The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, CA 91304-1148

Via CIWQS

February 15, 2026
In reply refer to SHEA-117052

Information Technology Unit
Los Angeles Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, California 90013

Subject: Fourth Quarter 2025 NPDES Discharge Monitoring Report
Compliance File CI-6027 and NPDES No. CA0001309
Santa Susana Field Laboratory
Ventura County, California

The Boeing Company (Boeing) hereby submits this Discharge Monitoring Report (DMR) for the Santa Susana Field Laboratory (Santa Susana Site) for the period of October 1 through December 31, 2025 (Fourth Quarter 2025). This DMR was prepared as required by, and in accordance with, the National Pollutant Discharge Elimination System Permit No. CA0001309 (NPDES Permit) issued by the Los Angeles California Regional Water Quality Control Board (Regional Board) in 2023 (California Regional Water Quality Control Board, Los Angeles Region, 2023), and effective on January 1, 2024. The NPDES Permit covers the entire Santa Susana Site, which includes approximately 2,400 acres owned by Boeing and approximately 450 acres owned by the United States and administered by the National Aeronautics and Space Administration (NASA). Department of Energy (DOE) has assumed responsibility to remediate approximately 472 acres of Boeing's land.

An electronic version of this DMR is located at: http://www.boeing.com/principles/environment/santa-susana/monitoring-reports.page.

FOURTH QUARTER 2025 DMR COVER LETTER CONTENTS

This DMR cover letter includes the following sections and attachments:

- Stormwater Treatment System Activities;
- Discharge and Sample Collection Summary;
- Summary of Exceedances and/or Non-Compliance;
- Combined Radium-226 and Radium-228 at Outfall 009;
- Stormwater Pollution Prevention Plan/Best Management Practice Activities;
- Off-site Release of Potable Water Onto and Across the Site with Discharge at Outfall 009 and RSW-002; and
- List of Tables (included as attachments):
  - Table 1: SWTS Maintenance Activities, Fourth Quarter 2025;
  - Table 2: SWTS Operational Activities, Fourth Quarter 2025;

- Table 3: Sampling Record, Fourth Quarter 2025; and
- Table 4: BMP Activities, Fourth Quarter 2025.

STORMWATER TREATMENT SYSTEM ACTIVITIES

The Stormwater Treatment System (SWTS), located near R-1 Pond (SWTS 011, see Figure 1), discharges through Outfall 011. The SWTS located at Silvernale Pond (SWTS 018, see Figure 1) discharges through Outfall 018.

SWTS 011 operated one time and SWTS 018 operated two times during the Fourth Quarter 2025. Operational activities are summarized in Table 2.

Both systems were prepared for operation during the Fourth Quarter 2025, ahead of the rainy season and planned operational events. These activities included inspecting and replacing needed parts/equipment, performing chemical inventory checks, and conducting general operational tuning. SWTS maintenance activities completed in the Fourth Quarter 2025 are included in Table 1.

DISCHARGE AND SAMPLE COLLECTION SUMMARY

Four qualifying rain events occurred during the Fourth Quarter 2025 (Appendix A). Three of the four qualifying rain events produced stormwater discharges. Stormwater samples were collected at Outfalls 001, 002, 004, 008, 009, 011, and 018 in one or more rain events or SWTS discharge events this quarter.

In addition to outfall samples, SWTS influent samples and receiving water samples were also collected. One influent sample was collected at SWTS 011 (INF-001), and two influent samples were collected at SWTS 018 (INF-002). A quarterly on-site receiving water sample was collected at the Bell Creek location (RSW-001 at Outfall 002, see Figure 1) and quarterly off-site receiving water samples were collected at the Arroyo Simi locations (RSW-002 [downstream] and RSW-003 [upstream]; see Figure 2).

As discussed below, one sample was collected at Outfall 009 and the Arroyo Simi location (RSW-002 [downstream]) with discharge at that location the result of a release of potable water from an off-site Ventura County-owned and operated water main break that resulted in the flow of potable municipal water onto and across the Santa Susana Site.

Table 3 summarizes the Fourth Quarter 2025 sampling record by outfall or location, sample frequency, and sample type collected per NPDES Permit requirements. Sample results are included in Appendix C.

Boeing affirms that “With the exception of field tests, all analyses were conducted at a laboratory certified for such analyses by the State Water Board, Division of Drinking Water, Environmental Laboratory Accreditation Program or approved by the Executive Officer and in accordance with current U.S. [Environmental Protection Agency] EPA guideline procedures or as specified in this [Monitoring and Reporting Program] MRP.” Toxicity laboratory reports and validation reports (if validation was performed), are included in Appendix E.

The annual requirement to include reporting limits, method detection limits, laboratory analytical methods, State Water Resources Control Board Environmental Laboratory Accreditation Program certifications, and laboratory quality assurance and quality control (QA/QC) procedures are included in Appendix F.

SUMMARY OF EXCEEDANCES AND/OR NON-COMPLIANCE

As summarized in Appendix D, the Fourth Quarter 2025 exceedances of Daily Maximum Permit limits, Receiving Water limits, or other non-compliance for the data received within the timeframe of this report included:

- Aluminum at Outfalls 001, 002, 009, 011, and 018;
- Dioxins (TCDD) toxic equivalent (TEQ) at Outfall 002;
- Manganese at Outfall 011; and
- Mercury at Outfalls 004 and 009.

ALUMINUM AT OUTFALLS 001, 002, 009, 011, AND 018

Aluminum was detected in stormwater samples collected from the following outfalls above the Daily Maximum Permit Limit of 1.0 milligram per liter (mg/L):

- Outfall 001 on December 27, 2025, and January 2, 2026, at 3.3 mg/L and 1.1 mg/L, respectively;
- Outfall 002 on November 16, 2025, and December 25, 2025, at 4.5 mg/L and 4.1 mg/L, respectively;
- Outfall 009 on December 25, 2025 and January 2, 2026 at 1.1 mg/L and 1.3 mg/L, respectively;
- Outfall 011 on December 26, 2025 at 2.6 mg/L; and
- Outfall 018 on December 26, 2025 at 1.2 mg/L.

Boeing believes that the aluminum detected in stormwater is from naturally occurring sources and not from significant materials remaining from historical industrial operations, and thus the exceedances are not permit violations. There is significant evidence to support Boeing's position, including data and analyses produced from several background studies conducted by the Surface Water Expert Panel [Expert Panel] (Pitt, 2009); the Expert Panel's conclusions in several Annual Reports that aluminum is naturally occurring at the Santa Susana Site rather than residual from former industrial operations (Expert Panel, 2023, 2024, 2025); limited use of aluminum during historical operations;[1] and no indication of any areas of aluminum contamination in soil based on extensive soil sampling over decades. Indeed, aluminum concentrations in soil were at or below established background levels in 99.9 percent of approximately 6,500 soil samples collected throughout the Santa Susana Site.

Boeing anticipates that the Expert Panel will continue to evaluate aluminum exceedances, including the likely sources of the aluminum detected in stormwater, in its 2026 Annual Report.

DIOXINS (TCDD) TOXICITY EQUIVALENT (TEQ) AT OUTFALL 002

TCDD TEQ was calculated above the Daily Maximum Permit Limit of 2.8E-08 micrograms per liter (µg/L) in stormwater samples collected from Outfall 002 on:

- November 16, 2025 at 3.4E-08 µg/L; and
- December 25, 2025 at 7.2E-08 µg/L.

Boeing believes the elevated dioxin concentration at Outfall 002 during the Fourth Quarter 2025 is attributable to natural background soils and non-industrial sources, such as pavement and soils adjacent to

1 Speculative assumptions made regarding the historical use and storage of aluminum at the Santa Susana Site during the Permit renewal process were not based on site-specific information and are incorrect.

telephone/utility poles (treated wood). The industrial areas upstream of Outfall 002 are monitored at Outfall 018, which had no exceedances, and the property in the watershed between Outfall 018 and Outfall 002 lacks historical industrial activities. This conclusion is consistent with the findings in prior Site studies conducted by the Expert Panel based on methods discussed in the Expert Panel Annual Reports, which uses multiple lines of evidence including particulate strength, fingerprinting methods, spatial patterns, and material inventory to identify the likely non-industrial sources of TCDD TEQ in samples exceeding permit limits (Expert Panel, 2022, 2024, 2025). The Expert Panel will evaluate these exceedances in their 2026 Annual Report.

In addition, the exceedances occurred prior to Boeing completing the installation of updated best management practices (BMPs) recommendations by the Expert Panel for dioxins in the watershed that flows to Outfall 002. Those BMPs were completed in February 2026. Boeing also will continue to maintain BMPs around utility poles and in the vicinity of the impacted portion of the watershed to minimize their pollutant contributions.

MANGANESE AT OUTFALL 011

Manganese was detected above the Daily Maximum Permit Limit of 50 µg/L in a stormwater sample collected from Outfall 011 on:

- December 26, 2025 at 52 µg/L.

Boeing believes the manganese concentration at Outfall 011 during the Fourth Quarter 2025 is attributable to natural background soils. This conclusion is consistent with the findings in prior Site studies conducted by the Expert Panel, which confirmed that manganese is naturally occurring in Site soils unrelated to former industrial operations (Expert Panel, 2022, 2024). The Expert Panel will evaluate this exceedance in their 2026 Annual Report.

MERCURY AT OUTFALLS 004 AND 009

Mercury was detected in stormwater samples collected from the following outfalls above the Daily Maximum Permit Limit of 0.024 µg/L:

- Outfall 004 on December 26, 2025, at 0.046 µg/L; and
- Outfall 009 on December 26, 2025, at 0.025 µg/L.

Boeing believes the slightly elevated mercury concentration at Outfall 004 during the Fourth Quarter 2025 is likely attributable to an area of mercury contaminated soils located within the Outfall 004 watershed. This conclusion is consistent with the findings in prior Site studies conducted by the Expert Panel, which uses multiple lines of evidence including particulate strength, spatial patterns, fingerprinting, and material inventory to indicate that the area of mercury-contaminated soil likely is contributing to the slightly elevated mercury concentrations identified at Outfall 004 as compared to other watersheds (Expert Panel, 2024). The Expert Panel will evaluate this exceedance in their 2026 Annual Report.

Boeing believes the slightly elevated mercury concentration at Outfall 009 during the Fourth Quarter 2025 is likely attributable to natural background soils and localized impacted soils. This conclusion is consistent with the findings in prior Site studies conducted by the Expert Panel, which uses multiple lines of evidence including particulate strength, fingerprinting methods, spatial patterns, and material inventory to identify potential sources of mercury in the Outfall 009 watershed (Expert Panel, 2025). The Expert Panel recommended reconstructing the B-1 media filter at Outfall 009 with new sulfur-impregnated granular activated carbon (GAC) to improve mercury capture. However, that action was not completed prior to the

rain events during the Fourth Quarter 2025. That BMP has since been completed. The Expert Panel will evaluate this exceedance in their 2026 Annual Report.

COMBINED RADIUM-226 AND RADIUM-228 AT OUTFALL 009

On February 15, 2025, Combined Radium-226 and Radium-228 were calculated at 6.63 ± 2.29 picocuries per liter (pCi/L) in a stormwater sample collected from Outfall 009, which is indeterminate when compared to the Daily Maximum Permit Limit of 5.0 pCi/L. Although the Combined Radium-226 and Radium-228 limit of 5.0 pCi/L is presented as a Daily Maximum in the NPDES permit (Table 5), the associated permit footnote specifies that compliance for radionuclides is determined based on the annual average concentration, consistent with Title 22 requirements. Accordingly, a single sample result above the numerical limit does not, by itself, demonstrate noncompliance. Permit compliance is evaluated using the calendar-year average of Combined Radium-226 and Radium-228 concentrations. Averaging the First and Fourth Quarter 2025 data from Outfall 009 (a total of seven samples) yields an annual average concentration for Combined Radium-226 and Radium-228 of 1.96 ± 1.42 pCi/L, which is well below the applicable permit limit of 5.0 pCi/L. Thus, Combined Radium-226 and Radium-228 at Outfall 009 during 2025 was in compliance with the NPDES permit.

STORMWATER POLLUTION PREVENTION PLAN/BEST MANAGEMENT PRACTICE ACTIVITIES

BOEING-RELATED ACTIVITIES

During Fourth Quarter 2025, Boeing implemented structural and non-structural BMPs in compliance with the site-wide Stormwater Pollution Prevention Plan (SWPPP; Haley & Aldrich, Inc., 2026) to assist in improving stormwater quality and compliance at the Santa Susana Site.

During the Fourth Quarter 2025, BMPs were reviewed as part of the annual wet-weather readiness review for the Site. This included evaluating structural and non-structural controls and identifying any repairs, replacements, or operational adjustments needed to maintain effective stormwater management before the rainy season. Additional BMP activities performed, commenced, or completed during the Fourth Quarter 2025 also included several that were done in coordination with the Expert Panel.

Table 4 summarizes the BMP activities and equipment maintenance completed during the Fourth Quarter 2025 by outfall or BMP location.

In addition to site-wide SWPPP-related activities, specific BMP projects included NASA and DOE activities. These are discussed below.

NASA-RELATED ACTIVITIES

During the Fourth Quarter 2025, NASA inspected and maintained demolition BMPs and stormwater activities in accordance with their Coca area Construction SWPPP and the Construction General Permit (CGP; NASA, 2023). NASA maintained fiber rolls and sandbags as perimeter and linear sediment controls in areas where construction activities were occurring or had been completed. The demolition activities associated with this SWPPP were completed in December 2025. Upon completion of demolition activities, disturbed areas were stabilized and temporary BMPs were removed from the Site. NASA is preparing to submit a Notice of Termination for this SWPPP.

DOE-RELATED ACTIVITIES

DOE reported no BMP-related activities during the Fourth Quarter 2025.

OFF-SITE RELEASE OF POTABLE WATER ONTO AND ACROSS THE SITE WITH DISCHARGE AT OUTFALL 009 AND RSW-002

A potable water main owned and operated by Ventura County failed outside the Boeing property on October 30, 2025. Water from off site flowed into the Outfall 009 watershed from the ruptured pipe for almost 24 hours, from approximately 1:20 a.m. to midnight on October 31st, until repairs were completed by the County. Potable water from the County's pipe entered upon and flowed across a small portion of the Site before flowing directly into the stormwater system, which leads to the Northern Drainage and discharges at Outfall 009. Approximately 700,000 gallons were released by the burst pipe onto the Site, based on the volume recorded at the Outfall 009 flow meter during this event. The resulting municipal water caused some erosion along the banks of the Northern Drainage and carried sediment into it. However, sediment discharge from the Site was prevented through drainage-area and conveyance BMPs (e.g., riprap/check dams and all erosion and sediment controls in place). Because the water discharge originated from a failure in Ventura County-owned and operated infrastructure located off Site and outside Boeing's control, and not from any on-site activity or equipment, pipes, sewer system, or water conveyance lines, it does not represent a non-stormwater discharge for which Boeing is responsible and, accordingly, it does not represent permit non-compliance nor is it a permit violation.

Nevertheless, Boeing notified the Water Board about the event on October 31st and collected routine samples at Outfall 009 and Arroyo Simi [RSW-002]. Analytical results from this discharge event showed no exceedances and are summarized in this DMR. This event description and sampling results will be kept with the facility's reporting records. There were no other changes in the discharges, as described in the NPDES Permit during the reporting period.

CONCLUSIONS

Boeing is committed to fulfilling the requirements of the NPDES Permit and continues to implement, maintain, and monitor wide-ranging control practices intended to improve water quality at stormwater discharge locations at the Santa Susana Site through methods designed to preserve the natural conditions in the watershed to the maximum extent feasible. The Surface Water Expert Panel is reviewing the data collected and will make BMP and monitoring recommendations that will be communicated in the Surface Water Expert Panel's 2026 Annual Report.

FACILITY CONTACT

If there are any questions regarding this report or its enclosures, you may contact Mr. Jeffrey Wokurka of Boeing at (818) 466-8800.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the 15th of February 2026 at The Boeing Company, Seal Beach, California Site.

Sincerely,

Kim O'Rourke

Kim O'Rourke
Global Remediation
Global Enterprise Sustainability - Environment

Enclosures:

References

Table 1: SWTS Maintenance Activities, Fourth Quarter 2025
Table 2: SWTS Operational Activities, Fourth Quarter 2025
Table 3: Sampling Record, Fourth Quarter 2025
Table 4: BMP Activities, Fourth Quarter 2025

Attachments:

Figure 1: Site Map with Stormwater Collection and Conveyance System and Site Features
Figure 2: Arroyo Simi Receiving Water Sampling Locations RSW-002 (Downstream) and RSW-003 (Upstream)
Appendix A: Rainfall Data Summary, Fourth Quarter 2025
Appendix B: Waste Shipment Summary Table, Fourth Quarter 2025
Appendix C: Discharge Monitoring Data Summary Tables, Fourth Quarter 2025
Appendix D: NPDES Permit Limit Exceedances and/or Non-Compliance, Fourth Quarter 2025
Appendix E: Toxicity Laboratory Reports and Validation Reports, Fourth Quarter 2025
Appendix F: Analytical Laboratory Methods, Method Detection Limits, Reporting Limits, QA/QC Procedures, and ELAP Certifications, Fourth Quarter 2025
Appendix G: Receiving Water Surveys, Fourth Quarter 2025

REFERENCES

1. California Regional Water Quality Control Board, Los Angeles Region, 2023. *Waste Discharge Requirements for The Boeing Company, Santa Susana Field Laboratory (Order No. R4-2023-0359, NPDES No. CA0001309, CI Number 6027).* 19 October.

2. Geosyntec and the Expert Panel, 2022. *Santa Susana Field Laboratory Site-wide Stormwater Annual Report, 2021/22 Reporting Year, Ventura County, California* (NPDES No. CA0001309, CI No.6027). October.

3. Geosyntec and the Expert Panel, 2023. *Santa Susana Field Laboratory Site-wide Stormwater Annual Report, 2022/23 Reporting Year, Ventura County, California* (NPDES No. CA0001309, CI No.6027). October.

4. Geosyntec and the Expert Panel, 2024. *Santa Susana Field Laboratory Site-wide Stormwater Annual Report, 2023/24 Reporting Year, Ventura County, California* (NPDES No. CA0001309, CI No.6027). October.

5. Geosyntec and the Expert Panel, 2025. *Santa Susana Field Laboratory Site-wide Stormwater Annual Report, 2024/25 Reporting Year, Ventura County, California* (NPDES No. CA0001309, CI No.6027). October.

6. Haley & Aldrich, Inc., 2026. *Stormwater Pollution and Prevention Plan (Version 2 for Compliance with 2023 NPDES Permit).* Pending.

7. Pitt, 2009. Boeing SSFL Metals Background Reports, Source of Metals in SSFL Watersheds. November.

8. National Aeronautics and Space Administration, 2023. *Stormwater Pollution and Prevention Plan for Demo SSFL Phase 7 - NASA Area II, Ventura County, California.* October.

9. Jacobs, 2023. *Stormwater Pollution Prevention Plan (SWPPP) for Santa Susanna Field Laboratory Area I Burn Pit Removal Action, Ventura County, California.* August.

10. Stantec Consulting Services, Inc., 2022. Stormwater Pollution Prevention Plan for Former Shooting Range Remedial Action, Santa Susana Field Laboratory, Ventura County, California. August.

TABLES

TABLE 1

SWTS MAINTENANCE ACTIVITIES, FOURTH QUARTER 2025

THE BOEING COMPANY

SANTA SUSANA FIELD LABORATORY

NPDES PERMIT CA0001309

SWTS	Activities During Fourth Quarter 2025
011	– Sand filter lids were reinstalled to return the filters to an operable configuration. Lids were removed in the summer to dry out the sand.
	– Painting was performed on carbon vessels and in the satellite skids.
	– The system was cleaned and organized, including the lab area.
	– The system was filled and hydro testing was initiated to evaluate system integrity and identify leaks.
	– Startup activities were performed in preparation for discharge operations.
	– Solids generated at SWTS 011 were transferred to SWTS 018 for decanting and processing.
	– Chemical transfers were performed to support system operations and discharge activities.
	– The buffer tank was filled and hydro testing was conducted to identify leaks, followed by leak repairs.
018	– Weir tanks were painted and finished, and diaphragm pumps were reinstalled.
	– High-density polyethylene (HDPE) backwash lines were re-fused, and gate valves on sand filters were disassembled and cleaned.
	– Weed abatement was performed around the staff gauge and system areas.
	– The buffer tank was filled and hydro testing was conducted to identify leaks, followed by leak repairs.
	– Chemical skids were cleaned, and system housekeeping and parts organization were completed.
	– A new sump pump and backwash motor were installed and placed into service.
	– Hydro testing was completed and the system was prepared for operations and storm events.
	– Weir tanks were decanted, and solids were transferred from the mixer tank for processing.
	– Chemical transfers were performed to support treatment and discharge operations.
	– Completed maintenance and housekeeping at weir tanks.
	– Re-fused HDPE lines on the backend of backwash tanks.
	– Performed housekeeping at the culvert and Y intersection.
	– Re-attached mixers on the top of ACTIFLO.

TABLE 2

SWTS OPERATIONAL ACTIVITIES, FOURTH QUARTER 2025

THE BOEING COMPANY

SANTA SUSANA FIELD LABORATORY

NPDES PERMIT CA0001309

SWTS	Operational Event	Operational Dates and Hours	Total Amount of Water Treated and Discharged (gallons)
011	1	Operated from 12/27/2025 through 1/5/2026, and discharged for approximately 160 hours.	8,226,200 gallons
018	1	Operated from 11/18/2025 through 11/22/2025, and discharged for approximately 96 hours.	6,119,200 gallons
	2	Operated from 12/24/2025 through 1/8/2026, and discharged for approximately 340 hours.	23,389,500 gallons

SWTS	Total Amount of Solids Generated (cubic yards)
011	The total amount of solids generated by operation of Stormwater Treatment System (SWTS) 011 was approximately 4 cubic yards during the Fourth Quarter 2025.
018	The total amount of solids generated by operation of SWTS 018 was approximately 40 cubic yards during the Fourth Quarter 2025.

TABLE 3
SAMPLING RECORD, FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Sample Date/Time (Grab)	Sample Date/Time (Composite)	Outfall/Location	Sample Frequency
10-31-2025/08:57	11-1-2025/08:40	Outfall 009	Routine[1]
10-31-2025/10:28	N/A	Arroyo Simi Receiving Water Downstream (RSW-002)	Quarterly[1]
11-15-2025/11:45	11-16-2025/10:15	Outfall 002	Routine, Quarterly
11-15-2025/08:30	11-16-2025/09:05	Outfall 009	Routine
11-15-2025/10:05	N/A	Arroyo Simi Receiving Water Downstream (RSW-002)	Quarterly
11-15-2025/09:25	N/A	Arroyo Simi Receiving Water Upstream (RSW-003)	Quarterly
11-17-2025/10:05	N/A	INF-002	Routine
11-18-2025/12:30	11-19-2025/11:40	Outfall 018	Routine
12-23-2025/07:30	N/A	INF-002	Routine
12-24-2025/07:55	12-25-2025/08:10	Outfall 002	Routine
12-24-2025/11:00	12-26-2025/07:45	Outfall 004	Annual, Routine, Toxicity[2]
12-24-2025/08:30	12-26-2025/09:30	Outfall 008	Routine, Toxicity
12-24-2025/07:30	12-25-2025/07:25	Outfall 009	Routine
12-24-2025/11:30	12-26-2025/08:45	Outfall 018	Routine
12-25-2025/09:15	12-26-2025/10:00	Outfall 011	Annual, Routine, Toxicity
12-27-2025/11:40	12-27-2025/11:45	Outfall 001	Routine, Toxicity[3]
12-27-2025/07:45	N/A	INF-001	Annual, Routine, Toxicity
12-28-2025/13:00	N/A	Outfall 001	Toxicity[4]
12-31-2025/14:50	1-2-2026/10:05	Outfall 001	Routine, Toxicity[5]
12-31-2025/14:05	1-2-2026/08:15	Outfall 002	Routine
12-31-2025/15:35	1-2-2026/11:15	Outfall 008	Routine
12-31-2025/13:50	1-2-2026/07:50	Outfall 009	Routine
12-31-2025/15:10	1-2-2026/10:35	Outfall 011	Routine, Toxicity
12-31-2025/15:35	1-2-2026/09:10	Outfall 018	Routine

Notes:

[1] = No rain; sampled due to off-site municipal Ventura County-owned and operated water main break that flowed through Outfall 009.

[2] = Chronic toxicity collected as a grab from sample box due to low autosampler volume.

[3] = Grab sample was not collected within first hour of discharge because a fallen tree blocked the access road; sample was collected once safe access was restored.

[4] = Chronic toxicity collected as a grab from sample box due to field error.

[5] = Chronic toxicity resampled as a composite during the same event to correct previous field error.

N/A = Not applicable.

Routine = Once per discharge event.

TABLE 4
BMP ACTIVITIES, FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Outfall, Watershed, BMP, or Other Location	BMP Activities During Fourth Quarter 2025
SWPPP-Related Activities	
001, 002, 003, 006, 008, 009, 010, 011, 018	– Cleaned sample box and flume. – Performed weed abatement.
001	– Completed maintenance on autosampler equipment. – Fixed level sensor issue for flow meter. – Removed fallen tree that temporarily blocked access to the outfall.
002	– Completed maintenance and reprogrammed autosampler and flow meter equipment.
003	– Completed maintenance on autosampler and flow meter equipment. – Troubleshot electrical issues at the autosampler.
004	– Removed sediment and debris and cleared material from the associated rock crib.
005	– Pumped standing water from the outfall with approval from Padre Asoociateds, Inc. to maintain drainage and prevent ponding.
006	– Replaced felt. – Completed maintenance on flow meter equipment. – Troubleshot air gap, disassembled and serviced check valves. – Modified piping to increase flow and operational flexibility.
007	– Maintained felt and HDPE lining.
008	– Cleaned flume, rock crib and autosampler area. – Replaced spent wattles.
009	– Removed standing water out of flume.
011	– Completed maintanance on outfall piping and drainage area. – Connected hosing to Charles King pump at the top of outfall.
018	– Added batteries to increase power to autosamplers. – Completed maintanance on autosampler tubing and power components. – Completed flow testing and program completion with new setup. – Replaced bubbler tubing. – Replaced spent wattle and removed sediment in front of autosamplers.
Perimeter Pond	– Conveyed stormwater during rain events. – Performed weed abatement.
R-2A Pond	– Conveyed stormwater during rain events. – Cleaned spillway. – Performed weed abatement. – Removed sediment and debris.
GETS Culvert	– Installed pipe and sand bags to help divert water.
Area I Weather Station	– Downloaded rain gauge data following rain events. – Performed weed abatement.
Helipad	– Conveyed stormwater during rain events. – Cleaned sump and adjacent drainage area. – Performed weed abatement. – Placed and maintained Charles King pumps. – Repaired float switch.
28 Tanks Area	– Conveyed stormwater during rain events. – Performed weed abatement – Removed sediment around tanks.

TABLE 4
BMP ACTIVITIES, FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Outfall, Watershed, BMP, or Other Location	BMP Activities During Fourth Quarter 2025
408 Yard	– Performed housekeeping and weed abatement.
Lower Lot	– Performed weed abatement and general housekeeping. – Removed spent wattles.
Coca Road	– Added riprap to drain across from Burn Pit to help convey water from Coca Road.
Outfall 1 Road	– Replaced spent wattles around power poles.
Area I Road	– Removed sediment and debris from drainage features near power poles along Area I Road. – Replaced spent wattles. – Performed weed abatement around power poles.
Area II Road	– Hydroseeded at the Burn Pit, GETS Lot, Y Intersection by SWTS 18, and multiple other locations along Area II Road.
505 Building	– Cleaned sediment and fixed rock cribs.
Guard Shack, Water Tower & 450 Building	– Installed curb cuts.
Other SWPPP-Related Activities	
Former Shooting Range	– Performed BMP Inspections, upgrades, and repairs in accordance with the SWPPP for Former Shooting Range Remedial Action (Stantec, 2022).
	– Installed and maintained BMPs along the Northern Drainage adjacent to the Shooting Range to stabilize the bank and control runoff. – Repaired sinkhole within the Shooting Range to restore drainage integrity.
Area I Burn Pit	– Performed BMP Inspections, upgrades, and repairs in accordance with the SWPPP for Area I Burn Pit Removal Action (Jacobs, 2023).
	– BMPs were installed, maintained, and replaced at the Burn Pit to control stormwater runoff and sediment migration. – Inspected, repaired, and replaced BMPs in advance of and following rain events. – Installed new totalizer. – Removed sediment and debris from Burn Pit check structures.

TABLE 4
BMP ACTIVITIES, FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Outfall, Watershed, BMP, or Other Location	BMP Activities During Fourth Quarter 2025
Expert Panel-Related Activities	
Culvert Modifications (CM)	– Performed BMP inspections. – Performed weed abatement. – Removed sediment and debris from CMs along Area II Road using manual methods and vacuum truck support.
B-1 Area	– Performed BMP inspections. – Removed debris from drainage features.
Upper Parking Lot Media Filter	– Performed BMP inspections.
Former Building 1436 Detention Bioswales	– Performed BMP inspections.
Lower Lot Biofilter (Sedimentation Basin and Biofilter)	– Performed BMP inspections. – Approximately 1,740,700 gallons of stormwater were pumped from the cistern to the sedimentation basin during the Fourth Quarter 2025.
Administration Area Inlet Filters	– Performed BMP inspections.
NASA and Boeing BMP Monitoring-Related Activities	– In addition to activities performed in coordination with the Expert Panel described above, BMP performance monitoring samples were collected in the watersheds associated with Outfall 001, Outfall 009, and Outfall 011. These sampling results will be reported by the Expert Panel in their 2026 Annual Report.

FIGURES

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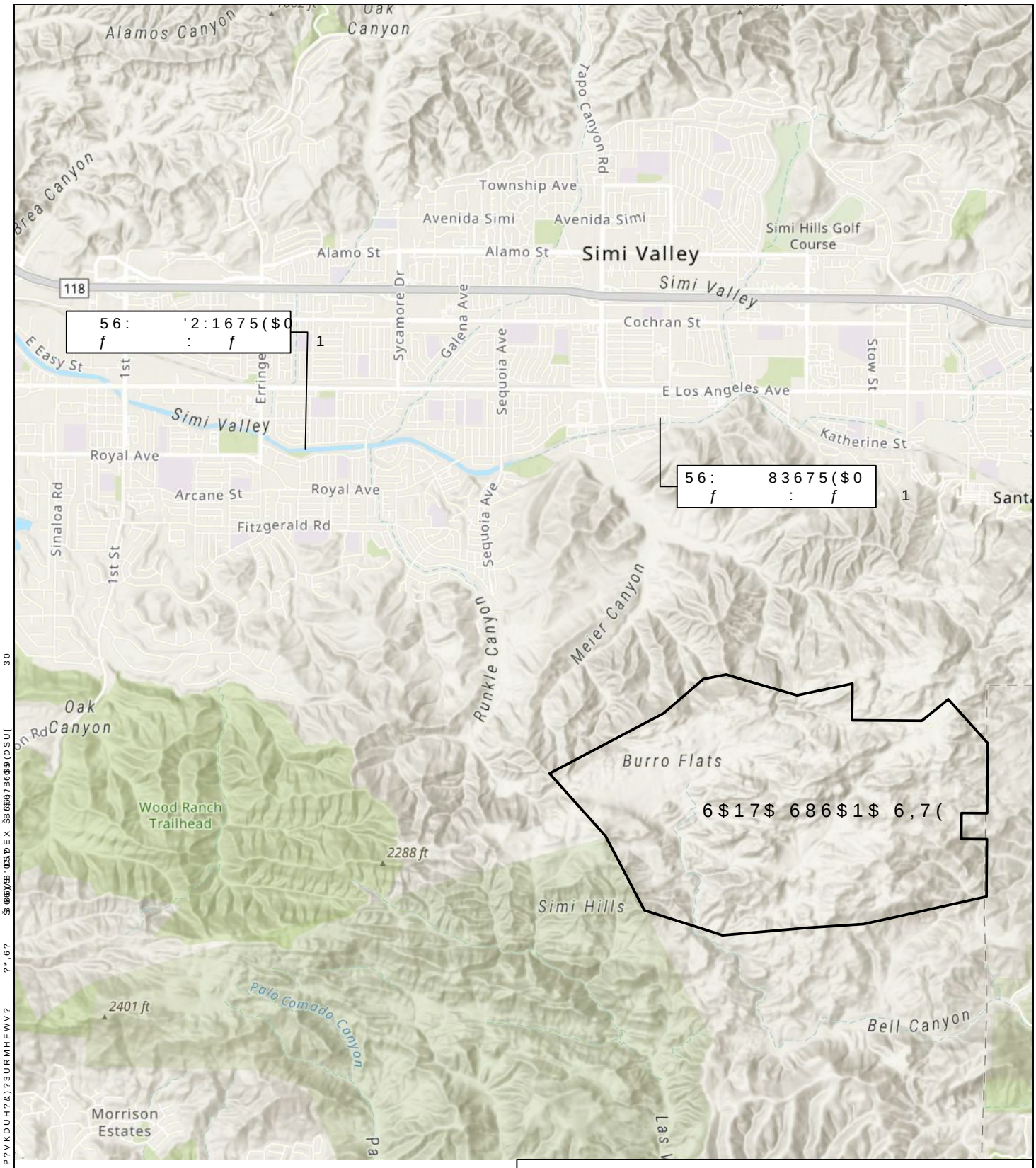

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APPENDIX A

Rainfall Data Summary, Fourth Quarter 2025

TABLE A
DAILY RAINFALL SUMMARY
FOURTH QUARTER 2025
THE BOEING COMPANY - SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Inches of Rain
Month/Year: October 2025

HOUR OF THE DAY, PACIFIC STANDARD TIME

DAY OF THE MONTH	HR-BEG 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	DAY																								**Total**
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	**8**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	**9**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	**10**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	**12**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	**13**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	14	0.12	0.14	0.06	0.12	0.40	0.20	0.13	0.34	0.19	0.11	0.04	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	1.91
T	**15**	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
H	**16**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	**17**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	**19**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	**20**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	**21**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	**22**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	**23**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
																								Monthly Total	1.93

TABLE A
DAILY RAINFALL SUMMARY
FOURTH QUARTER 2025
THE BOEING COMPANY - SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Inches of Rain
Month/Year: November 2025

HOUR OF THE DAY, PACIFIC STANDARD TIME

DAY OF THE MONTH	HR-BEG	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	
	DAY																									**Total**
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	**8**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	**9**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	**10**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	**12**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	**13**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02
	14	0.09	0.01	0.00	0.03	0.02	0.00	0.02	0.15	0.10	0.06	0.01	0.04	0.08	0.13	0.09	0.07	0.20	0.19	0.06	0.09	0.07	0.00	0.01	0.09	1.61
T	**15**	0.18	0.00	0.08	0.22	0.02	0.00	0.38	0.25	0.31	0.13	0.10	0.12	0.05	0.03	0.06	0.00	0.01	0.13	0.50	0.44	0.15	0.12	0.12	0.04	3.44
H	**16**	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.03	0.19	0.00	0.01	0.00	0.00	0.03	0.04	0.02	0.02	0.01	0.00	0.00	0.01	0.00	0.03	0.41
E	**17**	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.06	0.02	0.15	0.41	0.26	0.06	0.04	0.03	0.00	0.01	0.00	0.00	1.22
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	**19**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	**20**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.09	0.01	0.01	0.03	0.04	0.06	0.05	0.09	0.10	0.02	0.01	0.57
N	**21**	0.01	0.00	0.09	0.16	0.01	0.00	0.00	0.03	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
T	**22**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	**23**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
																									Monthly Total	7.64

TABLE A
DAILY RAINFALL SUMMARY
FOURTH QUARTER 2025
THE BOEING COMPANY - SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Inches of Rain
Month/Year: December 2025

HOUR OF THE DAY, PACIFIC STANDARD TIME

DAY OF THE MONTH	HR-BEG 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	DAY																								Total
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.00	0.01	0.05
	24	0.05	0.15	0.31	0.44	0.65	0.75	0.49	0.34	0.52	0.36	0.25	0.21	0.23	0.16	0.07	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.07	0.03	5.14
	25	0.05	0.02	0.19	0.06	0.08	0.21	0.25	0.08	0.39	0.06	0.01	0.00	0.05	0.05	0.03	0.07	0.05	0.02	0.02	0.08	0.02	0.02	0.01	0.04	1.86
	26	0.21	0.13	0.13	0.07	0.28	0.11	0.01	0.03	0.08	0.00	0.00	0.02	0.10	0.13	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
	27	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.02	0.07	0.05	0.04	0.01	0.02	0.04	0.07	0.04	0.04	0.03	0.03	0.50
																									Monthly Total	8.92

APPENDIX B

Waste Shipment Summary Table, Fourth Quarter 2025

WASTE SHIPMENT SUMMARY TABLE
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Transported Spills						
Type of Material	**Matrix**	**Quantity**	**Units**	**Transporter 1**	**Transporter 2**	**Destination**
None						

Transported Stormwater						
Type of Stormwater	**Matrix**	**Quantity**	**Units**	**Transporter 1**	**Transporter 2**	**Destination**
Non Hazarodous Waste	Liquid	20,000	G	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058	N/A	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058

Notes:
G = Gallons
N/A = Not Applicable

APPENDIX C

Discharge Monitoring Data Summary Tables, Fourth Quarter 2025

APPENDIX C

TABLE OF CONTENTS

Reporting Summary Notes

C-1.A: Outfalls 001, 002, 011, and 018

C-1.B: Outfall 008

C-1.C: Outfall 004 and 009

C-2: SWTS 011 (INF-001) and SWTS 018 (INF-002)

C-3.A: RSW-002 (Downstream)

C-3.B: RSW-003 (Upstream)

C-4: E. Coli

C-5: Radionuclides

C-6: TCDD TEQ

C-7: PCBs

C-8: PFAS

REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Not all the following notes, abbreviations, symbols, or acronyms occur on every table:

1. Exceedances are constituents detected in excess of daily maximum permit limits or receiving water limits. Analytical concentrations or calculations to determine compliance to the National Pollutant Discharge Elimination System (NPDES) permit are compared to the same number of significant figures as the daily maximum permit limits or receiving water limits.

2. Dissolved metals are filtered by the laboratory and reported as "Metal, dissolved". Dissolved metals are not required by the NPDES Permit, but may be analyzed at the same sample frequency as total metals. Total metals are not filtered by the laboratory and reported as "Metal".

3. If the laboratory reported multiple analytical results for the same analyte, the table shows the result with the lowest reporting limit.

4. Abbreviations, symbols, and acronyms:

–92.9 +/–200	A negative radiochemical analytical result indicates the count rate of the sample was less than the background condition. Radiological results are presented as activity plus or minus total uncertainty.
%	Percent.
$	Reported result or other information was incorrectly reported by the laboratory; result was corrected by the data validator.
--	Based on validation of the data, a qualifier was not required.
-	No NPDES permit limit established for daily maximum or receiving water limit.
>(value)	Greater than most probable number.
*	Result not validated.
**	Flow for each outfall is calculated over the 24-hour period when the outfall autosampler is operating to collect the composite sample. See definition of "Daily Discharge" on page A-1 of attachment A of the 2023 NPDES permit.
*1	Improper preservation of sample.
*3	Initial and or continuing calibration recoveries were outside acceptable control limits.
*10	Value was estimated detect or estimated non-detect (J, UJ) due to deficiencies in quantitation of the constituent including constituents reported by the laboratory as estimated maximum possible concentration (EMPC) values.
*III	Unusual problems found with the data that have been described in the validation report.
ANR	Analysis not required; e.g., constituent or outfall was not required by the NPDES permit to be sampled and analyzed over the reporting period (annual, semi- annual, etc.).
B	Presumed contamination as indicated by the preparation (method) blank results.
BEF	Bioaccumulation equivalency factor.
C	Calibration %RSD or %D was noncompliant or Correlation coefficient is <0.995.
Comp	Composite sample.
CEs/100 ml	Cell equivalents per 100 milliliters.
D	The analysis with this flag should not be used because another more technically sound analysis is available.

REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Deg C	Degrees Celsius.
Deg F	Degrees Fahrenheit.
DL	Detection limit.
DNQ	Detected but not quantified (constituent value greater than or equal to the laboratory method detection limit and less than the laboratory reporting limit).
E	E in validation qualifier indicates that duplicates show poor agreement.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
FB	Field blank.
ft/sec	Feet per second.
gpd	Gallons per day.
H	Holding time was exceeded.
I	Internal standard performance was unsatisfactory.
J	Estimated value.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
L	Laboratory control standard (LCS)/laboratory control standard duplicate (LCSD), relative percent difference (RPD) was outside the control limit.
LBS/DAY	Pounds per day.
MDL	Method detection limit.
Meas	Measure sample type.
MFL	Million fibers per liter.
MGD	Million gallons per day.
mg/L	Milligrams per liter.
mg/kg	Milligrams per kilogram.
ml/L	Milliliters per liter.
ml/L/hr	Milliliters per liter per hour.
MPN/100 mL	Most probable number per 100 milliliters.
MQL	Method quantitation limit.
MS	Matrix spike.
MSD	Matrix spike duplicate.
mS/cm	MilliSiemens per centimeter.
NA	Not applicable (i.e., NPDES permit limit not established for the constituent and/or outfall or analyte not required per receiving water monitoring requirements.)
ND	Analyte not detected.
ng/L	Nanograms per liter.
NM	Not measured or determined or minimum detectable activities (MDAs) are not calculated as there is no statistical method for combining MDAs.
NOEC	No observed effect concentration
NPDES	National Pollutant Discharge Elimination System.
NR	Not reported by laboratory by the deadline of this report.
NTU	Nephelometric turbidity unit.

REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

ppb	Parts per billion.
pCi/L	PicoCuries per liter.
Q	Matrix spike (MS)/matrix spike duplicate (MSD) relative percent difference (RPD) was outside the control limit.
R	As a validation qualifier, results are rejected; the presence or absence of analyte cannot be verified.
(R)	Percent recovery (%R) for calibration not within control limits.
RL	Laboratory reporting limit.
RPD	Relative percent difference.
%R	Percent recovery.
S	Surrogate recovery was outside control limits.
s.u.	Standard unit.
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin.
TEQ	Toxic equivalent.
TIC	Tentatively identified compound
TIE	Toxicity identification evaluation
T	Presumed contamination, as indicated by a detect in the trip blank.
U	Result not detected.
µg/L	Micrograms per liter.
µg/g	Micrograms per gram.
µg/kg	Micrograms per kilogram.
µmhos/cm	Micromhos per centimeter.
UJ	Result not detected at the estimated reporting limit.
WHO TEF	World Health Organization toxic equivalency factor.
(a)	Analysis not completed due to hold time exceedance or insufficient sample volume.
(b)	The composite sample was collected as a grab sample from the stream due to insufficient flow.
(c)	Total Ammonia is reported in wet weight units' milligrams per kilogram (mg/kg).
(d)	Total organic carbon (TOC) is reported in dry weight units. Permit asks for TOC units in % dry weight, but data is provided in dry unit milligrams per kilogram (mg/kg).
(e)	The composite sample was collected as a grab sample from the sample box due to insufficient flow.
(f)	The grab sample was collected at the first opportunity given the short duration and low flow at this Outfall.
(g)	Unsafe conditions all day prevented access to the Outfall.
(h)	Various constituents were analyzed by laboratory due to field and laboratory error.
(i)	Reanalysis.
(j)	Sample collected in addition to NPDES permit required sampling frequency.
(k)	Composite sample collected from sample box due to cracked autosampler tubing resulting in low volume recovery.
(l)	Various field parameter(s) analyzed out of hold time due to field and/or laboratory error.

REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

(m)	Analysis performed on composite sample instead of grab sample due to field error.
(n)	Permit limit does not apply to receiving water.
(o)	Analyte was reported as a TIC.
(p)	Particle size distribution is reported in percent units. Permit asks for particle size distribution units in µm, but data is provided in percent (%).
(q)	The Discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in a replicate sample and the result reported is within the hexavalent chromium limits.
(r)	Statistical Threshold Value (STV): E. coli density shall not exceed 320 cfu or MPN/100mL by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 001			
							LOCATION								
							DATE RANGE	12/27/2025 11:40 - 12/27/2025 11:45				12/28/2025 13:00			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	1.1	2.0	U *	ANR	ANR	ANR	ANR
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	6.0	1/Year	1/Discharge	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	lbs/day	CALC	-	5.9	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.78	2.0	U *	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	0.5	1/Year	1/Discharge	ND	0.17	0.50	U *	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	lbs/day	CALC	-	0.49	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dioxane	Composite	µg/L	SW8260SIM	-	-	-	1/Discharge	ND	0.55	1.0	U *	ANR	ANR	ANR	ANR
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	13	1/Year	1/Discharge	ND	0.059	1.0	U *	ANR	ANR	ANR	ANR
2,4,6-Trichlorophenol	Composite	lbs/day	CALC	-	12.8	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	18	1/Year	1/Discharge	ND	0.13	0.20	U *	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	lbs/day	CALC	-	17.7	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Year	1/Discharge	ND	0.55	5.0	U *	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.076	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Year	1/Discharge	ND	0.0037	0.005	U *	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	lbs/day	CALC	-	0.00058	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	0.03	1/Year	1/Discharge	ND	0.0024	0.005	U *	ANR	ANR	ANR	ANR
alpha-BHC	Composite	lbs/day	CALC	-	0.03	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	-	1/Discharge	3.3	0.0029	0.015	--	ANR	ANR	ANR	ANR
Aluminum	Composite	lbs/day	CALC	-	983	-	1/Discharge	16.6	NA	NA	--	ANR	ANR	ANR	ANR
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Discharge	0.028	0.0029	0.015	*	ANR	ANR	ANR	ANR
Ammonia - N	Composite	mg/L	E350.1	-	10.1	-	1/Discharge	ND	0.023	0.075	U *	ANR	ANR	ANR	ANR
Ammonia - N	Composite	lbs/day	CALC	-	9,925	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 001			
							LOCATION								
							DATE RANGE	12/27/2025 11:40 - 12/27/2025 11:45				12/28/2025 13:00			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic	Composite	µg/L	E200.8	2	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic	Composite	lbs/day	CALC	-	9.83	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	1.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	lbs/day	CALC	-	983	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Year	1/Discharge	ND	0.94	5.0	U *	ANR	ANR	ANR	ANR
Benzidine	Composite	lbs/day	CALC	-	0.00053	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	4.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	lbs/day	CALC	-	3.93	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	mg/L	SM5210B	-	30	-	1/Discharge	1.9	1.0	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	lbs/day	CALC	-	29,481	-	1/Discharge	9.6	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4	1/Year	1/Discharge	ND	1.1	5.0	U *	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	3.93	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Boron	Composite	mg/L	E200.7	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Year	1/Discharge	0.093	0.047	1.0	J (DNQ*)	ANR	ANR	ANR	ANR
Cadmium	Composite	lbs/day	CALC	-	3.05	-	1/Discharge	0.00047	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
Cadmium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.047	1.0	U *	ANR	ANR	ANR	ANR
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	-	1/Discharge	4.5	0.72	2.0	*	ANR	ANR	ANR	ANR
Chloride	Composite	lbs/day	CALC	-	147,405	-	1/Discharge	23	NA	NA	*	ANR	ANR	ANR	ANR
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 001			
							LOCATION								
							DATE RANGE	12/27/2025 11:40 - 12/27/2025 11:45				12/28/2025 13:00			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Chromium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	lbs/day	CALC	-	15.72	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	-	1st & 2nd rain event/year	ANR	ANR	ANR	ANR	SURVIVAL = PASS, % EFFECT = -1.19%	NM	NM	*
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.24	0.50	U *	ANR	ANR	ANR	ANR
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	umhos/cm	SM2510	-	-	-	1/Discharge	120	1.0	1.0	*	ANR	ANR	ANR	ANR
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Year	1/Discharge	4.8	0.24	2.0	*	ANR	ANR	ANR	ANR
Copper	Composite	lbs/day	CALC	-	66.3	-	1/Discharge	0.024	NA	NA	*	ANR	ANR	ANR	ANR
Copper, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	1.9	0.24	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Cyanide	Composite	µg/L	KELADA-01	5	8.5	1/Year	1/Discharge	3.3	2.7	5.0	J (DNQ*)	ANR	ANR	ANR	ANR
Cyanide	Composite	lbs/day	CALC	-	8.4	-	1/Discharge	0.017	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
Cyclohexane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.80	2.0	U *	ANR	ANR	ANR	ANR
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	0.5	-	1/Discharge	ND	0.062	0.20	U *	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	lbs/day	CALC	-	491.4	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	-	1/Discharge	16.62	NM	NM	*	ANR	ANR	ANR	ANR
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	117.83	1/Quarter	1/Discharge	0.60318	NA	NA	*	ANR	ANR	ANR	ANR
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	1,572	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	0.00042	1/Year	1/Discharge	ND	0.005	0.005	U *	ANR	ANR	ANR	ANR
Heptachlor	Composite	lbs/day	CALC	-	0.00041	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	0.1	1/Year	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	lbs/day	CALC	-	0.1	-	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	10	0.1	1/Year	1/Discharge	ND	0.10	0.30	U *	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Iron	Composite	mg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 001			
							LOCATION								
							DATE RANGE	12/27/2025 11:40 - 12/27/2025 11:45				12/28/2025 13:00			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Year	1/Discharge	2.5	0.058	1.0	*	ANR	ANR	ANR	ANR
Lead	Composite	lbs/day	CALC	-	5.1	-	1/Discharge	0.013	NA	NA	*	ANR	ANR	ANR	ANR
Lead, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.058	1.0	U *	ANR	ANR	ANR	ANR
Manganese	Composite	µg/L	E200.8	-	50	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese	Composite	lbs/day	CALC	-	49.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.1	1/Year	1/Discharge	0.025	0.0002	0.0005	*	ANR	ANR	ANR	ANR
Mercury	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	0.00013	NA	NA	*	ANR	ANR	ANR	ANR
Mercury, dissolved	Composite	µg/L	E1631E	-	-	-	Additional/Discharge	0.015	0.0002	0.0005	*	ANR	ANR	ANR	ANR
Monomethyl hydrazine	Composite	µg/L	SW8315	-	-	-	1/Discharge	ND	0.62	2.0	U *	ANR	ANR	ANR	ANR
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	94	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	92.4	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	8	-	1/Discharge	1.0	0.039	0.20	*	ANR	ANR	ANR	ANR
Nitrate - N	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	5.0	NA	NA	*	ANR	ANR	ANR	ANR
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	-	1/Discharge	1.0	0.18	0.20	*	ANR	ANR	ANR	ANR
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	5.0	NA	NA	*	ANR	ANR	ANR	ANR
Nitrite - N	Composite	mg/L	E300	-	1	-	1/Discharge	ND	0.18	0.20	U *	ANR	ANR	ANR	ANR
Nitrite - N	Composite	lbs/day	CALC	-	983	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	16	1/Year	1/Discharge	ND	0.092	0.20	U *	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	lbs/day	CALC	-	15.72	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	15	-	1/Discharge	1.2	0.50	0.98	*	ANR	ANR	ANR	ANR
Oil & Grease	Grab	lbs/day	CALC	-	14,741	-	1/Discharge	6.0	NA	NA	*	ANR	ANR	ANR	ANR
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1	1/Year	1/Discharge	ND	0.097	1.0	U *	ANR	ANR	ANR	ANR
Pentachlorophenol	Composite	lbs/day	CALC	-	0.98	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Perchlorate	Composite	µg/L	E314.0	-	6.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Perchlorate	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	1/Discharge	7.1	NM	NM	*	ANR	ANR	ANR	ANR
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	8.2	1/Year	1/Discharge	0.71	0.42	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Selenium	Composite	lbs/day	CALC	-	8.1	-	1/Discharge	0.0036	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
Selenium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.42	2.0	U *	ANR	ANR	ANR	ANR
Settleable solids	Grab	mL/L	SM2540F	-	-	-	1/Discharge	ND	0.10	0.10	U *	ANR	ANR	ANR	ANR
Silver	Composite	µg/L	E200.8	0.25	4.1	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver	Composite	lbs/day	CALC	-	4.03	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	300	-	1/Discharge	10	0.37	2.0	*	ANR	ANR	ANR	ANR
Sulfate	Composite	lbs/day	CALC	-	294,810	-	1/Discharge	50	NA	NA	*	ANR	ANR	ANR	ANR
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	1/Discharge	51.82	NM	NM	*	ANR	ANR	ANR	ANR
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.97	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	-	1/Discharge	100	5.7	10	*	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	lbs/day	CALC	-	933,565	-	1/Discharge	500	NA	NA	*	ANR	ANR	ANR	ANR
Total Organic Carbon	Composite	mg/L	SM5310C	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	0.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	**Outfall 001**				**Outfall 001**			
							DATE RANGE	**12/27/2025 11:40 - 12/27/2025 11:45**				**12/28/2025 13:00**			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Total Residual Chlorine, Field	Grab	lbs/day	CALC	-	98.3	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Year	1/Discharge	38	1.6	2.0	*	ANR	ANR	ANR	ANR
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	5.0	1/Year	1/Discharge	ND	0.11	0.50	U *	ANR	ANR	ANR	ANR
Trichloroethene	Grab	lbs/day	CALC	-	4.9	-	1/Discharge	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Turbidity	Composite	NTU	SM2130	-	-	-	1/Discharge	85	0.65	1.0	*	ANR	ANR	ANR	ANR
Vanadium	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	159	1/Year	1/Discharge	21	4.5	20	*	ANR	ANR	ANR	ANR
Zinc	Composite	lbs/day	CALC	-	156.25	-	1/Discharge	0.11	NA	NA	*	ANR	ANR	ANR	ANR
Zinc, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	4.5	20	U *	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 002			
							LOCATION								
							DATE RANGE	12/31/2025 14:50 - 01/02/2026 10:05				11/15/2025 11:45 - 11/16/2025 10:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	1.1	2.0	U *	ND	1.1	2.0	U *
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	6.0	1/Year	1/Discharge	ND	0.19	0.50	U *	ND	0.19	0.50	U *
1,1-Dichloroethene	Grab	lbs/day	CALC	-	5.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.78	2.0	U *	ND	0.78	2.0	U *
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	0.5	1/Year	1/Discharge	ND	0.17	0.50	U *	ND	0.17	0.50	U *
1,2-Dichloroethane	Grab	lbs/day	CALC	-	0.49	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dioxane	Composite	µg/L	SW8260SIM	-	-	-	1/Discharge	ND	0.55	1.0	U *	ND	0.55	1.0	U *
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	13	1/Year	1/Discharge	ND	0.056	0.95	U *	ND	0.057	0.97	U *
2,4,6-Trichlorophenol	Composite	lbs/day	CALC	-	12.8	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	18	1/Year	1/Discharge	ND	0.12	0.19	U *	ND	0.12	0.19	U *
2,4-Dinitrotoluene	Composite	lbs/day	CALC	-	17.7	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Year	1/Discharge	ND	0.52	4.8	U *	ND	0.53	4.8	U *
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.076	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Year	1/Discharge	ND	0.0037	0.005	U *	ND	0.018	0.025	U *
4,4'-DDE	Composite	lbs/day	CALC	-	0.00058	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	0.03	1/Year	1/Discharge	ND	0.0024	0.005	U *	ND	0.012	0.025	U *
alpha-BHC	Composite	lbs/day	CALC	-	0.03	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	-	1/Discharge	1.1	0.0029	0.015	--	4.5	0.015	0.075	--
Aluminum	Composite	lbs/day	CALC	-	983	-	1/Discharge	6.1	NA	NA	--	17.9	NA	NA	--
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Discharge	0.037	0.0029	0.015	*	0.016	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	10.1	-	1/Discharge	0.030	0.023	0.075	J (DNQ*)	ND	0.023	0.075	U *
Ammonia - N	Composite	lbs/day	CALC	-	9,925	-	1/Discharge	0.20	NA	NA	J (DNQ*)	ND	NA	NA	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 002			
							LOCATION								
							DATE RANGE	12/31/2025 14:50 - 01/02/2026 10:05				11/15/2025 11:45 - 11/16/2025 10:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ND	2.5	2.5	U *
Arsenic	Composite	µg/L	E200.8	2	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic	Composite	lbs/day	CALC	-	9.83	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	1.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	lbs/day	CALC	-	983	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Year	1/Discharge	ND	0.89	4.8	U *	ND	0.91	4.8	U *
Benzidine	Composite	lbs/day	CALC	-	0.00053	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	4.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	lbs/day	CALC	-	3.93	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	mg/L	SM5210B	-	30	-	1/Discharge	1.1	1.0	2.0	J (DNQ*)	3.4	1.0	2.0	*
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	lbs/day	CALC	-	29,481	-	1/Discharge	6.1	NA	NA	J (DNQ*)	1.4	NA	NA	*
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4	1/Year	1/Discharge	ND	1.0	4.8	U *	1.2	1.0	4.8	J (DNQ*)
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	3.93	-	1/Discharge	ND	NA	NA	U *	0.00048	NA	NA	J (DNQ*)
Boron	Composite	mg/L	E200.7	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Year	1/Discharge	ND	0.047	1.0	U *	0.082	0.047	1.0	J (DNQ*)
Cadmium	Composite	lbs/day	CALC	-	3.05	-	1/Discharge	ND	NA	NA	U *	0.000033	NA	NA	J (DNQ*)
Cadmium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.047	1.0	U *	ND	0.047	1.0	U *
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	-	1/Discharge	5.0	0.36	1.0	*	19	0.72	2.0	*
Chloride	Composite	lbs/day	CALC	-	147,405	-	1/Discharge	30	NA	NA	*	7.6	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

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OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 002			
							LOCATION								
							DATE RANGE	12/31/2025 14:50 - 01/02/2026 10:05				11/15/2025 11:45 - 11/16/2025 10:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Chromium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	lbs/day	CALC	-	15.72	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	-	1st & 2nd rain event/year	SURVIVAL = PASS, % EFFECT = -0.70%	NM	NM	*	ANR	ANR	ANR	ANR
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.24	0.50	U *	ND	0.24	0.50	U *
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	umhos/cm	SM2510	-	-	-	1/Discharge	200	1.0	1.0	*	520	1.0	1.0	*
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Year	1/Discharge	2.8	0.24	2.0	*	6.7	0.24	2.0	*
Copper	Composite	lbs/day	CALC	-	66.3	-	1/Discharge	0.016	NA	NA	*	0.0027	NA	NA	*
Copper, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	1.7	0.24	2.0	J (DNQ*)	1.9	0.24	2.0	J (DNQ*)
Cyanide	Composite	µg/L	KELADA-01	5	8.5	1/Year	1/Discharge	2.7	2.7	5.0	J (DNQ*)	ND	2.7	5.0	U *
Cyanide	Composite	lbs/day	CALC	-	8.4	-	1/Discharge	0.015	NA	NA	J (DNQ*)	ND	NA	NA	U *
Cyclohexane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.80	2.0	U *	ND	0.80	2.0	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	0.5	-	1/Discharge	0.089	0.062	0.20	J (DNQ*)	ND	0.062	0.20	U *
Detergents (as MBAS)	Composite	lbs/day	CALC	-	491.4	-	1/Discharge	0.49	NA	NA	J (DNQ*)	ND	NA	NA	U *
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	-	1/Discharge	26.20	NM	NM	*	12.16	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	117.83	1/Quarter	1/Discharge	0.66467	NA	NA	*	0.47596	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	1,572	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	170	0.48	7.1	*
Heptachlor	Composite	µg/L	E608.3	0.01	0.00042	1/Year	1/Discharge	ND	0.005	0.005	U *	ND	0.012	0.025	U *
Heptachlor	Composite	lbs/day	CALC	-	0.00041	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	0.1	1/Year	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	lbs/day	CALC	-	0.1	-	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	10	0.1	1/Year	1/Discharge	ND	0.094	0.28	U *	ND	0.096	0.29	U *
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Iron	Composite	mg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

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THE BOEING COMPANY
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								Outfall 001				Outfall 002			
							LOCATION								
							DATE RANGE	12/31/2025 14:50 - 01/02/2026 10:05				11/15/2025 11:45 - 11/16/2025 10:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Year	1/Discharge	0.84	0.058	1.0	J (DNQ*)	3.7	0.058	1.0	*
Lead	Composite	lbs/day	CALC	-	5.1	-	1/Discharge	0.0047	NA	NA	J (DNQ*)	0.0015	NA	NA	*
Lead, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.058	1.0	U *	0.067	0.058	1.0	J (DNQ*)
Manganese	Composite	µg/L	E200.8	-	50	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese	Composite	lbs/day	CALC	-	49.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.1	1/Year	1/Discharge	0.0089	0.0002	0.0005	*	0.012	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	0.000049	NA	NA	*	0.0000048	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	-	-	-	Additional/Discharge	0.0067	0.0002	0.0005	*	0.0055	0.0002	0.0005	*
Monomethyl hydrazine	Composite	µg/L	SW8315	-	-	-	1/Discharge	ND	0.62	2.0	U *	ND	0.62	2.0	U *
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	94	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	92.4	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	8	-	1/Discharge	0.46	0.020	0.10	*	0.43	0.039	0.20	*
Nitrate - N	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	2.5	NA	NA	*	0.17	NA	NA	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	-	1/Discharge	0.46	0.091	0.10	*	0.43	0.18	0.20	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	2.5	NA	NA	*	0.17	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	1	-	1/Discharge	ND	0.091	0.10	U *	ND	0.18	0.20	U *
Nitrite - N	Composite	lbs/day	CALC	-	983	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	16	1/Year	1/Discharge	ND	0.087	0.19	U *	ND	0.089	0.19	U *
N-Nitrosodimethylamine	Composite	lbs/day	CALC	-	15.72	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	15	-	1/Discharge	0.59	0.50	0.98	J (DNQ*)	ND	0.51	1.0	U *
Oil & Grease	Grab	lbs/day	CALC	-	14,741	-	1/Discharge	3.3	NA	NA	J (DNQ*)	ND	NA	NA	U *
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1	1/Year	1/Discharge	0.76	0.092	0.95	J (DNQ*)	ND	0.093	0.97	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.98	-	1/Discharge	0.0042	NA	NA	J (DNQ*)	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Perchlorate	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	1/Discharge	7.85	NM	NM	*	7.25	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	8.2	1/Year	1/Discharge	ND	0.42	2.0	U *	1.1	0.42	2.0	J (DNQ*)
Selenium	Composite	lbs/day	CALC	-	8.1	-	1/Discharge	ND	NA	NA	U *	0.00044	NA	NA	J (DNQ*)
Selenium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.42	2.0	U *	0.51	0.42	2.0	J (DNQ*)
Settleable solids	Grab	mL/L	SM2540F	-	-	-	1/Discharge	ND	0.10	0.10	U *	0.20	0.10	0.10	*
Silver	Composite	µg/L	E200.8	0.25	4.1	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver	Composite	lbs/day	CALC	-	4.03	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	300	-	1/Discharge	11	0.18	1.0	*	120	0.37	2.0	*
Sulfate	Composite	lbs/day	CALC	-	294,810	-	1/Discharge	61	NA	NA	*	48	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	1/Discharge	53.6	NM	NM	*	57.22	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.97	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	-	1/Discharge	140	5.7	10	*	350	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	933,565	-	1/Discharge	780	NA	NA	*	140	NA	NA	*
Total Organic Carbon	Composite	mg/L	SM5310C	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	0.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 001				Outfall 002			
							LOCATION								
							DATE RANGE	12/31/2025 14:50 - 01/02/2026 10:05				11/15/2025 11:45 - 11/16/2025 10:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Total Residual Chlorine, Field	Grab	lbs/day	CALC	-	98.3	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Year	1/Discharge	34	0.80	1.0	*	98	3.2	4.0	*
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	5.0	1/Year	1/Discharge	ND	0.11	0.50	U *	ND	0.11	0.50	U *
Trichloroethene	Grab	lbs/day	CALC	-	4.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Turbidity	Composite	NTU	SM2130	-	-	-	1/Discharge	25	0.65	1.0	*	160	0.40	0.50	*
Vanadium	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	159	1/Year	1/Discharge	7.9	4.5	20	J (DNQ*)	29	4.5	20	*
Zinc	Composite	lbs/day	CALC	-	156.25	-	1/Discharge	0.044	NA	NA	J (DNQ*)	0.012	NA	NA	*
Zinc, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	4.5	20	U *	ND	4.5	20	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 002 12/24/2025 07:55 - 12/25/2025 08:10				Outfall 002 12/31/2025 14:05 - 01/02/2026 08:15			
LOCATION															
DATE RANGE															
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	1.1	2.0	U *	ND	1.1	2.0	U *
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	6.0	1/Year	1/Discharge	ND	0.19	0.50	U *	ND	0.19	0.50	U *
1,1-Dichloroethene	Grab	lbs/day	CALC	-	5.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.78	2.0	U *	ND	0.78	2.0	U *
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	0.5	1/Year	1/Discharge	ND	0.17	0.50	U *	ND	0.17	0.50	U *
1,2-Dichloroethane	Grab	lbs/day	CALC	-	0.49	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dioxane	Composite	µg/L	SW8260SIM	-	-	-	1/Discharge	ND	0.55	1.0	U *	ND	0.55	1.0	U *
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	13	1/Year	1/Discharge	ND	0.056	0.95	U *	ND	0.056	0.95	U *
2,4,6-Trichlorophenol	Composite	lbs/day	CALC	-	12.8	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	18	1/Year	1/Discharge	ND	0.12	0.19	U *	ND	0.12	0.19	U *
2,4-Dinitrotoluene	Composite	lbs/day	CALC	-	17.7	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Year	1/Discharge	ND	0.52	4.8	U *	ND	0.52	4.8	U *
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.076	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Year	1/Discharge	ND	0.0074	0.01	U *	ND	0.0037	0.005	U *
4,4'-DDE	Composite	lbs/day	CALC	-	0.00058	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	0.03	1/Year	1/Discharge	ND	0.01	0.01	U *	ND	0.0024	0.005	U *
alpha-BHC	Composite	lbs/day	CALC	-	0.03	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	-	1/Discharge	4.1	0.0029	0.015	--	0.45	0.0029	0.015	*
Aluminum	Composite	lbs/day	CALC	-	983	-	1/Discharge	464.7	NA	NA	--	5.98	NA	NA	--
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Discharge	0.013	0.0029	0.015	J (DNQ*)	0.045	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	10.1	-	1/Discharge	ND	0.023	0.075	U *	ND	0.023	0.075	U *
Ammonia - N	Composite	lbs/day	CALC	-	9,925	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 002 12/24/2025 07:55 - 12/25/2025 08:10				Outfall 002 12/31/2025 14:05 - 01/02/2026 08:15			
LOCATION															
DATE RANGE															
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Arsenic	Composite	µg/L	E200.8	2	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic	Composite	lbs/day	CALC	-	9.83	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	1.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	lbs/day	CALC	-	983	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Year	1/Discharge	ND	0.89	4.8	U *	ND	0.89	4.8	U *
Benzidine	Composite	lbs/day	CALC	-	0.00053	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	4.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	lbs/day	CALC	-	3.93	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	mg/L	SM5210B	-	30	-	1/Discharge	1.9	1.0	2.0	J (DNQ*)	1.9	1.0	2.0	J (DNQ*)
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	lbs/day	CALC	-	29,481	-	1/Discharge	220	NA	NA	J (DNQ*)	25	NA	NA	J (DNQ*)
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4	1/Year	1/Discharge	ND	1.0	4.8	U *	ND	1.0	4.8	U *
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	3.93	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Boron	Composite	mg/L	E200.7	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Year	1/Discharge	0.11	0.047	1.0	J (DNQ*)	0.062	0.047	1.0	J (DNQ*)
Cadmium	Composite	lbs/day	CALC	-	3.05	-	1/Discharge	0.012	NA	NA	J (DNQ*)	0.00082	NA	NA	J (DNQ*)
Cadmium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.047	1.0	U *	ND	0.047	1.0	U *
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	-	1/Discharge	5.6	0.72	2.0	*	11	0.36	1.0	*
Chloride	Composite	lbs/day	CALC	-	147,405	-	1/Discharge	630	NA	NA	*	150	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 002				Outfall 002			
							LOCATION								
							DATE RANGE	12/24/2025 07:55 - 12/25/2025 08:10				12/31/2025 14:05 - 01/02/2026 08:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Chromium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	lbs/day	CALC	-	15.72	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	-	1st & 2nd rain event/year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	-	-	1/Discharge	0.40	0.24	0.50	J (DNQ*)	3.6	0.24	0.50	*
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	umhos/cm	SM2510	-	-	-	1/Discharge	230	1.0	1.0	*	440	1.0	1.0	*
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Year	1/Discharge	5.4	0.24	2.0	*	1.8	0.24	2.0	J (DNQ*)
Copper	Composite	lbs/day	CALC	-	66.3	-	1/Discharge	0.61	NA	NA	*	0.024	NA	NA	J (DNQ*)
Copper, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	1.9	0.24	2.0	J (DNQ*)	1.3	0.24	2.0	J (DNQ*)
Cyanide	Composite	µg/L	KELADA-01	5	8.5	1/Year	1/Discharge	ND	2.7	5.0	U *	3.2	2.7	5.0	J (DNQ*)
Cyanide	Composite	lbs/day	CALC	-	8.4	-	1/Discharge	ND	NA	NA	U *	0.043	NA	NA	J (DNQ*)
Cyclohexane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.80	2.0	U *	ND	0.80	2.0	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	0.5	-	1/Discharge	ND	0.062	0.20	U *	0.068	0.062	0.20	J (DNQ*)
Detergents (as MBAS)	Composite	lbs/day	CALC	-	491.4	-	1/Discharge	ND	NA	NA	U *	0.90	NA	NA	J (DNQ*)
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	-	1/Discharge	15.12	NM	NM	*	26.41	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	117.83	1/Quarter	1/Discharge	13.590	NA	NA	*	1.5939	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	1,572	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	0.00042	1/Year	1/Discharge	ND	0.0046	0.01	U *	ND	0.0023	0.005	U *
Heptachlor	Composite	lbs/day	CALC	-	0.00041	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	0.1	1/Year	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	lbs/day	CALC	-	0.1	-	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	10	0.1	1/Year	1/Discharge	ND	0.095	0.28	U *	ND	0.096	0.29	U *
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Iron	Composite	mg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 002 12/24/2025 07:55 - 12/25/2025 08:10				Outfall 002 12/31/2025 14:05 - 01/02/2026 08:15			
LOCATION															
DATE RANGE															
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Year	1/Discharge	3.6	0.058	1.0	*	0.30	0.058	1.0	J (DNQ*)
Lead	Composite	lbs/day	CALC	-	5.1	-	1/Discharge	0.41	NA	NA	*	0.0040	NA	NA	J (DNQ*)
Lead, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.058	1.0	U *	ND	0.058	1.0	U *
Manganese	Composite	µg/L	E200.8	-	50	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese	Composite	lbs/day	CALC	-	49.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.1	1/Year	1/Discharge	0.028	0.0002	0.0005	*	0.0056	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	0.0032	NA	NA	*	0.000074	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	-	-	-	Additional/Discharge	0.011	0.0002	0.0005	*	0.0043	0.0002	0.0005	*
Monomethyl hydrazine	Composite	µg/L	SW8315	-	-	-	1/Discharge	ND	0.62	2.0	U *	ND	0.62	2.0	U *
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	94	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	92.4	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	8	-	1/Discharge	0.51	0.039	0.20	*	0.50	0.02	0.10	*
Nitrate - N	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	58	NA	NA	*	7.0	NA	NA	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	-	1/Discharge	0.51	0.18	0.20	*	0.50	0.091	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	58	NA	NA	*	7.0	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	1	-	1/Discharge	ND	0.18	0.20	U *	ND	0.091	0.10	U *
Nitrite - N	Composite	lbs/day	CALC	-	983	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	16	1/Year	1/Discharge	ND	0.087	0.19	U *	ND	0.087	0.19	U *
N-Nitrosodimethylamine	Composite	lbs/day	CALC	-	15.72	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	15	-	1/Discharge	0.79	0.50	0.98	J (DNQ*)	ND	0.52	1.0	U *
Oil & Grease	Grab	lbs/day	CALC	-	14,741	-	1/Discharge	90	NA	NA	J (DNQ*)	ND	NA	NA	U *
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1	1/Year	1/Discharge	0.78	0.092	0.95	J (DNQ*)	ND	0.092	0.95	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.98	-	1/Discharge	0.088	NA	NA	J (DNQ*)	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Perchlorate	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	1/Discharge	7.42	NM	NM	*	7.20	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	8.2	1/Year	1/Discharge	0.44	0.42	2.0	J (DNQ*)	0.48	0.42	2.0	J (DNQ*)
Selenium	Composite	lbs/day	CALC	-	8.1	-	1/Discharge	0.05	NA	NA	J (DNQ*)	0.0064	NA	NA	J (DNQ*)
Selenium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.42	2.0	U *	ND	0.42	2.0	U *
Settleable solids	Grab	mL/L	SM2540F	-	-	-	1/Discharge	1.0	0.10	0.10	*	ND	0.10	0.10	U *
Silver	Composite	µg/L	E200.8	0.25	4.1	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver	Composite	lbs/day	CALC	-	4.03	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	300	-	1/Discharge	27	0.37	2.0	*	110	0.92	5.0	*
Sulfate	Composite	lbs/day	CALC	-	294,810	-	1/Discharge	3,100	NA	NA	*	1,500	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	1/Discharge	55.9	NM	NM	*	58.1	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.97	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	-	1/Discharge	110	5.7	10	*	280	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	933,565	-	1/Discharge	12,000	NA	NA	*	3,700	NA	NA	*
Total Organic Carbon	Composite	mg/L	SM5310C	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	0.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 002				Outfall 002			
							LOCATION								
							DATE RANGE	12/24/2025 07:55 - 12/25/2025 08:10				12/31/2025 14:05 - 01/02/2026 08:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Total Residual Chlorine, Field	Grab	lbs/day	CALC	-	98.3	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Year	1/Discharge	120	3.2	4.0	*	8.5	0.80	1.0	*
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	5.0	1/Year	1/Discharge	ND	0.11	0.50	U *	1.5	0.11	0.50	*
Trichloroethene	Grab	lbs/day	CALC	-	4.9	-	1/Discharge	ND	NA	NA	U *	0.02	NA	NA	*
Turbidity	Composite	NTU	SM2130	-	-	-	1/Discharge	70	0.65	1.0	*	9.6	0.65	1.0	*
Vanadium	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	159	1/Year	1/Discharge	36	4.5	20	*	ND	4.5	20	U *
Zinc	Composite	lbs/day	CALC	-	156.25	-	1/Discharge	4.1	NA	NA	*	ND	NA	NA	U *
Zinc, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	4.7	4.5	20	J (DNQ*)	ND	4.5	20	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 011				Outfall 011			
							LOCATION								
							DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/31/2025 15:10 - 01/02/2026 10:35			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ND	0.15	0.50	U *	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	1.1	2.0	U *	ND	1.1	2	U *
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.20	0.50	U *	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	6.0	1/Year	1/Discharge	ND	0.19	0.50	U *	ND	0.19	0.50	U *
1,1-Dichloroethene	Grab	lbs/day	CALC	-	5.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ND	0.18	1.0	U *	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.082	0.20	U *	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.78	2.0	U *	ND	0.78	2.0	U *
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ND	0.076	0.20	U *	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	0.5	1/Year	1/Discharge	ND	0.17	0.50	U *	ND	0.17	0.50	U *
1,2-Dichloroethane	Grab	lbs/day	CALC	-	0.49	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ND	0.17	0.50	U *	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.024	0.20	U *	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.078	0.20	U *	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.12	0.50	U *	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.075	0.20	U *	ANR	ANR	ANR	ANR
1,4-Dioxane	Composite	µg/L	SW8260SIM	-	-	-	1/Discharge	ND	0.55	1.0	U *	ND	0.55	1.0	U *
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	13	1/Year	1/Discharge	ND	0.058	0.99	U *	ND	0.056	0.96	U *
2,4,6-Trichlorophenol	Composite	lbs/day	CALC	-	12.8	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.046	0.99	U *	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ND	0.064	0.20	U *	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	2.5	4.9	U *	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	18	1/Year	1/Discharge	ND	0.13	0.20	U *	ND	0.12	0.19	U *
2,4-Dinitrotoluene	Composite	lbs/day	CALC	-	17.7	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.066	0.20	U *	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ND	0.59	1.0	U*	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.066	0.20	U *	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.057	0.20	U *	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	1.7	4.9	U *	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	1.4	4.9	U *	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Year	1/Discharge	ND	0.54	4.9	U *	ND	0.52	4.8	U *
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.076	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ND	0.0054	0.01	U *	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Year	1/Discharge	ND	0.0074	0.01	U *	ND	0.0037	0.005	U *
4,4'-DDE	Composite	lbs/day	CALC	-	0.00058	-	1/Discharge	ND	0.0074	0.01	U *	ND	NA	NA	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ND	0.01	0.01	U *	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.053	0.20	U *	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.054	0.99	U *	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.061	0.20	U *	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.78	4.9	U *	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.064	0.20	U *	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.064	0.20	U *	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	1/Year	ND	1.8	5.0	U *	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.98	2.0	U *	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ND	0.0062	0.01	U *	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	0.03	1/Year	1/Discharge	ND	0.0048	0.01	U *	ND	0.0024	0.005	U *
alpha-BHC	Composite	lbs/day	CALC	-	0.03	-	1/Discharge	ND	0.0048	0.01	U *	ND	NA	NA	U *
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ND	0.0038	0.01	U *	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	-	1/Discharge	2.6	0.0029	0.015	--	0.62	0.0029	0.015	*
Aluminum	Composite	lbs/day	CALC	-	983	-	1/Discharge	190.7	NA	NA	--	5.7	NA	NA	*
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Discharge	0.026	0.0029	0.015	*	0.12	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	10.1	-	1/Discharge	ND	0.023	0.075	U *	ND	0.023	0.075	U *
Ammonia - N	Composite	lbs/day	CALC	-	9,925	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 011				Outfall 011			
							LOCATION								
							DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/31/2025 15:10 - 01/02/2026 10:35			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.025	0.20	U *	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	1/Year	ND	0.79	2.0	U *	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	5.9	-	1/Year	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	-	Additional/Year	1.0	0.79	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR
Arsenic	Composite	µg/L	E200.8	2	10	-	1/Year	2.2	0.16	1.0	*	ANR	ANR	ANR	ANR
Arsenic	Composite	lbs/day	CALC	-	9.83	-	1/Year	0.16	NA	NA	*	ANR	ANR	ANR	ANR
Arsenic, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	1.1	0.16	1.0	*	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	1.0	-	1/Year	0.03	0.00054	0.001	*	ANR	ANR	ANR	ANR
Barium	Composite	lbs/day	CALC	-	983	-	1/Year	2.0	NA	NA	*	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	0.0093	0.00054	0.001	*	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.10	0.50	U *	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Year	1/Discharge	ND	0.92	4.9	U *	ND	0.90	4.8	U *
Benzidine	Composite	lbs/day	CALC	-	0.00053	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.059	0.20	U *	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.028	0.20	U *	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.059	0.20	U *	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	4.0	1/Year	1/Year	0.26	0.23	0.50	J (DNQ*)	ANR	ANR	ANR	ANR
Beryllium	Composite	lbs/day	CALC	-	3.93	-	1/Year	0.019	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ND	0.0066	0.01	U *	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ND	0.0078	0.01	U *	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	mg/L	SM5210B	-	30	-	1/Discharge	1.7	1.0	2.0	J (DNQ*)	1.9	1.0	2.0	J (DNQ*)
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	lbs/day	CALC	-	29,481	-	1/Discharge	120	NA	NA	J (DNQ*)	18	NA	NA	J (DNQ*)
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.070	0.20	U *	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ND	0.086	0.20	U *	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4	1/Year	1/Discharge	ND	1.1	4.9	U *	ND	1.0	4.8	U *
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	3.93	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Boron	Composite	mg/L	E200.7	-	-	-	1/Year	0.056	0.026	0.50	J (DNQ*)	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	-	Additional/Year	0.037	0.026	0.50	J (DNQ*)	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.25	1.0	U *	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.38	0.50	U *	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.34	0.99	U *	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Year	1/Discharge	0.20	0.047	1.0	J (DNQ*)	0.074	0.047	1.0	J (DNQ*)
Cadmium	Composite	lbs/day	CALC	-	3.05	-	1/Discharge	0.01	NA	NA	J (DNQ*)	0.00068	NA	NA	J (DNQ*)
Cadmium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	0.051	0.047	1.0	J (DNQ*)	0.071	0.047	1.0	J (DNQ*)
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.20	0.50	U *	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	1/Year	ND	0.2	0.2	U *	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	-	1/Discharge	3.3	0.72	2.0	*	3.2	0.36	1.0	*
Chloride	Composite	lbs/day	CALC	-	147,405	-	1/Discharge	240	NA	NA	*	30	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.25	0.50	U *	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	16	1/Year	1/Year	4.1	0.54	2.0	*	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	Outfall 011				Outfall 011			
							DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/31/2025 15:10 - 01/02/2026 10:35			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Chromium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ND	0.54	2.0	U *	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	1/Year	4.1	3.0	50	J (DNQ*)	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ND	3.0	50	U*	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	16	1/Year	1/Year	ND	0.051	0.20	U *	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	lbs/day	CALC	-	15.72	-	1/Year	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ND	0.051	0.20	U *	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	-	1st & 2nd rain event/year	SURVIVAL = PASS, % EFFECT = -1.19%	NM	NM	*	SURVIVAL = PASS, % EFFECT = 12.24%	NM	NM	*
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.055	0.20	U *	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.24	0.50	U *	ND	0.24	0.50	U *
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	-	1/Year	1.2	0.050	1.0	*	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	0.11	0.050	1.0	J (DNQ*)	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	umhos/cm	SM2510	-	-	-	1/Discharge	68	1.0	1.0	*	200	1.0	1.0	*
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Year	1/Discharge	5.8	0.24	2.0	*	2.5	0.24	2.0	*
Copper	Composite	lbs/day	CALC	-	66.3	-	1/Discharge	0.43	NA	NA	*	0.023	NA	NA	*
Copper, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	2.9	0.24	2.0	*	2.1	0.24	2.0	*
Cyanide	Composite	µg/L	KELADA-01	5	8.5	1/Year	1/Discharge	2.8	2.7	5.0	J (DNQ*)	ND	2.7	5.0	U *
Cyanide	Composite	lbs/day	CALC	-	8.4	-	1/Discharge	0.21	NA	NA	J (DNQ*)	ND	NA	NA	U *
Cyclohexane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.80	2.0	U *	ND	0.80	2.0	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ND	0.01	0.01	U *	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	0.5	-	1/Discharge	0.16	0.062	0.20	J (DNQ*)	0.075	0.062	0.20	J (DNQ*)
Detergents (as MBAS)	Composite	lbs/day	CALC	-	491.4	-	1/Discharge	12	NA	NA	J (DNQ*)	0.69	NA	NA	J (DNQ*)
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.14	0.20	U *	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ND	0.0034	0.01	U *	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ND	0.20	2.0	U *	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ND	1.6	2.0	U *	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.70	2.0	U *	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.074	3.0	U *	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	-	1/Discharge	14.13	NM	NM	*	14.05	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ND	0.0058	0.01	U *	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ND	0.008	0.01	U *	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ND	0.0079	0.01	U *	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.090	0.50	U *	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	117.83	1/Quarter	1/Discharge	8.7953	NA	NA	*	1.1088	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.055	0.20	U *	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.059	0.20	U *	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	-	1/Year	0.12	0.092	0.20	J (DNQ*)	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	1,572	-	1/Year	8.8	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ND	0.0072	0.01	U *	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	-	Additional/Year	24	0.48	7.1	*	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Quarter	1/Year	34	0.48	7.1	*	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	0.00042	1/Year	1/Discharge	ND	0.0046	0.01	U *	ND	0.005	0.005	U *
Heptachlor	Composite	lbs/day	CALC	-	0.00041	-	1/Discharge	ND	0.0046	0.01	U *	ND	NA	NA	U *
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ND	0.0090	0.01	U *	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.069	0.20	U *	ANR	ANR	ANR	ANR
Hexachlorobutadiene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.11	0.20	U *	ANR	ANR	ANR	ANR
Hexachlorobutadiene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ND	0.22	0.50	U *	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.11	0.20	U *	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.096	0.20	U *	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	-	Additional/Year	ND	0	0	U *	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	0.1	1/Year	Additional	ND	0.13	0.20	U *	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	lbs/day	CALC	-	0.1	-	Additional	ND	0.13	0.2	U *	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	10	0.1	1/Year	1/Discharge	ND	0.098	0.29	U *	ND	0.097	0.29	U *
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Iron	Composite	mg/L	E200.8	-	-	-	1/Year	3.2	0.018	0.02	*	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	0.042	0.018	0.02	*	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 011				Outfall 011			
							LOCATION								
							DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/31/2025 15:10 - 01/02/2026 10:35			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.070	0.20	U *	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Year	1/Discharge	2.5	0.058	1.0	*	0.15	0.058	1.0	J (DNQ*)
Lead	Composite	lbs/day	CALC	-	5.1	-	1/Discharge	0.18	NA	NA	*	0.0014	NA	NA	J (DNQ*)
Lead, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	0.078	0.058	1.0	J (DNQ*)	ND	0.058	1.0	U *
Manganese	Composite	µg/L	E200.8	-	50	-	1/Year	52	1.4	2.0	--	ANR	ANR	ANR	ANR
Manganese	Composite	lbs/day	CALC	-	49.1	-	1/Year	3.8	NA	NA	--	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	2.0	1.4	2.0	*	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.1	1/Year	1/Discharge	0.033	0.0002	0.0005	*	0.0067	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	0.0024	NA	NA	*	0.000062	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	-	-	-	Additional/Discharge	0.015	0.0002	0.0005	*	0.0049	0.0002	0.0005	*
Monomethyl hydrazine	Composite	µg/L	SW8315	-	-	-	1/Discharge	ND	0.62	2.0	U *	ND	0.62	2.0	U *
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.63	2.0	U *	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ND	0.17	1.0	U *	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.055	0.20	U *	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	94	1/Year	1/Year	4.1	0.60	2.0	*	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	92.4	-	1/Year	0.30	NA	NA	*	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	1.1	0.60	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	8	-	1/Discharge	0.81	0.039	0.20	*	0.41	0.020	0.10	*
Nitrate - N	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	59	NA	NA	*	3.8	NA	NA	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	-	1/Discharge	0.81	0.18	0.20	*	0.41	0.091	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	59	NA	NA	*	3.8	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	1	-	1/Discharge	ND	0.18	0.20	U *	ND	0.091	0.10	U *
Nitrite - N	Composite	lbs/day	CALC	-	983	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.083	0.20	U *	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	16	1/Year	1/Discharge	ND	0.090	0.20	U *	ND	0.088	0.19	U *
N-Nitrosodimethylamine	Composite	lbs/day	CALC	-	15.72	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.059	0.20	U *	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.031	0.20	U *	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	15	-	1/Discharge	1.2	0.52	1.0	*	0.99	0.51	0.99	*
Oil & Grease	Grab	lbs/day	CALC	-	14,741	-	1/Discharge	90	NA	NA	*	9.2	NA	NA	*
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1	1/Year	1/Discharge	ND	0.095	0.99	U *	ND	0.092	0.96	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.98	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	-	1/Year	ND	4.3	20	U *	ANR	ANR	ANR	ANR
Perchlorate	Composite	lbs/day	CALC	-	5.9	-	1/Year	ND	NA	NA	U *	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	1/Discharge	7.49	NM	NM	*	7.68	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ND	0.067	0.20	U *	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ND	0.033	0.99	U *	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ND	0.066	0.20	U *	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	8.2	1/Year	1/Discharge	0.57	0.42	2.0	J (DNQ*)	ND	0.42	2.0	U *
Selenium	Composite	lbs/day	CALC	-	8.1	-	1/Discharge	0.042	NA	NA	J (DNQ*)	ND	NA	NA	U *
Selenium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	0.45	0.42	2.0	J (DNQ*)	ND	0.42	2.0	U *
Settleable solids	Grab	mL/L	SM2540F	-	-	-	1/Discharge	ND	0.1	0.1	U *	ND	0.10	0.10	U *
Silver	Composite	µg/L	E200.8	0.25	4.1	1/Year	1/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR
Silver	Composite	lbs/day	CALC	-	4.03	-	1/Year	ND	NA	NA	U *	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	300	-	1/Discharge	3.5	0.37	2.0	*	45	0.18	1.0	*
Sulfate	Composite	lbs/day	CALC	-	294,810	-	1/Discharge	260	NA	NA	*	420	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	1/Discharge	56.1	NM	NM	*	52.6	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2.0	1/Year	1/Year	0.16	0.055	1.0	J (DNQ*)	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.97	-	1/Year	0.012	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	-	Additional/Year	ND	0.055	1.0	U *	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.11	0.50	U *	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	-	1/Discharge	42	5.7	10	*	130	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	933,565	-	1/Discharge	3,100	NA	NA	*	1,200	NA	NA	*
Total Organic Carbon	Composite	mg/L	SM5310C	-	-	-	1/Year	12	0.60	1.0	*	ANR	ANR	ANR	ANR
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	0.1	-	1/Year	0.0	NM	NM	*	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 011				Outfall 011			
							LOCATION								
							DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/31/2025 15:10 - 01/02/2026 10:35			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Total Residual Chlorine, Field	Grab	lbs/day	CALC	-	98.3	-	1/Year	0.0	NA	NA	*	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Year	1/Discharge	55	1.6	2.0	*	3.0	0.96	1.2	*
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	1/Year	ND	2	2	U *	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	5.0	1/Year	1/Discharge	ND	0.11	0.50	U *	ND	0.11	0.50	U *
Trichloroethene	Grab	lbs/day	CALC	-	4.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Turbidity	Composite	NTU	SM2130	-	-	-	1/Discharge	85	0.65	1.0	*	3.1	0.65	1.0	*
Vanadium	Composite	µg/L	E200.8	-	-	-	1/Year	8.0	0.55	2.0	*	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	1.2	0.55	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	159	1/Year	1/Discharge	25	4.5	20	*	11	4.5	20	J (DNQ*)
Zinc	Composite	lbs/day	CALC	-	156.25	-	1/Discharge	1.8	NA	NA	*	0.10	NA	NA	J (DNQ*)
Zinc, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	4.9	4.5	20	J (DNQ*)	ND	4.5	20	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018				Outfall 018			
							LOCATION								
							DATE RANGE	11/18/2025 12:30 - 11/19/2025 11:40				12/24/2025 11:30 - 12/26/2025 08:45			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	1.1	2.0	U *	ND	1.1	2.0	U *
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	6.0	1/Year	1/Discharge	ND	0.19	0.50	U *	ND	0.19	0.50	U *
1,1-Dichloroethene	Grab	lbs/day	CALC	-	5.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.78	2.0	U *	ND	0.78	2.0	U *
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	0.5	1/Year	1/Discharge	ND	0.17	0.50	U *	ND	0.17	0.50	U *
1,2-Dichloroethane	Grab	lbs/day	CALC	-	0.49	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dioxane	Composite	µg/L	SW8260SIM	-	-	-	1/Discharge	ND	0.55	1.0	U *	ND	0.55	1.0	U *
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	13	1/Year	1/Discharge	ND	0.056	0.96	U *	ND	0.057	0.97	U *
2,4,6-Trichlorophenol	Composite	lbs/day	CALC	-	12.8	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	18	1/Year	1/Discharge	ND	0.12	0.19	U *	ND	0.12	0.19	U *
2,4-Dinitrotoluene	Composite	lbs/day	CALC	-	17.7	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Year	1/Discharge	ND	0.53	4.8	U *	ND	0.53	4.9	U *
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.076	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Year	1/Discharge	ND	0.0037	0.005	U *	ND	0.0037	0.005	U *
4,4'-DDE	Composite	lbs/day	CALC	-	0.00058	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	0.03	1/Year	1/Discharge	ND	0.0024	0.005	U *	ND	0.0024	0.005	U *
alpha-BHC	Composite	lbs/day	CALC	-	0.03	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	-	1/Discharge	0.17	0.0029	0.015	*	1.2	0.0029	0.015	--
Aluminum	Composite	lbs/day	CALC	-	983	-	1/Discharge	2.0	NA	NA	*	61.9	NA	NA	--
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Discharge	0.09	0.0029	0.015	*	0.061	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	10.1	-	1/Discharge	0.048	0.023	0.075	J (DNQ*)	ND	0.023	0.075	U *
Ammonia - N	Composite	lbs/day	CALC	-	9,925	-	1/Discharge	0.56	NA	NA	J (DNQ*)	ND	NA	NA	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018				Outfall 018			
							LOCATION								
							DATE RANGE	11/18/2025 12:30 - 11/19/2025 11:40				12/24/2025 11:30 - 12/26/2025 08:45			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ND	1	1	U *	ND	0.5	0.5	U *
Arsenic	Composite	µg/L	E200.8	2	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic	Composite	lbs/day	CALC	-	9.83	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	1.0	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	lbs/day	CALC	-	983	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Year	1/Discharge	ND	0.90	4.8	U *	ND	0.91	4.9	U *
Benzidine	Composite	lbs/day	CALC	-	0.00053	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	4.0	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	lbs/day	CALC	-	3.93	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	mg/L	SM5210B	-	30	-	1/Discharge	ND	1.0	2.0	U *	1.1	1.0	2.0	J (DNQ*)
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	lbs/day	CALC	-	29,481	-	1/Discharge	ND	NA	NA	U *	57	NA	NA	J (DNQ*)
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4	1/Year	1/Discharge	ND	1.0	4.8	U *	ND	1.0	4.9	U *
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	3.93	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Boron	Composite	mg/L	E200.7	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Year	1/Discharge	0.060	0.047	1.0	J (DNQ*)	0.12	0.047	1.0	J (DNQ*)
Cadmium	Composite	lbs/day	CALC	-	3.05	-	1/Discharge	0.0007	NA	NA	J (DNQ*)	0.0062	NA	NA	J (DNQ*)
Cadmium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	0.049	0.047	1.0	J (DNQ*)	0.047	0.047	1.0	J (DNQ*)
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	-	1/Discharge	6.2	0.36	1.0	*	4.9	0.36	1.0	*
Chloride	Composite	lbs/day	CALC	-	147,405	-	1/Discharge	73	NA	NA	*	250	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018				Outfall 018			
							LOCATION DATE RANGE	11/18/2025 12:30 - 11/19/2025 11:40				12/24/2025 11:30 - 12/26/2025 08:45			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Chromium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	16	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	lbs/day	CALC	-	15.72	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	-	1st & 2nd rain event/year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.24	0.50	U *	ND	0.24	0.50	U *
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	umhos/cm	SM2510	-	-	-	1/Discharge	320	1.0	1.0	*	89	1.0	1.0	*
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Year	1/Discharge	1.8	0.24	2.0	J (DNQ*)	4.0	0.24	2.0	*
Copper	Composite	lbs/day	CALC	-	66.3	-	1/Discharge	0.021	NA	NA	J (DNQ*)	0.2	NA	NA	*
Copper, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	1.5	0.24	2.0	J (DNQ*)	2.7	0.24	2.0	*
Cyanide	Composite	µg/L	KELADA-01	5	8.5	1/Year	1/Discharge	ND	2.7	5.0	U *	2.9	2.7	5.0	J (DNQ*)
Cyanide	Composite	lbs/day	CALC	-	8.4	-	1/Discharge	ND	NA	NA	U *	0.15	NA	NA	J (DNQ*)
Cyclohexane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.80	2.0	U *	ND	0.80	2.0	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	0.5	-	1/Discharge	ND	0.062	0.20	U *	0.13	0.062	0.20	J (DNQ*)
Detergents (as MBAS)	Composite	lbs/day	CALC	-	491.4	-	1/Discharge	ND	NA	NA	U *	6.7	NA	NA	J (DNQ*)
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	-	1/Discharge	10.32	NM	NM	*	14.94	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	117.83	1/Quarter	1/Discharge	1.4078	NA	NA	*	6.1898	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	1,572	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	0.00042	1/Year	1/Discharge	ND	0.005	0.005	U *	ND	0.005	0.005	U *
Heptachlor	Composite	lbs/day	CALC	-	0.00041	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	0.1	1/Year	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	lbs/day	CALC	-	0.1	-	Additional	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	10	0.1	1/Year	1/Discharge	ND	0.096	0.29	U *	ND	0.10	0.32	U *
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Iron	Composite	mg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								LOCATION	Outfall 018				Outfall 018			
								DATE RANGE	11/18/2025 12:30 - 11/19/2025 11:40				12/24/2025 11:30 - 12/26/2025 08:45			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY		RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Year	1/Discharge		0.10	0.058	1.0	J (DNQ*)	1.1	0.058	1.0	*
Lead	Composite	lbs/day	CALC	-	5.1	-	1/Discharge		0.001	NA	NA	J (DNQ*)	0.057	NA	NA	*
Lead, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge		ND	0.058	1.0	U *	ND	0.058	1.0	U *
Manganese	Composite	µg/L	E200.8	-	50	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese	Composite	lbs/day	CALC	-	49.1	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.1	1/Year	1/Discharge		0.0023	0.0002	0.0005	*	0.022	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.1	-	1/Discharge		0.000027	NA	NA	*	0.0011	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	-	-	-	Additional/Discharge		0.002	0.0002	0.0005	*	0.014	0.0002	0.0005	*
Monomethyl hydrazine	Composite	µg/L	SW8315	-	-	-	1/Discharge		ND	0.62	2.0	U *	ND	0.62	2.0	U *
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	94	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	92.4	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	8	-	1/Discharge		1.2	0.020	0.10	*	0.51	0.020	0.10	*
Nitrate - N	Composite	lbs/day	CALC	-	7,862	-	1/Discharge		14	NA	NA	*	26	NA	NA	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	-	1/Discharge		1.2	0.091	0.10	*	0.51	0.091	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	7,862	-	1/Discharge		14	NA	NA	*	26	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	1	-	1/Discharge		ND	0.091	0.10	U *	ND	0.091	0.10	U *
Nitrite - N	Composite	lbs/day	CALC	-	983	-	1/Discharge		ND	NA	NA	U *	ND	NA	NA	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	16	1/Year	1/Discharge		ND	0.088	0.19	U *	ND	0.089	0.19	U *
N-Nitrosodimethylamine	Composite	lbs/day	CALC	-	15.72	-	1/Discharge		ND	NA	NA	U *	ND	NA	NA	U *
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	15	-	1/Discharge		1.9	0.49	0.97	*	1.4	0.50	0.98	*
Oil & Grease	Grab	lbs/day	CALC	-	14,741	-	1/Discharge		22	NA	NA	*	72	NA	NA	*
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1	1/Year	1/Discharge		ND	0.093	0.96	U *	ND	0.094	0.97	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.98	-	1/Discharge		ND	NA	NA	U *	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Perchlorate	Composite	lbs/day	CALC	-	5.9	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	1/Discharge		7.06	NM	NM	*	7.19	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	8.2	1/Year	1/Discharge		ND	0.42	2.0	U *	0.55	0.42	2.0	J (DNQ*)
Selenium	Composite	lbs/day	CALC	-	8.1	-	1/Discharge		ND	NA	NA	U *	0.028	NA	NA	J (DNQ*)
Selenium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge		0.45	0.42	2.0	J (DNQ*)	ND	0.42	2.0	U *
Settleable solids	Grab	mL/L	SM2540F	-	-	-	1/Discharge		ND	0.10	0.10	U *	0.30	0.10	0.10	*
Silver	Composite	µg/L	E200.8	0.25	4.1	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver	Composite	lbs/day	CALC	-	4.03	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	300	-	1/Discharge		95	0.18	1.0	*	16	0.18	1.0	*
Sulfate	Composite	lbs/day	CALC	-	294,810	-	1/Discharge		1,100	NA	NA	*	830	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	1/Discharge		55.15	NM	NM	*	54.8	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2.0	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.97	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	-	Additional/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	-	1/Discharge		180	5.7	10	*	82	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	933,565	-	1/Discharge		2,100	NA	NA	*	4,200	NA	NA	*
Total Organic Carbon	Composite	mg/L	SM5310C	-	-	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	0.1	-	1/Year		ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018				Outfall 018			
							LOCATION DATE RANGE	11/18/2025 12:30 - 11/19/2025 11:40				12/24/2025 11:30 - 12/26/2025 08:45			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	RECEIVING WATER SAMPLE FREQUENCY	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Total Residual Chlorine, Field	Grab	lbs/day	CALC	-	98.3	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Year	1/Discharge	ND	0.80	1.0	U *	18	0.80	1.0	*
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	5.0	1/Year	1/Discharge	ND	0.11	0.50	U *	ND	0.11	0.50	U *
Trichloroethene	Grab	lbs/day	CALC	-	4.9	-	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Turbidity	Composite	NTU	SM2130	-	-	-	1/Discharge	0.50	0.40	0.50	*	20	0.65	1.0	*
Vanadium	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	159	1/Year	1/Discharge	ND	4.5	20	U *	16	4.5	20	J (DNQ*)
Zinc	Composite	lbs/day	CALC	-	156.25	-	1/Discharge	ND	NA	NA	U *	0.83	NA	NA	J (DNQ*)
Zinc, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	4.5	20	U *	5.3	4.5	20	J (DNQ*)

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018			
							LOCATION	12/31/2025 15:35 - 01/02/2026 09:10			
							DATE RANGE				
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	1.1	2.0	U *
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	6.0	1/Year	1/Discharge	ND	0.19	0.50	U *
1,1-Dichloroethene	Grab	lbs/day	CALC	-	5.9	-	1/Discharge	ND	NA	NA	U *
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.78	2.0	U *
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	0.5	1/Year	1/Discharge	ND	0.17	0.50	U *
1,2-Dichloroethane	Grab	lbs/day	CALC	-	0.49	-	1/Discharge	ND	NA	NA	U *
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
1,4-Dioxane	Composite	µg/L	SW8260SIM	-	-	-	1/Discharge	ND	0.55	1.0	U *
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	13	1/Year	1/Discharge	ND	0.057	0.98	U *
2,4,6-Trichlorophenol	Composite	lbs/day	CALC	-	12.8	-	1/Discharge	ND	NA	NA	U *
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	18	1/Year	1/Discharge	ND	0.12	0.20	U *
2,4-Dinitrotoluene	Composite	lbs/day	CALC	-	17.7	-	1/Discharge	ND	NA	NA	U *
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Year	1/Discharge	ND	0.53	4.9	U *
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.076	-	1/Discharge	ND	NA	NA	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Year	1/Discharge	ND	0.0037	0.005	U *
4,4'-DDE	Composite	lbs/day	CALC	-	0.00058	-	1/Discharge	ND	NA	NA	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	0.03	1/Year	1/Discharge	ND	0.0024	0.005	U *
alpha-BHC	Composite	lbs/day	CALC	-	0.03	-	1/Discharge	ND	NA	NA	U *
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	-	1/Discharge	0.15	0.0029	0.015	*
Aluminum	Composite	lbs/day	CALC	-	983	-	1/Discharge	1.7	NA	NA	*
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Discharge	0.064	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	10.1	-	1/Discharge	ND	0.023	0.075	U *
Ammonia - N	Composite	lbs/day	CALC	-	9,925	-	1/Discharge	ND	NA	NA	U *

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018			
							LOCATION	12/31/2025 15:35 - 01/02/2026 09:10			
							DATE RANGE				
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	1/Year	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	-	Additional/Year	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Arsenic	Composite	µg/L	E200.8	2	10	-	1/Year	ANR	ANR	ANR	ANR
Arsenic	Composite	lbs/day	CALC	-	9.83	-	1/Year	ANR	ANR	ANR	ANR
Arsenic, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	1.0	-	1/Year	ANR	ANR	ANR	ANR
Barium	Composite	lbs/day	CALC	-	983	-	1/Year	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Year	1/Discharge	ND	0.91	4.9	U *
Benzidine	Composite	lbs/day	CALC	-	0.00053	-	1/Discharge	ND	NA	NA	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	4.0	1/Year	1/Year	ANR	ANR	ANR	ANR
Beryllium	Composite	lbs/day	CALC	-	3.93	-	1/Year	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	mg/L	SM5210B	-	30	-	1/Discharge	2.1	1.0	2.0	*
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Composite	lbs/day	CALC	-	29,481	-	1/Discharge	24	NA	NA	*
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4	1/Year	1/Discharge	ND	1.0	4.9	U *
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	3.93	-	1/Discharge	ND	NA	NA	U *
Boron	Composite	mg/L	E200.7	-	-	-	1/Year	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Year	1/Discharge	ND	0.047	1.0	U *
Cadmium	Composite	lbs/day	CALC	-	3.05	-	1/Discharge	ND	NA	NA	U *
Cadmium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.047	1.0	U *
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	-	1/Discharge	8.1	0.36	1.0	*
Chloride	Composite	lbs/day	CALC	-	147,405	-	1/Discharge	93	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	16	1/Year	1/Year	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018			
							LOCATION DATE RANGE	12/31/2025 15:35 - 01/02/2026 09:10			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Chromium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	16	1/Year	1/Year	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	lbs/day	CALC	-	15.72	-	1/Year	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	-	1st & 2nd rain event/year	ANR	ANR	ANR	ANR
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.24	0.50	U *
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	umhos/cm	SM2510	-	-	-	1/Discharge	360	1.0	1.0	*
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Year	1/Discharge	1.4	0.24	2.0	J (DNQ*)
Copper	Composite	lbs/day	CALC	-	66.3	-	1/Discharge	0.016	NA	NA	J (DNQ*)
Copper, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	1.3	0.24	2.0	J (DNQ*)
Cyanide	Composite	µg/L	KELADA-01	5	8.5	1/Year	1/Discharge	ND	2.7	5.0	U *
Cyanide	Composite	lbs/day	CALC	-	8.4	-	1/Discharge	ND	NA	NA	U *
Cyclohexane	Grab	µg/L	E624.1	-	-	-	1/Discharge	ND	0.80	2.0	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	0.5	-	1/Discharge	ND	0.062	0.20	U *
Detergents (as MBAS)	Composite	lbs/day	CALC	-	491.4	-	1/Discharge	ND	NA	NA	U *
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	-	1/Discharge	19.17	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	117.83	1/Quarter	1/Discharge	1.3728	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	-	1/Year	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	1,572	-	1/Year	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Quarter	1/Year	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	0.00042	1/Year	1/Discharge	ND	0.005	0.005	U *
Heptachlor	Composite	lbs/day	CALC	-	0.00041	-	1/Discharge	ND	NA	NA	U *
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Hexachlorobutadiene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Hexachlorobutadiene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	0.1	1/Year	Additional	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	lbs/day	CALC	-	0.1	-	Additional	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	10	0.1	1/Year	1/Discharge	ND	0.098	0.29	U *
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	ND	NA	NA	U *
Iron	Composite	mg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	**Outfall 018**			
							DATE RANGE	**12/31/2025 15:35 - 01/02/2026 09:10**			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Year	1/Discharge	ND	0.058	1.0	U *
Lead	Composite	lbs/day	CALC	-	5.1	-	1/Discharge	ND	NA	NA	U *
Lead, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.058	1.0	U *
Manganese	Composite	µg/L	E200.8	-	50	-	1/Year	ANR	ANR	ANR	ANR
Manganese	Composite	lbs/day	CALC	-	49.1	-	1/Year	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.1	1/Year	1/Discharge	0.0034	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.1	-	1/Discharge	0.000039	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	-	-	-	Additional/Discharge	0.0027	0.0002	0.0005	*
Monomethyl hydrazine	Composite	µg/L	SW8315	-	-	-	1/Discharge	ND	2.0	2.0	U *
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	-	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	94	1/Year	1/Year	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	92.4	-	1/Year	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	8	-	1/Discharge	0.47	0.020	0.10	*
Nitrate - N	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	5.4	NA	NA	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	-	1/Discharge	0.47	0.091	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	7,862	-	1/Discharge	5.4	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	1	-	1/Discharge	ND	0.091	0.10	U *
Nitrite - N	Composite	lbs/day	CALC	-	983	-	1/Discharge	ND	NA	NA	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	16	1/Year	1/Discharge	ND	0.089	0.20	U *
N-Nitrosodimethylamine	Composite	lbs/day	CALC	-	15.72	-	1/Discharge	ND	NA	NA	U *
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	15	-	1/Discharge	1.4	0.50	0.98	*
Oil & Grease	Grab	lbs/day	CALC	-	14,741	-	1/Discharge	16	NA	NA	*
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1	1/Year	1/Discharge	ND	0.094	0.98	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.98	-	1/Discharge	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	-	1/Year	ANR	ANR	ANR	ANR
Perchlorate	Composite	lbs/day	CALC	-	5.9	-	1/Year	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	1/Discharge	7.88	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	8.2	1/Year	1/Discharge	ND	0.42	2.0	U *
Selenium	Composite	lbs/day	CALC	-	8.1	-	1/Discharge	ND	NA	NA	U *
Selenium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	0.42	2.0	U *
Settleable solids	Grab	mL/L	SM2540F	-	-	-	1/Discharge	ND	0.10	0.10	U *
Silver	Composite	µg/L	E200.8	0.25	4.1	1/Year	1/Year	ANR	ANR	ANR	ANR
Silver	Composite	lbs/day	CALC	-	4.03	-	1/Year	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	300	-	1/Discharge	99	0.18	1.0	*
Sulfate	Composite	lbs/day	CALC	-	294,810	-	1/Discharge	1,100	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	1/Discharge	52.8	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2.0	1/Year	1/Year	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.97	-	1/Year	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	-	Additional/Year	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	-	1/Discharge	240	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	933,565	-	1/Discharge	2,700	NA	NA	*
Total Organic Carbon	Composite	mg/L	SM5310C	-	-	-	1/Year	ANR	ANR	ANR	ANR
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	0.1	-	1/Year	ANR	ANR	ANR	ANR

TABLE C-1.A
OUTFALLS 001, 002, 011, AND 018
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 018			
							LOCATION DATE RANGE	12/31/2025 15:35 - 01/02/2026 09:10			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**RECEIVING WATER SAMPLE FREQUENCY**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Total Residual Chlorine, Field	Grab	lbs/day	CALC	-	98.3	-	1/Year	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Year	1/Discharge	ND	0.80	1.0	U *
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	1/Year	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	1/Year	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	5.0	1/Year	1/Discharge	ND	0.11	0.50	U *
Trichloroethene	Grab	lbs/day	CALC	-	4.9	-	1/Discharge	ND	NA	NA	U *
Turbidity	Composite	NTU	SM2130	-	-	-	1/Discharge	ND	0.65	1.0	U *
Vanadium	Composite	µg/L	E200.8	-	-	-	1/Year	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Year	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	1/Year	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	159	1/Year	1/Discharge	ND	4.5	20	U *
Zinc	Composite	lbs/day	CALC	-	156.25	-	1/Discharge	ND	NA	NA	U *
Zinc, dissolved	Composite	µg/L	E200.8	-	-	-	Additional/Discharge	ND	4.5	20	U *

TABLE C-1.B
OUTFALL 008
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						LOCATION	Outfall 008				Outfall 008			
						DATE RANGE	12/24/2025 08:30 - 12/26/2025 09:30				12/31/2025 15:35 - 01/02/2026 11:15			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	0.077	1/Discharge	ND	0.55	5.1	U *	ND	0.54	4.9	U *
3,3'-Dichlorobenzidine	Composite	lbs/day	CALC	-	0.0046	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
4,4'-DDE	Composite	µg/L	E608.3	0.05	0.00059	1/Discharge	ND	0.0037	0.005	U *	ND	0.0037	0.005	U *
4,4'-DDE	Composite	lbs/day	CALC	-	3.5E-05	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Aluminum	Composite	mg/L	E200.8	-	1.0	1/Discharge	0.43	0.0029	0.015	*	0.41	0.0029	0.015	*
Aluminum	Composite	lbs/day	CALC	-	60	1/Discharge	2.23	NA	NA	*	0.16	NA	NA	*
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	Additional/Discharge	0.024	0.0029	0.015	*	ANR	ANR	ANR	ANR
Ammonia - N	Composite	mg/L	E350.1	-	10.1	1/Discharge	ND	0.023	0.075	U *	ND	0.023	0.075	U *
Ammonia - N	Composite	lbs/day	CALC	-	607.3	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Arsenic	Composite	µg/L	E200.8	2	10.0	1/Discharge	1.0	0.16	1.0	*	0.89	0.16	1.0	J (DNQ*)
Arsenic	Composite	lbs/day	CALC	-	0.6	1/Discharge	0.01	NA	NA	*	0.00036	NA	NA	J (DNQ*)
Arsenic, dissolved	Composite	µg/L	E200.8	2	-	Additional/Discharge	0.93	0.16	1.0	J (DNQ*)	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	0.00054	1/Discharge	ND	0.95	5.1	U *	ND	0.92	4.9	U *
Benzidine	Composite	lbs/day	CALC	-	3.2E-05	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	-	1/Discharge	ND	1.1	5.1	U *	2.3	1.1	4.9	J (DNQ*)
Cadmium	Composite	µg/L	E200.8	0.25	3.1	1/Discharge	ND	0.047	1.0	U *	ND	0.047	1.0	U *
Cadmium	Composite	lbs/day	CALC	-	0.19	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Cadmium, dissolved	Composite	µg/L	E200.8	0.25	-	Additional/Discharge	ND	0.047	1.0	U *	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	1/Discharge	4.2	0.36	1.0	*	4.7	0.36	1.0	*
Chloride	Composite	lbs/day	CALC	-	9,020	1/Discharge	22	NA	NA	*	1.9	NA	NA	*
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	1st & 2nd rain event/Year	SURVIVAL = PASS, % EFFECT = 2.43%	NM	NM	*	ANR	ANR	ANR	ANR
Copper	Composite	µg/L	E200.8	0.5	67.5	1/Discharge	2.4	0.24	2.0	*	1.9	0.24	2.0	J (DNQ*)
Copper	Composite	lbs/day	CALC	-	4.1	1/Discharge	0.012	NA	NA	*	0.00076	NA	NA	J (DNQ*)
Copper, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Discharge	2.1	0.24	2.0	*	ANR	ANR	ANR	ANR
Cyanide	Composite	µg/L	KELADA-01	-	9.5	1/Discharge	3.6	2.7	5.0	J (DNQ*)	ND	2.7	5.0	U *
Cyanide	Composite	lbs/day	CALC	-	0.57	1/Discharge	0.019	NA	NA	J (DNQ*)	ND	NA	NA	U *
Detergents (as MBAS)	Composite	mg/L	SM5540	-	-	1/Discharge	0.10	0.062	0.20	J (DNQ*)	ND	0.062	0.20	U *
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	1/Discharge	13.75	NM	NM	*	19.17	NM	NM	*
Flow**	Meas	mgd	FIELDPARAM	-	7.21	1/Discharge	0.621	NA	NA	*	0.048	NA	NA	*
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Discharge	0.41	0.058	1.0	J (DNQ*)	0.27	0.058	1.0	J (DNQ*)
Lead	Composite	lbs/day	CALC	-	0.31	1/Discharge	0.0021	NA	NA	J (DNQ*)	0.00011	NA	NA	J (DNQ*)
Lead, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Discharge	ND	0.058	1.0	U *	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.024	1/Discharge	0.021	0.0002	0.0005	*	0.011	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.0014	1/Discharge	0.00011	NA	NA	*	0.0000044	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	0.5	-	Additional/Discharge	0.017	0.0002	0.0005	*	0.0098	0.0002	0.0005	*
Nitrate - N	Composite	mg/L	E300	-	8	1/Discharge	1.7	0.020	0.10	*	0.52	0.020	0.10	*
Nitrate - N	Composite	lbs/day	CALC	-	481	1/Discharge	8.8	NA	NA	*	0.21	NA	NA	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	8	1/Discharge	1.7	0.091	0.10	*	0.52	0.091	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	481	1/Discharge	8.8	NA	NA	*	0.21	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	1	1/Discharge	ND	0.091	0.10	U *	ND	0.091	0.10	U *
Nitrite - N	Composite	lbs/day	CALC	-	60	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Oil & Grease	Grab	mg/L	E1664	-	15	1/Discharge	0.98	0.50	0.98	*	ND	0.51	1.0	U *
Oil & Grease	Grab	lbs/day	CALC	-	902	1/Discharge	5.1	NA	NA	*	ND	NA	NA	U *
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Discharge	ND	0.098	1.0	U *	ND	0.095	0.99	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	1/Discharge	ND	4.3	20	U *	ND	0.86	4.0	U *
Perchlorate	Composite	lbs/day	CALC	-	0.36	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Discharge	7.57	NM	NM	*	7.88	NM	NM	*
Settleable solids	Grab	mL/L	SM2540F	-	-	1/Discharge	ND	0.10	0.10	U *	ND	0.10	0.10	U *
Sulfate	Composite	mg/L	E300	-	300	1/Discharge	3.1	0.18	1.0	*	3.6	0.18	1.0	*
Sulfate	Composite	lbs/day	CALC	-	18,039	1/Discharge	16	NA	NA	*	1.4	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Discharge	55.5	NM	NM	*	52.8	NM	NM	*
Total Dissolved Solids	Composite	mg/L	SM2540C	-	950	1/Discharge	87	5.7	10	*	140	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	57,124	1/Discharge	450	NA	NA	*	56	NA	NA	*
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Discharge	3.0	0.8	1.0	*	3.4	0.80	1.0	*
Zinc	Composite	µg/L	E200.8	1	159	1/Discharge	5.8	4.5	20	J (DNQ*)	5.9	4.5	20	J (DNQ*)
Zinc	Composite	lbs/day	CALC	-	9.6	1/Discharge	0.030	NA	NA	J (DNQ*)	0.0024	NA	NA	J (DNQ*)
Zinc, dissolved	Composite	µg/L	E200.8	1	-	Additional/Discharge	ND	4.5	20	U *	ANR	ANR	ANR	ANR

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							Outfall 004				Outfall 009				Outfall 009			
						LOCATION												
						DATE RANGE	12/24/2025 11:00 - 12/26/2025 07:45				10/31/2025 08:57 - 11/01/2025 08:40				11/15/2025 08:30 - 11/16/2025 09:05			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	ND	0.15	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	ND	0.20	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.081	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	0.076	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	-	1/Year	ND	0.17	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	ND	0.17	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.023	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	0.078	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	ND	0.12	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	0.075	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.057	0.98	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.045	0.98	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	0.063	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	2.5	4.9	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.12	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.065	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	1	-	1/Year	ND	0.92	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.065	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.057	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	1.7	4.9	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	1.4	4.9	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	-	1/Discharge	ND	0.53	4.9	U *	ND	0.52	4.8	U *	ND	0.53	4.8	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	ND	0.0027	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	-	1/Discharge	ND	0.0037	0.005	U *	ND	0.0037	0.005	U *	ND	0.0037	0.005	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.0028	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.053	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.054	0.98	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.060	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.77	4.9	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.064	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.063	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	ND	1.8	5.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	ND	0.98	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	ND	0.0031	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.0024	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	ND	0.0019	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	1/Discharge	0.29	0.0029	0.015	*	0.49	0.0029	0.015	*	0.98	0.0029	0.015	*
Aluminum	Composite	lbs/day	CALC	-	537	1/Discharge	0.069	NA	NA	*	2.76	NA	NA	*	23.91	NA	NA	*
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	Additional/Discharge	0.053	0.0029	0.015	*	0.023	0.0029	0.015	*	0.20	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	-	1/Discharge	0.044	0.023	0.075	J (DNQ*)	0.19	0.023	0.075	*	ND	0.023	0.075	U *
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.025	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	ND	0.79	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	3.2	1/Year	ND	NA	NA	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Year	ND	0.79	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Year	ND	0.5	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							Outfall 004				Outfall 009				Outfall 009			
						LOCATION												
						DATE RANGE	12/24/2025 11:00 - 12/26/2025 07:45				10/31/2025 08:57 - 11/01/2025 08:40				11/15/2025 08:30 - 11/16/2025 09:05			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Arsenic	Composite	µg/L	E200.8	2	-	1/Discharge	0.95	0.16	1.0	J (DNQ*)	1.3	0.16	1.0	*	1.5	0.16	1.0	*
Arsenic, dissolved	Composite	µg/L	E200.8	2	-	Additional/Discharge	0.82	0.16	1.0	J (DNQ*)	1.0	0.16	1.0	*	1.1	0.16	1.0	*
Asbestos > 10 um	Composite	MFL	EPA100.2	-	-	1/Year	ND	2.12	2.12	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	-	1/Year	0.018	0.00054	0.001	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	Additional/Year	0.009	0.00054	0.001	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.10	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	-	1/Discharge	ND	0.92	4.9	U *	ND	0.89	4.8	U *	ND	0.91	4.8	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.058	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.028	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.067	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.058	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.067	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	-	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	ND	0.0033	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.0039	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.069	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.067	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	0.085	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4.0	1/Discharge	ND	1.0	4.9	U *	ND	1.0	4.8	U *	ND	1.0	4.8	U *
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	2.1	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *	ND	NA	NA	U *
Boron	Composite	mg/L	E200.7	-	1.0	1/Year	0.027	0.026	0.50	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron	Composite	lbs/day	CALC	-	537	1/Year	0.0065	NA	NA	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	Additional/Year	0.031	0.026	0.50	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	ND	0.25	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	ND	0.38	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.34	0.98	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	4.0	1/Discharge	0.079	0.047	1.0	J (DNQ*)	ND	0.047	1.0	U *	0.14	0.047	1.0	J (DNQ*)
Cadmium	Composite	lbs/day	CALC	-	2.1	1/Discharge	0.000019	NA	NA	J (DNQ*)	ND	NA	NA	U *	0.0034	NA	NA	J (DNQ*)
Cadmium, dissolved	Composite	µg/L	E200.8	0.25	-	Additional/Discharge	0.066	0.047	1.0	J (DNQ*)	ND	0.047	1.0	U *	0.095	0.047	1.0	J (DNQ*)
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	ND	0.20	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	ND	0.1	0.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	1/Discharge	1.6	0.36	1.0	*	51	0.36	1.0	*	3.3	0.72	2.0	*
Chloride	Composite	lbs/day	CALC	-	80,477	1/Discharge	0.38	NA	NA	*	290	NA	NA	*	81	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	ND	0.25	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorpyrifos	Composite	µg/L	625OPP	-	-	1/Year	ND	0.004	0.01	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	-	1/Year	0.95	0.54	2.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Year	ND	0.54	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	ND	3	50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	Additional/Year	ND	3	50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	-	1/Year	ND	0.051	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	Additional/Year	ND	0.051	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	1st & 2nd rain event/Year	SURVIVAL = PASS, % EFFECT = -1.19%	NM	NM	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.055	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	1/Year	0.23	0.050	1.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	Additional/Year	0.094	0.050	1.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Copper	Composite	µg/L	E200.8	0.5	31	1/Discharge	3.5	0.24	2.0	*	1.7	0.24	2.0	J (DNQ*)	4.2	0.24	2.0	*
Copper	Composite	lbs/day	CALC	-	16.6	1/Discharge	0.00084	NA	NA	*	0.0096	NA	NA	J (DNQ*)	0.10	NA	NA	*
Copper, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Discharge	3.0	0.24	2.0	*	1.2	0.24	2.0	J (DNQ*)	2.9	0.24	2.0	*
Cyanide	Composite	µg/L	KELADA-01	-	9.5	1/Discharge	2.8	2.7	5.0	J (DNQ*)	ND	2.7	5.0	U *	ND	2.7	5.0	U *

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						LOCATION	Outfall 004				Outfall 009				Outfall 009			
						DATE RANGE	12/24/2025 11:00 - 12/26/2025 07:45				10/31/2025 08:57 - 11/01/2025 08:40				11/15/2025 08:30 - 11/16/2025 09:05			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Cyanide	Composite	lbs/day	CALC	-	5.1	1/Discharge	0.00067	NA	NA	J (DNQ*)	ND	NA	NA	U *	ND	NA	NA	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	ND	0.0019	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	-	1/Discharge	0.13	0.062	0.20	J (DNQ*)	0.10	0.062	0.20	J (DNQ*)	ND	0.062	0.20	U *
Diazinon	Composite	µg/L	625OPP	-	-	1/Year	ND	0.0034	0.01	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.14	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.0017	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	0.20	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	ND	1.6	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.69	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.074	2.9	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	1/Discharge	14.52	NM	NM	*	8.95	NM	NM	*	12.91	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	ND	0.0029	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.004	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.0039	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.09	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	64.33	1/Discharge	0.0288	NA	NA	*	0.6764	NA	NA	*	2.925	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.054	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.058	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	1/Year	0.13	0.046	0.10	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	858	1/Year	0.031	NA	NA	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	ND	0.0036	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Year	18	0.48	7.1	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	Additional/Year	19	0.48	7.1	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.005	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	ND	0.0018	0.005	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.11	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.11	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.095	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	Additional/Year	ND	0	0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	-	-	1/Year	ND	0.10	0.30	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.13	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron	Composite	mg/L	E200.8	-	-	1/Year	0.33	0.018	0.02	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	Additional/Year	0.044	0.018	0.02	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.069	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Discharge	1.1	0.058	1.0	*	1.4	0.058	1.0	*	4.8	0.058	1.0	*
Lead	Composite	lbs/day	CALC	-	2.8	1/Discharge	0.00026	NA	NA	*	0.0079	NA	NA	*	0.12	NA	NA	*
Lead, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Discharge	0.15	0.058	1.0	J (DNQ*)	ND	0.058	1.0	U *	0.86	0.058	1.0	J (DNQ*)
Manganese	Composite	µg/L	E200.8	-	-	1/Year	12	1.4	2.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	Additional/Year	2.4	1.4	2.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.024	1/Discharge	0.046	0.0002	0.0005	--	0.0068	0.0002	0.0005	*	0.017	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.013	1/Discharge	0.000011	NA	NA	--	0.000038	NA	NA	*	0.00041	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	0.5	-	Additional/Discharge	0.032	0.0002	0.0005	*	0.0039	0.0002	0.0005	*	ND	0.0002	0.0005	U *
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	ND	0.63	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	1	-	1/Year	ND	0.17	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.055	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	100	1/Year	2.3	0.60	2.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	53.7	1/Year	0.00055	NA	NA	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	1	-	Additional/Year	2.0	0.60	2.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	-	1/Discharge	0.73	0.020	0.10	*	0.57	0.020	0.10	*	1.4	0.039	0.20	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	10	1/Discharge	0.73	0.091	0.10	*	0.82	0.091	0.10	*	1.4	0.18	0.20	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	5,365	1/Discharge	0.18	NA	NA	*	4.6	NA	NA	*	34	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	-	1/Discharge	ND	0.091	0.10	U *	0.25	0.091	0.10	*	ND	0.18	0.20	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.083	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.089	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.059	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.030	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							Outfall 004				Outfall 009				Outfall 009			
						LOCATION												
						DATE RANGE	12/24/2025 11:00 - 12/26/2025 07:45				10/31/2025 08:57 - 11/01/2025 08:40				11/15/2025 08:30 - 11/16/2025 09:05			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Oil & Grease	Grab	mg/L	E1664	-	15	1/Discharge	1.3	0.50	0.99	*	ND	0.50	0.97	U *	0.80	0.51	0.99	J (DNQ*)
Oil & Grease	Grab	lbs/day	CALC	-	8,048	1/Discharge	0.31	NA	NA	*	ND	NA	NA	U *	20	NA	NA	J (DNQ*)
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1.0	1/Discharge	ND	0.094	0.98	U *	ND	0.092	0.95	U *	ND	0.093	0.97	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.54	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	1/Discharge	ND	4.3	20	U *	ND	0.43	2.0	U *	ND	4.3	20	U *
Perchlorate	Composite	lbs/day	CALC	-	3.22	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *	ND	NA	NA	U *
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Discharge	7.43	NM	NM	*	7.04	NM	NM	*	7.44	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	ND	0.067	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	ND	0.033	0.98	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	ND	0.065	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	-	1/Year	0.47	0.42	2.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium, dissolved	Composite	µg/L	E200.8	2	-	Additional/Year	ND	0.42	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Settleable solids	Grab	mL/L	SM2540F	-	-	1/Discharge	ND	0.10	0.10	U *	ND	0.10	0.10	U *	0.10	0.10	0.10	*
Silver	Composite	µg/L	E200.8	0.25	-	1/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	0.25	-	Additional/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	250	1/Discharge	2.2	0.18	1.0	*	61	0.18	1.0	*	4.1	0.37	2.0	*
Sulfate	Composite	lbs/day	CALC	-	134,128	1/Discharge	0.53	NA	NA	*	340	NA	NA	*	100	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Discharge	55.4	NM	NM	*	62.69	NM	NM	*	58.17	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2	1/Year	ND	0.055	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.1	1/Year	ND	NA	NA	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	Additional/Year	ND	0.055	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.11	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	850	1/Discharge	26	5.7	10	*	300	5.7	10	*	59	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	456,034	1/Discharge	6.2	NA	NA	*	2,000	NA	NA	*	1,400	NA	NA	*
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	-	1/Year	0.0	NM	NM	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Discharge	6.0	0.80	1.0	*	4.4	0.80	1.0	*	28	0.80	1.0	*
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	ND	1	1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	-	1/Year	ND	0.11	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium	Composite	µg/L	E200.8	-	-	1/Year	1.7	0.55	2.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	Additional/Year	1.0	0.55	2.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	120	1/Discharge	49	4.5	20	*	14	4.5	20	J (DNQ*)	14	4.5	20	J (DNQ*)
Zinc	Composite	lbs/day	CALC	-	64.4	1/Discharge	0.012	NA	NA	*	0.079	NA	NA	J (DNQ*)	0.34	NA	NA	J (DNQ*)
Zinc, dissolved	Composite	µg/L	E200.8	1	-	Additional/Discharge	41	4.5	20	*	ND	4.5	20	U *	5.8	4.5	20	J (DNQ*)

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							Outfall 009				Outfall 009			
						LOCATION								
						DATE RANGE	12/24/2025 07:30 - 12/25/2025 07:25				12/31/2025 13:50 - 01/02/2026 07:50			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloropropane	Grab	µg/L	E624.1	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (VOC)	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene (SVOC)	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4,6-Trichlorophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dichlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,6-Dinitrotoluene	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Composite	µg/L	E625.1SIM	5	-	1/Discharge	ND	0.55	5.1	U *	ND	0.52	4.8	U *
4,4'-DDD	Composite	µg/L	E608.3	0.05	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDE	Composite	µg/L	E608.3	0.05	-	1/Discharge	ND	0.0074	0.01	U *	ND	0.0037	0.005	U *
4,4'-DDT	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Composite	µg/L	E608.3	0.005	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-BHC	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
alpha-Endosulfan	Composite	µg/L	E608.3	0.02	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aluminum	Composite	mg/L	E200.8	-	1.0	1/Discharge	1.1	0.0029	0.015	--	1.3	0.0029	0.015	--
Aluminum	Composite	lbs/day	CALC	-	537	1/Discharge	48.9	NA	NA	--	2.2	NA	NA	--
Aluminum, dissolved	Composite	mg/L	E200.8	-	-	Additional/Discharge	0.039	0.0029	0.015	*	0.039	0.0029	0.015	*
Ammonia - N	Composite	mg/L	E350.1	-	-	1/Discharge	ND	0.023	0.075	U *	ND	0.023	0.075	U *
Anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	µg/L	E200.8	0.5	6.0	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Composite	lbs/day	CALC	-	3.2	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1016 (PCB-1016)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aroclor Sum Total	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							Outfall 009				Outfall 009			
						LOCATION								
						DATE RANGE	12/24/2025 07:30 - 12/25/2025 07:25				12/31/2025 13:50 - 01/02/2026 07:50			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Arsenic	Composite	µg/L	E200.8	2	-	1/Discharge	1.2	0.16	1.0	*	1.2	0.16	1.0	*
Arsenic, dissolved	Composite	µg/L	E200.8	2	-	Additional/Discharge	0.71	0.16	1.0	J (DNQ*)	0.66	0.16	1.0	J (DNQ*)
Asbestos > 10 um	Composite	MFL	EPA100.2	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Composite	mg/L	E200.8	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Composite	mg/L	E200.8	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Composite	µg/L	E625.1SIM	5	-	1/Discharge	ND	0.95	5.1	U *	ND	0.90	4.8	U *
Benzo(a)anthracene	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Composite	µg/L	E200.8	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-Endosulfan	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethoxy) Methane	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Composite	µg/L	E625.1SIM	5	4.0	1/Discharge	ND	1.1	5.1	U *	ND	1.0	4.8	U *
Bis (2-Ethylhexyl) Phthalate	Composite	lbs/day	CALC	-	2.1	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Boron	Composite	mg/L	E200.7	-	1.0	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron	Composite	lbs/day	CALC	-	537	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Composite	mg/L	E200.7	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Composite	µg/L	E200.8	0.25	4.0	1/Discharge	0.092	0.047	1.0	J (DNQ*)	0.11	0.047	1.0	J (DNQ*)
Cadmium	Composite	lbs/day	CALC	-	2.1	1/Discharge	0.0041	NA	NA	J (DNQ*)	0.00019	NA	NA	J (DNQ*)
Cadmium, dissolved	Composite	µg/L	E200.8	0.25	-	Additional/Discharge	ND	0.047	1.0	U *	ND	0.047	1.0	U *
Carbon tetrachloride	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Composite	µg/L	E608.3	0.1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloride	Composite	mg/L	E300	-	150	1/Discharge	2.2	0.72	2.0	*	3.2	0.36	1.0	*
Chloride	Composite	lbs/day	CALC	-	80,477	1/Discharge	98	NA	NA	*	5.4	NA	NA	*
Chlorobenzene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorpyrifos	Composite	µg/L	625OPP	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Composite	µg/L	E200.8	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Composite	µg/L	E218.6	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent), dissolved	Composite	µg/L	E218.6	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Composite	µg/L	E218.6	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Composite	µg/L	E218.6	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Composite	Pass or Fail and % Effect	EPA-821-R-02-013	-	Pass or % Effect <50	1st & 2nd rain event/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chrysene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Composite	µg/L	E200.8	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Composite	µg/L	E200.8	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Copper	Composite	µg/L	E200.8	0.5	31	1/Discharge	3.4	0.24	2.0	*	3.8	0.24	2.0	*
Copper	Composite	lbs/day	CALC	-	16.6	1/Discharge	0.15	NA	NA	*	0.0065	NA	NA	*
Copper, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Discharge	2.1	0.24	2.0	*	2.0	0.24	2.0	*
Cyanide	Composite	µg/L	KELADA-01	-	9.5	1/Discharge	2.8	2.7	5.0	J (DNQ*)	ND	2.7	5.0	U *

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						LOCATION	**Outfall 009**				**Outfall 009**			
						DATE RANGE	**12/24/2025 07:30 - 12/25/2025 07:25**				**12/31/2025 13:50 - 01/02/2026 07:50**			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Cyanide	Composite	lbs/day	CALC	-	5.1	1/Discharge	0.12	NA	NA	J (DNQ*)	ND	NA	NA	U *
delta-BHC	Composite	µg/L	E608.3	0.005	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Composite	mg/L	SM5540	-	-	1/Discharge	ND	0.062	0.20	U *	ND	0.062	0.20	U *
Diazinon	Composite	µg/L	625OPP	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dibenzo(a,h)anthracene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Diethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Composite	µg/L	E625.1SIM	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	-	1/Discharge	15.38	NM	NM	*	15.96	NM	NM	*
Endosulfan sulfate	Composite	µg/L	E608.3	0.05	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Endrin aldehyde	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Flow**	Meas	mgd	FIELDPARAM	-	64.33	1/Discharge	5.325	NA	NA	*	0.2039	NA	NA	*
Fluoranthene	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	mg/L	E300	-	1.6	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Composite	lbs/day	CALC	-	858	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Composite	µg/L	E608.3	0.02	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness (as CaCO3)	Composite	mg/L	SM2340	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Composite	mg/L	SM2340	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor epoxide	Composite	µg/L	E608.3	0.01	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Human Bacteroides	Grab	CEs/100mL	DHC qPCR	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Composite	µg/L	SW8270C	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EUROFINS)	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron	Composite	mg/L	E200.8	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Composite	mg/L	E200.8	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Isophorone	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Composite	µg/L	E200.8	0.5	5.2	1/Discharge	5.0	0.058	1.0	*	3.8	0.058	1.0	*
Lead	Composite	lbs/day	CALC	-	2.8	1/Discharge	0.20	NA	NA	*	0.0065	NA	NA	*
Lead, dissolved	Composite	µg/L	E200.8	0.5	-	Additional/Discharge	0.27	0.058	1.0	J (DNQ*)	0.23	0.058	1.0	J (DNQ*)
Manganese	Composite	µg/L	E200.8	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Manganese, dissolved	Composite	µg/L	E200.8	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Mercury	Composite	µg/L	E1631E	0.5	0.024	1/Discharge	0.025	0.0002	0.0005	--	0.017	0.0002	0.0005	*
Mercury	Composite	lbs/day	CALC	-	0.013	1/Discharge	0.0011	NA	NA	--	0.000029	NA	NA	*
Mercury, dissolved	Composite	µg/L	E1631E	0.5	-	Additional/Discharge	0.017	0.0002	0.0005	*	0.013	0.0002	0.0005	*
Methylene chloride	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (VOC)	Grab	µg/L	E624.1	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Naphthalene (SVOC)	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	µg/L	E200.8	1	100	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Composite	lbs/day	CALC	-	53.7	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel, dissolved	Composite	µg/L	E200.8	1	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nitrate - N	Composite	mg/L	E300	-	-	1/Discharge	0.93	0.039	0.20	*	0.48	0.020	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	mg/L	E300	-	10	1/Discharge	0.93	0.18	0.20	*	0.48	0.091	0.10	*
Nitrate + Nitrite as Nitrogen (N)	Composite	lbs/day	CALC	-	5,365	1/Discharge	41	NA	NA	*	0.82	NA	NA	*
Nitrite - N	Composite	mg/L	E300	-	-	1/Discharge	ND	0.18	0.20	U *	ND	0.091	0.10	U *
Nitrobenzene	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitroso-di-n-propylamine	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-1.C
OUTFALL 004 AND 009
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						LOCATION	Outfall 009				Outfall 009			
						DATE RANGE	12/24/2025 07:30 - 12/25/2025 07:25				12/31/2025 13:50 - 01/02/2026 07:50			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	DAILY MAXIMUM LIMIT	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Oil & Grease	Grab	mg/L	E1664	-	15	1/Discharge	0.90	0.51	1.0	J (DNQ*)	ND	0.55	1.1	U *
Oil & Grease	Grab	lbs/day	CALC	-	8,048	1/Discharge	40	NA	NA	J (DNQ*)	ND	NA	NA	U *
Pentachlorophenol	Composite	µg/L	E625.1SIM	5	1.0	1/Discharge	ND	0.098	1.0	U *	ND	0.093	0.96	U *
Pentachlorophenol	Composite	lbs/day	CALC	-	0.54	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
Perchlorate	Composite	µg/L	E314.0	-	6.0	1/Discharge	ND	4.3	20	U *	ND	0.86	4.0	U *
Perchlorate	Composite	lbs/day	CALC	-	3.22	1/Discharge	ND	NA	NA	U *	ND	NA	NA	U *
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Discharge	7.17	NM	NM	*	7.23	NM	NM	*
Phenanthrene	Composite	µg/L	E625.1SIM	5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Composite	µg/L	E625.1SIM	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Composite	µg/L	E625.1SIM	10	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Composite	µg/L	E200.8	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium, dissolved	Composite	µg/L	E200.8	2	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Settleable solids	Grab	mL/L	SM2540F	-	-	1/Discharge	0.40	0.10	0.10	*	ND	0.10	0.10	U *
Silver	Composite	µg/L	E200.8	0.25	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Composite	µg/L	E200.8	0.25	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Composite	mg/L	E300	-	250	1/Discharge	2.6	0.37	2.0	*	3.5	0.18	1.0	*
Sulfate	Composite	lbs/day	CALC	-	134,128	1/Discharge	120	NA	NA	*	6.0	NA	NA	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Discharge	55.7	NM	NM	*	58.5	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	µg/L	E200.8	1	2	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Composite	lbs/day	CALC	-	1.1	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Composite	µg/L	E200.8	1	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Composite	mg/L	SM2540C	-	850	1/Discharge	34	5.7	10	*	62	5.7	10	*
Total Dissolved Solids	Composite	lbs/day	CALC	-	456,034	1/Discharge	1,500	NA	NA	*	110	NA	NA	*
Total Residual Chlorine, Field	Grab	mg/L	FIELDPARAM	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Composite	mg/L	SM2540D	-	-	1/Discharge	27	1.6	2.0	*	9.8	0.80	1.0	*
Toxaphene	Composite	µg/L	E608.3	0.5	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium	Composite	µg/L	E200.8	-	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Composite	µg/L	E200.8	-	-	Additional/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	-	1/Year	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Composite	µg/L	E200.8	1	120	1/Discharge	15	4.5	20	J (DNQ*)	15	4.5	20	J (DNQ*)
Zinc	Composite	lbs/day	CALC	-	64.4	1/Discharge	0.67	NA	NA	J (DNQ*)	0.026	NA	NA	J (DNQ*)
Zinc, dissolved	Composite	µg/L	E200.8	1	-	Additional/Discharge	4.7	4.5	20	J (DNQ*)	4.9	4.5	20	J (DNQ*)

TABLE C-2
SWTS 011 (INF-001) AND SWTS 018 (INF-002)
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
					LOCATION	SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
					DATE RANGE	12/27/2025 07:45				11/17/2025 10:05				12/23/2025 07:30			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
1,1,1-Trichloroethane	Grab	µg/L	E624.1	2	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2,2-Tetrachloroethane	Grab	µg/L	E624.1	1	1/Year	ND	0.15	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1,2-Trichloro-1,2,2-trifluoroethane	Grab	µg/L	E624.1	-	1/Discharge	ND	1.1	2.0	U *	ND	1.1	2.0	U *	ND	1.1	2.0	U *
1,1,2-Trichloroethane	Grab	µg/L	E624.1	2	1/Year	ND	0.20	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethane	Grab	µg/L	E624.1	1	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,1-Dichloroethene	Grab	µg/L	E624.1	2	1/Discharge	ND	0.19	0.50	U *	ND	0.19	0.50	U *	ND	0.19	0.50	U *
1,2,4-Trichlorobenzene (VOC)	Grab	µg/L	E624.1	2	1/Year	ND	0.18	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2,4-Trichlorobenzene (SVOC)	Grab	µg/L	E625.1SIM	2	1/Year	ND	0.084	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloro-1,1,2-trifluoroethane	Grab	µg/L	E624.1	-	1/Discharge	ND	0.78	2.0	U *	ND	0.78	2.0	U *	ND	0.78	2.0	U *
1,2-Dichlorobenzene	Grab	µg/L	E624.1	2	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Dichloroethane	Grab	µg/L	E624.1	2	1/Discharge	ND	0.17	0.50	U *	ND	0.17	0.50	U *	ND	0.17	0.50	U *
1,2-Dichloropropane	Grab	µg/L	E624.1	1	1/Year	ND	0.17	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,2-Diphenylhydrazine/Azobenzene	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.024	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,3-Dichlorobenzene	Grab	µg/L	E624.1	2	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dichlorobenzene	Grab	µg/L	E624.1	2	1/Year	ND	0.12	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
1,4-Dioxane	Grab	µg/L	SW8260SIM	-	1/Discharge	ND	0.55	1.0	U *	ND	0.55	1.0	U *	ND	1.1	2.0	U *
2,4,6-Trichlorophenol	Grab	µg/L	E625.1SIM	10	1/Discharge	ND	0.059	1.0	U *	ND	0.056	0.97	U *	ND	0.057	0.98	U *
2,4-Dichlorophenol	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.047	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dimethylphenol	Grab	µg/L	E625.1SIM	2	1/Year	ND	0.065	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrophenol	Grab	µg/L	E625.1SIM	5	1/Year	ND	2.6	5.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2,4-Dinitrotoluene	Grab	µg/L	E625.1SIM	5	1/Discharge	ND	0.13	0.20	U *	ND	0.12	0.19	U *	ND	0.12	0.20	U *
2,6-Dinitrotoluene	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloroethyl vinyl ether	Grab	µg/L	E624.1	1	1/Year	ND	0.92	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chloronaphthalene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Chlorophenol	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.059	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Methyl-4,6-dinitrophenol	Grab	µg/L	E625.1SIM	5	1/Year	ND	1.7	5.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
2-Nitrophenol	Grab	µg/L	E625.1SIM	10	1/Year	ND	1.5	5.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
3,3'-Dichlorobenzidine	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.55	5.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4,4'-DDD	Grab	µg/L	E608.3	0.05	1/Year	ND	0.0027	0.005	U *	ND	0.014	0.025	U *	ANR	ANR	ANR	ANR
4,4'-DDE	Grab	µg/L	E608.3	0.05	1/Discharge	ND	0.0037	0.005	U *	ND	0.018	0.025	U *	ND	0.074	0.10	U *
4,4'-DDT	Grab	µg/L	E608.3	0.01	1/Year	ND	0.005	0.005	U *	ND	0.014	0.025	U *	ANR	ANR	ANR	ANR
4-Bromophenyl phenyl ether	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.055	0.2	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chloro-3-methylphenol	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.056	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Chlorophenyl phenyl ether	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.062	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
4-Nitrophenol	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.80	5.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthene	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.066	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acenaphthylene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.066	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrolein	Grab	µg/L	E624.1	5	1/Year	ND	1.8	5.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Acrylonitrile	Grab	µg/L	E624.1	2	1/Year	ND	0.98	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Aldrin	Grab	µg/L	E608.3	0.005	1/Year	ND	0.0031	0.005	U *	ND	0.015	0.025	U *	ANR	ANR	ANR	ANR
alpha-BHC	Grab	µg/L	E608.3	0.01	1/Discharge	ND	0.0024	0.005	U *	ND	0.012	0.025	U *	ND	0.048	0.10	U *
alpha-Endosulfan	Grab	µg/L	E608.3	0.02	1/Year	ND	0.0019	0.005	U *	ND	0.0095	0.025	U *	ANR	ANR	ANR	ANR
Aluminum	Grab	mg/L	E200.8	-	1/Year	0.8	0.0029	0.015	*	0.9	0.0029	0.015	*	0.058	0.0029	0.015	*
Aluminum, dissolved	Grab	mg/L	E200.8	-	Additional/Year	0.033	0.0029	0.015	*	0.1	0.0029	0.015	*	ANR	ANR	ANR	ANR
Ammonia - N	Grab	mg/L	E350.1	-	1/Discharge	ND	0.023	0.075	U *	ND	0.023	0.075	U *	0.033	0.023	0.075	J (DNQ*)
Anthracene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.026	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony	Grab	µg/L	E200.8	0.5	1/Year	ND	0.79	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Antimony, dissolved	Grab	µg/L	E200.8	0.5	Additional/Year	ND	0.79	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-2
SWTS 011 (INF-001) AND SWTS 018 (INF-002)
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
					LOCATION												
					DATE RANGE	12/27/2025 07:45				11/17/2025 10:05				12/23/2025 07:30			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	ML	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Aroclor-1016 (PCB-1016)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor-1221 (PCB-1221)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor-1232 (PCB-1232)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor-1242 (PCB-1242)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor-1248 (PCB-1248)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor-1254 (PCB-1254)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor-1260 (PCB-1260)	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Aroclor Sum Total	Grab	µg/L	E608.3	0.5	1/Year	ND	0.5	0.5	U *	ND	0.5	2.5	U *	ANR	ANR	ANR	ANR
Arsenic	Grab	µg/L	E200.8	2	1/Year	1.7	0.16	1.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Arsenic, dissolved	Grab	µg/L	E200.8	2	Additional/Year	1.3	0.16	1.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium	Grab	mg/L	E200.8	-	1/Year	0.018	0.00054	0.0010	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Barium, dissolved	Grab	mg/L	E200.8	-	Additional/Year	0.011	0.00054	0.0010	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzene	Grab	µg/L	E624.1	2	1/Year	ND	0.10	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzidine	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.95	5.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)anthracene	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.060	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(a)pyrene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.029	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(b)fluoranthene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.070	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(g,h,i)perylene	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.061	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Benzo(k)fluoranthene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.070	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium	Grab	µg/L	E200.8	0.5	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Beryllium, dissolved	Grab	µg/L	E200.8	0.5	Additional/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
beta-BHC	Grab	µg/L	E608.3	0.005	1/Year	ND	0.0033	0.005	U *	ND	0.016	0.025	U *	ANR	ANR	ANR	ANR
beta-Endosulfan	Grab	µg/L	E608.3	0.01	1/Year	ND	0.0039	0.005	U *	ND	0.02	0.025	U *	ANR	ANR	ANR	ANR
Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	Grab	mg/L	SM5210B	-	1/Discharge	1.6	1.0	2.0	J (DNQ*)	3.1	1.0	2.0	*	3.5	1.0	2.0	*
Bis (2-Chloroethoxy) Methane	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.072	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroethyl) Ether	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.070	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Chloroisopropyl) Ether	Grab	µg/L	E625.1SIM	2	1/Year	ND	0.088	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bis (2-Ethylhexyl) Phthalate	Grab	µg/L	E625.1SIM	5	1/Discharge	ND	1.1	5.1	U *	2.7	1.0	4.8	J (DNQ*)	ND	1.0	4.9	U *
Boron	Grab	mg/L	E200.7	-	1/Year	0.069	0.026	0.50	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Boron, dissolved	Grab	mg/L	E200.7	-	Additional/Year	0.058	0.026	0.50	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromodichloromethane	Grab	µg/L	E624.1	2	1/Year	ND	0.13	0.5	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromoform	Grab	µg/L	E624.1	2	1/Year	ND	0.25	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Bromomethane (Methyl Bromide)	Grab	µg/L	E624.1	2	1/Year	ND	0.38	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Butyl benzylphthalate	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.35	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cadmium	Grab	µg/L	E200.8	0.25	1/Discharge	0.12	0.047	1.0	J (DNQ*)	0.11	0.047	1.0	J (DNQ*)	0.14	0.047	1.0	J (DNQ*)
Cadmium, dissolved	Grab	µg/L	E200.8	0.25	Additional/Discharge	0.070	0.047	1.0	J (DNQ*)	0.090	0.047	1.0	J (DNQ*)	ANR	ANR	ANR	ANR
Carbon tetrachloride	Grab	µg/L	E624.1	2	1/Year	ND	0.20	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlordane	Grab	µg/L	E608.3	0.1	1/Year	ND	0.1	0.1	U *	ND	0.22	0.5	U *	ANR	ANR	ANR	ANR
Chloride	Grab	mg/L	E300	-	1/Discharge	3.8	0.72	2.0	*	5.3	0.36	1.0	*	14	0.72	2.0	*
Chlorine, Total Residual (Field)	Grab	mg/L	FIELDPARAM	-	1/Year	0.0	NM	NM	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorobenzene	Grab	µg/L	E624.1	2	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroethane	Grab	µg/L	E624.1	2	1/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloroform	Grab	µg/L	E624.1	2	1/Year	ND	0.25	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chlorodibromomethane	Grab	µg/L	E624.1	2	1/Year	ND	0.13	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chloromethane (Methyl Chloride)	Grab	µg/L	E624.1	2	1/Year	ND	0.23	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium	Grab	µg/L	E200.8	0.5	1/Year	1.5	0.54	2.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium, dissolved	Grab	µg/L	E200.8	0.5	Additional/Year	ND	0.54	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium III (Trivalent)	Grab	µg/L	E218.6	-	1/Year	ND	3.0	50.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR

TABLE C-2
SWTS 011 (INF-001) AND SWTS 018 (INF-002)
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
					LOCATION												
					DATE RANGE	12/27/2025 07:45				11/17/2025 10:05				12/23/2025 07:30			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Chromium III (Trivalent), dissolved	Grab	µg/L	E218.6	-	Additional/Year	ND	3.0	50.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent)	Grab	µg/L	E218.6	-	1/Year	ND	0.051	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chromium VI (Hexavalent), dissolved	Grab	µg/L	E218.6	-	Additional/Year	ND	0.051	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chronic Toxicity, Fathead Minnow	Grab	Pass or Fail and % Effect	EPA-821-R-02-013	-	1/Year	SURVIVAL = PASS, % EFFECT = 0.95%	NM	NM	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Chrysene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.057	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
cis-1,2-Dichloroethene	Grab	µg/L	E624.1	-	1/Discharge	ND	0.24	0.50	U *	ND	0.24	0.50	U *	ND	0.24	0.50	U *
cis-1,3-Dichloropropene	Grab	µg/L	E624.1	2	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt	Grab	µg/L	E200.8	-	1/Year	0.43	0.050	1.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Cobalt, dissolved	Grab	µg/L	E200.8	-	Additional/Year	0.096	0.050	1.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Conductivity at 25 deg. C	Grab	µmhos/cm	SM2510	-	1/Discharge	76	1.0	1.0	*	130	1.0	1.0	*	400	1.0	1.0	*
Copper	Grab	µg/L	E200.8	0.5	1/Discharge	5.1	0.24	2.0	*	4.6	0.24	2.0	*	2.8	0.24	2.0	*
Copper, dissolved	Grab	µg/L	E200.8	0.5	Additional/Discharge	3.9	0.24	2.0	*	3.7	0.24	2.0	*	ANR	ANR	ANR	ANR
Cyanide	Grab	µg/L	KELADA-01	-	1/Discharge	2.7	2.7	5.0	J (DNQ*)	ND	2.7	5.0	U *	2.7	2.7	5.0	J (DNQ*)
Cyclohexane	Grab	µg/L	E624.1	-	1/Discharge	ND	0.80	2.0	U *	ND	0.80	2.0	U *	ND	0.80	2.0	U *
delta-BHC	Grab	µg/L	E608.3	0.005	1/Year	ND	0.0019	0.005	U *	ND	0.025	0.025	U *	ANR	ANR	ANR	ANR
Detergents (as MBAS)	Grab	mg/L	SM5540	-	1/Discharge	ND	0.062	0.20	U *	ND	0.062	0.20	U *	0.12	0.062	0.20	J (DNQ*)
Dibenzo(a,h)anthracene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.14	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dieldrin	Grab	µg/L	E608.3	0.01	1/Year	ND	0.0017	0.005	U *	ND	0.0085	0.025	U *	ANR	ANR	ANR	ANR
Diethyl phthalate	Grab	µg/L	E625.1SIM	2	1/Year	ND	0.21	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dimethyl phthalate	Grab	µg/L	E625.1SIM	2	1/Year	ND	1.7	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-butyl phthalate	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.72	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Di-n-octyl phthalate	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.077	3.1	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Dissolved Oxygen (Field)	Grab	mg/L	FIELDPARAM	-	1/Discharge	12.57	NM	NM	*	15.74	NM	NM	*	9.40	NM	NM	*
Endosulfan sulfate	Grab	µg/L	E608.3	0.05	1/Year	ND	0.0029	0.005	U *	ND	0.014	0.025	U *	ANR	ANR	ANR	ANR
Endrin	Grab	µg/L	E608.3	0.01	1/Year	ND	0.004	0.005	U *	ND	0.02	0.025	U *	ANR	ANR	ANR	ANR
Endrin aldehyde	Grab	µg/L	E608.3	0.01	1/Year	ND	0.0039	0.005	U *	ND	0.02	0.025	U *	ANR	ANR	ANR	ANR
Ethylbenzene	Grab	µg/L	E624.1	2	1/Year	ND	0.090	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoranthene	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.057	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluorene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.061	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Fluoride	Grab	mg/L	E300	-	1/Year	0.10	0.092	0.20	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
gamma-BHC (Lindane)	Grab	µg/L	E608.3	0.02	1/Year	ND	0.0036	0.005	U *	ND	0.018	0.025	U *	ANR	ANR	ANR	ANR
Hardness, Dissolved (as CaCO3)	Grab	mg/L	SM2340	-	Additional/Year	26	0.48	7.1	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hardness, Total (as CaCO3)	Grab	mg/L	SM2340	-	1/Year	31	0.48	7.1	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Heptachlor	Grab	µg/L	E608.3	0.01	1/Discharge	ND	0.005	0.005	U *	ND	0.012	0.025	U *	ND	0.046	0.10	U *
Heptachlor epoxide	Grab	µg/L	E608.3	0.01	1/Year	ND	0.0018	0.005	U *	ND	0.0090	0.025	U *	ANR	ANR	ANR	ANR
Hexachlorobenzene	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.071	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorobutadiene	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.11	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachlorocyclopentadiene	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.11	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Hexachloroethane	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.099	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Indeno(1,2,3-cd)pyrene (EMAX)	Grab	µg/L	SW8270C	10	1/Discharge	ND	0.099	0.30	U *	ND	0.096	0.29	U *	ND	0.096	0.29	U *
Indeno(1,2,3-cd)pyrene (EUROFINS)	Grab	µg/L	E625.1SIM	10	1/Discharge	ND	0.14	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron	Grab	mg/L	E200.8	-	1/Year	1.2	0.018	0.020	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Iron, dissolved	Grab	mg/L	E200.8	-	Additional/Year	0.055	0.018	0.020	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Isophorone	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.072	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Lead	Grab	µg/L	E200.8	0.5	1/Discharge	1.1	0.058	1.0	*	1.1	0.058	1.0	*	0.19	0.058	1.0	J (DNQ*)
Lead, dissolved	Grab	µg/L	E200.8	0.5	Additional/Discharge	0.060	0.058	1.0	J (DNQ*)	0.16	0.058	1.0	J (DNQ*)	ANR	ANR	ANR	ANR
Manganese	Grab	µg/L	E200.8	-	1/Year	22	1.4	2.0	*	77	1.4	2.0	*	400	1.4	2.0	*

TABLE C-2
SWTS 011 (INF-001) AND SWTS 018 (INF-002)
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
					LOCATION	SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
					DATE RANGE	12/27/2025 07:45				11/17/2025 10:05				12/23/2025 07:30			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Manganese, dissolved	Grab	µg/L	E200.8	-	Additional/Year	1.5	1.4	2.0	J (DNQ*)	7.9	1.4	2.0	*	ANR	ANR	ANR	ANR
Mercury	Grab	µg/L	E1631E	0.5	1/Discharge	0.030	0.00020	0.00050	*	0.017	0.00020	0.00050	*	0.0069	0.00020	0.00050	*
Mercury, dissolved	Grab	µg/L	E1631E	0.5	Additional/Discharge	0.018	0.00020	0.00050	*	0.011	0.00020	0.00050	*	0.0048	0.00020	0.00050	*
Methylene chloride	Grab	µg/L	E624.1	2	1/Year	ND	0.63	2.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Monomethyl hydrazine	Grab	µg/L	SW8315	-	1/Discharge	ND	0.62	2	U *	ND	0.62	2.0	U *	ND	0.62	2.0	U *
Naphthalene	Grab	µg/L	E624.1	1	1/Year	ND	0.17	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Nickel	Grab	µg/L	E200.8	1	1/Year	1.7	0.60	2.0	J (DNQ*)	2.3	0.60	2.0	*	2.1	0.60	2.0	*
Nickel, dissolved	Grab	µg/L	E200.8	1	Additional/Year	0.90	0.60	2.0	J (DNQ*)	1.5	0.60	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Nitrate - N	Grab	mg/L	E300	-	1/Discharge	0.72	0.039	0.20	*	1.4	0.020	0.10	*	ND	0.039	0.20	U *
Nitrate + Nitrite as Nitrogen (N)	Grab	mg/L	E300	-	1/Discharge	0.72	0.18	0.20	*	1.4	0.091	0.10	*	ND	0.18	0.20	U *
Nitrite - N	Grab	mg/L	E300	-	1/Discharge	ND	0.18	0.20	U *	ND	0.091	0.10	U *	ND	0.18	0.20	U *
Nitrobenzene	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.086	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodimethylamine	Grab	µg/L	E625.1SIM	5	1/Discharge	ND	0.093	0.20	U *	ND	0.088	0.19	U *	ND	0.089	0.20	U *
N-Nitroso-di-n-propylamine	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.061	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
N-Nitrosodiphenylamine	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.031	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Oil & Grease	Grab	mg/L	E1664	-	1/Discharge	1.3	0.53	1.0	*	ND	0.52	1.0	U *	1.4	0.50	0.98	*
Pentachlorophenol	Grab	µg/L	E625.1SIM	5	1/Discharge	ND	0.098	1.0	U *	ND	0.093	0.97	U *	ND	0.094	0.98	U *
Perchlorate	Grab	µg/L	E314.0	-	1/Year	ND	4.3	20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
pH (Field)	Grab	s.u.	FIELDPARAM	-	1/Discharge	8.30	NM	NM	*	6.80	NM	NM	*	8.40	NM	NM	*
Phenanthrene	Grab	µg/L	E625.1SIM	5	1/Year	ND	0.069	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Phenol	Grab	µg/L	E625.1SIM	1	1/Year	ND	0.034	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Pyrene	Grab	µg/L	E625.1SIM	10	1/Year	ND	0.068	0.20	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Selenium	Grab	µg/L	E200.8	2	1/Discharge	ND	0.42	2.0	U *	ND	0.42	2.0	U *	0.52	0.42	2.0	J (DNQ*)
Selenium, dissolved	Grab	µg/L	E200.8	2	Additional/Discharge	ND	0.42	2.0	U *	0.62	0.42	2.0	J (DNQ*)	ANR	ANR	ANR	ANR
Silver	Grab	µg/L	E200.8	0.25	1/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Silver, dissolved	Grab	µg/L	E200.8	0.25	Additional/Year	ND	0.36	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Sulfate	Grab	mg/L	E300	-	1/Discharge	3.0	0.37	2.0	*	19	0.18	1.0	*	120	0.37	2.0	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	1/Discharge	48.72	NM	NM	*	60.33	NM	NM	*	53.1	NM	NM	*
Tetrachloroethene	Grab	µg/L	E624.1	2	1/Year	ND	0.14	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium	Grab	µg/L	E200.8	1	1/Year	ND	0.055	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Thallium, dissolved	Grab	µg/L	E200.8	1	Additional/Year	ND	0.055	1.0	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Toluene	Grab	µg/L	E624.1	2	1/Year	ND	0.11	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Dissolved Solids	Grab	mg/L	SM2540C	-	1/Discharge	74	5.7	10	*	110	5.7	10	*	330	5.7	10	*
Total Organic Carbon	Grab	mg/L	SM5310C	-	1/Year	13	0.60	1.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Total Suspended Solids	Grab	mg/L	SM2540D	-	Additional/Discharge	14	0.80	1.0	*	24	0.85	1.1	*	7.3	0.80	1.0	*
Toxaphene	Grab	µg/L	E608.3	0.5	1/Year	ND	1	1	U *	ND	0.75	2.5	U *	ANR	ANR	ANR	ANR
trans-1,2-Dichloroethene	Grab	µg/L	E624.1	1	1/Year	ND	0.19	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
trans-1,3-Dichloropropene	Grab	µg/L	E624.1	2	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Trichloroethene	Grab	µg/L	E624.1	2	1/Discharge	ND	0.11	0.50	U *	ND	0.11	0.50	U *	ND	0.11	0.50	U *
Turbidity	Grab	NTU	SM2130	-	1/Discharge	27	0.65	1.0	*	27	0.40	0.50	*	3.8	0.65	1.0	*
Vanadium	Grab	µg/L	E200.8	-	1/Year	3.0	0.55	2.0	*	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vanadium, dissolved	Grab	µg/L	E200.8	-	Additional/Year	1.1	0.55	2.0	J (DNQ*)	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Vinyl chloride	Grab	µg/L	E624.1	2	1/Year	ND	0.16	0.50	U *	ANR	ANR	ANR	ANR	ANR	ANR	ANR	ANR
Zinc	Grab	µg/L	E200.8	1	1/Discharge	13	4.5	20	J (DNQ*)	18	4.5	20	J (DNQ*)	ND	4.5	20	U *
Zinc, dissolved	Grab	µg/L	E200.8	1	Additional/Discharge	6.5	4.5	20	J (DNQ*)	6.6	4.5	20	J (DNQ*)	ANR	ANR	ANR	ANR

TABLE C-3.A
RSW-002 (DOWNSTREAM)
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						LOCATION	Arroyo Simi Receiving Water Downstream (RSW-002)				Arroyo Simi Receiving Water Downstream (RSW-002)			
						DATE RANGE	10/31/2025 10:28				11/15/2025 10:05			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
4,4'-DDD	Grab	µg/L	E608.3	0.05	-	1/Quarter	ND	0.027	0.50	U *	ND	0.014	0.025	U *
4,4'-DDE	Grab	µg/L	E608.3	0.05	-	1/Quarter	ND	0.037	0.50	U *	ND	0.018	0.025	U *
4,4'-DDT	Grab	µg/L	E608.3	0.01	-	1/Quarter	ND	0.028	0.50	U *	ND	0.014	0.025	U *
Aroclor 1016	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.75	10	U *	ND	0.5	2.5	U *
Aroclor 1221	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.60	10	U *	ND	0.5	2.5	U *
Aroclor 1232	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.83	10	U *	ND	0.5	2.5	U *
Aroclor 1242	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.95	10	U *	ND	0.5	2.5	U *
Aroclor 1248	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.83	10	U *	ND	0.5	2.5	U *
Aroclor 1254	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.40	10	U *	ND	0.5	2.5	U *
Aroclor 1260	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	0.55	10	U *	ND	0.5	2.5	U *
Aroclor Sum Total	Grab	µg/L	CALC	0.5	-	1/Quarter	ND	0.55	10	U *	ND	0.5	2.5	U *
Chlordane	Grab	µg/L	E608.3	0.1	-	1/Quarter	ND	0.43	5.0	U *	ND	0.22	0.5	U *
Chlorpyrifos	Grab	µg/L	E625.1	-	0.014	1/Quarter	0.0069	0.0040	0.010	J (DNQ*)	ND	0.081	0.20	U *
Diazinon	Grab	µg/L	E625.1	-	0.01	1/Quarter	ND	0.0034	0.010	U *	ND	0.068	0.20	U *
Dieldrin	Grab	µg/L	E608.3	0.01	-	1/Quarter	ND	0.017	0.50	U *	ND	0.0085	0.025	U *
Hardness (as CaCO3)	Grab	mg/L	SM2340	-	-	1/Quarter	620	3.1	4.0	*	55	3.1	4.0	*
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	6.79	NM	NM	*	7.35	NM	NM	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	63.63	NM	NM	*	57.52	NM	NM	*
Toxaphene	Grab	µg/L	E608.3	0.5	-	1/Quarter	ND	1.5	20	U *	ND	0.75	2.5	U *
Water Velocity	Grab	ft/sec	FIELDPARAM	-	-	1/Quarter	0.1	NM	NM	*	1.1	NM	NM	*

TABLE C-3.B
RSW-003 (UPSTREAM)
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

						LOCATION DATE RANGE	Arroyo Simi Receiving Water Upstream (RSW-003) 11/15/2025 09:25			
ANALYTE	**SAMPLE TYPE**	**UNITS**	**METHOD**	**ML**	**DAILY MAXIMUM LIMIT**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Hardness (as CaCO3)	Grab	mg/L	SM2340	-	-	1/Quarter	48	3.1	4	*
pH (Field)	Grab	s.u.	FIELDPARAM	-	6.5-8.5	1/Quarter	7.61	NM	NM	*
Temperature (Field)	Grab	Deg F	FIELDPARAM	-	80	1/Quarter	58.1	NM	NM	*
Water Velocity	Grab	ft/sec	FIELDPARAM	-	-	1/Quarter	1.0	NM	NM	*

TABLE C-4
E. COLI
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

					E. Coli (MPN/100mL)				
LOCATION	**SAMPLE DATE AND TIME**	**RECEIVING WATER LIMIT**	**METHOD**	**SAMPLE FREQUENCY**	**SAMPLE TYPE**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
Outfall 004	12/24/2025 11:00	-	SM9223B	1/Year	Grab	360	NA	NA	*
Outfall 011	12/25/2025 09:15	-	SM9223B	1/Year	Grab	610	NA	NA	*
SWTS 011 (INF-001)	12/27/2025 07:45	-	SM9223B	1/Year	Grab	42	NA	NA	*

TABLE C-5
RADIONUCLIDES
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Analyte		**Cesium-137**			**Gross Alpha Analytes**			**Gross Beta Analytes**		
Method		**E901.1**			**E900**			**E900**		
Units		**pCi/L**			**pCi/L**			**pCi/L**		
Daily Maximum Limit		**-**			**15**			**50**		
Sample Frequency		**1/Discharge**			**1/Discharge**			**1/Discharge**		
LOCATION	**SAMPLE DATE AND TIME**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**
Outfall 001	12/27/2025 11:45	-3.43 ± 11.7	19.5	U *	2.26 ± 1.15	1.46	*	4.87 ± 1.00	0.848	*
Outfall 001	01/02/2026 10:05	-4.27 ± 11.1	19.7	U *	2.67 ± 1.35	1.70	*	4.08 ± 1.04	1.15	*
Outfall 002	11/16/2025 10:15	-5.66 ± 19.1	17.4	U *	8.98 ± 4.15	5.44	*	8.67 ± 1.89	1.91	*
Outfall 002	12/25/2025 08:10	1.76 ± 8.54	14.7	U *	4.76 ± 1.96	2.25	*	8.14 ± 1.39	1.05	*
Outfall 002	01/02/2026 08:15	0.927 ± 8.90	15.5	U *	0.195 ± 1.25	2.35	U *	2.20 ± 0.806	1.06	*
Outfall 004	12/26/2025 07:45	-3.51 ± 12.4	19.9	U *	1.02 ± 0.758	1.11	U *	2.81 ± 0.799	0.901	*
Outfall 008	12/26/2025 09:30	-7.97 ± 15.1	18.2	U *	1.54 ± 1.04	1.49	*	2.78 ± 0.817	0.942	*
Outfall 008	01/02/2026 11:15	-3.99 ± 12.7	22.2	U *	1.51 ± 1.23	1.88	U *	0.982 ± 0.766	1.18	U *
Outfall 009	11/01/2025 08:40	2.34 ± 8.45	13.9	U *	2.08 ± 1.66	2.44	U *	2.89 ± 0.926	1.16	*
Outfall 009	11/16/2025 09:05	-1.95 ± 8.52	14.2	U *	2.00 ± 0.945	1.14	*	3.08 ± 0.930	1.11	*
Outfall 009	12/25/2025 07:25	0.143 ± 14.3	25.1	U *	2.68 ± 1.19	1.48	*	4.01 ± 0.958	0.979	*
Outfall 009	01/02/2026 07:50	4.54 ± 8.47	13.9	U *	1.60 ± 0.933	1.27	*	1.20 ± 0.690	0.986	*
Outfall 011	12/26/2025 10:00	-2.51 ± 10.8	17.5	U *	3.14 ± 1.31	1.52	*	4.79 ± 1.01	0.894	*
Outfall 011	01/02/2026 10:35	-6.20 ± 13.1	23.1	U *	-0.373 ± 0.627	1.38	U *	1.56 ± 0.838	1.25	*
Outfall 018	11/19/2025 11:40	9.03 ± 8.65	12.7	U *	-0.233 ± 0.887	1.80	U *	3.04 ± 0.792	0.840	*
Outfall 018	12/26/2025 08:45	1.02 ± 21.2	36.6	U *	2.24 ± 1.17	1.54	*	2.63 ± 0.786	0.883	*
Outfall 018	01/02/2026 09:10	3.72 ± 6.63	10.9	U *	-0.157 ± 0.748	1.64	U *	1.47 ± 0.767	1.13	*
SWTS 011 (INF-001)	12/27/2025 07:45	-5.49 ± 12.0	21.2	U *	2.03 ± 1.04	1.32	*	4.22 ± 1.04	1.12	*
SWTS 018 (INF-002)	11/17/2025 10:05	4.44 ± 10.6	16.9	U *	1.65 ± 1.07	1.51	*	3.56 ± 0.985	1.14	*
SWTS 018 (INF-002)	12/23/2025 07:30	-3.51 ± 12.4	19.9	U *	1.49 ± 1.58	2.53	U *	4.34 ± 0.967	0.919	*

TABLE C-5
RADIONUCLIDES
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Analyte		**Gross Beta Analytes**			**Potassium-40**			**Radium-226 & 228**		
Method		**E900**			**E901.1**			**E903/904**		
Units		**millirem/yr**			**pCi/L**			**pCi/L**		
Daily Maximum Limit		**4**			**-**			**5.0**		
Sample Frequency		**1/Discharge**			**1/Discharge**			**1/Discharge**		
LOCATION	**SAMPLE DATE AND TIME**	**RESULT**	**MDA**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**
Outfall 001	12/27/2025 11:45	<4	NA	NA	-37.8 ± 105	198	U *	1.64 ± 1.046	NM	U *
Outfall 001	01/02/2026 10:05	<4	NA	NA	8.22 ± 107	189	U *	0.646 ± 0.675	NM	U *
Outfall 002	11/16/2025 10:15	<4	NA	NA	63.8 ± 119	194	U *	1.96 ± 1.142	NM	U *
Outfall 002	12/25/2025 08:10	<4	NA	NA	-44.0 ± 120	222	U *	0.353 ± 1.067	NM	*
Outfall 002	01/02/2026 08:15	<4	NA	NA	2.40 ± 103	185	U *	0.834 ± 0.444	NM	U *
Outfall 004	12/26/2025 07:45	<4	NA	NA	-48.0 ± 111	212	U *	0.744 ± 0.488	NM	U *
Outfall 008	12/26/2025 09:30	<4	NA	NA	-28.2 ± 124	222	U *	1.11 ± 0.700	NM	U *
Outfall 008	01/02/2026 11:15	<4	NA	NA	-15.3 ± 118	211	U *	0.922 ± 0.564	NM	U *
Outfall 009	11/01/2025 08:40	<4	NA	NA	-19.0 ± 135	232	U *	0.76 ± 0.47	NM	U *
Outfall 009	11/16/2025 09:05	<4	NA	NA	88.9 ± 110	171	U *	1.04 ± 0.64	NM	U *
Outfall 009	12/25/2025 07:25	<4	NA	NA	2.58 ± 120	230	U *	1.05 ± 0.57	NM	U *
Outfall 009	01/02/2026 07:50	<4	NA	NA	-20.7 ± 116	211	U *	0.984 ± 0.555	NM	U *
Outfall 011	12/26/2025 10:00	<4	NA	NA	44.1 ± 132	219	U *	1.43 ± 0.886	NM	U *
Outfall 011	01/02/2026 10:35	<4	NA	NA	-17.1 ± 111	200	U *	0.706 ± 0.412	NM	U *
Outfall 018	11/19/2025 11:40	<4	NA	NA	-11.8 ± 129	223	U *	0.997 ± 0.476	NM	U *
Outfall 018	12/26/2025 08:45	<4	NA	NA	-40.9 ± 154	271	U *	2.910 ± 0.831	NM	*
Outfall 018	01/02/2026 09:10	<4	NA	NA	11.7 ± 105	185	U *	0.632 ± 0.396	NM	U *
SWTS 011 (INF-001)	12/27/2025 07:45	<4	NA	NA	14.1 ± 116	200	U *	1.75 ± 0.618	NM	*
SWTS 018 (INF-002)	11/17/2025 10:05	<4	NA	NA	-32.8 ± 129	232	U *	1.71 ± 0.783	NM	*
SWTS 018 (INF-002)	12/23/2025 07:30	<4	NA	NA	-35.9 ± 124	227	U *	0.89 ± 0.549	NM	U *

TABLE C-5
RADIONUCLIDES
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Analyte		**Strontium-90**			**Uranium**			**Tritium**		
Method		**E905.0**			**HASL-300 U Mod**			**E906.0**		
Units		**pCi/L**			**pCi/L**			**pCi/L**		
Daily Maximum Limit		**8.0**			**20**			**20,000**		
Sample Frequency		**1/Discharge**			**1/Discharge**			**1/Discharge**		
LOCATION	**SAMPLE DATE AND TIME**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**	**RESULT**	**MDA**	**LAB/VALIDATION QUALIFIER**
Outfall 001	12/27/2025 11:45	0.621 ± 0.676	1.10	U *	0.558 ± 0.297	0.205	*	-136 ± 157	307	U *
Outfall 001	01/02/2026 10:05	-0.00877 ± 0.295	0.531	U *	0.188 ± 0.162	0.158	*	-67.6 ± 115	223	U *
Outfall 002	11/16/2025 10:15	0.352 ± 0.362	0.586	U *	0.814 ± 0.692	0.777	*	102 ± 173	294	U *
Outfall 002	12/25/2025 08:10	0.295 ± 0.763	1.31	U *	0.604 ± 0.307	0.245	*	-155 ± 145	281	U *
Outfall 002	01/02/2026 08:15	-0.0642 ± 0.375	0.676	U *	0.677 ± 0.330	0.239	*	-114 ± 160	310	U *
Outfall 004	12/26/2025 07:45	0.622 ± 0.335	0.489	*	0.341 ± 0.429	0.589	U *	-144 ± 151	294	U *
Outfall 008	12/26/2025 09:30	0.301 ± 0.439	0.734	U *	0.322 ± 0.224	0.178	*	147 ± 182	303	U *
Outfall 008	01/02/2026 11:15	0.113 ± 0.330	0.573	U *	0.107 ± 0.158	0.260	U *	-17.1 ± 121	221	U *
Outfall 009	11/01/2025 08:40	0.198 ± 0.499	0.858	U *	0.813 ± 0.408	0.299	*	57.7 ± 134	232	U *
Outfall 009	11/16/2025 09:05	0.0266 ± 0.399	0.709	U *	0.411 ± 0.280	0.242	*	84.2 ± 173	299	U *
Outfall 009	12/25/2025 07:25	0.0316 ± 0.329	0.584	U *	0.418 ± 0.275	0.229	*	-142 ± 154	301	U *
Outfall 009	01/02/2026 07:50	-0.0200 ± 0.235	0.434	U *	0.374 ± 0.373	0.443	U *	-50.9 ± 122	235	U *
Outfall 011	12/26/2025 10:00	-0.173 ± 0.501	0.940	U *	0.361 ± 0.272	0.285	*	-141 ± 152	296	U *
Outfall 011	01/02/2026 10:35	0.0399 ± 0.270	0.479	U *	0.251 ± 0.230	0.321	U *	-10.4 ± 126	233	U *
Outfall 018	11/19/2025 11:40	0.194 ± 0.295	0.497	U *	0.0846 ± 0.1117	0.156	U *	9.91 ± 136	253	U *
Outfall 018	12/26/2025 08:45	0.635 ± 0.351	0.520	*	0.880 ± 0.483	0.459	*	-36.0 ± 124	233	U *
Outfall 018	01/02/2026 09:10	0.115 ± 0.339	0.588	U *	0.146 ± 0.1405	0.177	U *	-7.66 ± 127	233	U *
SWTS 011 (INF-001)	12/27/2025 07:45	-0.0198 ± 0.268	0.487	U *	0.110 ± 0.175	0.279	U *	-57.2 ± 120	233	U *
SWTS 018 (INF-002)	11/17/2025 10:05	0.838 ± 0.400	0.571	*	0.327 ± 0.305	0.418	U *	73.9 ± 169	292	U *
SWTS 018 (INF-002)	12/23/2025 07:30	-0.662 ± 0.830	1.56	U *	0.422 ± 0.253	0.205	*	5.86 ± 128	228	U *

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	Outfall 001					Outfall 001				
							DATE RANGE	12/27/2025 11:40 - 12/27/2025 11:45					12/31/2025 14:50 - 01/02/2026 10:05				
ANALYTE	METHOD	ML	INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY	RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY	1998 WHO TEF	BEF GREAT LAKES WATER QUALITY INITIATIVE	UNITS	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	1.4E-06	4.8E-05	3.3E-05	J (DNQ*)	ND	4.4E-07	4.9E-05	8.8E-06	J (DNQ,L)	ND
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	5.2E-07	4.8E-05	1.4E-05	J (DNQ*)	ND	1.8E-07	4.9E-05	3.4E-06	UJ (*10)	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	6.2E-07	4.8E-05	ND	U *	ND	2.3E-07	4.9E-05	7.3E-07	UJ (*10)	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	8.6E-07	4.8E-05	ND	U *	ND	2.9E-07	4.9E-05	ND	U	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	1.6E-06	4.8E-05	ND	U *	ND	2.3E-07	4.9E-05	ND	U	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	8.1E-07	4.8E-05	8.6E-07	J (DNQ*)	ND	2.8E-07	4.9E-05	ND	U	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	1.5E-06	4.8E-05	ND	U *	ND	2.2E-07	4.9E-05	ND	U	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	8.0E-07	4.8E-05	ND	U *	ND	2.8E-07	4.9E-05	ND	U	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	1.6E-06	4.8E-05	ND	U *	ND	2.1E-07	4.9E-05	ND	U	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	1.3E-06	4.8E-05	ND	U *	ND	4.0E-07	4.9E-05	ND	U	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	8.4E-07	4.8E-05	ND	U *	ND	4.7E-07	4.9E-05	ND	U	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	1.5E-06	4.8E-05	ND	U *	ND	2.0E-07	4.9E-05	ND	U	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	8.2E-07	4.8E-05	ND	U *	ND	4.1E-07	4.9E-05	ND	U	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	1.5E-06	9.7E-06	ND	U *	ND	9.6E-07	9.7E-06	ND	U	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	2.4E-06	9.7E-06	ND	U *	ND	3.9E-07	9.7E-06	ND	U	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	2.4E-06	9.7E-05	4.1E-04	*	4.1E-10	6.5E-07	9.7E-05	5.2E-05	U (B)	ND
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	2.5E-06	9.7E-05	3.9E-05	J (DNQ*)	ND	8.3E-07	9.7E-05	6.5E-06	U (B)	ND

TCDD TEQ w/out DNQ Values in µg/L	**4.1E-10**	**TCDD TEQ w/out DNQ Values in µg/L**	**ND**
TCDD TEQ w/out DNQ Values in lbs/day	**2.1E-12**	**TCDD TEQ w/out DNQ Values in lbs/day**	**ND**

TCDD TEQ Limit (µg/L)	**2.8E-08**	**TCDD TEQ Limit (µg/L)**	**2.8E-08**
TCDD TEQ Limit (lbs/day)	**2.75E-08**	**TCDD TEQ Limit (lbs/day)**	**2.75E-08**

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

								Outfall 002					Outfall 002				
							LOCATION	11/15/2025 11:45 - 11/16/2025 10:15					12/24/2025 07:55 - 12/25/2025 08:10				
							DATE RANGE										
ANALYTE	METHOD	ML	INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY	RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY	1998 WHO TEF	BEF GREAT LAKES WATER QUALITY INITIATIVE	UNITS	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	1.2E-06	4.9E-05	6.7E-05	--	3.4E-08	1.5E-06	5.7E-05	1.4E-04	--	7.0E-08
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	5.0E-07	4.9E-05	3.3E-05	J (DNQ)	ND	4.0E-07	5.7E-05	3.3E-05	J (DNQ)	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	6.3E-07	4.9E-05	1.3E-06	UJ (*10)	ND	4.9E-07	5.7E-05	1.8E-06	U (B)	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	4.3E-07	4.9E-05	6.7E-07	U (B)	ND	4.9E-07	5.7E-05	2.0E-06	UJ (*10)	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	5.1E-07	4.9E-05	1.2E-06	UJ (*10)	ND	3.5E-07	5.7E-05	1.1E-06	UJ (*10)	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	4.0E-07	4.9E-05	2.6E-06	U (B)	ND	4.6E-07	5.7E-05	5.4E-06	J (DNQ)	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	4.7E-07	4.9E-05	2.2E-06	J (DNQ,L)	ND	3.1E-07	5.7E-05	1.5E-06	UJ (*10)	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	4.1E-07	4.9E-05	1.8E-06	U (B)	ND	4.7E-07	5.7E-05	3.6E-06	UJ (*10)	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	4.4E-07	4.9E-05	8.0E-07	UJ (B,L)	ND	2.9E-07	5.7E-05	4.0E-07	UJ (*10)	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	5.3E-07	4.9E-05	ND	U	ND	3.7E-07	5.7E-05	1.1E-06	UJ (*10)	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	8.4E-07	4.9E-05	ND	U	ND	2.7E-07	5.7E-05	ND	U	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	4.0E-07	4.9E-05	2.3E-06	U (B)	ND	2.9E-07	5.7E-05	2.2E-06	J (DNQ)	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	7.0E-07	4.9E-05	ND	U	ND	2.8E-07	5.7E-05	ND	U	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	1.2E-06	9.7E-06	ND	U	ND	6.4E-07	1.1E-05	ND	U	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	6.8E-07	9.7E-06	ND	U	ND	2.0E-07	1.1E-05	ND	U	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	2.5E-06	9.7E-05	6.9E-04	--	6.9E-10	4.2E-06	1.1E-04	1.7E-03	J (L)	1.7E-09
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	1.0E-06	9.7E-05	8.2E-05	J (DNQ)	ND	9.9E-07	1.1E-04	8.0E-05	J (DNQ)	ND

TCDD TEQ w/out DNQ Values in µg/L	**3.4E-08**	**TCDD TEQ w/out DNQ Values in µg/L**	**7.2E-08**
TCDD TEQ w/out DNQ Values in lbs/day	**1.4E-11**	**TCDD TEQ w/out DNQ Values in lbs/day**	**8.2E-09**

TCDD TEQ Limit (µg/L)	**2.8E-08**	**TCDD TEQ Limit (µg/L)**	**2.8E-08**
TCDD TEQ Limit (lbs/day)	**2.75E-08**	**TCDD TEQ Limit (lbs/day)**	**2.75E-08**

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	Outfall 002					Outfall 004				
							DATE RANGE	12/31/2025 14:05 - 01/02/2026 08:15					12/24/2025 11:00 - 12/26/2025 07:45				
ANALYTE	METHOD	ML	INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY	RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY	1998 WHO TEF	BEF GREAT LAKES WATER QUALITY INITIATIVE	UNITS	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	4.7E-07	4.9E-05	4.9E-06	J (DNQ,L)	ND	5.9E-07	4.8E-05	1.4E-05	J (DNQ*)	ND
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	2.5E-07	4.9E-05	2.7E-06	J (DNQ,L)	ND	1.3E-07	4.8E-05	7.6E-06	J (DNQ*)	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	3.3E-07	4.9E-05	ND	U	ND	1.4E-07	4.8E-05	2.2E-07	J (DNQ*)	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	2.7E-07	4.9E-05	ND	U	ND	1.6E-07	4.8E-05	ND	U *	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	3.2E-07	4.9E-05	ND	U	ND	1.4E-07	4.8E-05	5.5E-07	J (DNQ*)	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	2.6E-07	4.9E-05	ND	U	ND	1.5E-07	4.8E-05	3.3E-07	J (DNQ*)	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	2.9E-07	4.9E-05	ND	U	ND	1.2E-07	4.8E-05	ND	U *	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	2.6E-07	4.9E-05	ND	U	ND	1.5E-07	4.8E-05	ND	U *	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	2.8E-07	4.9E-05	ND	U	ND	1.0E-07	4.8E-05	3.9E-07	J (DNQ*)	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	4.4E-07	4.9E-05	ND	U	ND	2.4E-07	4.8E-05	ND	U *	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	5.5E-07	4.9E-05	ND	U	ND	2.2E-07	4.8E-05	ND	U *	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	2.7E-07	4.9E-05	ND	U	ND	1.0E-07	4.8E-05	ND	U *	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	5.0E-07	4.9E-05	ND	U	ND	2.8E-07	4.8E-05	ND	U *	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	1.0E-06	9.7E-06	ND	U	ND	7.9E-07	9.6E-06	ND	U *	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	4.3E-07	9.7E-06	ND	U	ND	1.6E-07	9.6E-06	ND	U *	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	7.7E-07	9.7E-05	3.6E-05	U (B)	ND	7.1E-07	9.6E-05	2.2E-04	*	2.2E-10
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	8.3E-07	9.7E-05	8.0E-06	U (B)	ND	8.2E-07	9.6E-05	7.5E-06	J (DNQ*)	ND

TCDD TEQ w/out DNQ Values in µg/L	ND	TCDD TEQ w/out DNQ Values in µg/L	2.2E-10
TCDD TEQ w/out DNQ Values in lbs/day	ND	TCDD TEQ w/out DNQ Values in lbs/day	5.3E-14

TCDD TEQ Limit (µg/L)	2.8E-08	TCDD TEQ Limit (µg/L)	2.8E-08
TCDD TEQ Limit (lbs/day)	2.75E-08	TCDD TEQ Limit (lbs/day)	1.5E-08

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	Outfall 011					Outfall 011				
							DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00					12/31/2025 15:10 - 01/02/2026 10:35				
ANALYTE	**METHOD**	**ML**	**INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY**	**RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY**	**1998 WHO TEF**	**BEF GREAT LAKES WATER QUALITY INITIATIVE**	**UNITS**	**LAB MDL**	**LAB RL**	**LAB RESULT**	**LAB/ VALIDATION QUALIFIER**	**TCDD EQUIVALENT (w/out DNQ Values)**	**LAB MDL**	**LAB RL**	**LAB RESULT**	**LAB/ VALIDATION QUALIFIER**	**TCDD EQUIVALENT (w/out DNQ Values)**
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	7.9E-07	4.9E-05	4.1E-05	J (DNQ*)	ND	4.7E-07	4.8E-05	1.9E-06	UJ (*10)	ND
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	3.4E-07	4.9E-05	1.9E-05	J (DNQ*)	ND	1.9E-07	4.8E-05	5.7E-07	UJ (*10)	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	3.9E-07	4.9E-05	ND	U *	ND	2.3E-07	4.8E-05	ND	U	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	1.3E-07	4.9E-05	6.6E-07	J (DNQ*)	ND	2.0E-07	4.8E-05	ND	U	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	2.8E-07	4.9E-05	ND	U *	ND	1.9E-07	4.8E-05	ND	U	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	1.3E-07	4.9E-05	1.8E-06	J (DNQ*)	ND	1.9E-07	4.8E-05	ND	U	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	2.7E-07	4.9E-05	ND	U *	ND	1.8E-07	4.8E-05	ND	U	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	1.3E-07	4.9E-05	1.1E-06	J (DNQ*)	ND	2.0E-07	4.8E-05	ND	U	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	2.7E-07	4.9E-05	ND	U *	ND	1.7E-07	4.8E-05	ND	U	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	3.3E-07	4.9E-05	ND	U *	ND	5.1E-07	4.8E-05	ND	U	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	2.5E-07	4.9E-05	ND	U *	ND	4.3E-07	4.8E-05	ND	U	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	2.6E-07	4.9E-05	9.3E-07	J (DNQ*)	ND	1.5E-07	4.8E-05	ND	U	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	2.7E-07	4.9E-05	ND	U *	ND	3.6E-07	4.8E-05	ND	U	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	8.2E-07	9.9E-06	ND	U *	ND	1.0E-06	9.7E-06	ND	U	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	2.2E-07	9.9E-06	ND	U *	ND	3.7E-07	9.7E-06	ND	U	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	1.6E-06	9.9E-05	4.4E-04	*	4.4E-10	5.3E-07	9.7E-05	2.3E-05	U (B)	ND
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	6.4E-07	9.9E-05	4.4E-05	J (DNQ*)	ND	6.4E-07	9.7E-05	3.3E-06	U (B)	ND

TCDD TEQ w/out DNQ Values in µg/L	**4.4E-10**	**TCDD TEQ w/out DNQ Values in µg/L**	**ND**
TCDD TEQ w/out DNQ Values in lbs/day	**3.2E-11**	**TCDD TEQ w/out DNQ Values in lbs/day**	**ND**

TCDD TEQ Limit (µg/L)	**2.8E-08**	**TCDD TEQ Limit (µg/L)**	**2.8E-08**
TCDD TEQ Limit (lbs/day)	**2.75E-08**	**TCDD TEQ Limit (lbs/day)**	**2.75E-08**

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	Outfall 018					Outfall 018				
							DATE RANGE	11/18/2025 12:30 - 11/19/2025 11:40					12/24/2025 11:30 - 12/26/2025 08:45				
ANALYTE	METHOD	ML	INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY	RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY	1998 WHO TEF	BEF GREAT LAKES WATER QUALITY INITIATIVE	UNITS	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	3.8E-07	5.0E-05	2.9E-06	U (B)	ND	1.2E-06	4.8E-05	2.7E-05	J (DNQ*)	ND
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	9.0E-08	5.0E-05	6.7E-07	UJ (*10)	ND	4.2E-07	4.8E-05	5.4E-06	J (DNQ*)	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	1.2E-07	5.0E-05	8.8E-07	J (DNQ)	ND	5.0E-07	4.8E-05	ND	U *	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	4.0E-07	5.0E-05	ND	U	ND	6.7E-07	4.8E-05	ND	U *	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	1.8E-07	5.0E-05	ND	U	ND	1.4E-06	4.8E-05	ND	U *	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	3.9E-07	5.0E-05	ND	U	ND	6.7E-07	4.8E-05	ND	U *	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	1.8E-07	5.0E-05	ND	UJ (L)	ND	1.4E-06	4.8E-05	ND	U *	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	4.0E-07	5.0E-05	ND	U	ND	6.5E-07	4.8E-05	ND	U *	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	1.7E-07	5.0E-05	ND	UJ (L)	ND	1.5E-06	4.8E-05	ND	U *	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	3.3E-07	5.0E-05	ND	U	ND	1.0E-06	4.8E-05	ND	U *	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	6.9E-07	5.0E-05	ND	U	ND	8.0E-07	4.8E-05	ND	U *	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	1.5E-07	5.0E-05	ND	U	ND	1.3E-06	4.8E-05	ND	U *	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	5.8E-07	5.0E-05	ND	U	ND	7.5E-07	4.8E-05	ND	U *	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	1.0E-06	1.0E-05	ND	U	ND	1.2E-06	9.7E-06	ND	U *	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	7.1E-07	1.0E-05	ND	U	ND	2.2E-06	9.7E-06	ND	U *	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	2.3E-07	1.0E-04	1.6E-05	U (B)	ND	2.4E-06	9.7E-05	3.4E-04	*	3.4E-10
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	6.8E-07	1.0E-04	2.8E-06	U (B)	ND	2.0E-06	9.7E-05	1.8E-05	J (DNQ*)	ND

TCDD TEQ w/out DNQ Values in µg/L	**ND**	**TCDD TEQ w/out DNQ Values in µg/L**	**3.4E-10**
TCDD TEQ w/out DNQ Values in lbs/day	**ND**	**TCDD TEQ w/out DNQ Values in lbs/day**	**1.8E-11**
TCDD TEQ Limit (µg/L)	**2.8E-08**	**TCDD TEQ Limit (µg/L)**	**2.8E-08**
TCDD TEQ Limit (lbs/day)	**2.75E-08**	**TCDD TEQ Limit (lbs/day)**	**2.75E-08**

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	Outfall 018					SWTS 011 (INF-001)				
							DATE RANGE	12/31/2025 15:35 - 01/02/2026 09:10					12/27/2025 07:45				
ANALYTE	METHOD	ML	INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY	RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY	1998 WHO TEF	BEF GREAT LAKES WATER QUALITY INITIATIVE	UNITS	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	5.9E-07	4.8E-05	ND	U	ND	5.7E-07	5.3E-05	3.1E-05	J (DNQ*)	ND
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	1.3E-07	4.8E-05	8.4E-07	UJ (*10)	ND	1.8E-07	5.3E-05	1.2E-05	J (DNQ*)	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	1.7E-07	4.8E-05	ND	U	ND	2.1E-07	5.3E-05	1.8E-06	J (DNQ*)	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	2.2E-07	4.8E-05	ND	U	ND	1.8E-07	5.3E-05	4.1E-07	J (DNQ*)	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	2.2E-07	4.8E-05	ND	U	ND	1.1E-07	5.3E-05	7.0E-07	J (DNQ*)	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	2.2E-07	4.8E-05	ND	U	ND	1.7E-07	5.3E-05	1.1E-06	J (DNQ*)	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	2.2E-07	4.8E-05	ND	U	ND	1.0E-07	5.3E-05	4.0E-07	J (DNQ*)	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	2.2E-07	4.8E-05	ND	U	ND	1.8E-07	5.3E-05	7.8E-07	J (DNQ*)	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	2.0E-07	4.8E-05	ND	U	ND	9.8E-08	5.3E-05	4.0E-07	J (DNQ*)	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	5.3E-07	4.8E-05	ND	U	ND	2.0E-07	5.3E-05	ND	U *	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	4.5E-07	4.8E-05	ND	U	ND	1.2E-07	5.3E-05	ND	U *	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	1.8E-07	4.8E-05	ND	U	ND	9.3E-08	5.3E-05	1.2E-06	J (DNQ*)	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	3.9E-07	4.8E-05	ND	U	ND	1.3E-07	5.3E-05	ND	U *	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	9.4E-07	9.6E-06	ND	U	ND	7.0E-07	1.1E-05	ND	U *	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	3.2E-07	9.6E-06	ND	U	ND	1.0E-07	1.1E-05	ND	U *	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	3.5E-07	9.6E-05	6.9E-06	U (B)	ND	1.3E-06	1.1E-04	2.9E-04	*	2.9E-10
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	6.7E-07	9.6E-05	ND	U	ND	8.5E-07	1.1E-04	3.0E-05	J (DNQ*)	ND

TCDD TEQ w/out DNQ Values in µg/L	**ND**	**TCDD TEQ w/out DNQ Values in µg/L**	**2.9E-10**
TCDD TEQ w/out DNQ Values in lbs/day	**ND**		

TCDD TEQ Limit (µg/L)	**2.8E-08**
TCDD TEQ Limit (lbs/day)	**2.75E-08**

TABLE C-6
TCDD TEQ
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							LOCATION	SWTS 018 (INF-002)					SWTS 018 (INF-002)				
							DATE RANGE	11/17/2025 10:05					12/23/2025 07:30				
ANALYTE	METHOD	ML	INFLUENT AND OUTFALLS 001, 002, 011, 018 SAMPLE FREQUENCY	RECEIVING WATER AND OUTFALLS 003 THROUGH 010 SAMPLE FREQUENCY	1998 WHO TEF	BEF GREAT LAKES WATER QUALITY INITIATIVE	UNITS	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)	LAB MDL	LAB RL	LAB RESULT	LAB/ VALIDATION QUALIFIER	TCDD EQUIVALENT (w/out DNQ Values)
1,2,3,4,6,7,8-HpCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.05	µg/L	2.2E-06	4.9E-05	2.9E-05	U (B)	ND	4.2E-06	4.9E-05	ND	U	ND
1,2,3,4,6,7,8-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.01	µg/L	4.8E-07	4.9E-05	7.8E-06	U (B)	ND	7.5E-07	4.9E-05	ND	U	ND
1,2,3,4,7,8,9-HpCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.01	0.4	µg/L	6.7E-07	4.9E-05	ND	U	ND	8.5E-07	4.9E-05	ND	U	ND
1,2,3,4,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.3	µg/L	4.4E-07	4.9E-05	ND	U	ND	2.5E-06	4.9E-05	ND	U	ND
1,2,3,4,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.08	µg/L	9.7E-07	4.9E-05	ND	U	ND	3.2E-06	4.9E-05	ND	U	ND
1,2,3,6,7,8-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	4.5E-07	4.9E-05	ND	U	ND	2.4E-06	4.9E-05	ND	U	ND
1,2,3,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.2	µg/L	8.6E-07	4.9E-05	ND	U	ND	2.8E-06	4.9E-05	ND	U	ND
1,2,3,7,8,9-HxCDD	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.1	µg/L	4.4E-07	4.9E-05	ND	U	ND	2.4E-06	4.9E-05	ND	U	ND
1,2,3,7,8,9-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.6	µg/L	1.2E-06	4.9E-05	ND	U	ND	3.6E-06	4.9E-05	ND	U	ND
1,2,3,7,8-PeCDD	E1613B	5.0E-05	1/Discharge	1/Year	1	0.9	µg/L	5.5E-07	4.9E-05	ND	U	ND	3.5E-06	4.9E-05	ND	U	ND
1,2,3,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.05	0.2	µg/L	5.2E-07	4.9E-05	ND	U	ND	1.6E-06	4.9E-05	ND	U	ND
2,3,4,6,7,8-HxCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.1	0.7	µg/L	9.0E-07	4.9E-05	ND	U	ND	3.0E-06	4.9E-05	ND	U	ND
2,3,4,7,8-PeCDF	E1613B	5.0E-05	1/Discharge	1/Year	0.5	1.6	µg/L	3.9E-07	4.9E-05	ND	U	ND	1.3E-06	4.9E-05	ND	U	ND
2,3,7,8-TCDD	E1613B	1.0E-05	1/Discharge	1/Year	1	1	µg/L	1.9E-07	9.7E-06	ND	U	ND	6.1E-07	9.8E-06	ND	U	ND
2,3,7,8-TCDF	E1613B	1.0E-05	1/Discharge	1/Year	0.1	0.8	µg/L	3.5E-07	9.7E-06	ND	U	ND	1.6E-06	9.8E-06	ND	U	ND
OCDD	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.01	µg/L	1.6E-06	9.7E-05	3.8E-04	J (L)	3.8E-10	3.2E-06	9.8E-05	ND	U	ND
OCDF	E1613B	1.00E-04	1/Discharge	1/Year	0.0001	0.02	µg/L	3.4E-07	9.7E-05	ND	U	ND	8.1E-07	9.8E-05	ND	U	ND
								TCDD TEQ w/out DNQ Values in µg/L				3.8E-10	TCDD TEQ w/out DNQ Values in µg/L				ND

TABLE C-7
PCBs
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

				LOCATION	Outfall 011				Outfall 011			
				SAMPLE TYPE	Primary				Duplicate			
				DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/25/2025 09:15 - 12/26/2025 10:00			
ANALYTE	SAMPLE TYPE	METHOD	UNITS	SAMPLE FREQUENCY	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
(PCB 8) 2,4'-Dichlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	8.7	200	U *	ND	3.3	200	U *
(PCB 18) 2,2',5-Trichlorobiphenyl	Comp	E1668C	pg/L	1/Year	48	2.2	400	J (DNQ*)	50	0.74	410	J (DNQ*)
(PCB 28) 2,4,4'-Trichlorobiphenyl	Comp	E1668C	pg/L	1/Year	41	2.7	400	J (DNQ*)	44	2.0	410	J (DNQ*)
(PCB 37) 3,4,4'-Trichlorobiphenyl	Comp	E1668C	pg/L	1/Year	5.8	2.7	20	J (DNQ*)	8.3	2.0	20	J (DNQ*)
(PCB 44) 2,2',3,5'-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	160	6.2	600	J (DNQ*)	160	3.0	610	J (DNQ*)
(PCB 49) 2,2',4,5'-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	86	5.7	400	J (DNQ*)	81	2.7	410	J (DNQ*)
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	210	6.3	200	*	210	3.0	200	*
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	96	7.9	200	J (DNQ*)	100	3.8	200	J (DNQ*)
(PCB 70) 2,3',4',5-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	200	8.4	800	J (DNQ*)	200	4.0	810	J (DNQ*)
(PCB 74) 2,4,4',5-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	200	8.4	800	J (DNQ*)	200	4.0	810	J (DNQ*)
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	9.2	20	U *	9.1	4.5	20	J (DNQ*)
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	10	20	U *	ND	4.7	20	U *
(PCB 87) 2,2',3,4,5'-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	260	7.2	1,200	J (DNQ*)	290	6.4	1,200	J (DNQ*)
(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	260	8.7	400	J (DNQ*)	270	7.8	410	J (DNQ*)
(PCB 101) 2,2',4,5,5'-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	420	7.8	600	J (DNQ*)	460	6.9	610	J (DNQ*)
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	91	6.0	20	*	110	5.3	20	*
(PCB 110) 2,3,3',4',6-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	600	6.2	400	*	660	5.5	410	*
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	6.3	20	U *	ND	5.8	20	U *
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	220	5.7	20	*	230	5.3	20	*
(PCB 119) 2,3',4,4',6-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	260	7.2	1,200	J (DNQ*)	290	6.4	1,200	J (DNQ*)
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	10	7.0	20	J (DNQ*)	8.5	6.3	20	J (DNQ*)
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	6.1	20	U *	ND	5.6	20	U *
(PCB 128) 2,2',3,3',4,4'-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	320	5.4	400	J (DNQ*)	350	4.6	410	J (DNQ*)
(PCB 138) 2,2',3,4,4',5'-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	1,600	5.7	800	*	1,800	4.8	810	*
(PCB 149) 2,2',3,4',5',6-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	930	6.1	400	*	1,100	5.2	410	*
(PCB 151) 2,2',3,5,5',6-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	340	6.4	400	J (DNQ*)	390	5.4	410	J (DNQ*)
(PCB 153) 2,2',4,4',5,5'-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	910	4.8	400	*	1,000	4.0	410	*
(PCB 156) 2,3,3',4,4',5-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	120	2.5	40	*	130	2.3	41	*
(PCB 157) 2,3,3',4,4',5'-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	120	2.5	40	*	130	2.3	41	*
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	130	4.2	200	J (DNQ*)	140	3.6	200	J (DNQ*)
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	73	1.7	20	*	79	1.6	20	*
(PCB 168) 2,3',4,4',5',6-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	910	4.8	400	*	1,000	4.0	410	*
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	1.6	20	U *	ND	1.5	20	U *

TABLE C-7
PCBs
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

				LOCATION	Outfall 011				Outfall 011			
				SAMPLE TYPE	Primary				Duplicate			
				DATE RANGE	12/25/2025 09:15 - 12/26/2025 10:00				12/25/2025 09:15 - 12/26/2025 10:00			
ANALYTE	**SAMPLE TYPE**	**METHOD**	**UNITS**	**SAMPLE FREQUENCY**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**	**RESULT**	**MDL**	**RL**	**LAB/ VALIDATION QUALIFIER**
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	Comp	E1668C	pg/L	1/Year	170	3.4	200	J (DNQ*)	210	3.0	200	*
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	Comp	E1668C	pg/L	1/Year	89	3.2	200	J (DNQ*)	95	2.9	200	J (DNQ*)
(PCB 180) 2,2',3,4,4',5,5'-Heptachlorobiphenyl	Comp	E1668C	pg/L	1/Year	270	2.6	400	J (DNQ*)	320	2.3	410	J (DNQ*)
(PCB 183) 2,2',3,4,4',5',6-Heptachlorobiphenyl	Comp	E1668C	pg/L	1/Year	85	2.9	200	J (DNQ*)	96	2.6	200	J (DNQ*)
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	Comp	E1668C	pg/L	1/Year	160	0.40	200	J (DNQ*)	200	0.25	200	J (DNQ*)
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	Comp	E1668C	pg/L	1/Year	4.6	0.52	20	J (DNQ*)	10	0.44	20	J (DNQ*)
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Comp	E1668C	pg/L	1/Year	32	0.65	200	J (DNQ*)	41	0.40	200	J (DNQ*)
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	Comp	E1668C	pg/L	1/Year	17	0.72	200	J (DNQ*)	17	0.44	200	J (DNQ*)
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	Comp	E1668C	pg/L	1/Year	4.4	0.38	200	J (DNQ*)	6.6	0.33	200	J (DNQ*)
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	Comp	E1668C	pg/L	1/Year	ND	15	20	U *	21	6.4	20	*
(PCB 209) Decachlorobiphenyl	Comp	E1668C	pg/L	1/Year	13	0.43	20	J (DNQ*)	10	0.16	20	J (DNQ*)
Sum					4,754				5,529			

TABLE C-8
PFAS
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

				LOCATION	SWTS 011 (INF-001)				SWTS 018 (INF-002)				SWTS 018 (INF-002)			
				DATE RANGE	12/27/2025 07:45				11/17/2025 10:05				12/23/2025 07:30			
ANALYTE	SAMPLE TYPE	UNITS	METHOD	SAMPLE FREQUENCY[j]	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER	RESULT	MDL	RL	LAB/ VALIDATION QUALIFIER
Perfluorobutanoic acid (PFBA)	Grab	ng/L	E537M	Additional	7.5	1.1	4.3	*	12	1.2	4.9	*	18	1.0	4.2	*
Perfluoropentanoic acid (PFPeA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	12	0.42	1.7	*
Perfluorohexanoic acid (PFHxA)	Grab	ng/L	E537M	Additional	3.9	0.49	1.7	*	6.9	0.56	1.9	*	14	0.48	1.7	*
Perfluoroheptanoic acid (PFHpA)	Grab	ng/L	E537M	Additional	2.7	0.43	1.7	*	5.5	0.49	1.9	*	10	0.42	1.7	*
Perfluorooctanoic acid (PFOA)	Grab	ng/L	E537M	Additional	9.6	0.43	1.7	*	13	0.49	1.9	*	22	0.42	1.7	*
Perfluorononanoic acid (PFNA)	Grab	ng/L	E537M	Additional	2.1	0.43	1.7	*	2.6	0.49	1.9	*	2.7	0.42	1.7	*
Perfluorodecanoic acid (PFDA)	Grab	ng/L	E537M	Additional	1.1	0.43	1.7	J (DNQ*)	1.4	0.49	1.9	J (DNQ*)	1.1	0.42	1.7	J (DNQ*)
Perfluoroundecanoic acid (PFUnDA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorododecanoic acid (PFDoDA)	Grab	ng/L	E537M	Additional	ND	0.47	1.7	U *	ND	0.53	1.9	U *	ND	0.46	1.7	U *
Perfluorotridecanoic acid (PFTrDA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorotetradecanoic acid (PFTeDA)	Grab	ng/L	E537M	Additional	ND	0.62	1.7	U *	ND	0.71	1.9	U *	ND	0.61	1.7	U *
Perfluorohexadecanoic acid (PFHxDA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorooctadecanoic acid (PFOcDA)	Grab	ng/L	E537M	Additional	ND	0.80	1.7	U *	ND	0.91	1.9	U *	ND	0.78	1.7	U *
Perfluorobutanesulfonic acid (PFBS)	Grab	ng/L	E537M	Additional	1.8	0.43	1.7	*	1.0	0.49	1.9	J (DNQ*)	1.8	0.42	1.7	*
Perfluoropentanesulfonic acid (PFPeS)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorohexanesulfonic acid (PFHxS)	Grab	ng/L	E537M	Additional	0.72	0.49	1.7	J (DNQ*)	ND	0.55	1.9	U *	0.93	0.48	1.7	J (DNQ*)
Perfluoroheptanesulfonic acid (PFHpS)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorooctanesulfonic acid (PFOS)	Grab	ng/L	E537M	Additional	4.8	0.43	1.7	*	4.8	0.49	1.9	*	5.5	0.42	1.7	*
Perfluorononane sulfonic acid (PFNS)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorodecanesulfonic acid (PFDS)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluorododecane sulfonic acid (PFDoDS)	Grab	ng/L	E537M	Additional	ND	0.83	1.7	U *	ND	0.94	1.9	U *	ND	0.81	1.7	U *
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Grab	ng/L	E537M	Additional	1.1	1.1	4.3	J (DNQ*)	ND	1.2	4.9	U *	ND	1.0	4.2	U *
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Grab	ng/L	E537M	Additional	1.6	0.43	1.7	J (DNQ*)	ND	0.49	1.9	U *	ND	0.42	1.7	U *
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Grab	ng/L	E537M	Additional	ND	0.57	1.7	U *	ND	0.65	1.9	U *	ND	0.56	1.7	U *
Perfluorooctane sulfonamide (PFOSA)	Grab	ng/L	E537M	Additional	ND	0.84	1.7	U *	ND	0.95	1.9	U *	ND	0.82	1.7	U *
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	Grab	ng/L	E537M	Additional	ND	0.74	1.7	U *	ND	0.84	1.9	U *	ND	0.73	1.7	U *
N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	Grab	ng/L	E537M	Additional	ND	1.1	4.3	U *	ND	1.2	4.9	U *	ND	1.0	4.2	U *
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	Grab	ng/L	E537M	Additional	ND	1.1	4.3	U *	ND	1.2	4.9	U *	ND	1.0	4.2	U *
N-Methylperfluorooctane sulfonamidoethanol (N-MeFOSE)	Grab	ng/L	E537M	Additional	ND	1.2	3.4	U *	ND	1.4	3.9	U *	ND	1.2	3.3	U *
N-Ethylperfluorooctane sulfonamidoethanol (N-EtFOSE)	Grab	ng/L	E537M	Additional	ND	0.72	1.7	U *	ND	0.83	1.9	U *	ND	0.71	1.7	U *
Perfluoro-2-propoxypropanoic acid (PFPrOPrA)(GenX) (HFPO-DA)	Grab	ng/L	E537M	Additional	ND	0.85	3.4	U *	ND	0.97	3.9	U *	ND	0.83	3.3	U *
4,8-Dioxa-3H-Perfluorononanoic Acid (ADONA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluoro-3-methoxypropanoic acid (PFMPA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Perfluoro(4-methoxybutanoic) acid (PFMBA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	Grab	ng/L	E537M	Additional	ND	0.53	1.7	U *	ND	0.60	1.9	U *	ND	0.52	1.7	U *
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	Grab	ng/L	E537M	Additional	ND	0.59	1.7	U *	ND	0.67	1.9	U *	ND	0.58	1.7	U *
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
3:3 Fluorotelomer carboxylic acid (3:3 FTCA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	Grab	ng/L	E537M	Additional	ND	0.43	1.7	U *	ND	0.49	1.9	U *	ND	0.42	1.7	U *
3-(Perfluoroheptyl)propanoic acid (7:3 FTCA)	Grab	ng/L	E537M	Additional	ND	0.47	1.7	U *	ND	0.53	1.9	U *	ND	0.46	1.7	U *

APPENDIX D

NPDES Permit Limit Exceedances and/or Non-Compliance,

Fourth Quarter 2025

SUMMARY OF PERMIT LIMIT EXCEEDANCES AND/OR NON-COMPLIANCE

FOURTH QUARTER 2025

THE BOEING COMPANY

SANTA SUSANA FIELD LABORATORY

NPDES PERMIT CA0001309

Daily Maximum Permit Limit Exceedances and/or Non-Compliance							
Outfall	**Sample Date**	**Sample Type**	**Analyte**	**Permit Limit Daily Max**	**Result**	**Units**	**Laboratory/ Validation Qualifier**
OUTFALL 001	12/27/2025	Comp	Aluminum	1.0	3.3	mg/L	--
OUTFALL 001	1/2/2026	Comp	Aluminum	1.0	1.1	mg/L	--
OUTFALL 002	11/16/2025	Comp	Aluminum	1.0	4.5	mg/L	--
OUTFALL 002	11/16/2025	Comp	2,3,7,8-TCDD TEQ	2.8E-08	3.4E-08	µg/L	*
OUTFALL 002	12/25/2025	Comp	Aluminum	1.0	4.1	mg/L	--
OUTFALL 002	12/25/2025	Comp	2,3,7,8-TCDD TEQ	2.8E-08	7.2E-08	µg/L	*
OUTFALL 004	12/26/2025	Comp	Mercury	0.024	0.046	µg/L	--
OUTFALL 009	12/25/2025	Comp	Aluminum	1.0	1.1	mg/L	--
OUTFALL 009	12/25/2025	Comp	Mercury	0.024	0.025	µg/L	--
OUTFALL 009	1/2/2026	Comp	Aluminum	1.0	1.3	mg/L	--
OUTFALL 011	12/26/2025	Comp	Aluminum	1.0	2.6	mg/L	--
OUTFALL 011	12/26/2025	Comp	Manganese	50	52	µg/L	--
OUTFALL 018	12/26/2025	Comp	Aluminum	1.0	1.2	mg/L	--

See reporting summary notes for abbreviations, definitions, and other explanations for the data presented.

APPENDIX E

Toxicity Laboratory Reports and Validation Reports,

Fourth Quarter 2025

APPENDIX E

TABLE OF CONTENTS

Number	Outfall/Location	Toxicity Laboratory Report Number	Sampling Date
1	Outfall 008	570-260883-3	December 26, 2025
2	Outfall 011	570-261344-4	December 26, 2025
3	Outfall 004	570-261356-5	December 26, 2025
4	Annual SWTS 011	570-261391-5	December 27, 2025
5	Outfall 001	570-261455-1	December 28, 2025
6	Outfall 001	570-261745-5	January 2, 2026
7	Outfall 011	570-261755-5	January 2, 2026

Number	Outfall/Location	Data Usability Summary Reports (Validation Reports)	Sampling Date
8	Various	Dioxin/Furan, Fourth Quarter 2025	November 16, 2025 through January 2, 2026

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 2:16 PM

JOB DESCRIPTION

Boeing NPDES SSFL - Routine Outfall 008 COMP

JOB NUMBER

570-260883-3

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

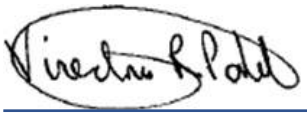
Eurofins Calscience

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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Authorized for release by
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714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Method Summary 6
- Sample Summary 7

Subcontracted Data 8

Shipping and Receiving Documents 44

- Client Chain of Custody 45
- Field Data Sheets 58
- Sample Receipt Checklist 59

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
570-260883-3

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 12/26/2025 4:24 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.2°C, 0.9°C, 2.3°C and 3.2°C.

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-260883-3
Project/Site: Boeing NPDES SSFL - Routine Outfall 008
COMP

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-260883-3
Project/Site: Boeing NPDES SSFL - Routine Outfall 008
COMP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-260883-1	Outfall008_20251226_Comp	Water	12/26/25 09:30	12/26/25 16:24	CA

Subcontract Data

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/20/2026**

Report ID: **CSE1225.200**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample(s) submitted to Aquatic Bioassay and Consulting Laboratories on 12/29/2025. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 12/26/2025 at 0930. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 12/29/2025 at 1030. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 12/30/2025 to 01/06/2026. Test concentrations for the sample were 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
Outfall008_20251226_Comp	CSE1225.200	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2 and Table 3.

Table 2. Summary of Acute Toxicity Results.

Sample ID	Percent Survival in 100% Sample
Control	100%
Outfall008_20251226_Comp	100%

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
Outfall008_20251226_Comp	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	2.43%

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Pimephales promelas	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS^{tm} Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
12/30/2025	*Pimephales promelas*	7d Survival Rate	Copper chloride	19 µg/L	82.03 µg/L	69.62 µg/L 51.4 – 94.3
		Mean Dry Biomass	Copper chloride	38 µg/L	63.15 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	11-2819-4281	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:37	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:20	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7789-4912	**Code:**	CSE1225.200fml	**Project:**	Boeing-SSFL NPDES Permit 2023		
Sample Date:	26 Dec-25 09:30	**Material:**	Sample Water	**Source:**	Bioassay Report		
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall008_20251226_Comp		
Sample Age:	4d 3h (3.1 °C)	**Client:**	Eurofins Calscience				

Comments: Report ID: CSE1225.200

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
17-3095-8345	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
13-3442-0217	Mean Dry Biomass-mg	TST-Welch's t Test	<1.0E-05	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
17-3095-8345	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
13-3442-0217	Mean Dry Biomass-mg	Control Resp	0.3502	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.3503	0.3422	0.3583	0.3393	0.3687	0.003413	0.009654	2.76%	0.00%
100		8	0.3417	0.3397	0.3438	0.3387	0.346	0.0008632	0.002441	0.71%	2.43%

7d Survival Rate Detail — MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail — MD5: FB5D0E79C14F6DB517D4FEAF5315345B

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.342	0.3393	0.356	0.3467	0.3547	0.352	0.3427	0.3687
100		0.3427	0.346	0.342	0.3407	0.3387	0.3433	0.342	0.3387

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-3095-8345	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:36	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	11-2819-4281	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:37	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:20	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7789-4912	**Code:**	CSE1225.200fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 09:30	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall008_20251226_Comp
Sample Age:	4d 3h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.200

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

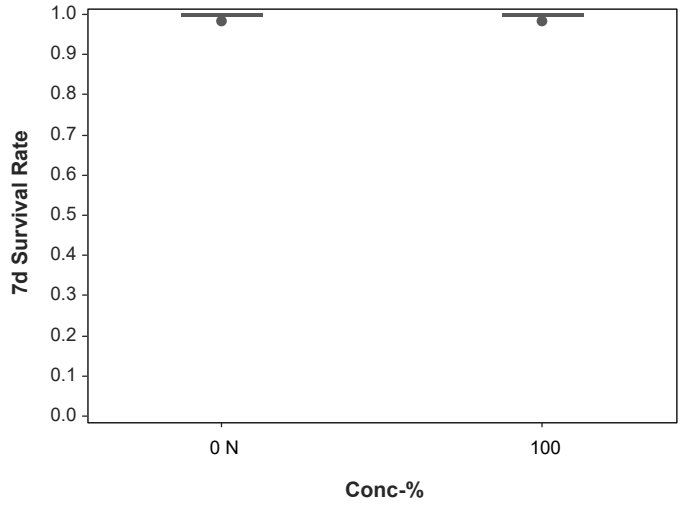
7d Survival Rate Binomials

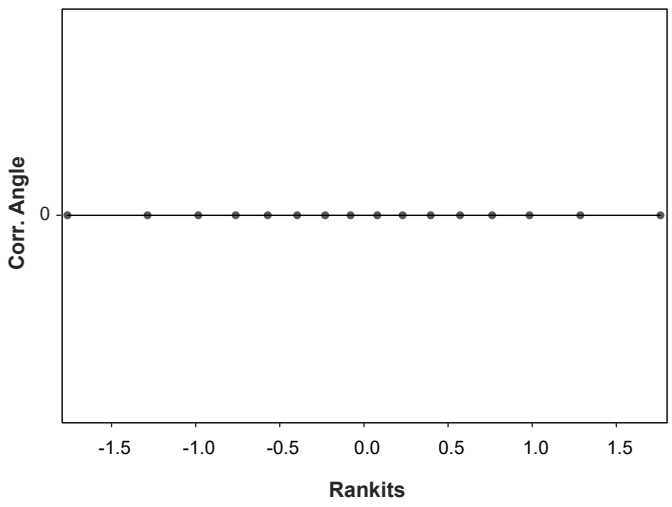
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-3095-8345	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:36	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	13-3442-0217	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:36	**MD5 Hash:**	FB5D0E79C14F6DB517D4FEAF5315345B	**Editor ID:**	
Batch ID:	11-2819-4281	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos
Start Date:	30 Dec-25 12:37	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	06 Jan-26 11:20	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO **Age:** 1d
Sample ID:	19-7789-4912	**Code:**	CSE1225.200fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 09:30	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall008_20251226_Comp
Sample Age:	4d 3h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.200

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	8	29.27	0.7064	CDF	<1.0E-05	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0002890	0.0002890	1	5.829	0.0300	Significant Effect
Error	0.0006941	4.958E-05	14			
Total	0.0009831		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	8.976	8.862	0.0096	Unequal Variances
	Mod Levene Equality of Variance Test	8.79	8.862	0.0102	Equal Variances
	Variance Ratio F Test	15.64	8.885	0.0018	Unequal Variances
Distribution	Anderson-Darling A2 Test	0.5215	3.878	0.1884	Normal Distribution
	D'Agostino Skewness Test	1.799	2.576	0.0720	Normal Distribution
	Kolmogorov-Smirnov D Test	0.1485	0.2471	0.4726	Normal Distribution
	Shapiro-Wilk W Normality Test	0.9198	0.8408	0.1675	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.3503	0.3422	0.3583	0.3493	0.3393	0.3687	0.003413	2.76%	0.00%
100		8	0.3417	0.3397	0.3438	0.342	0.3387	0.346	0.0008631	0.71%	2.43%

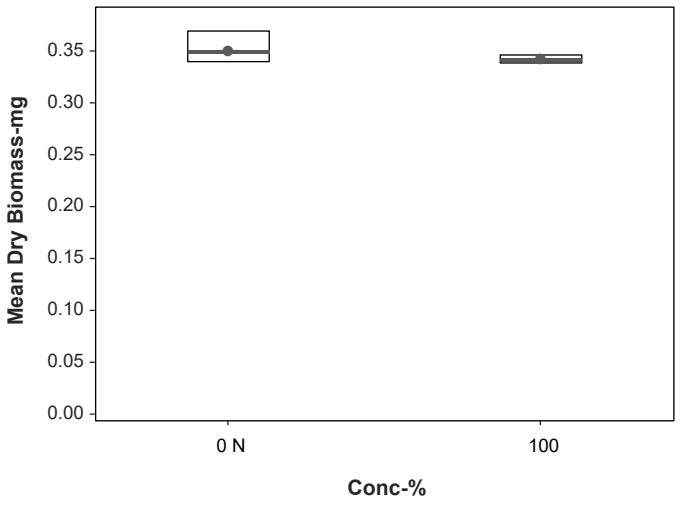
Mean Dry Biomass-mg Detail

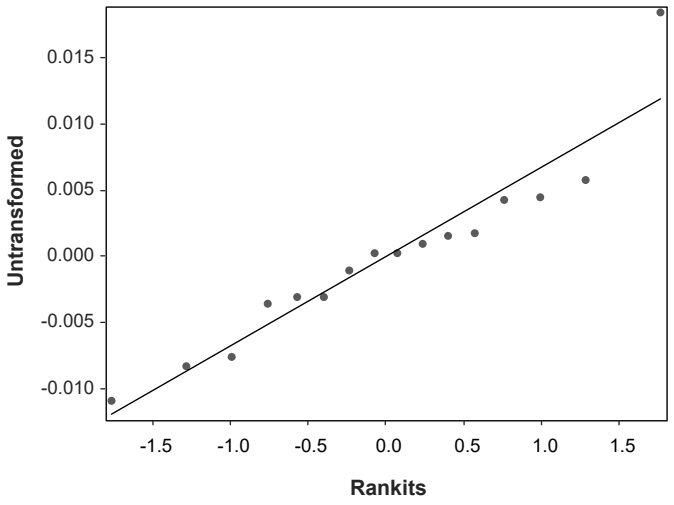
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.342	0.3393	0.356	0.3467	0.3547	0.352	0.3427	0.3687
100		0.3427	0.346	0.342	0.3407	0.3387	0.3433	0.342	0.3387

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	13-3442-0217	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:36	**MD5 Hash:**	FB5D0E79C14F6DB517D4FEAF5315345B	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	11-2819-4281	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:37	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:20	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7789-4912	**Code:**	CSE1225.200fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 09:30	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall008_20251226_Comp
Sample Age:	4d 3h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.200

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
100		8	48	48	48	48	48	0	0	0.00%	0
Overall		16	53	50.25	55.75	48	58	1.291	5.164	9.74%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
100		8	126.9	125.1	128.6	123	130	0.2625	2.1	1.66%	0
Overall		16	224.1	170.6	277.7	123	325	25.11	100.5	44.82%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
100		8	7.9	7.587	8.213	7	8.2	0.04677	0.3742	4.74%	0
Overall		16	7.831	7.65	8.012	7	8.2	0.08501	0.34	4.34%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	53	53	53	53	53	0	0	0.00%	0
Overall		16	76.5	63.57	89.43	53	100	6.068	24.27	31.73%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
100		8	7.012	6.983	7.042	7	7.1	0.00442	0.03536	0.50%	0
Overall		16	7.388	7.18	7.595	7	7.8	0.09741	0.3897	5.28%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.16	24.06	24.26	24	24.3	0.01484	0.1188	0.49%	0
Overall		16	24.08	24.02	24.14	24	24.3	0.02918	0.1167	0.48%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
07-6584-2034	7d Survival Rate	Steel Many-One Rank Sum Test	✓	19	38	26.87	9.86%	1
07-0949-7949	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test		38	75	53.39	8.51%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
20-9726-2836	7d Survival Rate	Linear Interpolation (ICPIN)	✓	EC15	36.1	21.18	53.94	1
			✓	EC20	42.35	21.57	59.07	
			✓	EC25	48.88	21.8	64.03	
				EC40	68.47	53.55	78.92	
				EC50	82.03	64.66	91.96	
19-7190-2604	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)		IC15	45.54	44.27	45.75	1
				IC20	48.06	46.88	48.34	
				IC25	50.57	49.43	50.93	
			✓	IC40	58.12	57.14	58.71	
			✓	IC50	63.15	62.17	63.92	

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
07-6584-2034	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
20-9726-2836	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
19-7190-2604	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	PMSD	0.08514	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.1520	0.5333	0.9333	0.1000	0.2000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.4000	0.6000	0.0500	0.1000	18.18%	45.00%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3413	0.3547	0.002807	0.005614	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3413	0.35	0.002317	0.004635	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.346	0.3507	0.0009813	0.001963	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3413	0.3507	0.002079	0.004159	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.08533	0.09933	0.003133	0.006266	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0	0.08333	0.02057	0.04114	189.88%	93.75%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: C5F324C8E327E99CF47200B51B720B1C

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Mean Dry Biomass-mg Detail MD5: C0E8E497E3C1FC1F3DE9D694CD00CBB3

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	19	38	26.87	---	0.09859	9.86%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38*	6	10	10	0	CDF	0.0417	Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.21865	1.04373	5	83.82	<1.0E-05	Significant Effect
Error	0.224141	0.0124523	18			
Total	5.44279		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	6.711	4.248	0.0011	Unequal Variances
	Mod Levene Equality of Variance Test	0.7457	4.248	0.5996	Equal Variances
Distribution	Anderson-Darling A2 Test	2.634	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	3.619	2.576	0.0003	Non-Normal Distribution
	D'Agostino Skewness Test	3.884	2.576	0.0001	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	28.18	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2917	0.2056	1.2E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.7217	0.884	2.0E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.0000	0.9333	0.5333	0.9333	0.1000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.6000	0.4000	0.6000	0.0500	18.18%	45.00%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.1870	0.7964	1.5770	1.3100	0.8188	1.3100	0.1227	20.68%	17.65%
75		4	0.8357	0.6755	0.9959	0.8861	0.6847	0.8861	0.0503	12.05%	42.02%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Angular (Corrected) Transformed Detail

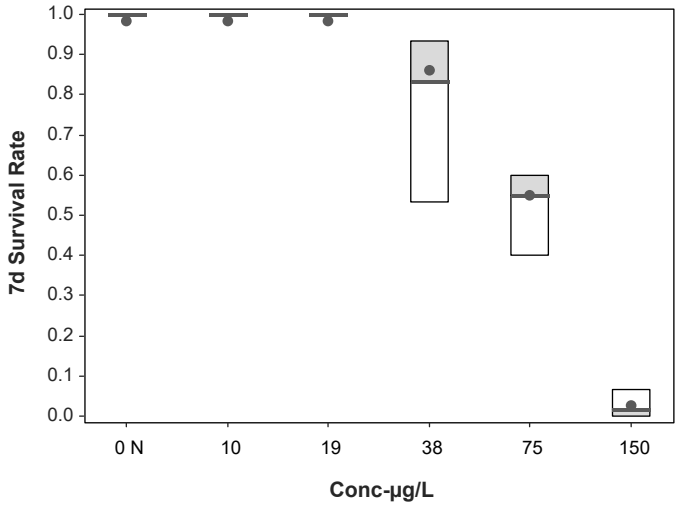
Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		0.8188	1.3100	1.3100	1.3100
75		0.8861	0.8861	0.6847	0.8861
150		0.1295	0.2612	0.1295	0.1295

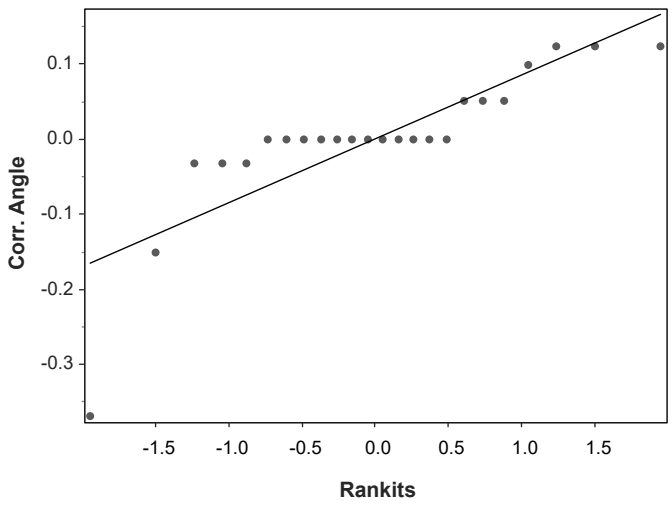
7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test					Aquatic Bioassay & Consulting Labs, Inc.
Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.02953	8.51%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	17.5	10	1	CDF	0.7867	Non-Significant Effect
		19	6	21.5	10	1	CDF	0.9855	Non-Significant Effect
		38	6	19	10	2	CDF	0.9055	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.45886	0.091772	5	304.9	<1.0E-05	Significant Effect
Error	0.005418	0.000301	18			
Total	0.464278		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	32.99	15.09	<1.0E-05	Unequal Variances
	Levene Equality of Variance Test	6.766	4.248	0.0010	Unequal Variances
	Mod Levene Equality of Variance Test	0.8401	4.248	0.5387	Equal Variances
Distribution	Anderson-Darling A2 Test	2.692	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	4.107	2.576	4.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	4.332	2.576	1.5E-05	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	35.63	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2638	0.2056	0.0001	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.6777	0.884	<1.0E-05	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3457	0.3413	0.3547	0.002807	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3457	0.3413	0.35	0.002317	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.3477	0.346	0.3507	0.0009814	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3477	0.3413	0.3507	0.002079	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.091	0.08533	0.09933	0.003133	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0.001111	0	0.08333	0.02057	189.88%	93.75%

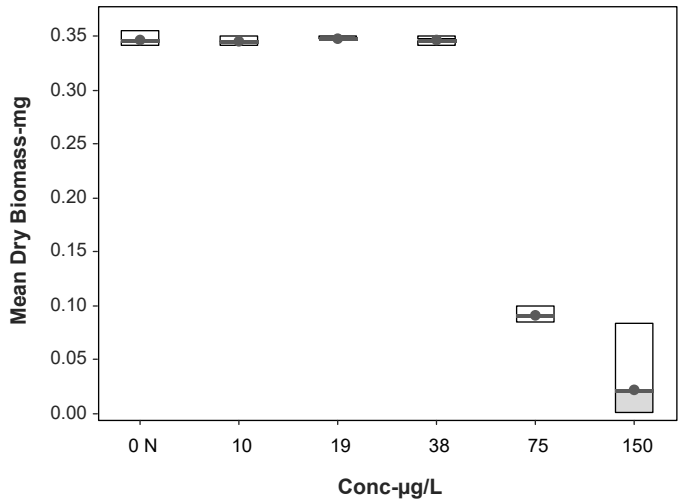
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

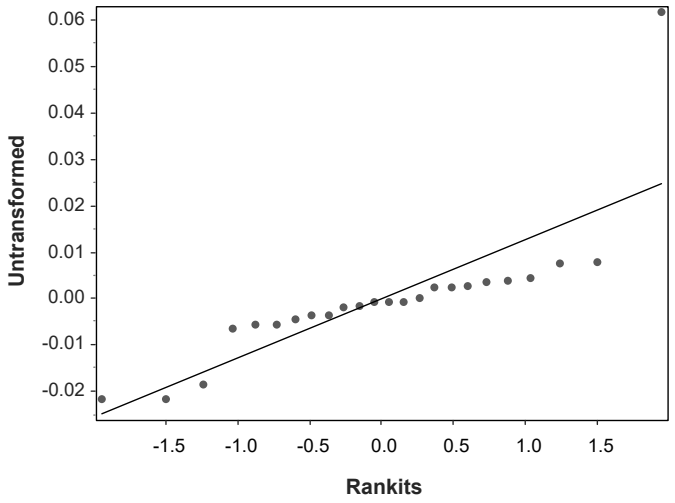
Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	36.1	21.18	53.94
EC20	42.35	21.57	59.07
EC25	48.88	21.8	64.03
EC40	68.47	53.55	78.92
EC50	82.03	64.66	91.96

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.8333	0.9333	0.5333	0.9333	24.00%	16.67%	50/60	0.8333	16.67%
75		4	0.5500	0.6000	0.4000	0.6000	18.18%	45.00%	33/60	0.5500	45.00%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

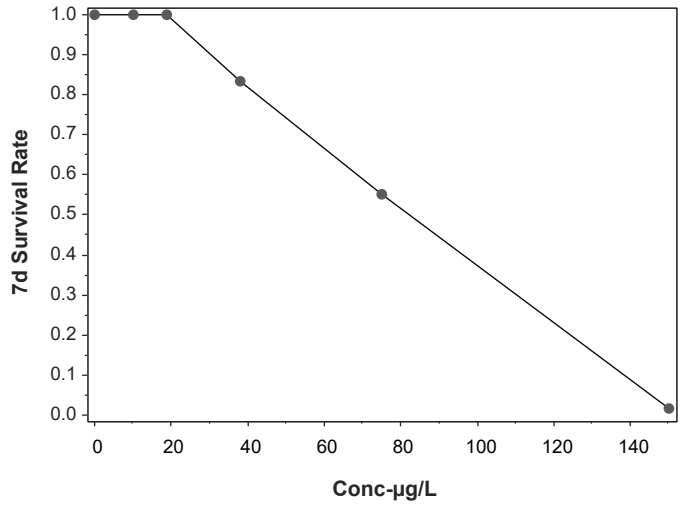
7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1953384	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	45.54	44.27	45.75
IC20	48.06	46.88	48.34
IC25	50.57	49.43	50.93
IC40	58.12	57.14	58.71
IC50	63.15	62.17	63.92

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3468	0.3457	0.3413	0.3547	1.62%	0.00%	0.3468	0.00%
10		4	0.3457	0.3457	0.3413	0.35	1.34%	0.34%	0.3468	0.00%
19		4	0.348	0.3477	0.346	0.3507	0.56%	-0.34%	0.3468	0.00%
38		4	0.3468	0.3477	0.3413	0.3507	1.20%	0.00%	0.3468	0.00%
75		4	0.09167	0.091	0.08533	0.09933	6.84%	73.57%	0.09167	73.57%
150		4	0.02167	0.001111	0	0.08333	189.88%	93.75%	0.02167	93.75%

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

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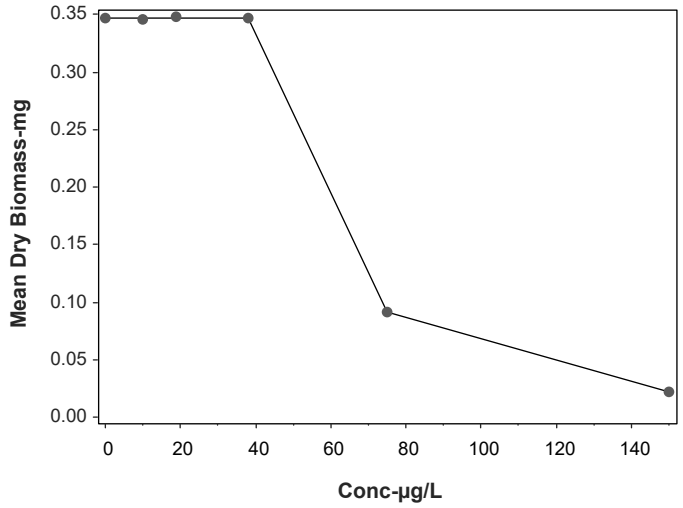


Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX	
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant	
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX	
Sample Age:	---	**Client:**	ABC Labs			

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
150		8	57	57	57	57	57	0	0	0.00%	0
Overall		16	57.5	57.22	57.78	57	58	0.1291	0.5164	0.90%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
10		8	318.4	317.4	319.4	316	320	0.1485	1.188	0.37%	0
19		8	317.4	316.5	318.3	316	319	0.1326	1.061	0.33%	0
38		8	315.6	313.8	317.4	312	318	0.2667	2.134	0.68%	0
75		8	314.1	311.5	316.7	310	317	0.3864	3.091	0.98%	0
150		8	312.8	310	315.5	310	317	0.4159	3.327	1.06%	0
Overall		48	316.6	315.6	317.6	310	325	0.5181	3.589	1.13%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
10		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
19		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
38		8	7.713	7.47	7.955	7	7.9	0.03625	0.29	3.76%	0
75		8	7.725	7.477	7.973	7	7.9	0.03705	0.2964	3.84%	0
150		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
Overall		48	7.735	7.653	7.818	7	7.9	0.04109	0.2847	3.68%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
10		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
19		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
38		8	7.713	7.618	7.807	7.5	7.8	0.01408	0.1126	1.46%	0
75		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
150		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
Overall		48	7.721	7.694	7.748	7.5	7.8	0.0133	0.09216	1.19%	0 (0%)

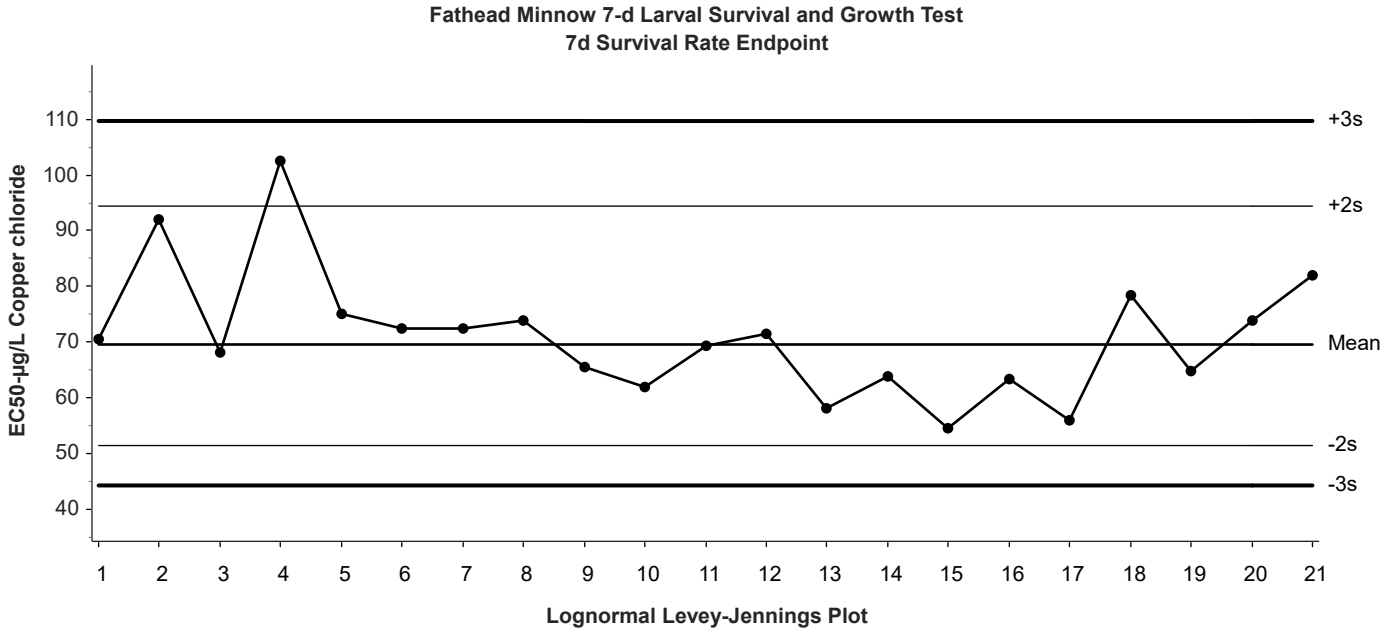
Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.08	24.04	24.11	24	24.1	0.005762	0.0461	0.19%	0
19		8	24.11	24.04	24.18	24	24.2	0.01042	0.08334	0.35%	0
38		8	24.13	24.05	24.2	24	24.2	0.01107	0.08854	0.37%	0
75		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
150		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
Overall		48	24.1	24.07	24.13	24	24.3	0.01348	0.09338	0.39%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



Mean:	69.62	**Count:**	20	**-2s Warning Limit:**	51.4	**-3s Action Limit:**	44.2
Sigma:	NA	**CV:**	15.30%	**+2s Warning Limit:**	94.3	**+3s Action Limit:**	110

Quality Control Data

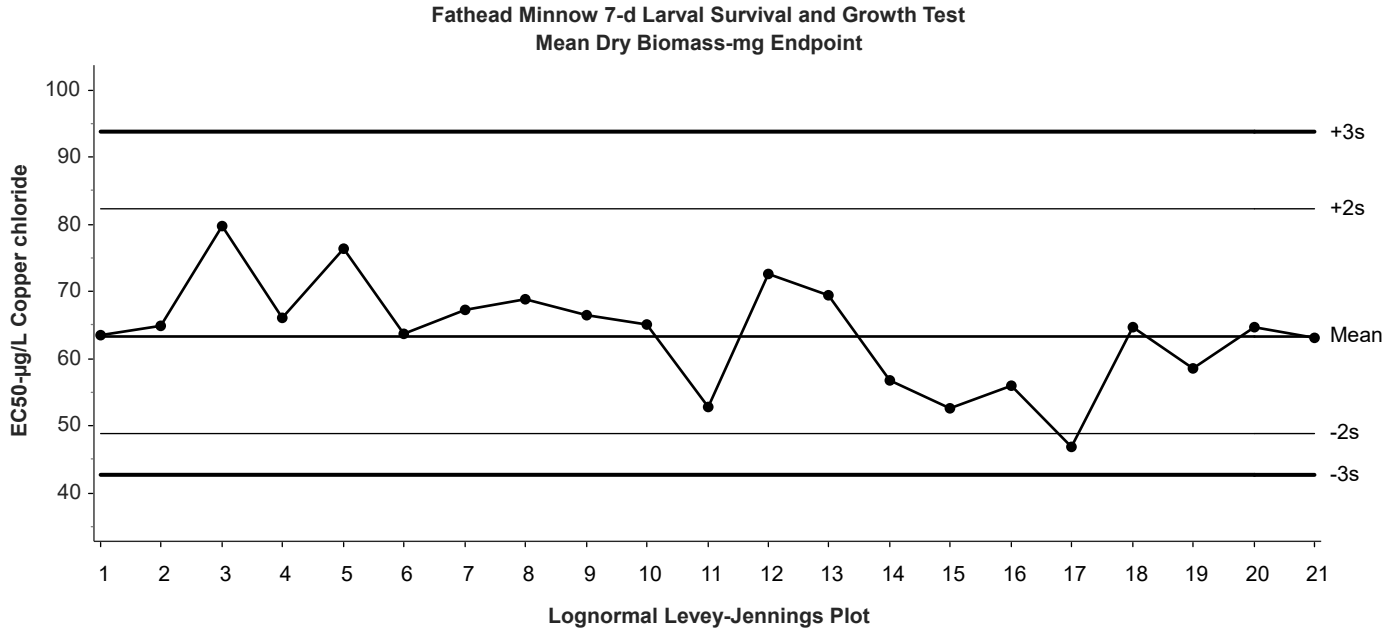
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	70.52	0.8988	0.08456			21-2981-7713	03-0489-4574
2			17	13:00	91.94	22.32	1.833			13-3277-6088	03-7751-7547
3			21	15:24	68	-1.616	-0.1549			08-1266-5648	19-4309-1944
4			22	14:55	102.6	33.02	2.559	(+)		07-5558-1243	12-5555-4178
5			28	15:30	75	5.384	0.491			13-4573-3635	11-5047-1832
6			30	15:30	72.36	2.741	0.2545			11-5715-0925	03-3652-0021
7		Apr	4	11:45	72.45	2.832	0.2628			17-3412-6439	09-0505-4831
8			11	15:10	73.72	4.108	0.3779			12-2891-6798	20-3297-8234
9			25	15:00	65.49	-4.131	-0.4032			19-7686-5958	17-2422-4835
10			27	13:00	61.94	-7.675	-0.77			01-1863-5687	10-3453-8425
11		May	2	15:45	69.31	-0.3087	-0.0293			01-5973-7078	19-8547-5138
12			9	15:30	71.53	1.915	0.1789			01-4263-6313	07-3079-9817
13		Aug	9	13:00	58.18	-11.43	-1.183			14-3532-4574	02-3075-3473
14		Oct	6	14:45	63.9	-5.716	-0.5648			18-8099-7551	11-2650-3626
15	2024	Jan	9	13:20	54.55	-15.06	-1.607			14-8299-7228	00-5651-6529
16		Aug	1	15:59	63.35	-6.265	-0.6216			17-2152-6147	10-3671-8471
17	2025	Mar	6	15:00	55.94	-13.68	-1.442			06-4992-6637	09-1125-3834
18		Jul	8	11:21	78.31	8.692	0.7756			00-3393-7264	14-6710-1242
19			10	13:10	64.72	-4.894	-0.4805			07-5897-2938	20-7755-3652
20		Sep	9	13:10	73.75	4.136	0.3805			00-2537-6486	15-9566-8088
21		Dec	30	12:30	82.03	12.41	1.082			00-0985-9985	20-9726-2836

CETIS QC Plot

Report Date: 20 Jan-26 14:16 (1 of 1)

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	Mean Dry Biomass-mg	**Source:**	Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	14	15:30	63.61	0.2356	0.02843			01-1632-8199	05-8079-6953
2			15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
3			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
4			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
5			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
6			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
7			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
8		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
9			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
10			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
11			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
12		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
13			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
14		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
15	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
16		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
17	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
18		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
19			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
20		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
21		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 12/30/25 1230 | Lab ID: FML 123025

End Date & Time: 1/6/26 1110 | Age of Organism: 1d.

Toxicant Batch ID: FML122925 | Method: EPA-821-R-02-013

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1230	0940	0802	0959	0842	1002	1011	1110
Analyst	CD	CD	CD	CD	CD	CD	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renew ≥80%	Y (N)	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.9	7.0	7.9	7.1	7.9	7.0
10 ug/L	7.9	7.5	7.8	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.9	7.0
19 ug/L	7.9	7.5	7.9	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.8	7.0
38 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.2	7.8	7.0	7.6	7.0
75 ug/L	7.8	7.4	7.9	7.2	7.8	7.1	7.8	7.0	7.8	7.2	7.9	7.0	7.8	7.0
150 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.1	7.9	7.0	7.4	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
10 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.0	24.0
19 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
38 ug/L	24.2	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
75 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24.0	24.0	24.0
150 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
10 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.8	7.7	7.8	7.7	7.6
19 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.7	7.7	7.8	7.7	7.8
38 ug/L	7.8	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.8	7.7	7.8
75 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
150 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	324
10 ug/L	319	320	318	319	316	319	318	318
19 ug/L	316	319	317	316	317	318	318	318
38 ug/L	312	316	316	314	314	317	318	314
75 ug/L	310	310	314	314	312	317	317	317
150 ug/L	310	310	310	312	310	316	317	317
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
150 ug/L	57	57	57	57	57	57	57	57
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
150 ug/L	104	104	104	104	104	104	104	104

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 12/30/25 End Date: 1/6/26 Lab ID: **FML** 123025

	Analyst	CD	CD	CD	CD	CD	CD	M	M
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
19	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	14	11	11	CD 11	8	8
	2	15	15	15	14	14	14	14	14
	3	15	15	15	14	14	14	14	14
	4	15	15	15	15	15	15	14	14
75	1	15	14	14	12	12	11	9	9
	2	15	15	14	13	10	10	9	9
	3	15	13	10	9	9	7	6	6
	4	15	15	14	12	10	9	5	9
150	1	15	6	4	1	1	0		
	2	15	9	6	4	4	1	0 1	1
	3	15	8	4	3	2	0		
	4	15	5	2	1	1	0		

Balance ID: BAL 1

Analyst: CD

Date/Time in Oven: 1/6/26 ~~12/30/25~~ CD

Date/Time out Oven 1/7/26

Oven Temp (°C): 66.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CA 1	CONTROL	1	1.10790	1.11302	0.00512
2		2	1.10578	1.11096	0.00518
3		3	1.10274	1.10793	0.00519
4		4	1.11310	1.11842	0.00532
CA 5	10	1	1.10772	1.11296	0.00524
6		2	1.10895	1.11407	0.00512
7		3	1.10622	1.11135	0.00513
8		4	1.10652	1.11177	0.00525
CA 9	19	1	1.12274	1.12796	0.00522
10		2	1.10675	1.11194	0.00519
11		3	1.11303	1.11829	0.00526
12		4	1.10416	1.10937	0.00521
CA 13	38	1	1.10460	1.10684	0.00224
14		2	1.10557	1.11083	0.00526
15		3	1.11656	1.12175	0.00519
16		4	1.12686	1.13198	0.00512
CA 17	75	1	1.12045	1.12186	0.00141
18		2	1.10722	1.10871	0.00149
19		3	1.10315	1.10443	0.00128
20		4	1.11397	1.11529	0.00132
—	150	1	—	—	—
CA 21		2	1.12130	1.12155	0.00025
—		3	—	—	—
—		4	—	—	—
CA 22	BLANK	1	1.11005	1.11000	-0.00005

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE 2 | Lab ID: CSE1225.200
Start Date & Time: 12/30/25 1237 | Date Rec'd: 12/29/25
End Date & Time: 1/6/26 1120 | Age of Organism: 1d.

Day/Date	0 12/30		1 12/31/25		2 1/1/26		3 1/2/26		4 1/3/26		5 1/4/26		6 1/5/26		7 1/6/26	
Time	1237		0949		0814		1014		0853		1017		1029		1120	
Analyst	CD		CD		CD		CD		CD		CD		JW		JW	
Fed	(Y)	N	(Y)	N	(Y)	N	(Y)	N	(Y)	N	(Y)	N	(Y)	N	(Y)	N
Renewed≥80%	Y	(N)	(Y)	N	(Y)	N	(Y)	N	(Y)	N	(Y)	N	(Y)	N	Y	(N)
Lab ID	.200		.200		.200		.200		.200		.200		.200		.200	
ControlBatch	IMHW 122825		IMHW 122825		IMHW 122825		IMHW 122825		IMHW 122825		IMHW 122825		IMHW 122825		IMHW 122825	
YSI ID	B		B		B		B		B		B		B		B	
Therm ID	2		2		2		2		2		2		2		2	
C.F. (°C)	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
Dissolved Oxygen (mg/L)																
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.8	7.4	7.9	7.1	7.9	7.9		
100%	8.2	8.0	8.0	7.9	8.1	8.0	8.0	7.8	8.0	7.9	8.0	7.5	7.9	7.9		
Temperature (°C)																
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	
100%	24.2	24.0	24.3	24.0	24.2	24.1	24.2	24.0	24.3	24.0	24.1	24.0	24.0	24.0	24.0	
pH																
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8	7.8	
100%	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	7.0	7.0	7.0	
Conductivity (uS/cm)																
Control	320	322	320	321	319	322	322	322								
100%	123	126	127	126	127	127	129	130								
Alkalinity (mg/L CaCO3)																
Control	58	58	58	58	58	58	58	58								
100%	48	48	48	48	48	48	48	48								
Hardness (mg/L CaCO3)																
Control	140	140	140	140	140	140	140	140								
100%	53	53	53	53	53	53	53	53								

Residual Chlorine 1st Sample: 0.01 2nd Sample: — 3rd Sample: —

Chronic Fathead Minnow Survival and Growth - TST

Client: CSE 2 Lab ID: CSE1225.200

Start Date: 12/30/25 End Date: 1/6/26

Concentration	Replicate	Analyst	1	2	3	4	5	6	Final
USE CONTROL CSE.199	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
100	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15

Oven Temp (°C): 66.0 Date/Time In: 1/6/26 Date/Time Out: 1/7/26

Balance ID: BAL 1 Analyst: LD

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
	CONTROL	1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
CC 1	100	1	1.14857	1.15364	0.00514
2		2	1.14373	1.14892	0.00519
3		3	1.13997	1.14510	0.00513
4		4	1.15315	1.15826	0.00511
5		5	1.16444	1.16952	0.00508
6		6	1.16140	1.16655	0.00515
7		7	1.14848	1.15361	0.00513
8		8	1.15536	1.16044	0.00508

Appendix D

Chain of Custody and Sample Receipt Summary

CHAIN OF CUSTODY FORM

Client Name/Address:
Haley & Aldrich
5333 Mission Center Rd Suite 300
San Diego, CA 92108

Eurofins Calscience Project Manager: Virendra Patel
2841 Dow Avenue, Suite #100
Tustin, CA 92780
Tel: 714-895-5494

ECI Project #57013187

Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.

Sampler: Adrien Mobeka

Project:
Boeing-SSFL NPDES
2023 Permit
Routine
Outfall 008
COMPOSITE

Project Manager: Katherine Miller
520.289.8606, 520.904.6944 (cell)

Field Manager: Mark Dominick
978.234.5033, 818.599.0702 (cell)

ANALYSIS REQUIRED

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	R Total Recoverable Metals (E200.8): Al, As, Zn, Cd, Cu, Pb	R Chloride (Cl-), Sulfate (SO4), Nitrate-N, Nitrite-N, NO3+NO2-N (E300); Perchlorate (E314.0)	R TDS (SM2540C/E160.1)	R TSS (160.2 (SM2540D))	R Total Dissolved Metals (E200.8): Al, As, Zn, Cd, Cu, Pb	R Gross Alpha(E900.0), Gross Beta(E900.0), Tritium (H-3) (E906.0), Sr-90 (E905.0), Total Combined Radium 226 (E903.0 or E903.1) & Radium 228 (E904.0), Uranium (E908.0), K-40, CS-137 (E901.0 or E901.1) - **sub to St. Louis**	A/R * Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	R Ammonia-N (351.1)	R Cyanide (Kaleda)	R Detergents (MBAS) (SM5540C/E425.1)	R Routine Pesticides - only 4,4'-DDE (E608) **Weck Labs in Hacienda Heights, CA**	R LL Mercury (1631) Total Recoverable	R LL Mercury (1631) Total Dissolved	Comments
Outfall 008	Outfall 008_20251226_comp -NW		WM	250 mL Poly	3	HNO_3	Yes	X													
			WM	250 mL Poly	1	None			X												48 hours Holding Time NO_3 & NO_2
			WM	500 mL Poly	1	None				X											
			WM	250 mL Poly	1	H2SO4									X						
			WM	1L Poly	1	None					X										
			WM	500 mL Poly	1	NaOH										X					
	Outfall008_20251226_Comp	12/26/2025 0930	WM	1 L Poly	4	HNO3						X									Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None															
			WM	* 2.5 Gal Cube	2	None							X								Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA**
			WM	1 L Glass Amber	4	None											X				**Segregate into a cooler for Weck Labs.**
			WM	8oz Clear Glass, double bagged	1	HCL	Yes											X			Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	1 L Poly	1	None										X					
	Outfall008_20251226_Comp_F	12/26/2025 0930	WM	250 ml Poly	3	None	Yes					X									Filter and preserve w/in 24hrs of receipt at lab
			WM	8oz Clear Glass, double bagged	1	None	Yes													X	Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Added C.F. = -0.2°C
Therm. = sample receiving 2
Temp. deg. C = 3.1
Chlorine (mg/L) = <0.1
NH3 (mg/L) = <0.1

Legend: R = Routine, A = Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
M Dominick	12-29-2025 / 1030	H;A		12/29/25 1030
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

2025-2026 Rainy Season
Version 1

* Hand-delivered to ABC Labs with this copy of the COC

Sample Receipt Summary

AQUATIC BIOASSAY & CONSULTING LABORATORIES, INC.

Client Name: Dupont Tins Chemicals

Project Name: # 5701387

Receiving Information

1. Received By (initials): EM
2. Date Received: 12/29/24
3. Time Received: 1034
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - 1 Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): EM

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Shipping and Receiving Documents

Loc: 570
260883

Eurofins Calscience Tustin

570-260883 Chain of Custody

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES 2023 Permit Routine Outfall 008 COMPOSITE
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)
Sampler: Adrien Mobeka	

								ANALYSIS REQUIRED															
								R	R	R	R	R	R	A/R	R	R	R	R	R	R			
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Recoverable Metals (E200.8): Al, As, Zn, Cd, Cu, Pb	Chloride (Cl-), Sulfate (SO4), Nitrate-N, Nitrite-N, NO3+NO2-N (E300); Perchlorate (E314.0)	TDS (SM2540C/E160.1)	TSS (160.2 (SM2540D))	Total Dissolved Metals (E200.8): Al, As, Zn, Cd, Cu, Pb	Gross Alpha(E900.0), Gross Beta(E900.0), Tritium (H-3) (E906.0), Sr-90 (E905.0), Total Combined Radium 226 (E903.0 or E903.1) & Radium 228 (E904.0), Uranium (E908.0), K-40, CS-137 (E901.0 or E901.1) - **sub to St. Louis**	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	Ammonia-N (351.1)	Cyanide (Kaleda)	Detergents (MBAS) (SM5540C/E425.1)	Routine Pesticides - only 4,4'-DDE (E608) **Weck Labs in Hacienda Heights, CA**	LL Mercury (1631) Total Recoverable	LL Mercury (1631) Total Dissolved	**Comments**
Outfall 008	Outfall 008_20251226_comp		WM	250 mL Poly	3	HNO_3	Yes	X															
			WM	250 mL Poly	1	None			X														48 hours Holding Time NO_3 & NO_2
			WM	500 mL Poly	1	None				X													
			WM	250 mL Poly	1	H2SO4									X								
			WM	1L Poly	1	None					X												
			WM	500 mL Poly	1	NaOH										X							
	Outfall008_20251226_Comp	12/26/2025 0930	WM	1 L Poly	4	HNO3							X										Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None																	
			WM	2.5 Gal Cube	2	None								X									Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA**
			WM	1 L Glass Amber	4	None														X			**Segregate into a cooler for Weck Labs.**
			WM	8oz Clear Glass, double bagged	1	HCL	Yes														X		Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	1 L Poly	1	None											X						
	Outfall008_20251226_Comp_F	12/26/2025 0930	WM	250 ml Poly	3	None	Yes					X											Filter and preserve w/in 24hrs of receipt at lab
			WM	8oz Clear Glass, double bagged	1	None	Yes															X	Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: R = Routine, A = Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Michelle Dallalah	12/26/25 12:32	H&A		12/26/25 12:32
	12/26/25 1624			12/26/25 1624

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

2025-2026 Rainy Season
Version 1

3.1/3.2 0.8/0.9
2.2/2.3 0.1/0.2

Eurofins Calscience Tustin

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:	ANALYSIS REQUIRED
Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Boeing-SSFL NPDES 2023 Permit Routine Outfall 008 COMPOSITE	R: Routine SVOCs- Bis(2-ethylhexyl)phthalate, Pentachlorophenol, 3,3-Dichlorobenzidene, Benzidine (E625)
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	Project Manager: Katherine Miller 520.289.8606, 520.904.8944 (cell)	R: LL Mercury (1631) Total Recoverable
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)	R: LL Mercury (1631) Total Dissolved
Sampler: Adrien Mobeka		R: Extra Volume to be placed on Hold
		R: Extra Volume to be placed on Hold

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Routine SVOCs- Bis(2-ethylhexyl)phthalate, Pentachlorophenol, 3,3-Dichlorobenzidene, Benzidine (E625)	LL Mercury (1631) Total Recoverable	LL Mercury (1631) Total Dissolved	Extra Volume to be placed on Hold	Extra Volume to be placed on Hold	Comments
Outfall 008	Outfall008_20251226_Comp	12/26/2025 0930	WM	1 L Glass Amber	12	None	Yes	X					
	Outfall008_20251226_Comp_Extra	12/26/2025 0930	WM	1 L Glass Amber	~~12~~ 5	None					H		Hold
			WM	1L Poly	2	None						H	Hold
QA/QC	Outfall008_20251226_Grab-04	12/26/2025 0930	WQ	8oz Clear Glass, double bagged	1	HCL			X				Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WQ	1 L Glass Amber	4	None		X					
	Outfall008_20251226_Grab_F-04	12/26/2025 0930	WQ	8oz Clear Glass, double bagged	1	None				X			Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: R = Routine, A = Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Michelle Dallalah	12/26/25 12:32	H&A		12/26/25 1232
	12/26/25 1624			12/26/25 16:24

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

Eurofins Calscience
2841 Dow Avenue Suite 100
Tustin, CA 92780
Phone: 714-895-5494

2 coolers

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496773.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon, State California; State Program Cal		Job #: 570-260883-4
Address: 13715 Rider Trail North,	Due Date Requested: 1/30/2026			Preservation Codes:
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 008 COMP	Project #: 57013187			
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)	900.0/EvaporationGross Alpha/Beta	906.0/LSC_Diss_SuspTritium	905_Sr90/PrecSep_7Strontium-90	903.0/PrecSep_21Radium-226	904.0/PrecSep_0Radium-228	A01R_U/ExtChrom_ActinTotal Uranium	901.1_Cs/Fill_Geo_0K-40 and Cesium-137	Total Number of containers	Special Instructions/Note:
			Preservation Code:												
Outfall008_20251226_Comp (570-260883-1)	12/26/25	09:30 Pacific	G	Water			X	X	X	X	X	X	X	5	Boeing SSFL, DO NOT FILTER; use prep date from preservation. Ok to Preserve

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: 12-29-25 8-	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:

Ver 10/10/2024

ICOC No:
570-496773

Containers

Count	Container Type	Preservative
1	Amber Glass 1 liter - unpreserved	None
4	Plastic 1 liter - Nitric Acid	Nitric Acid

Bottle Order Information

Bottle Order:
Bottle Order #.
Request From Client: *12/29/2025*
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***12/29/2025 11:59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496853.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Weck Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon State California, State Program Cal		Job #: 570-260883-5
Address: 14859 East Clark Avenue,	Due Date Requested: 2/3/2026			Preservation Codes:
City: City of Industry	TAT Requested (days): N/A			
State, Zip: CA, 917451396				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 008 COMP	Project #: 57013187			
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)	SUB Subcontract Weck-EPA 608 4,4-DDE only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall008_20251226_Comp (570-260883-1)	12/26/25	09:30 Pacific	G	Water			X	4	See Attached Instructions

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: 12-29-25 9-	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:

Ver: 10/10/2024

ICOC No:
570-496853

Containers

Count	Container Type	Preservative
4	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - Weck-EPA 608 - 4,4-DDE only	Level IV package, MDL, EQUIS 5C

Bottle Order Information

Bottle Order
Bottle Order #
Request From Client 12/29/2025
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***12/29/2025 11:59:00PM***
Lab Project Number
PWSID

Order Completion Information

Creator George Padron
Filled by
Sent Date
Sent Via
Tracking #

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative	Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496970.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): NELAP Oregon State California, State Program Cal		Job #: 570-260883-1
Address: 5755 8th Street East,	Due Date Requested: 1/5/2026	Analysis Requested		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: Boeing NPDES SSFL Routine Outfall 008 COMP	Project #: 57013187			
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)	1631EMercury, Total	1631E/Filtration_MEMercury, Dissolved	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X			X	
Outfall008_20251226_Grab-04 (570-260883-4)	12/26/25	09:30 Pacific	G	Water			X		1	
Outfall008_20251226_Grab_F-04 (570-260883-5)	12/26/25	09:30 Pacific	G	Water				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
	12-29-25 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:

Ver 10/10/2024

ICOC No:
570-496970

Containers

Count	Container Type	Preservative
1	Clear Glass 250ml - HCL	Hydrochloric Acid
1	Clear Glass 250mL - unpreserved	None

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496970.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): NELAP Oregon, State California; State Program Cal		Job #: 570-260883-2
Address: 5755 8th Street East,	Due Date Requested: 1/12/2026			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: Boeing NPDES SSFL Routine Outfall 008 COMP	Project #: 57013187			
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)	1631EMercury, Total	1631E/Filtration_MEMercury, Dissolved	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Outfall008_20251226_Comp (570-260883-1)	12/26/25	09:30 Pacific	G	Water			X		1	
Outfall008_20251226_Comp (570-260883-1MS)	12/26/25	09:30 Pacific	G	Water			X		1	
Outfall008_20251226_Comp (570-260883-1MSD)	12/26/25	09:30 Pacific	G	Water			X		1	
Outfall008_20251226_Comp_F (570-260883-2)	12/26/25	09:30 Pacific	G	Water				X	1	
Outfall008_20251226_Comp_F (570-260883-2MS)	12/26/25	09:30 Pacific	G	Water				X	1	
Outfall008_20251226_Comp_F (570-260883-2MSD)	12/26/25	09:30 Pacific	G	Water				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
CP	12-29-25 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:

Ver: 10/10/2024

ICOC No:
570-496970

Containers

Count	Container Type	Preservative
1	Clear Glass 250ml - HCL	Hydrochloric Acid
1	Clear Glass 250mL - unpreserved	None
4	No Container	None

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client. 12/29/2025
Date Order Posted
Order Status. *Ready To Process*
Prepared By:
Deliver By Date. ***12/29/2025 11 59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date.
Sent Via.
Tracking #.

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

eurofins | Environment Testing

Date:	12/30/2025
End Time:	2[illegible]:43
KI Paper Lot:	N/A
Analyst:	JS
Pipette:	N/A

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	143313
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
570-260883-A-4	A	Y	5|2	
570-260883-D-1	A	Y	5|2	
570-260883-b-1 ms	A	Y	5|2	
570-260883-b-1 msd	A	Y	5|2	

JS 12/30/25

Login Sample Receipt Checklist

Client: Haley & Aldrich Inc

Job Number: 570-260883-3

Login Number: 260883
List Number: 1
Creator: Patel, Virendra

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.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 2:23 PM

JOB DESCRIPTION

Boeing NPDES SSFL - Annual Outfall 011 Comp

JOB NUMBER

570-261344-4

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

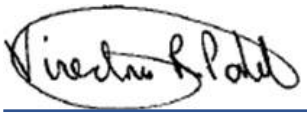
Eurofins Calscience

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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1/27/2026 2:23 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Method Summary 6
- Sample Summary 7

Subcontracted Data 8

Shipping and Receiving Documents 44

- Client Chain of Custody 45
- Field Data Sheets 64
- Sample Receipt Checklist 68

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
570-261344-4

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 12/26/2025 4:24 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.2°C, 0.3°C, 0.4°C, 1.1°C, 1.6°C, 2.3°C and 3.3°C.

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-261344-4
Project/Site: Boeing NPDES SSFL - Annual Outfall 011 Comp

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-261344-4
Project/Site: Boeing NPDES SSFL - Annual Outfall 011 Comp

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-261344-1	Outfall011_20251226_Comp	Water	12/26/25 10:00	12/26/25 16:24	CA

Subcontract Data

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/20/2026**

Report ID: **CSE1225.201**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample submitted to Aquatic Bioassay and Consulting Laboratories on 12/29/2025. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 12/26/2025 at 1000. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 12/29/2025 at 1030. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 12/30/2025 to 01/06/2026. Test concentration for the sample was 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
Outfall0011_20251226_Comp	CSE1225.201	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2.

Table 2. Summary of Acute Toxicity Results.

Sample ID	Percent Survival in 100% Sample
Control	100%
Outfall0011_20251226_Comp	100%

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
Outfall0011_20251226_Comp	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	-1.19%

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Fathead	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS™ Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
12/30/2025	*Pimephales promelas*	7d Survival Rate	Copper chloride	19 µg/L	82.03 µg/L	69.62 µg/L 51.4 – 94.3
		Mean Dry Biomass	Copper chloride	38 µg/L	63.15 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	16-4685-9771	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:42	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:23	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-9744-4871	**Code:**	CSE1225.201fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 10:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall011_20251226_Comp
Sample Age:	4d 3h (2.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.201

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
16-7886-0497	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
00-3146-0105	Mean Dry Biomass-mg	TST-Welch's t Test	<1.0E-05	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
16-7886-0497	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
00-3146-0105	Mean Dry Biomass-mg	Control Resp	0.3497	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.3497	0.3411	0.3583	0.336	0.3673	0.003632	0.01027	2.94%	0.00%
100		8	0.3538	0.3382	0.3695	0.338	0.3927	0.006609	0.01869	5.28%	-1.19%

7d Survival Rate Detail MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail MD5: 060EFA2634AB8003E9D87980C044F140

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3587	0.346	0.342	0.3453	0.336	0.3453	0.3567	0.3673
100		0.3687	0.338	0.3473	0.3387	0.356	0.348	0.3927	0.3413

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-7886-0497	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:35	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:32	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	16-4685-9771	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:42	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:23	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-9744-4871	**Code:**	CSE1225.201fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 10:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall011_20251226_Comp
Sample Age:	4d 3h (2.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.201

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

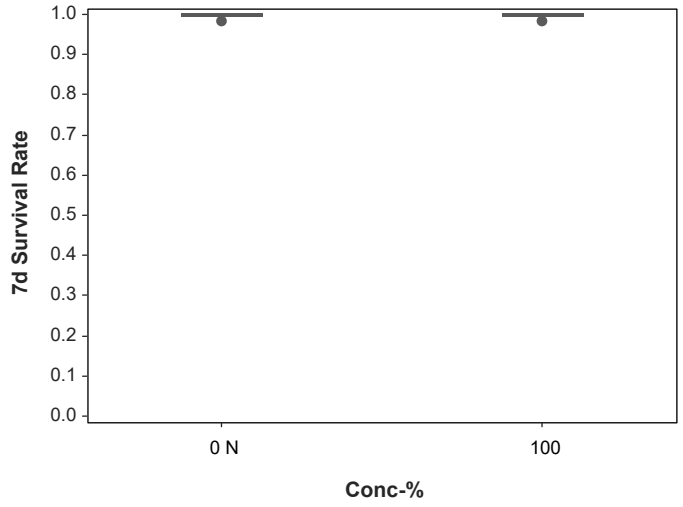
7d Survival Rate Binomials

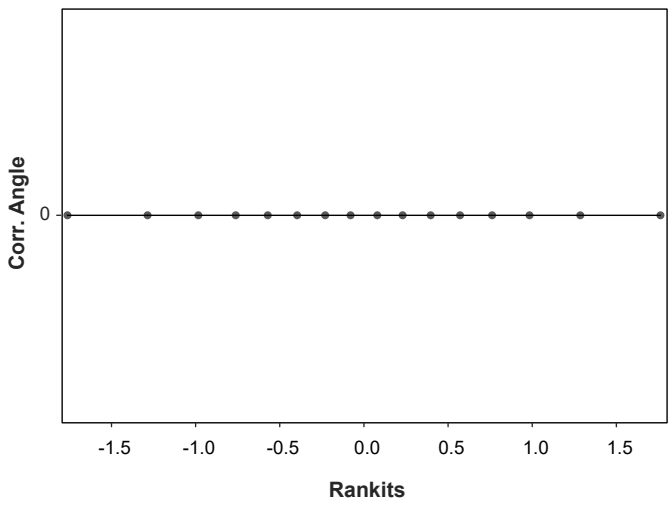
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-7886-0497	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:35	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:32	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	00-3146-0105	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:35	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:32	**MD5 Hash:**	060EFA2634AB8003E9D87980C044F140	**Editor ID:**	

Batch ID:	16-4685-9771	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:42	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:23	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-9744-4871	**Code:**	CSE1225.201fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 10:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall011_20251226_Comp
Sample Age:	4d 3h (2.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.201

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	9	12.81	0.7027	CDF	<1.0E-05	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6.944E-05	6.944E-05	1	0.3053	0.5893	Non-Significant Effect
Error	0.0031847	0.0002275	14			
Total	0.0032541		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	1.624	8.862	0.2233	Equal Variances
	Mod Levene Equality of Variance Test	0.7303	8.862	0.4072	Equal Variances
	Variance Ratio F Test	3.311	8.885	0.1368	Equal Variances
Distribution	Anderson-Darling A2 Test	0.748	3.878	0.0512	Normal Distribution
	D'Agostino Skewness Test	2.316	2.576	0.0206	Normal Distribution
	Kolmogorov-Smirnov D Test	0.2243	0.2471	0.0305	Normal Distribution
	Shapiro-Wilk W Normality Test	0.8792	0.8408	0.0378	Normal Distribution

Mean Dry Biomass-mg Summary

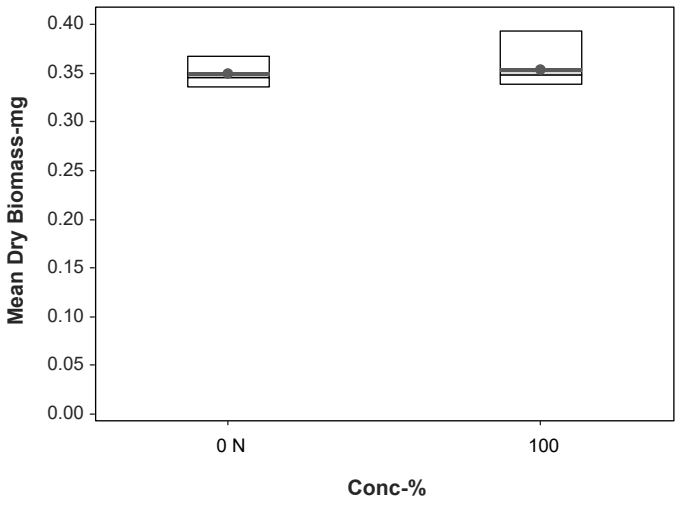
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.3497	0.3411	0.3583	0.3456	0.336	0.3673	0.003632	2.94%	0.00%
100		8	0.3538	0.3382	0.3695	0.3477	0.338	0.3927	0.006609	5.28%	-1.19%

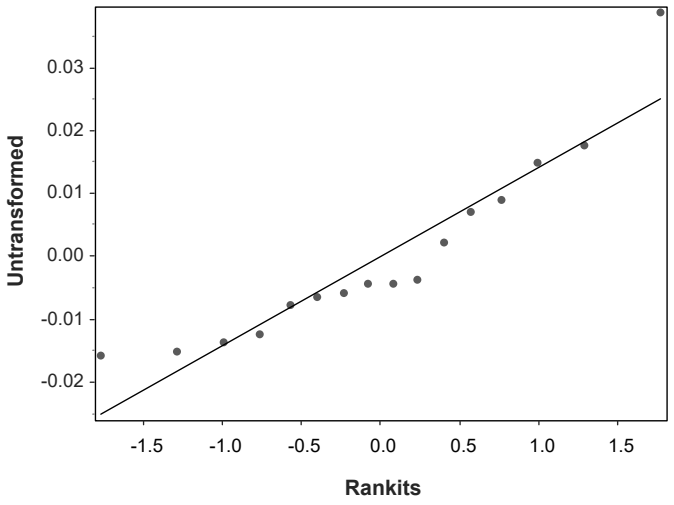
Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3587	0.346	0.342	0.3453	0.336	0.3453	0.3567	0.3673
100		0.3687	0.338	0.3473	0.3387	0.356	0.348	0.3927	0.3413

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	00-3146-0105	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:35	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:32	**MD5 Hash:**	060EFA2634AB8003E9D87980C044F140	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	16-4685-9771	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:42	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:23	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-9744-4871	**Code:**	CSE1225.201fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 10:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall011_20251226_Comp
Sample Age:	4d 3h (2.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.201

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
100		8	23	23	23	23	23	0	0	0.00%	0
Overall		16	40.5	30.87	50.13	23	58	4.518	18.07	44.63%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
100		8	73.62	72.37	74.88	71	75	0.1882	1.506	2.05%	0
Overall		16	197.5	129.3	265.7	71	325	31.99	127.9	64.78%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
100		8	7.838	7.538	8.137	7	8.2	0.04479	0.3583	4.57%	0
Overall		16	7.8	7.626	7.974	7	8.2	0.08165	0.3266	4.19%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	30	30	30	30	30	0	0	0.00%	0
Overall		16	65	45.74	84.26	30	100	9.037	36.15	55.61%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
100		8	7.162	7.054	7.271	7	7.4	0.01628	0.1302	1.82%	0
Overall		16	7.463	7.29	7.635	7	7.8	0.08107	0.3243	4.35%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.15	24.09	24.21	24	24.2	0.009431	0.07545	0.31%	0
Overall		16	24.08	24.03	24.12	24	24.2	0.02327	0.0931	0.39%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
07-6584-2034	7d Survival Rate	Steel Many-One Rank Sum Test	✓	19	38	26.87	9.86%	1
07-0949-7949	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test		38	75	53.39	8.51%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
20-9726-2836	7d Survival Rate	Linear Interpolation (ICPIN)	✓	EC15	36.1	21.18	53.94	1
			✓	EC20	42.35	21.57	59.07	
			✓	EC25	48.88	21.8	64.03	
				EC40	68.47	53.55	78.92	
				EC50	82.03	64.66	91.96	
19-7190-2604	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)		IC15	45.54	44.27	45.75	1
				IC20	48.06	46.88	48.34	
				IC25	50.57	49.43	50.93	
			✓	IC40	58.12	57.14	58.71	
			✓	IC50	63.15	62.17	63.92	

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
07-6584-2034	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
20-9726-2836	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
19-7190-2604	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	PMSD	0.08514	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.1520	0.5333	0.9333	0.1000	0.2000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.4000	0.6000	0.0500	0.1000	18.18%	45.00%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3413	0.3547	0.002807	0.005614	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3413	0.35	0.002317	0.004635	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.346	0.3507	0.0009813	0.001963	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3413	0.3507	0.002079	0.004159	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.08533	0.09933	0.003133	0.006266	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0	0.08333	0.02057	0.04114	189.88%	93.75%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: C5F324C8E327E99CF47200B51B720B1C

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Mean Dry Biomass-mg Detail MD5: C0E8E497E3C1FC1F3DE9D694CD00CBB3

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	19	38	26.87	---	0.09859	9.86%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38*	6	10	10	0	CDF	0.0417	Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.21865	1.04373	5	83.82	<1.0E-05	Significant Effect
Error	0.224141	0.0124523	18			
Total	5.44279		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	6.711	4.248	0.0011	Unequal Variances
	Mod Levene Equality of Variance Test	0.7457	4.248	0.5996	Equal Variances
Distribution	Anderson-Darling A2 Test	2.634	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	3.619	2.576	0.0003	Non-Normal Distribution
	D'Agostino Skewness Test	3.884	2.576	0.0001	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	28.18	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2917	0.2056	1.2E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.7217	0.884	2.0E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.0000	0.9333	0.5333	0.9333	0.1000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.6000	0.4000	0.6000	0.0500	18.18%	45.00%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.1870	0.7964	1.5770	1.3100	0.8188	1.3100	0.1227	20.68%	17.65%
75		4	0.8357	0.6755	0.9959	0.8861	0.6847	0.8861	0.0503	12.05%	42.02%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Angular (Corrected) Transformed Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		0.8188	1.3100	1.3100	1.3100
75		0.8861	0.8861	0.6847	0.8861
150		0.1295	0.2612	0.1295	0.1295

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

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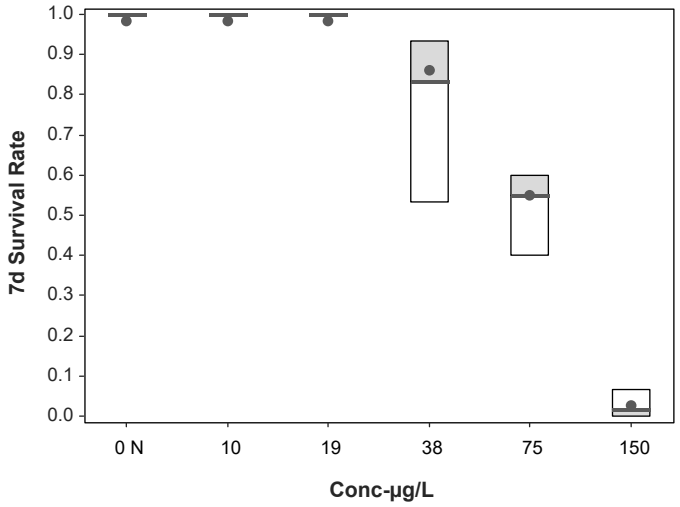
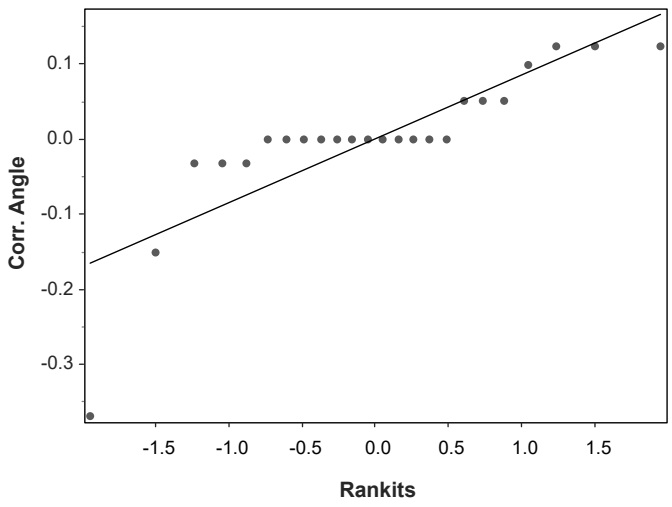




Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.02953	8.51%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	17.5	10	1	CDF	0.7867	Non-Significant Effect
		19	6	21.5	10	1	CDF	0.9855	Non-Significant Effect
		38	6	19	10	2	CDF	0.9055	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.45886	0.091772	5	304.9	<1.0E-05	Significant Effect
Error	0.005418	0.000301	18			
Total	0.464278		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	32.99	15.09	<1.0E-05	Unequal Variances
	Levene Equality of Variance Test	6.766	4.248	0.0010	Unequal Variances
	Mod Levene Equality of Variance Test	0.8401	4.248	0.5387	Equal Variances
Distribution	Anderson-Darling A2 Test	2.692	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	4.107	2.576	4.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	4.332	2.576	1.5E-05	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	35.63	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2638	0.2056	0.0001	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.6777	0.884	<1.0E-05	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3457	0.3413	0.3547	0.002807	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3457	0.3413	0.35	0.002317	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.3477	0.346	0.3507	0.0009814	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3477	0.3413	0.3507	0.002079	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.091	0.08533	0.09933	0.003133	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0.001111	0	0.08333	0.02057	189.88%	93.75%

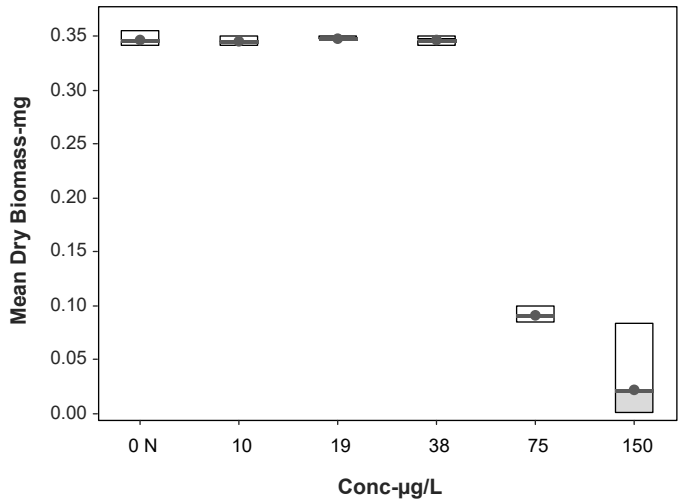
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

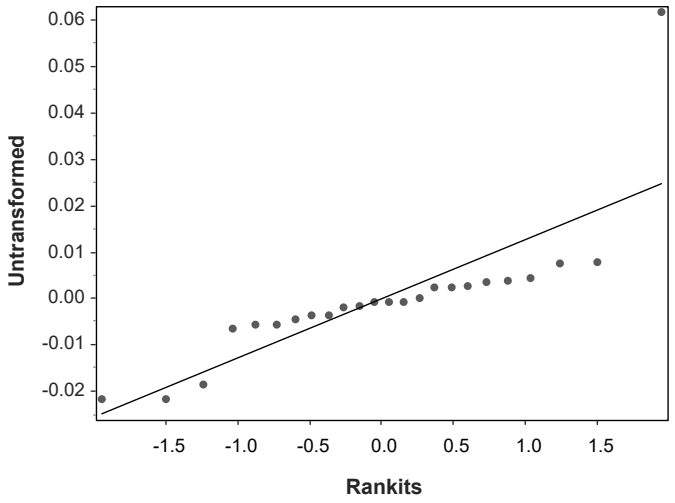
Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	36.1	21.18	53.94
EC20	42.35	21.57	59.07
EC25	48.88	21.8	64.03
EC40	68.47	53.55	78.92
EC50	82.03	64.66	91.96

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.8333	0.9333	0.5333	0.9333	24.00%	16.67%	50/60	0.8333	16.67%
75		4	0.5500	0.6000	0.4000	0.6000	18.18%	45.00%	33/60	0.5500	45.00%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

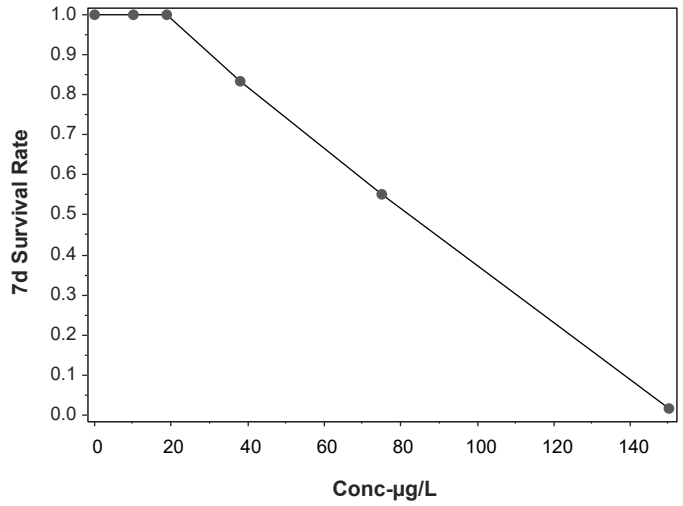
Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1953384	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	45.54	44.27	45.75
IC20	48.06	46.88	48.34
IC25	50.57	49.43	50.93
IC40	58.12	57.14	58.71
IC50	63.15	62.17	63.92

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3468	0.3457	0.3413	0.3547	1.62%	0.00%	0.3468	0.00%
10		4	0.3457	0.3457	0.3413	0.35	1.34%	0.34%	0.3468	0.00%
19		4	0.348	0.3477	0.346	0.3507	0.56%	-0.34%	0.3468	0.00%
38		4	0.3468	0.3477	0.3413	0.3507	1.20%	0.00%	0.3468	0.00%
75		4	0.09167	0.091	0.08533	0.09933	6.84%	73.57%	0.09167	73.57%
150		4	0.02167	0.001111	0	0.08333	189.88%	93.75%	0.02167	93.75%

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

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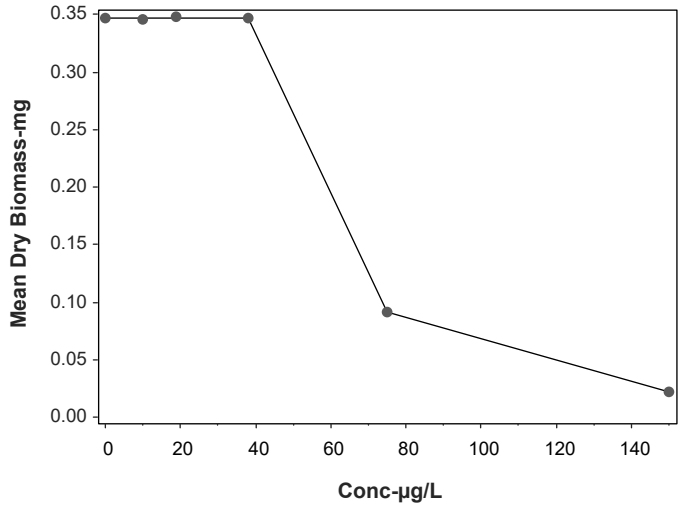


Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX	
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant	
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX	
Sample Age:	---	**Client:**	ABC Labs			

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
150		8	57	57	57	57	57	0	0	0.00%	0
Overall		16	57.5	57.22	57.78	57	58	0.1291	0.5164	0.90%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
10		8	318.4	317.4	319.4	316	320	0.1485	1.188	0.37%	0
19		8	317.4	316.5	318.3	316	319	0.1326	1.061	0.33%	0
38		8	315.6	313.8	317.4	312	318	0.2667	2.134	0.68%	0
75		8	314.1	311.5	316.7	310	317	0.3864	3.091	0.98%	0
150		8	312.8	310	315.5	310	317	0.4159	3.327	1.06%	0
Overall		48	316.6	315.6	317.6	310	325	0.5181	3.589	1.13%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
10		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
19		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
38		8	7.713	7.47	7.955	7	7.9	0.03625	0.29	3.76%	0
75		8	7.725	7.477	7.973	7	7.9	0.03705	0.2964	3.84%	0
150		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
Overall		48	7.735	7.653	7.818	7	7.9	0.04109	0.2847	3.68%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
10		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
19		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
38		8	7.713	7.618	7.807	7.5	7.8	0.01408	0.1126	1.46%	0
75		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
150		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
Overall		48	7.721	7.694	7.748	7.5	7.8	0.0133	0.09216	1.19%	0 (0%)

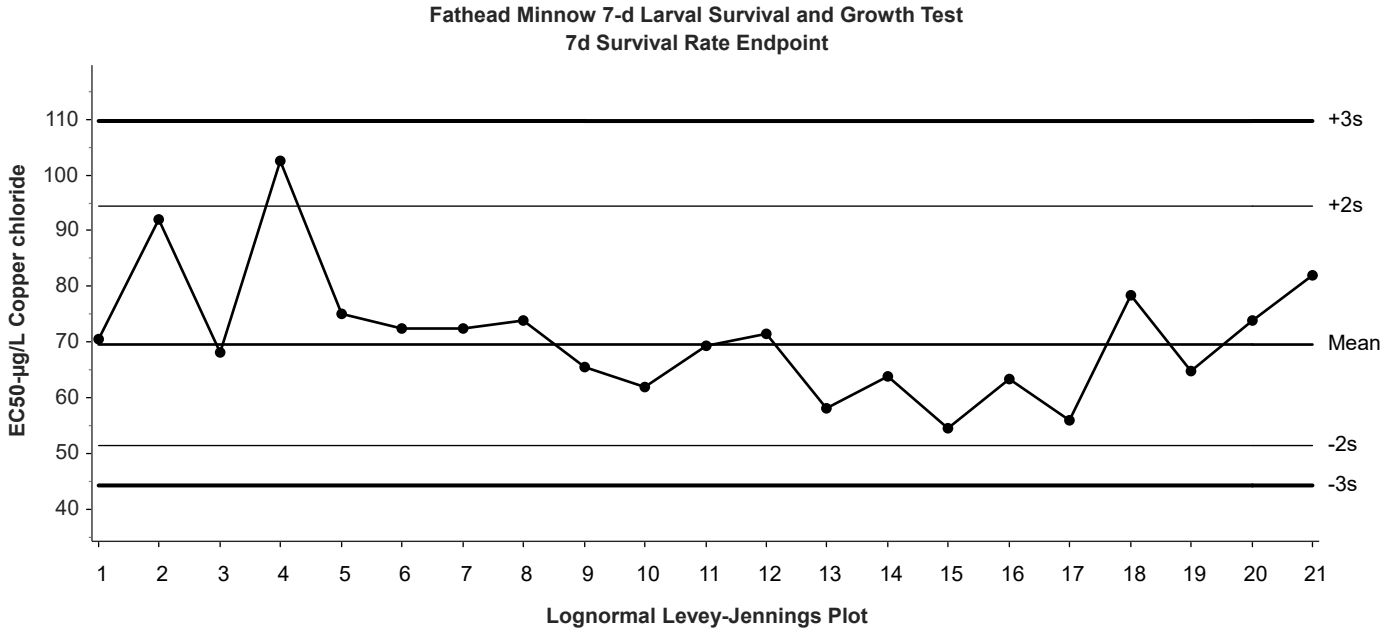
Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.08	24.04	24.11	24	24.1	0.005762	0.0461	0.19%	0
19		8	24.11	24.04	24.18	24	24.2	0.01042	0.08334	0.35%	0
38		8	24.13	24.05	24.2	24	24.2	0.01107	0.08854	0.37%	0
75		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
150		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
Overall		48	24.1	24.07	24.13	24	24.3	0.01348	0.09338	0.39%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



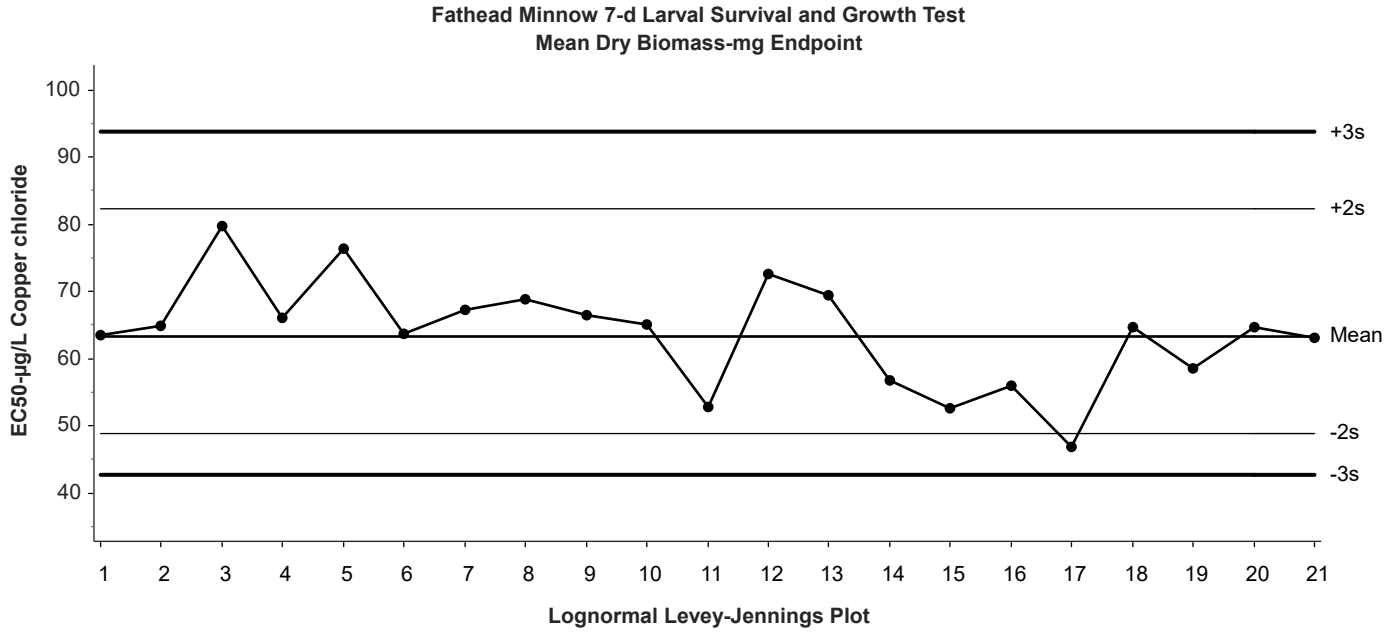
Mean:	69.62	**Count:**	20	**-2s Warning Limit:**	51.4	**-3s Action Limit:**	44.2
Sigma:	NA	**CV:**	15.30%	**+2s Warning Limit:**	94.3	**+3s Action Limit:**	110

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	70.52	0.8988	0.08456			21-2981-7713	03-0489-4574
2			17	13:00	91.94	22.32	1.833			13-3277-6088	03-7751-7547
3			21	15:24	68	-1.616	-0.1549			08-1266-5648	19-4309-1944
4			22	14:55	102.6	33.02	2.559	(+)		07-5558-1243	12-5555-4178
5			28	15:30	75	5.384	0.491			13-4573-3635	11-5047-1832
6			30	15:30	72.36	2.741	0.2545			11-5715-0925	03-3652-0021
7		Apr	4	11:45	72.45	2.832	0.2628			17-3412-6439	09-0505-4831
8			11	15:10	73.72	4.108	0.3779			12-2891-6798	20-3297-8234
9			25	15:00	65.49	-4.131	-0.4032			19-7686-5958	17-2422-4835
10			27	13:00	61.94	-7.675	-0.77			01-1863-5687	10-3453-8425
11		May	2	15:45	69.31	-0.3087	-0.0293			01-5973-7078	19-8547-5138
12			9	15:30	71.53	1.915	0.1789			01-4263-6313	07-3079-9817
13		Aug	9	13:00	58.18	-11.43	-1.183			14-3532-4574	02-3075-3473
14		Oct	6	14:45	63.9	-5.716	-0.5648			18-8099-7551	11-2650-3626
15	2024	Jan	9	13:20	54.55	-15.06	-1.607			14-8299-7228	00-5651-6529
16		Aug	1	15:59	63.35	-6.265	-0.6216			17-2152-6147	10-3671-8471
17	2025	Mar	6	15:00	55.94	-13.68	-1.442			06-4992-6637	09-1125-3834
18		Jul	8	11:21	78.31	8.692	0.7756			00-3393-7264	14-6710-1242
19			10	13:10	64.72	-4.894	-0.4805			07-5897-2938	20-7755-3652
20		Sep	9	13:10	73.75	4.136	0.3805			00-2537-6486	15-9566-8088
21		Dec	30	12:30	82.03	12.41	1.082			00-0985-9985	20-9726-2836

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type: Growth-Survival (7d) **Organism:** Pimephales promelas **Material:** Copper chloride
Protocol: EPA/821/R-02-013 (2002) **Endpoint:** Mean Dry Biomass-mg **Source:** Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	14	15:30	63.61	0.2356	0.02843			01-1632-8199	05-8079-6953
2			15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
3			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
4			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
5			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
6			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
7			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
8		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
9			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
10			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
11			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
12		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
13			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
14		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
15	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
16		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
17	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
18		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
19			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
20		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
21		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 12/30/25 1230 | Lab ID: FML 123025

End Date & Time: 1/6/26 1110 | Age of Organism: 1d.

Toxicant Batch ID: FML122925 | Method: EPA-821-R-02-013

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1230	0940	0802	0959	0842	1002	1011	1110
Analyst	eb	eb	eb	eb	eb	eb	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renew ≥80%	Y (N)	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.9	7.0	7.9	7.1	7.9	7.0
10 ug/L	7.9	7.5	7.8	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.9	7.0
19 ug/L	7.9	7.5	7.9	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.8	7.0
38 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.2	7.8	7.0	7.6	7.0
75 ug/L	7.8	7.4	7.9	7.2	7.8	7.1	7.8	7.0	7.8	7.2	7.9	7.0	7.8	7.0
150 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.1	7.9	7.0	7.4	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
10 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.0	24.0
19 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
38 ug/L	24.2	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
75 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24.0	24.0	24.0
150 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
10 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.8	7.7	7.8	7.7	7.8
19 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.7	7.7	7.8	7.7	7.8
38 ug/L	7.8	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.8	7.7	7.8
75 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
150 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	324
10 ug/L	319	320	318	319	316	319	318	318
19 ug/L	316	319	317	316	317	318	318	318
38 ug/L	312	316	316	314	314	317	318	314
75 ug/L	310	310	314	314	312	317	317	317
150 ug/L	310	310	310	312	310	316	317	317
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
150 ug/L	57	57	57	57	57	57	57	57
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
150 ug/L	104	104	104	104	104	104	104	104

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 12/30/25 End Date: 1/6/26 Lab ID: **FML** 123025

	Analyst	LD	LD	LD	LD	LD	LD	M	M
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
19	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	14	11	11	LD 11	8	8
	2	15	15	15	14	14	14	14	14
	3	15	15	15	14	14	14	14	14
	4	15	15	15	15	15	15	14	14
75	1	15	14	14	12	12	11	9	9
	2	15	15	14	13	10	10	9	9
	3	15	13	10	9	9	7	6	6
	4	15	15	14	12	10	9	5	9
150	1	15	6	4	1	1	0		
	2	15	9	6	4	4	1	0 1	1
	3	15	8	4	3	2	0		
	4	15	5	2	1	1	0		

Balance ID: BAL 1

Analyst: LD

Date/Time in Oven: 1/6/26 ~~1123/25~~ LD

Date/Time out Oven 1/7/26

Oven Temp (°C): 66.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CA 1	CONTROL	1	1.10790	1.11302	0.00512
2		2	1.10578	1.11096	0.00518
3		3	1.10274	1.10793	0.00519
4		4	1.11310	1.11842	0.00532
CA 5	10	1	1.10772	1.11296	0.00524
6		2	1.10895	1.11407	0.00512
7		3	1.10622	1.11135	0.00513
8		4	1.10652	1.11177	0.00525
CA 9	19	1	1.12274	1.12896	0.00522
10		2	1.10675	1.11194	0.00519
11		3	1.11303	1.11829	0.00526
12		4	1.10416	1.10937	0.00521
CA 13	38	1	1.10460	1.10684	0.00224
14		2	1.10557	1.11083	0.00526
15		3	1.11656	1.12175	0.00519
16		4	1.12686	1.13198	0.00512
CA 17	75	1	1.12045	1.12186	0.00141
18		2	1.10722	1.10871	0.00149
19		3	1.10315	1.10443	0.00128
20		4	1.11397	1.11529	0.00132
—	150	1	—	—	—
CA 21		2	1.12130	1.12155	0.00025
—		3	—	—	—
—		4	—	—	—
CA 22	BLANK	1	1.11005	1.11000	-0.00005

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE 3
Start Date & Time: 12/30/25 1242
End Date & Time: 1/6/26 1123

Lab ID: CSE1225.201
Date Rec'd: 12/29/25
Age of Organism: 1d.

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1242	0953	1817	1017	0857	1024	[illegible]	1127
Analyst	CD	CD	CD	CD	CD	CD	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renewed≥80%	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Lab ID	.201	.201	.201	.201	.201	.201	.201	.201
ControlBatch	1MHW 122825	1/3HW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.8	7.4	7.9	7.1	7.9	7.2
100%	8.2	8.0	8.0	7.3	7.8	8.1	7.9	7.6	8.0	7.7	7.9	7.2	7.9	7.2
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
100%	24.2	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.1	24.0	24.2	24.0	24.1	24.2
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.4	7.4	7.4
100%	7.1	7.1	7.0	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.3	7.3	7.3
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	320	324
100%	71	72	73	74	74	75	75	75
Alkalinity (mg/L CaCO3)								
Control	88	88	88	88	88	88	88	88
100%	73	73	73	73	73	73	73	73
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
100%	33	33	30	30	30	30	30	30

Residual Chlorine 1st Sample: 0.1 2nd Sample: ~ 3rd Sample: ~

Chronic Fathead Minnow Survival and Growth - TST

Client: CSE 3 Lab ID: CSE1225.201

Start Date: 12/30/25 End Date: 1/6/26

Concentration	Replicate	Analyst LD	1 LD	2 LD	3 LD	4 LD	5 LD	6 N	Final LD
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15
100	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15

Oven Temp (°C): 66.0 Date/Time In: 1/6/26 Date/Time Out: 1/7/26

Balance ID: BAL 1 Analyst: LD

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CE 1	CONTROL	1	1.14072	1.14610	0.00538
2		2	1.15575	1.16094	0.00519
3		3	1.17049	1.17562	0.00513
4		4	1.16611	1.17129	0.00518
5		5	1.15229	1.15733	0.00504
6		6	1.15180	1.15698	0.00518
7		7	1.16802	1.17337	0.00535
8		8	1.15031	1.15582	0.00551
CE 9	100	1	1.16040	1.16593	0.00553
10		2	1.14254	1.14761	0.00507
11		3	1.16431	1.16952	0.00521
12		4	1.15262	1.15770	0.00508
13		5	1.16443	1.16977	0.00534
14		6	1.15382	1.15904	0.00522
15		7	1.15203	1.15792	0.00589
16		8	1.15332	1.15844	0.00512

Appendix D

Chain of Custody and Sample Receipt Summary

CHAIN OF CUSTODY FORM

Client Name/Address	Project	Analysis Required
Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 **Annual** **Outfall 011** **COMPOSITE**	
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**		
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreements 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)	
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)	

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	A/R	A	R	A	R	A	R	R	R	R	Comments
								Total Dissolved Metals (E200.7): B, Hardness as CaCO3 (E200.8): Al, Ag, As, Ba, Be, Cd, Co, Cu, Cr, Fe, Mn, Ni, Pb, Se, Sb, Tl, V, Zn	Cr (VI), Total Dissolved (E218.6)	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0) - **Sub to St. Louis**	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	1,4-Dioxane (E624 (SW8260M_SIM))	Total Organic Carbon (415.2 (SM 5310D))	Monomethyl hydrazine (SW8315M/DV WC-0077) **Weck Labs in Hacienda Heights, CA**	Hg Mercury (E1631E) - Total Dissolved	Cyanide (Kelada)	Extra Volume to be placed on hold	Extra Volume to be placed on hold	
Outfall 011	Outfall011_20251226_Comp_F	12/26/2025 1000	WM	250 mL Poly	3	None	Yes	X										Filter and preserve w/in 24hrs of receipt at lab.
			WM	250 mL Poly	1	None			X									Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, double bagged	1	None	Yes								X			Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	-201 Outfall011_20251226_Comp	12/26/2025 1000	WM	500 mL Poly	1	NaOH										X		
			WM	1 L Poly	4	HNO3				X								Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None												
			WM *	2.5 Gal Cube	2	None					X							Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA**
			WM	40 mL VOA	3	HCl						X						
			WM	40 mL VOA	3	H2SO4							X					
			WM	1 L Glass Amber	1	None								X				**Segregate into a cooler for Weck Labs.**
	Outfall011_20251226_Comp_Extra	12/26/2025 1000	WM	1 L Glass Amber	4	None											X	Hold
			WM	1 L Poly	2	None											X	Hold
QA/QC	Outfall011_20251226_Grab_F-04	12/26/2025 1000	WQ	8oz Clear Glass, double bagged	1	None									X			Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Added C.F. = -0.2°C
Therm. # sample receiving 2
Temp. deg. C = 3.4
Chlorine (mg/L) = 20/1
NH3 (mg/L) = 20/1

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Mark Dominick	12-29-2025 / 1030	H&A		12/29/25 1030
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: __X__ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: __X__

* Hand-delivered to ABC Labs with this copy of the COC

2025-2026 Rainy Season
Version 1

Sample Receipt Summary

AQUATIC BIOASSAY & CONSULTING LABORATORIES, INC.

Client Name: Cummins Cascade

Project Name: # 57013187

Receiving Information

1. Received By (initials): EM
2. Date Received: 12/29/25
3. Time Received: 1034
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - 1 Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): EM

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Shipping and Receiving Documents

Loc: 570
261344

570-261344 Chain of Custody

CHAIN OF CUSTODY FORM

								A/R	R	R	R	A/R	R	R	A	A/R	A/R	R	A	R	A		
Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108			Project: Boeing-SSFL NPDES Permit 2023 **Annual** **Outfall 011** **COMPOSITE**					ANALYSIS REQUIRED															
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**			Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)					Total Recoverable Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, Ag, As, Ba, Be, Cd, Co, Cu, Cr, Fe, Mn, Ni, Pb, Se, Sb, Tl, V, Zn	TCDD (and all congeners) (E1613B) - Sub to Sacramento	BOD5 (20 degrees C) (E405.1 (SM5210B_BODCalc))	LL Mercury (E1631E) – Total Recoverable	Flouride (F-), Chloride (Cl-), Sulfate (SO4), Nitrate-N, Nitrite-N, NO3+NO2-N (E300); Perchlorate (E314.0)	Turbidity, TDS (SM2540C/E180.1)	TSS (160.2 (SM2540D))	Priority Pollutants-Pesticides+PCBs (E608) Weck Labs in Hacienda Heights, CA	Priority Pollutants-SVOCs (E6251 SIM)	Priority Pollutants-SVOCs (E6251 SIM) Sub Indeno[1,2,3-cd]pyrene to EMAX	Ammonia-N (E351.1)	PCBs - 44 Congeners only (1668C) - Sub to Sacramento	Detergents (MBAS) (SM5540C/E425.1)	Cr (VI), Total Recoverable (E218.6)		Comments
Sampler: Adrien Mobeka			Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)																				
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD																
1 Outfall 011	Outfall011_20251226_Comp	12/26/2025 1000	WM	250 mL Poly	3	HNO3	Yes	X															
			WM	1 L Glass Amber	2	None			X														
			WM	1 L Poly	1	None				X													
			WM	8oz Clear Glass, double bagged	1	HCL	Yes				X												Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	250 mL Poly	1	None						X											48 hours Holding Time NO_3 & NO_2
			WM	500 mL Poly	1	None							X										48 hour holding time for turbidity
			WM	1 L Poly	1	None								X									
			WM	1 L Glass Amber	4	None									X								Segregate into a cooler for Weck Labs.
			WM	1 L Glass Amber	12	None	Yes									X							
			WM	1 L Glass Amber	4	None											X						Segregate into a cooler for EMAX.
			WM	250 mL Poly	1	H_2SO_4												X					
			WM	1 L Glass Amber	12	None	Yes												X				
			WM	1 L Poly	1	None														X			
			WM	250 mL Poly	1	None															X		
2	Outfall011_20251226_Comp-02	12/26/2025 1000	WM	1 L Glass Amber	4	None													X				
QA/QC 3	Outfall011_20251226_Grab-04	12/26/2025 1000	WQ	1 L Glass Amber	4	None													X				
			WQ	8oz Clear Glass, double bagged	1	HCL					X												
			WQ	1 L Glass Amber	4	None									X								

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by: Michelle Dallalah	Date/Time: 12/26/25 12:32	Company: H&A	Received by:	Date/Time: 12/26/25 1232	Company:
Relinquished by:	Date/Time: 12/26/25 1624	Company:	Received by:	Date/Time: 12/26/25 1624	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: __X__ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: __X__

2025-2026 Rainy Season
Version 1

0.3/0.4 0.2/0.3 1.0/1.1 0.1/0.2
3.2/3.3 1.5/1.6 2.2/2.3 IN4 :a

G2X6

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 **Annual** **Outfall 011** **COMPOSITE**
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)
Sampler: Adrien Mobeka	

								ANALYSIS REQUIRED																	
								A/R	A	R	A	R	A	R	R	R	R	R							
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Dissolved Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, Ag, As, Ba, Be, Cd, Co, Cu, Cr, Fe, Mn, Ni, Pb, Se, Sb, Tl, V, Zn	Cr (VI), Total Dissolved (E218.6)	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0) - **Sub to St. Louis**	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	1,4-Dioxane (E624 (SW8260M_SIM))	Total Organic Carbon (415.2 (SM 5310D))	Monomethyl hydrazine (SW8315M/DY-WC-0077) **Weck Labs in Hacienda Heights, CA**	LL Mercury (E1631E) – Total Dissolved	Cyanide (Kelada)	Extra Volume to be placed on hold	Extra Volume to be placed on hold	Comments
			WM	250 mL Poly	3	None	Yes	X																	Filter and preserve w/in 24hrs of receipt at lab.
4	Outfall011_20251226_Comp_F	12/26/2025 1000	WM	250 mL Poly	1	None			X																Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, double bagged	1	None	Yes													X					Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	500 mL Poly	1	NaOH															X				
			WM	1 L Poly	4	HNO3																			Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
Outfall 011			WM	1 L Glass Amber	1	None				X															
1	Outfall011_20251226_Comp	12/26/2025 1000	WM	2.5 Gal Cube	2	None					X														Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA**
			WM	40 mL VOA	3	HCl						X												
			WM	40 mL VOA	3	H2SO4							X											
			WM	1 L Glass Amber	1	None								X										**Segregate into a cooler for Weck Labs.**
5	Outfall011_20251226_Comp_Extra	12/26/2025 1000	~~WM~~	~~1 L Glass Amber~~	~~4~~	~~None~~															X				~~Hold~~
			WM	1 L Poly	2	None																X			Hold
QA/QC 6	Outfall011_20251226_Grab_F-04	12/26/2025 1000	WQ	8oz Clear Glass, double bagged	1	None														X					Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by: Michelle Dallalah	Date/Time: 12/26/25 12:32	Company: H&A	Received by:	Date/Time: 12/26/25 12:32
Relinquished by:	Date/Time: 12/26/25 1624	Company:	Received by:	Date/Time: 12/26/25 1624
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496771 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon, State California; State Program Cal		Job #: 570-261344-6
Address: 13715 Rider Trail North,	Due Date Requested: 1/30/2026			Preservation Codes:
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual Outfall 011 Comp	Project #: 57013187			
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)	900.0/EvaporationGross Alpha/Beta	901.1_Cs/Fill_Geo_0K-40 and Cesium-137	A01R_U/ExtChrom_ActinTotal Uranium	903.0/PrecSep_21Radium-226	904.0/PrecSep_0Radium-228	905_Sr90/PrecSep_7Strontium-90	906.0/LSC_Dist_SuepTritium	Total Number of containers	Special Instructions/Note:
			Preservation Code:												
Outfall011_20251226_Comp (570-261344-1)	12/26/25	10:00 Pacific	G	Water			X	X	X	X	X	X	X	5	Boeing SSFL, DO NOT FILTER; use prep date from preservation

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
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

ICOC No:
570-496771

Containers

Count	Container Type	Preservative
1	Amber Glass 1 liter - unpreserved	None
4	Plastic 1 liter - Nitric Acid	Nitric Acid

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client: 12/29/2025
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***12/29/2025 11:59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator George Padron
Filled by
Sent Date.
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496810.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Weck Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon, State California; State Program Cal		Job #: 570-261344-7
Address: 14859 East Clark Avenue,	Due Date Requested: 1/13/2026			Preservation Codes:
City: City of Industry	TAT Requested (days): N/A			
State, Zip: CA, 917451396				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual Outfall 011 Comp	Project #: 57013187			
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)	SUB Subcontract EPA 608 Pesticides/PCBs PP list	SUB Subcontract Weck- Monomethyl Hydrazine	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Outfall011_20251226_Comp (570-261344-1)	12/26/25	10:00 Pacific	G	Water			X	X	5	See Attached Instructions

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		12-29-25 9-	EC			
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: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

ICOC No:
570-496810

Containers

Count	Container Type	Preservative
5	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - EPA 608 - Pesticides/PCBs - PP list	Level 2 package only MDL, EQUIS 5C
1	SUBCONTRACT	SUB - Subcontract - Weck- Monomethyl Hydrazine	Level IV package, MDL, EQUIS 5C

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client: 12/29/2025
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***12/29/2025 11 59:00PM***
Lab Project Number
PWSID

Order Completion Information

Creator George Padron
Filled by
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496972.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261344-2
Address: 5755 8th Street East,	Due Date Requested: 1/12/2026			
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: Boeing NPDES SSFL Annual Outfall 011 Comp	Project #: 57013187			
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)	1631EMercury, Total	1631E/Filtration_MEMercury, Dissolved	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Outfall011_20251226_Comp (570-261344-1)	12/26/25	10:00 Pacific	G	Water			X		1	
Outfall011_20251226_Comp (570-261344-1MS)	12/26/25	10:00 Pacific	G	Water			X		1	
Outfall011_20251226_Comp (570-261344-1MSD)	12/26/25	10:00 Pacific	G	Water			X		1	
Outfall011_20251226_Grab-04 (570-261344-3)	12/26/25	10:00 Pacific	G	Water			X		1	
Outfall011_20251226_Comp_F (570-261344-4)	12/26/25	10:00 Pacific	G	Water				X	1	
Outfall011_20251226_Grab-F-04 (570-261344-6)	12/26/25	10:00 Pacific	G	Water				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
	12-29-25 13-	et			
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

ICOC No:
570-496972

Containers

Count	Container Type	Preservative
2	Clear Glass 250ml - HCL	Hydrochloric Acid
2	Clear Glass 250mL - unpreserved	None
2	No Container	None

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client. 12/29/2025
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***12/29/2025 11 59:00PM***
Lab Project Number
PWSID

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative	Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

3 coolers

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497010.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP - Oregon; State California- State Program Cal		Job #: 570-261344-1
Address: 880 Riverside Parkway	Due Date Requested: 1/6/2026			Preservation Codes:
City: West Sacramento	TAT Requested (days): N/A			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual Outfall 011 Comp	Project #: 57013187			
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)	1668C/HRMS_Sep_P1668C 44 Congener List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall011_20251226_Comp-02 (570-261344-2)	12/26/25	10:00 Pacific	G	Water			X	4	
Outfall011_20251226_Grab-04 (570-261344-3)	12/26/25	10:00 Pacific	G	Water			X	4	

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: 12-29-25 15	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: ∆ Yes ∆ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

ICOC No:
570-497010

Containers

Count	Container Type	Preservative
8	Amber Glass 1 liter - unpreserved	None

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497010.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261344-3
Address: 880 Riverside Parkway	Due Date Requested: 1/12/2026			Preservation Codes:
City: West Sacramento	TAT Requested (days): N/A			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual Outfall 011 Comp	Project #: 57013187			
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)	1613B/1613B_Sox_Sep_P(MOD) Standard List w/ Totals	1668C/HRMS_Sep_P1668C 44 Congener List	1668C/HRMS_Sep_P1668C 44 Congener For MS/MSD ONLY	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
Outfall011_20251226_Comp (570-261344-1)	12/26/25	10:00 Pacific	G	Water			X	X		6	See QAS, Boeing_w/u to zero, ug/L, Use Boeing glassware.
Outfall011_20251226_Comp (570-261344-1MS)	12/26/25	10:00 Pacific	G	Water					X	4	
Outfall011_20251226_Comp (570-261344-1MSD)	12/26/25	10:00 Pacific	G	Water					X	4	

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
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

ICOC No:
570-497010

Containers

Count	Container Type	Preservative
14	Amber Glass 1 liter - unpreserved	None

Bottle Order Information

Bottle Order
Bottle Order #.
Request From Client: 12/29/2025
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***12/29/2025 11 59·00PM***
Lab Project Number
PWSID

Order Completion Information

Creator *George Padron*
Filled by
Sent Date.
Sent Via
Tracking #.

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497026.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261344-5
Address: 3051 Fujita Street,	Due Date Requested: 1/9/2026			
City: Torrance	TAT Requested (days): N/A			
State, Zip: CA, 90505				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual Outfall 011 Comp	Project #: 57013187			
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)	SUB Subcontract 625.1 SIM Indeno(1,2,3-cd)Pyrene	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall011_20251226_Comp (570-261344-1)	12/26/25	10:00 Pacific	G	Water			X	4	See Attached Instructions

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
	12-29-25 15-	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

ICOC No:
570-497026

Containers

Count	Container Type	Preservative
4	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - 625 1 - SIM - Indeno((1,2,3-cd)Pyrene	Report down to MDL Level IV EMAX STD DOD EDD

Bottle Order Information

Bottle Order
Bottle Order #.
Request From Client 12/29/2025
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date: ***12/29/2025 11 59·00PM***
Lab Project Number
PWSID

Order Completion Information

Creator *George Padron*
Filled by
Sent Date
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

eurofins | Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025	Issued by: XE8X	

Job _____

570-261344 Field Sheet

Tracking # 4970 0183 7502

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID 611 Corr. Factor (+ / -) _____ °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 1.8 °C Corrected 1.8 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials JL Date 12-30-25

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☐	☐	☑
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☐	☐	☐

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials JL Date 12-30-25

Notes _____

Trizma Lot #(s). _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials JL Date 12-30-25

eurofins Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025		Issued by: XE8X

Tracking # 4197 0101 8377 5256

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID. E11 Corr. Factor (+ / -) _____ °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Yes

Cooler ID 3 of 3

Temp Observed 2.1 °C Corrected 2.1 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials JH Date 12.30.25

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4')

Initials JH Date 12.30.25

Notes _____

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials JH Date 12.30.25

eurofins Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025		Issued by: XE8X

Tracking # 4970 0182 7541

Job _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID L-11 Corr. Factor (+ / -) _____ °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Yes

Cooler ID 7 of 3

Temp Observed 0.6 °C Corrected 0.6 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials JH Date 12-30-25

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4')

Initials JH Date 12-30-25

Notes _____

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials JH Date 12-30-25

eurofins | Environment Testing

Date:	12/30/2025
End Time:	2Q:43
KI Paper Lot:	~~N/A~~ N/A
Analyst:	JS
Pipette:	N/A

JS 12/30/25

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	143313
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
570-261344-e-1	A	Y	5|2	
570-261344-b-1 ms	A	Y	5|2	
570-261344-b-1 msd	A	Y	5|2	
570-261344-e-3	A	Y	5|2	

JS 12/30/25

Login Sample Receipt Checklist

Client: Haley & Aldrich Inc

Job Number: 570-261344-4

Login Number: 261344
List Number: 1
Creator: Patel, Virendra

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.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 2:18 PM

JOB DESCRIPTION

Boeing NPDES SSFL -Annual Outfall 004 Comp

JOB NUMBER

570-261356-5

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

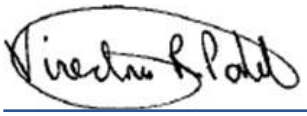
Eurofins Calscience

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
1/27/2026 2:18 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Method Summary 6
- Sample Summary 7

Subcontracted Data 8

Shipping and Receiving Documents 44

- Client Chain of Custody 45
- Field Data Sheets 58
- Sample Receipt Checklist 60

Definitions/Glossary

Client: Haley & Aldrich Inc
Job ID: 570-261356-5
Project/Site: Boeing NPDES SSFL -Annual Outfall 004 Comp

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
570-261356-5

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 12/26/2025 4:24 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.2°C, 0.6°C, 1.2°C, 1.9°C, 2.7°C and 3.7°C.

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-261356-5
Project/Site: Boeing NPDES SSFL -Annual Outfall 004 Comp

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-261356-5
Project/Site: Boeing NPDES SSFL -Annual Outfall 004 Comp

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-261356-1	Outfall_004_20251226_Comp	Water	12/26/25 07:45	12/26/25 16:24	CA

Subcontract Data

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/20/2026**

Report ID: **CSE1225.199**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample submitted to Aquatic Bioassay and Consulting Laboratories on 12/29/2025. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 12/26/2025 at 0745. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 12/29/2025 at 1030. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 12/30/2025 to 01/06/2026. Test concentrations for the sample were 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
Outfall004_20251226_Comp	CSE1225.199	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2 and Table 3.

Table 2. Summary of Acute Toxicity Results.

Sample ID	Percent Survival in 100% Sample
Control	100%
Outfall004_20251226_Comp	100%

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
Outfall004_20251226_Comp	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	-1.19%

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Fathead	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS^{tm} Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
12/30/2025	*Pimephales promelas*	7d Survival Rate	Copper chloride	19 µg /L	82.03 µg/L	69.62 µg/L 51.4 – 94.3
		Mean Dry Biomass	Copper chloride	38 µg /L	63.15 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	18-2907-8801	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:33	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:15	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7603-3549	**Code:**	CSE1225.199fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall004_20251226_Comp
Sample Age:	4d 5h (3.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.199

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
04-5992-5207	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
11-5439-5831	Mean Dry Biomass-mg	TST-Welch's t Test	<1.0E-05	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
04-5992-5207	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
11-5439-5831	Mean Dry Biomass-mg	Control Resp	0.3502	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.3503	0.3422	0.3583	0.3393	0.3687	0.003413	0.009654	2.76%	0.00%
100		8	0.3544	0.3438	0.365	0.34	0.3807	0.004497	0.01272	3.59%	-1.19%

7d Survival Rate Detail — MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail — MD5: 3DFE5341BC657EFA940A8C886C0A22ED

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.342	0.3393	0.356	0.3467	0.3547	0.352	0.3427	0.3687
100		0.3587	0.34	0.35	0.342	0.3513	0.36	0.3807	0.3527

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-5992-5207	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:42	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	18-2907-8801	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:33	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:15	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7603-3549	**Code:**	CSE1225.199fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall004_20251226_Comp
Sample Age:	4d 5h (3.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.199

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

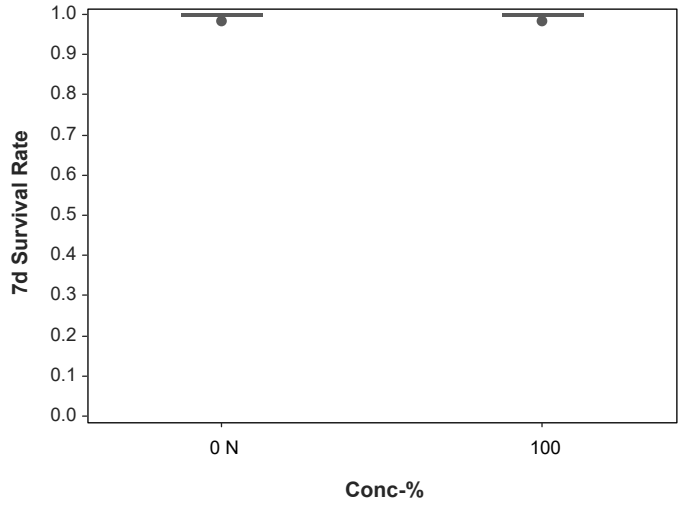
7d Survival Rate Binomials

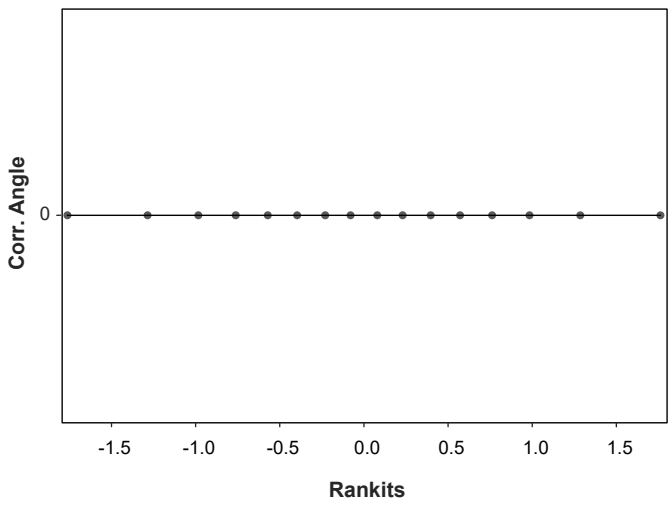
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-5992-5207	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:42	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	11-5439-5831	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:42	**MD5 Hash:**	3DFE5341BC657EFA940A8C886C0A22ED	**Editor ID:**	

Batch ID:	18-2907-8801	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:33	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:15	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7603-3549	**Code:**	CSE1225.199fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall004_20251226_Comp
Sample Age:	4d 5h (3.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.199

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	11	17.73	0.6974	CDF	<1.0E-05	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6.944E-05	6.944E-05	1	0.5447	0.4727	Non-Significant Effect
Error	0.0017848	0.0001275	14			
Total	0.0018542		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	0.1718	8.862	0.6848	Equal Variances
	Mod Levene Equality of Variance Test	0.071	8.862	0.7938	Equal Variances
	Variance Ratio F Test	1.736	8.885	0.4841	Equal Variances
Distribution	Anderson-Darling A2 Test	0.5154	3.878	0.1950	Normal Distribution
	D'Agostino Skewness Test	1.813	2.576	0.0698	Normal Distribution
	Kolmogorov-Smirnov D Test	0.1741	0.2471	0.2224	Normal Distribution
	Shapiro-Wilk W Normality Test	0.9211	0.8408	0.1755	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.3503	0.3422	0.3583	0.3493	0.3393	0.3687	0.003413	2.76%	0.00%
100		8	0.3544	0.3438	0.365	0.352	0.34	0.3807	0.004497	3.59%	-1.19%

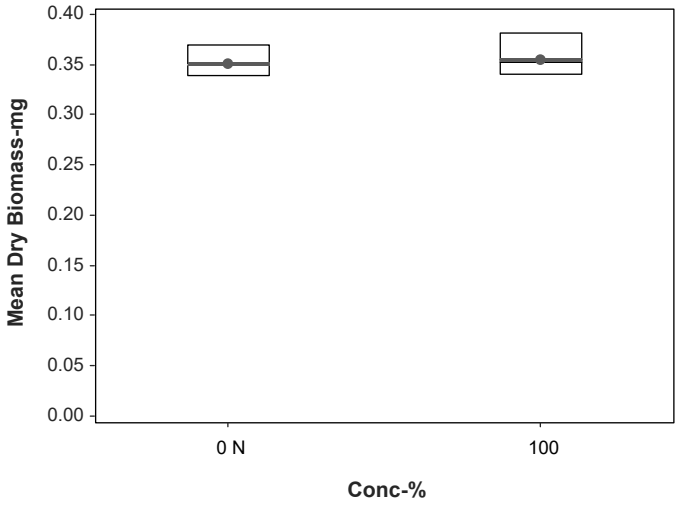
Mean Dry Biomass-mg Detail

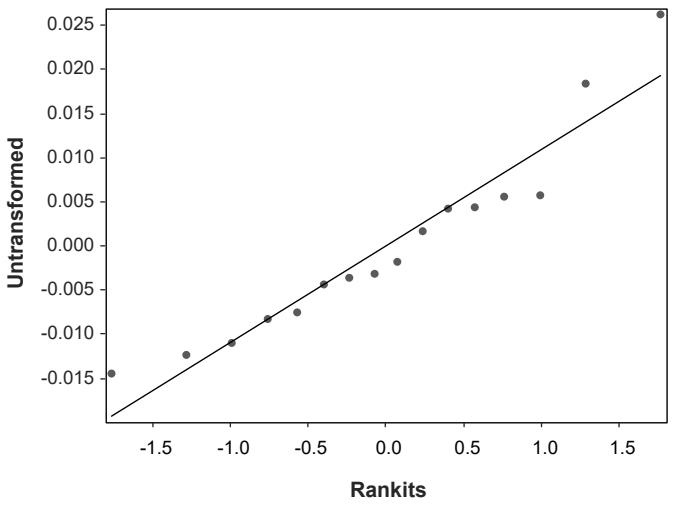
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.342	0.3393	0.356	0.3467	0.3547	0.352	0.3427	0.3687
100		0.3587	0.34	0.35	0.342	0.3513	0.36	0.3807	0.3527

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	11-5439-5831	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:42	**MD5 Hash:**	3DFE5341BC657EFA940A8C886C0A22ED	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	18-2907-8801	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:33	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:15	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	19-7603-3549	**Code:**	CSE1225.199fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	26 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall004_20251226_Comp
Sample Age:	4d 5h (3.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.199

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
100		8	32	32	32	32	32	0	0	0.00%	0
Overall		16	45	37.85	52.15	32	58	3.357	13.43	29.84%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
100		8	134.6	132	137.2	130	139	0.3892	3.114	2.31%	0
Overall		16	228	176.6	279.4	130	325	24.12	96.47	42.31%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
100		8	7.838	7.525	8.15	7	8.2	0.04674	0.3739	4.77%	0
Overall		16	7.8	7.622	7.978	7	8.2	0.08367	0.3347	4.29%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	33	33	33	33	33	0	0	0.00%	0
Overall		16	66.5	48.06	84.94	33	100	8.65	34.6	52.03%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
100		8	7.238	7.175	7.3	7.1	7.3	0.009299	0.07439	1.03%	0
Overall		16	7.5	7.352	7.648	7.1	7.8	0.06952	0.2781	3.71%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.16	24.07	24.25	24	24.3	0.01325	0.106	0.44%	0
Overall		16	24.08	24.02	24.14	24	24.3	0.02772	0.1109	0.46%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
07-6584-2034	7d Survival Rate	Steel Many-One Rank Sum Test	✓	19	38	26.87	9.86%	1
07-0949-7949	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test		38	75	53.39	8.51%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
20-9726-2836	7d Survival Rate	Linear Interpolation (ICPIN)	✓	EC15	36.1	21.18	53.94	1
			✓	EC20	42.35	21.57	59.07	
			✓	EC25	48.88	21.8	64.03	
				EC40	68.47	53.55	78.92	
				EC50	82.03	64.66	91.96	
19-7190-2604	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)		IC15	45.54	44.27	45.75	1
				IC20	48.06	46.88	48.34	
				IC25	50.57	49.43	50.93	
			✓	IC40	58.12	57.14	58.71	
			✓	IC50	63.15	62.17	63.92	

Test Acceptability

				TAC Limits			
Analysis ID	Endpoint	Attribute	Test Stat	Lower	Upper	Overlap	Decision
07-6584-2034	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
20-9726-2836	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
19-7190-2604	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	PMSD	0.08514	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.1520	0.5333	0.9333	0.1000	0.2000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.4000	0.6000	0.0500	0.1000	18.18%	45.00%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3413	0.3547	0.002807	0.005614	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3413	0.35	0.002317	0.004635	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.346	0.3507	0.0009813	0.001963	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3413	0.3507	0.002079	0.004159	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.08533	0.09933	0.003133	0.006266	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0	0.08333	0.02057	0.04114	189.88%	93.75%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: C5F324C8E327E99CF47200B51B720B1C

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Mean Dry Biomass-mg Detail MD5: C0E8E497E3C1FC1F3DE9D694CD00CBB3

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	19	38	26.87	---	0.09859	9.86%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38*	6	10	10	0	CDF	0.0417	Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.21865	1.04373	5	83.82	<1.0E-05	Significant Effect
Error	0.224141	0.0124523	18			
Total	5.44279		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	6.711	4.248	0.0011	Unequal Variances
	Mod Levene Equality of Variance Test	0.7457	4.248	0.5996	Equal Variances
Distribution	Anderson-Darling A2 Test	2.634	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	3.619	2.576	0.0003	Non-Normal Distribution
	D'Agostino Skewness Test	3.884	2.576	0.0001	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	28.18	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2917	0.2056	1.2E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.7217	0.884	2.0E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.0000	0.9333	0.5333	0.9333	0.1000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.6000	0.4000	0.6000	0.0500	18.18%	45.00%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.1870	0.7964	1.5770	1.3100	0.8188	1.3100	0.1227	20.68%	17.65%
75		4	0.8357	0.6755	0.9959	0.8861	0.6847	0.8861	0.0503	12.05%	42.02%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Angular (Corrected) Transformed Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		0.8188	1.3100	1.3100	1.3100
75		0.8861	0.8861	0.6847	0.8861
150		0.1295	0.2612	0.1295	0.1295

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

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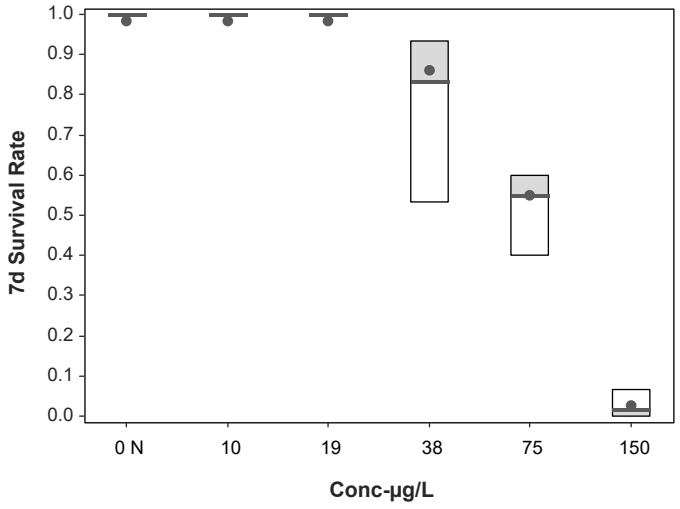
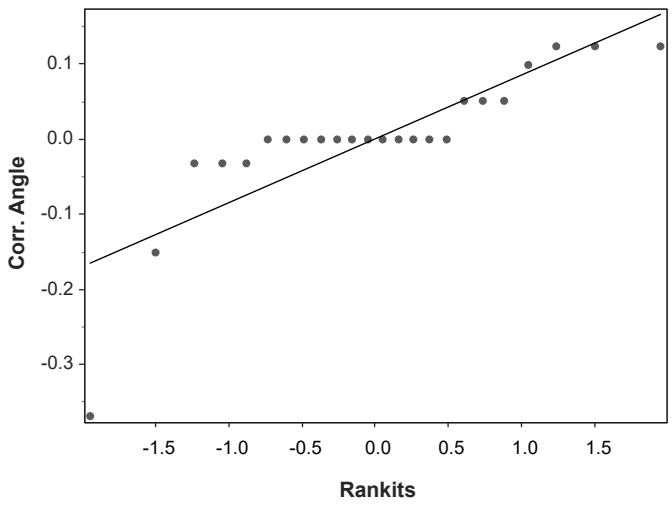




Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.02953	8.51%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	17.5	10	1	CDF	0.7867	Non-Significant Effect
		19	6	21.5	10	1	CDF	0.9855	Non-Significant Effect
		38	6	19	10	2	CDF	0.9055	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.45886	0.091772	5	304.9	<1.0E-05	Significant Effect
Error	0.005418	0.000301	18			
Total	0.464278		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	32.99	15.09	<1.0E-05	Unequal Variances
	Levene Equality of Variance Test	6.766	4.248	0.0010	Unequal Variances
	Mod Levene Equality of Variance Test	0.8401	4.248	0.5387	Equal Variances
Distribution	Anderson-Darling A2 Test	2.692	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	4.107	2.576	4.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	4.332	2.576	1.5E-05	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	35.63	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2638	0.2056	0.0001	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.6777	0.884	<1.0E-05	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3457	0.3413	0.3547	0.002807	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3457	0.3413	0.35	0.002317	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.3477	0.346	0.3507	0.0009814	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3477	0.3413	0.3507	0.002079	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.091	0.08533	0.09933	0.003133	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0.001111	0	0.08333	0.02057	189.88%	93.75%

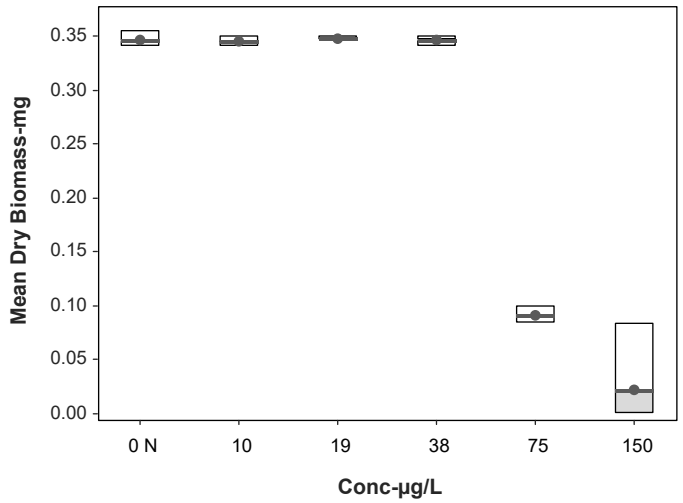
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

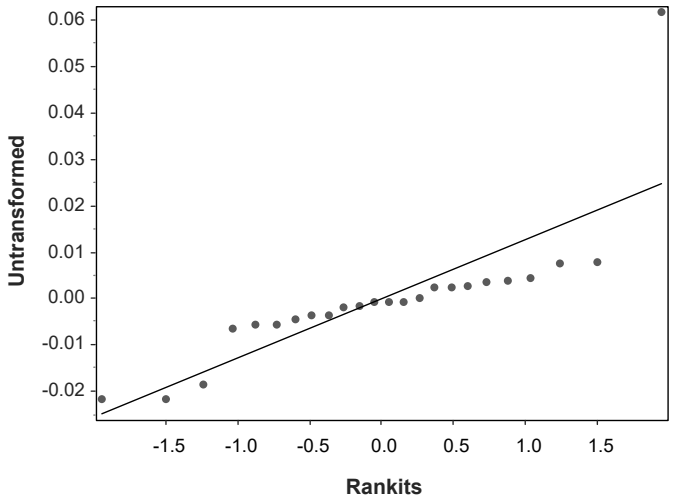
Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	36.1	21.18	53.94
EC20	42.35	21.57	59.07
EC25	48.88	21.8	64.03
EC40	68.47	53.55	78.92
EC50	82.03	64.66	91.96

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.8333	0.9333	0.5333	0.9333	24.00%	16.67%	50/60	0.8333	16.67%
75		4	0.5500	0.6000	0.4000	0.6000	18.18%	45.00%	33/60	0.5500	45.00%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

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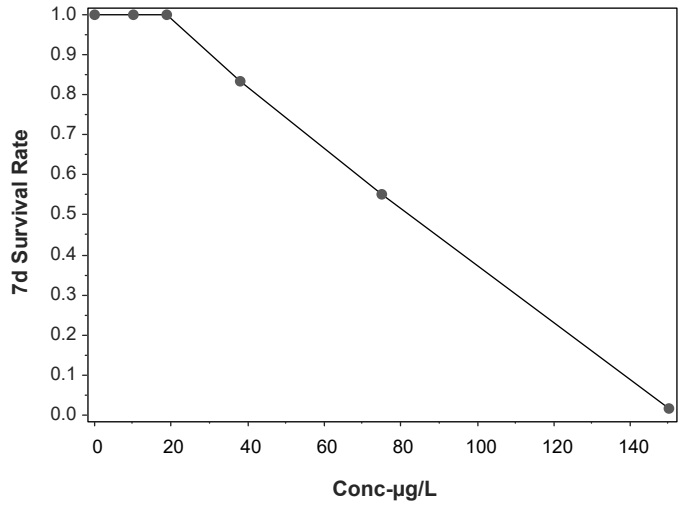

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1953384	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	45.54	44.27	45.75
IC20	48.06	46.88	48.34
IC25	50.57	49.43	50.93
IC40	58.12	57.14	58.71
IC50	63.15	62.17	63.92

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3468	0.3457	0.3413	0.3547	1.62%	0.00%	0.3468	0.00%
10		4	0.3457	0.3457	0.3413	0.35	1.34%	0.34%	0.3468	0.00%
19		4	0.348	0.3477	0.346	0.3507	0.56%	-0.34%	0.3468	0.00%
38		4	0.3468	0.3477	0.3413	0.3507	1.20%	0.00%	0.3468	0.00%
75		4	0.09167	0.091	0.08533	0.09933	6.84%	73.57%	0.09167	73.57%
150		4	0.02167	0.001111	0	0.08333	189.88%	93.75%	0.02167	93.75%

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

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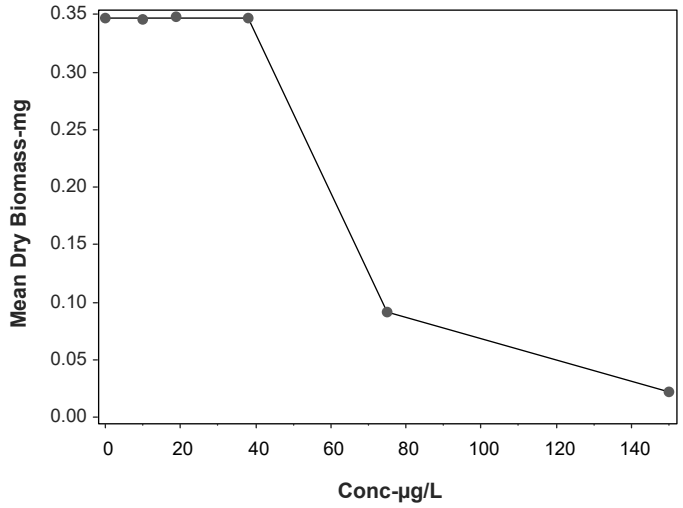


Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX	
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant	
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX	
Sample Age:	---	**Client:**	ABC Labs			

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
150		8	57	57	57	57	57	0	0	0.00%	0
Overall		16	57.5	57.22	57.78	57	58	0.1291	0.5164	0.90%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
10		8	318.4	317.4	319.4	316	320	0.1485	1.188	0.37%	0
19		8	317.4	316.5	318.3	316	319	0.1326	1.061	0.33%	0
38		8	315.6	313.8	317.4	312	318	0.2667	2.134	0.68%	0
75		8	314.1	311.5	316.7	310	317	0.3864	3.091	0.98%	0
150		8	312.8	310	315.5	310	317	0.4159	3.327	1.06%	0
Overall		48	316.6	315.6	317.6	310	325	0.5181	3.589	1.13%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
10		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
19		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
38		8	7.713	7.47	7.955	7	7.9	0.03625	0.29	3.76%	0
75		8	7.725	7.477	7.973	7	7.9	0.03705	0.2964	3.84%	0
150		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
Overall		48	7.735	7.653	7.818	7	7.9	0.04109	0.2847	3.68%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
10		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
19		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
38		8	7.713	7.618	7.807	7.5	7.8	0.01408	0.1126	1.46%	0
75		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
150		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
Overall		48	7.721	7.694	7.748	7.5	7.8	0.0133	0.09216	1.19%	0 (0%)

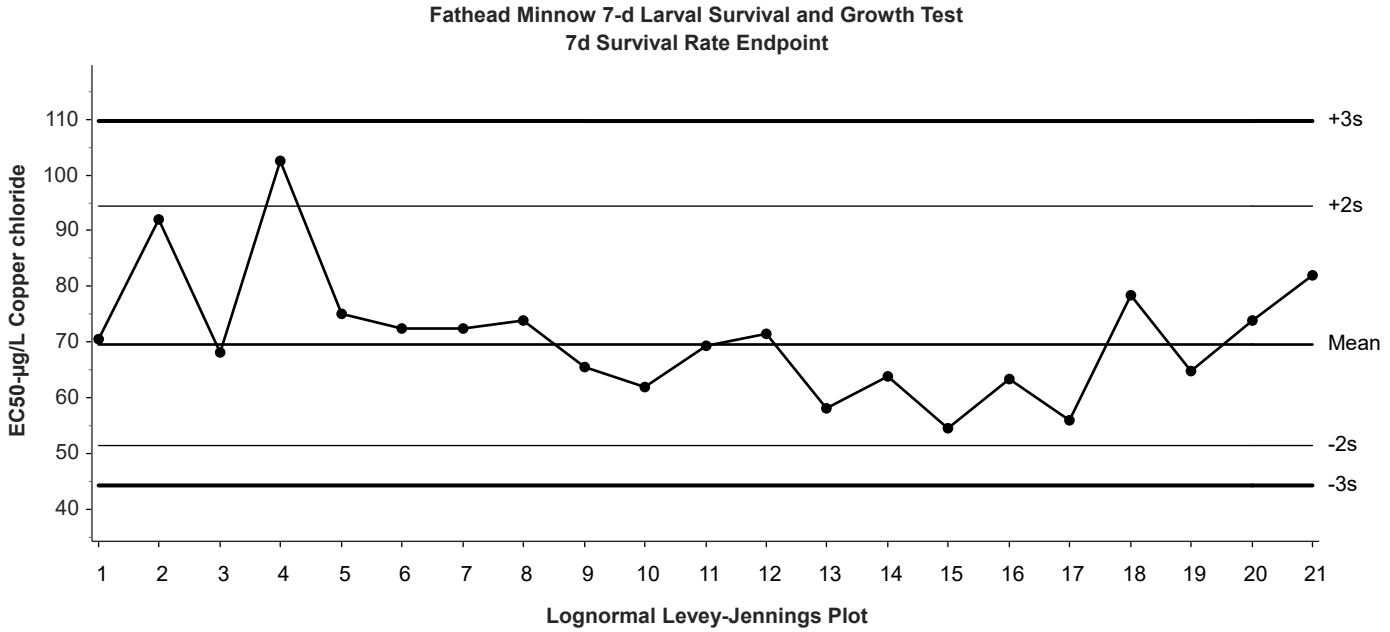
Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.08	24.04	24.11	24	24.1	0.005762	0.0461	0.19%	0
19		8	24.11	24.04	24.18	24	24.2	0.01042	0.08334	0.35%	0
38		8	24.13	24.05	24.2	24	24.2	0.01107	0.08854	0.37%	0
75		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
150		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
Overall		48	24.1	24.07	24.13	24	24.3	0.01348	0.09338	0.39%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



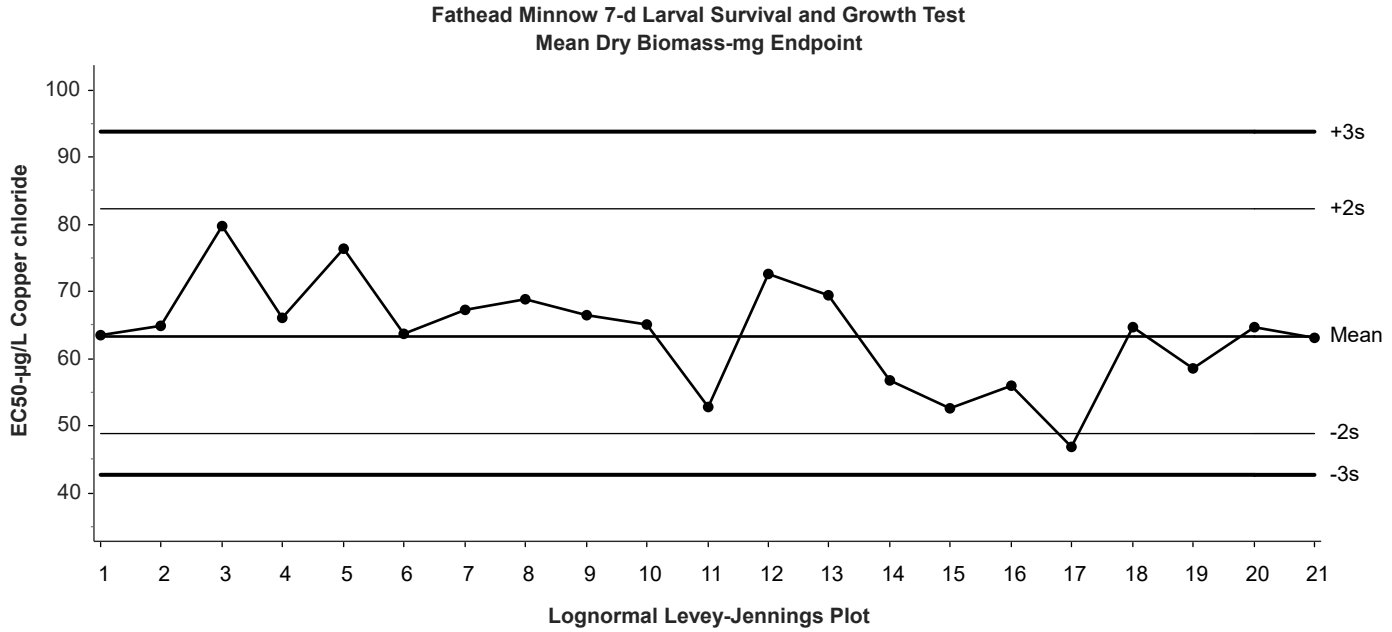
Mean:	69.62	**Count:**	20	**-2s Warning Limit:**	51.4	**-3s Action Limit:**	44.2
Sigma:	NA	**CV:**	15.30%	**+2s Warning Limit:**	94.3	**+3s Action Limit:**	110

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	70.52	0.8988	0.08456			21-2981-7713	03-0489-4574
2			17	13:00	91.94	22.32	1.833			13-3277-6088	03-7751-7547
3			21	15:24	68	-1.616	-0.1549			08-1266-5648	19-4309-1944
4			22	14:55	102.6	33.02	2.559	(+)		07-5558-1243	12-5555-4178
5			28	15:30	75	5.384	0.491			13-4573-3635	11-5047-1832
6			30	15:30	72.36	2.741	0.2545			11-5715-0925	03-3652-0021
7		Apr	4	11:45	72.45	2.832	0.2628			17-3412-6439	09-0505-4831
8			11	15:10	73.72	4.108	0.3779			12-2891-6798	20-3297-8234
9			25	15:00	65.49	-4.131	-0.4032			19-7686-5958	17-2422-4835
10			27	13:00	61.94	-7.675	-0.77			01-1863-5687	10-3453-8425
11		May	2	15:45	69.31	-0.3087	-0.0293			01-5973-7078	19-8547-5138
12			9	15:30	71.53	1.915	0.1789			01-4263-6313	07-3079-9817
13		Aug	9	13:00	58.18	-11.43	-1.183			14-3532-4574	02-3075-3473
14		Oct	6	14:45	63.9	-5.716	-0.5648			18-8099-7551	11-2650-3626
15	2024	Jan	9	13:20	54.55	-15.06	-1.607			14-8299-7228	00-5651-6529
16		Aug	1	15:59	63.35	-6.265	-0.6216			17-2152-6147	10-3671-8471
17	2025	Mar	6	15:00	55.94	-13.68	-1.442			06-4992-6637	09-1125-3834
18		Jul	8	11:21	78.31	8.692	0.7756			00-3393-7264	14-6710-1242
19			10	13:10	64.72	-4.894	-0.4805			07-5897-2938	20-7755-3652
20		Sep	9	13:10	73.75	4.136	0.3805			00-2537-6486	15-9566-8088
21		Dec	30	12:30	82.03	12.41	1.082			00-0985-9985	20-9726-2836

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type: Growth-Survival (7d) **Organism:** Pimephales promelas **Material:** Copper chloride
Protocol: EPA/821/R-02-013 (2002) **Endpoint:** Mean Dry Biomass-mg **Source:** Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	14	15:30	63.61	0.2356	0.02843			01-1632-8199	05-8079-6953
2			15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
3			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
4			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
5			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
6			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
7			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
8		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
9			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
10			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
11			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
12		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
13			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
14		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
15	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
16		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
17	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
18		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
19			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
20		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
21		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 12/30/25 1230 | Lab ID: FML 123025

End Date & Time: 1/6/26 1110 | Age of Organism: 1d.

Toxicant Batch ID: FML122925 | Method: EPA-821-R-02-013

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1230	0940	0802	0959	0842	1002	1011	1110
Analyst	CD	CD	CD	CD	CD	CD	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renew ≥80%	Y (N)	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.9	7.1	7.9	7.0
10 ug/L	7.9	7.5	7.8	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.9	7.0
19 ug/L	7.9	7.5	7.9	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.8	7.0
38 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.2	7.8	7.0	7.6	7.0
75 ug/L	7.8	7.4	7.9	7.2	7.8	7.1	7.8	7.0	7.8	7.2	7.9	7.0	7.8	7.0
150 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.1	7.9	7.0	7.4	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
10 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.0	24.0
19 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
38 ug/L	24.2	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
75 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24.0	24.0	24.0
150 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
10 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.8	7.7	7.8	7.7	7.6
19 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.7	7.7	7.8	7.7	7.8
38 ug/L	7.8	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.8	7.7	7.8
75 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
150 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	324
10 ug/L	319	320	318	319	316	319	318	318
19 ug/L	316	319	317	316	317	318	318	318
38 ug/L	312	316	316	314	314	317	318	314
75 ug/L	310	310	314	314	312	317	317	317
150 ug/L	310	310	310	312	310	316	317	317
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
150 ug/L	57	57	57	57	57	57	57	57
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
150 ug/L	104	104	104	104	104	104	104	104

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 12/30/25 End Date: 1/6/26 Lab ID: **FML** 123025

	Analyst	CD	CD	CD	CD	CD	CD	M	M
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
19	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	14	11	11	CD 11	8	8
	2	15	15	15	14	14	14	14	14
	3	15	15	15	14	14	14	14	14
	4	15	15	15	15	15	15	14	14
75	1	15	14	14	12	12	11	9	9
	2	15	15	14	13	10	10	9	9
	3	15	13	10	9	9	7	6	6
	4	15	15	14	12	10	9	9	9
150	1	15	6	4	1	1	0		
	2	15	9	6	4	4	1	0 1	1
	3	15	8	4	3	2	0		
	4	15	5	2	1	1	0		

Balance ID: BAL 1

Analyst: CD

Date/Time in Oven: 1/6/26 ~~1123/25~~ CD

Date/Time out Oven 1/7/26

Oven Temp (°C): 66.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CA 1	CONTROL	1	1.10790	1.11302	0.00512
2		2	1.10578	1.11096	0.00518
3		3	1.10274	1.10793	0.00519
4		4	1.11310	1.11842	0.00532
CA 5	10	1	1.10772	1.11296	0.00524
6		2	1.10895	1.11407	0.00512
7		3	1.10622	1.11135	0.00513
8		4	1.10652	1.11177	0.00525
CA 9	19	1	1.12274	1.12896	0.00522
10		2	1.10675	1.11194	0.00519
11		3	1.11303	1.11829	0.00526
12		4	1.10416	1.10937	0.00521
CA 13	38	1	1.10460	1.10684	0.00224
14		2	1.10557	1.11083	0.00526
15		3	1.11656	1.12175	0.00519
16		4	1.12686	1.13198	0.00512
CA 17	75	1	1.12045	1.12186	0.00141
18		2	1.10722	1.10871	0.00149
19		3	1.10315	1.10443	0.00128
20		4	1.11397	1.11529	0.00132
—	150	1	—	—	—
CA 21		2	1.12130	1.12155	0.00025
—		3	—	—	—
—		4	—	—	—
CA 22	BLANK	1	1.11005	1.11000	-0.00005

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE 1
Start Date & Time: 12/30/25 1233
End Date & Time: 1/6/26 1115

Lab ID: CSE1225.199
Date Rec'd: 12/29/25
Age of Organism: 1d.

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1233	0944	0810	1010	0849	1011	1120	1115
Analyst	CD	CD	CD	CD	CD	CD	AM	AM
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renewed≥80%	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Lab ID	.199	.199	.199	.199	.199	.199	.199	.199
ControlBatch	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.8	7.4	7.9	7.1	7.5	7.0
100%	8.2	8.0	8.1	8.0	8.1	7.9	7.8	7.2	7.8	7.4	7.8	7.5	7.9	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
100%	24.2	24.0	24.3	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
100%	7.2	7.2	7.2	7.2	7.1	7.2	7.2	7.1	7.3	7.4	7.3	7.4	7.3	7.3
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	325
100%	132	130	133	134	134	137	138	135
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
100%	32	32	32	32	32	32	32	32
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
100%	33	33	33	33	33	33	33	33

Residual Chlorine 1st Sample: <0.1 2nd Sample: — 3rd Sample: —

Chronic Fathead Minnow Survival and Growth - TST

Client: CSE 1 Lab ID: CSE1225.199

Start Date: 12/30/25 End Date: 1/6/26

Concentration	Replicate	Analyst LD	1 LD	2 LD	3 LD	4 LD	5 LD	6 M	Final M
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15
100	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15

Oven Temp (°C): 60.0 Date/Time In: 1/6/26 Date/Time Out: 1/7/26

Balance ID: BAL 1 Analyst: LD

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CB 1	CONTROL	1	1.12559	1.13072	0.00513
2		2	1.11436	1.11945	0.00509
3		3	1.11402	1.11936	0.00534
4		4	1.11491	1.12011	0.00520
5		5	1.11039	1.11571	0.00532
6		6	1.11301	1.11829	0.00528
7		7	1.25918	1.26432	0.00514
8		8	1.27524	1.28077	0.00553
CB 9	100	1	1.27127	1.27668	0.00538
10		2	1.27392	1.27902	0.00570
11		3	1.27312	1.27837	0.00525
12		4	1.25975	1.26488	0.00513
13		5	1.27844	1.28371	0.00527
14		6	1.27104	1.27644	0.00540
15		7	1.26526	1.27037	0.00511
16		8	1.27548	1.28077	0.00529

Appendix D

Chain of Custody and Sample Receipt Summary

Eurofins Calscience Tustin

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich, 5333 Mission Center Rd Suite 300, San Diego, CA 92108	Project: Boeing SSFL NPDES, 2023 Permit, Annual, Outfall 004, COMPOSITE
Eurofins Calscience Project Manager: Virendra Patel, 2841 Dow Avenue, Suite #100, Tustin, CA 92782, Tel: 714-895-5494, **ECI Project #57013187**	Project Manager: Katherine Miller, 520.289.8606, 520.904.6944 (cell)
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Signed Service Agreement#2021-24-Eurofins dx and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Field Manager: Mark Dominick, 978.234.5033, 818.599.0707 (cell)
Sampler: Adrien Mobeka	

ANALYSIS REQUIRED

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	Bottle Count	Preservative	MS/MSD	A/R Total Recoverable Metals (E200.7): B, Hardness as CaCO3 (E200.8): As, Al, Ba, Be, Co, Cr, Fe, Mn, Ni, V, Zn, Ag, Cd, Cu, Pb, Sb, Se, Tl	R ICDD (and all congeners) (E1613B) sub to Sacramento	A/R Fluoride (F-), Chloride (Cl-), Sulfate (SO4), Nitrate-N, Nitrite-N, NO3+NO2 N (E300); Perchlorate (E314.0)	R TDS (SM2540C/E160.1)	A TSS (E160.2 (SM2540D))	A/R Total Dissolved Metals (E200.7): B, Hardness as CaCO3 (E200.8): Al, As, Ba, Be, Co, Cr, Fe, Mn, Ni, V, Zn, Ag, Cd, Cu, Pb, Se, Tl	R Gross Alpha (E900.0), Gross Beta (E900.0), Tritium (H-3) (E906.0); Sr-90 (E905.0); Total Combined Radium 226 (E903.0 or E903.1) & Radium 228 (E904.0); Uranium (E908.0); Am-241, Cs-137 (E901.0 or E901.1) sub to St. Louis	R * Chronic Toxicity - Fathead Minnow (EPA 821-R-02-013) ABC Labs in Ventura, CA	R Ammonia-N (351.1)	R Cyanide (Kelada)	A Priority Pollutants-Pesticides+PCBs (E608) Weck Labs in Hacienda Heights, CA	A (L Mercury (1631) Total Recoverable	R (L Mercury (1631) Total Dissolved	A Cr (VI), total dissolved (E218.6)	Comments
Outfall 004	Outfall004_20251225_Comp	12/25/2025 0745	WM	250 mL Poly	3	HNO_3	Yes	X															48 hours Holding Time NO_3 & NO_2
			WM	1 L Glass Amber	2	None			X														
			WM	250 mL Poly	1	None				X													
			WM	500 mL Poly	1	None					X												
			WM	250 mL Poly	1	H2SO4																	
			WM	1 L Poly	1	None						X											
			WM	500 mL Poly	1	NaOH																	
			WM	1 L Poly	4	HNO_3																	
			WM	1 L Glass Amber	1	None									X								Unfiltered analysis. Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	2.5 Gal Cube 2025	2 2025	None										X							Only test if first or second rain events of the year. Deliver to ABC Labs in Ventura, CA.
			WM	1 L Glass Amber	12	None	Yes												X				Segregate into a cooler for Weck Labs.
			WM	8oz Clear Glass, dbl bagged	1	HCl	Yes													X			Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	Outfall004_20251225_Comp_F	12/25/2025 0745	WM	250 mL Poly	3	None	Yes																Filter and preserve w/in 24hrs of receipt at lab
			WM	8oz Clear Glass, dbl bagged	1	None	Yes														X		Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	250 mL Poly	1	None																X	Filter and preserve w/in 24hrs of receipt at lab

Addeu o.t. = 20, 2, 26
Therm. = sample receiving 2
Temp. deg. C = 3.6
Chlorine (mg/L) =
NH3 (mg/L) = 40,1 40,1

Legend: R = Routine, A = Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Mark Dominick	12/29/2025 1030	H&A		12/29/25 1030
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY

Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.

Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

2025-2026 Rainy Season
Version 1

* Hand-delivered to ABC Labs with this copy of the COC

Sample Receipt Summary

AQUATIC BIOASSAY & CONSULTING LABORATORIES, INC.

Client Name: ELEMENTS CONSULTANTS

Project Name: # 57013187

Receiving Information

1. Received By (initials): EM
2. Date Received: 12/29/24
3. Time Received: 1034
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - 1 Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): EM

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Shipping and Receiving Documents

Eurofins Calscience Tustin

570-261356 Chain of Custody

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	**Project:** Boeing-SSFL NPDES 2023 Permit **Annual** **Outfall 004** **COMPOSITE**
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)

								ANALYSIS REQUIRED																		
								A/R	R	A/R	R	A	A/R	R	R	R	R	A	R	R	A					
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Recoverable Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, As, Ba, Be, Co, Cr, Fe, Mn, Ni, V, Zn, Ag, Cd, Cu, Pb, Sb, Se, Tl	TCDD [and all congeners] (E1613B) -sub to Sacramento	Flouride [F-], Chloride [Cl-], Sulfate [SO4], Nitrate-N, Nitrite-N, NO3+NO2-N (E300); Perchlorate (E314.0)	TDS (SM2540C/E160.1)	TSS (160.2 (SM2540D))	Total Dissolved Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, As, Ba, Be, Co, Cr, Fe, Mn, Ni, V, Zn, Ag, Cd, Cu, Pb, Sb, Se, Tl	Gross Alpha(E900.0), Gross Beta(E900.0), Tritium (H-3) (E906.0), Sr-90 (E905.0), Total Combined Radium 226 (E903.0 or E903.1) & Radium 228 (E904.0), Uranium (E908.0), K-40, CS-137 (E901.0 or E901.1) - sub to St. Louis	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) ABC Labs in Ventura, CA	Ammonia-N (351.1)	Cyanide (Kaleda)	Priority Pollutants-Pesticides+PCBs (E608) Weck Labs in Hacienda Heights, CA	LL Mercury (1631) Total Recoverable	LL Mercury (1631) Total Dissolved	Cr (VI), total dissolved (E218.6)	Comments
Outfall 004	Outfall004_20251226_Comp (1)	12/26/2025 0745	WM	250 mL Poly	3	HNO_3	Yes	X																		
			WM	1 L Glass Amber	2	None			X																	
			WM	250 mL Poly	1	None				X																48 hours Holding Time NO_3 & NO_2
			WM	500 mL Poly	1	None					X															
			WM	250 mL Poly	1	H2SO4											X									
			WM	1 L Poly	1	None						X														
			WM	500 mL Poly	1	NaOH												X								
			WM	1 L Poly	4	HNO3																				Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None								X											
			WM	1 Gal Cube	5	None										X									Only test if first or second rain events of the year. Deliver to ABC Labs in Ventura, CA
			WM	1 L Glass Amber	12	None	Yes												X					Segregate into a cooler for Weck Labs.
			WM	8oz Clear Glass, dbl bagged	1	HCL	Yes													X				Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	Outfall004_20251226_Comp_F (2)	12/26/2025 0745	WM	250 mL Poly	3	None	Yes						X												Filter and preserve w/in 24hrs of receipt at lab
			WM	8oz Clear Glass, dbl bagged	1	None	Yes													X				Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	250 mL Poly	1	None																	X	Filter and preserve w/in 24hrs of receipt at lab

Legend: R = Routine, A = Annual

Relinquished by: Michelle Dallalah	Date/Time: 12/26/25 12:32 H&A	Company:	Received by:	Date/Time: 12/26/25 12:32	
Relinquished by:	Date/Time: 12/26/25	Company: 1624	Received by:	Date/Time: 12/26/25	1624
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	

Turn-around time: (Check)
24 Hour: ____ 72 Hour: ____ 10 Day: ____
48 Hour: ____ 5 Day: __X__ Normal: ____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: ____ On Ice: ____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: ____ All Level IV: __X__

2025-2026 Rainy Season
Version 1
VUF2

0.1/0.2 1.8/1.9 0.8/0.6
1.1/1.2
2.6/2.7 2.6/2.7

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:	ANALYSIS REQUIRED
Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Boeing-SSFL NPDES 2023 Permit **Annual** **Outfall 004** **COMPOSITE**	
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**		
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)	
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)	

								A	A	A	A	A	R	R	R	R	R			
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Priority Pollutants-SVOCs (E6251 SIM)	Priority Pollutants-SVOCs (E6251 SIM) Indeno(1,2,3-cd)pyrene only**Sub to EMAX**	Cr (VI), total recoverable (E218.6)	Asbestos fibers > 0.5µm and fibers >10µm (E100.2)	Chlorpyrifos, Diazinon (625OPP) **Weck Labs in Hacienda Heights, CA**	Detergents (MBAS) (SM5540C/E425.1)	LL Mercury (E1631E) Total Recoverable	LL Mercury (E1631E) Total Dissolved	Extra Volume to be placed on Hold	Extra Volume to be placed on Hold			Comments
Outfall 004	Outfall004_20251226_Comp	12/26/2025 0745	WM	1 L Glass Amber	12	None	Yes	X												
			WM	1 L Glass Amber	4	None			X											**Segregate into a cooler for EMAX.**
			WM	250 mL Poly	1	None				X										
			WM	1 L Poly	1	None					X									
			WM	1 L Glass Amber	2	None						X								**Extract within 24-Hours of sampling. Segregate into a cooler for Weck Labs.**
			WM	1 L Poly	1	None							X							
	Outfall004_20251226_Comp_Extra	12/26/2025 0745	WM	1 L Glass Amber	~~MD+~~ 8	None										H				Hold
			WM	1 L Poly	2	None											H			Hold
QA/QC	Outfall004_20251226_Grab-04	12/26/2025 0745	WQ	8oz Clear Glass, dbl bagged	1	HCL								X						Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WQ	1 L Glass Amber	4	None		X												
	Outfall004_20251226_Grab_F-04	12/26/2025 0745	WQ	8oz Clear Glass, dbl bagged	1	None									X					Filter and preserve w/in 24hrs of receipt at lab.

Legend: R = Routine, A = Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Michelle Dallalah	12/26/25 12:32	H&A		12/26/25 1232
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
	12/26/25 1624			12/26/25 1624
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

2025-2026 Rainy Season
Version 1

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-496772.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261356-7
Address: 13715 Rider Trail North,	Due Date Requested: 1/30/2026			Preservation Codes:
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL -Annual Outfall 004 Comp	Project #: 57013187			
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)	900.0/EvaporationGross Alpha/Beta	901.1_Ce/Fill_Geo_0K-40 and Cesium-137	A01R_U/ExtChrom_ActinTotal Uranium	903.0/PrecSep_21Radium-226	904.0/PrecSep_0Radium-228	905_Sr90/PrecSep_7Strontium-90	906.0/LSC_Dist_SuepTritium	Total Number of containers	Special Instructions/Note:
			Preservation Code:												
Outfall_004_20251226_Comp (570-261356-1)	12/26/25	07:45 Pacific	G	Water			X	X	X	X	X	X	X	5	Boeing SSFL, DO NOT FILTER; use prep date from preservation

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		12-29-25 0800	EC			
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:

Ver: 10/10/2024

ICOC No:
570-496772

Containers

Count	Container Type	Preservative
1	Amber Glass 1 liter - unpreserved	None
4	Plastic 1 liter - Nitric Acid	Nitric Acid

Bottle Order Information

Bottle Order
Bottle Order #:
Request From Client 12/29/2025
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***12/29/2025 11 59·00PM***
Lab Project Number
PWSID

Order Completion Information

Creator George Padron
Filled by
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field *sampler instructions*

Health and Safety Notes:

Preservative	Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497132.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP Oregon; State California, State Program Cal		Job #: 570-261356-2
Address: 880 Riverside Parkway	Due Date Requested: 1/12/2026			Preservation Codes:
City: West Sacramento	TAT Requested (days): N/A			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL -Annual Outfall 004 Comp	Project #: 57013187			
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)	1613B/1613B_Sox_Sep_P(MOD) Standard List w/ Totals	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall_004_20251226_Comp (570-261356-1)	12/26/25	07:45 Pacific	G	Water			X	2	See QAS, Boeing_w/u to zero, ug/L, Use Boeing glassware.

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		12-30-25 10-				
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:

Ver: 10/10/2024

ICOC No:
570-497132

Containers

Count	Container Type	Preservative
2	Amber Glass 1 liter - unpreserved	None

Bottle Order Information

Bottle Order
Bottle Order #.
Request From Client 12/30/2025
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***12/30/2025 11 59·00PM***
Lab Project Number
PWSID

Order Completion Information

Creator *George Padron*
Filled by
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497162.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Weck Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261356-8
Address: 14859 East Clark Avenue,	Due Date Requested: 2/3/2026			Preservation Codes:
City: City of Industry	TAT Requested (days): N/A			
State, Zip: CA, 917451396				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL -Annual Outfall 004 Comp	Project #: 57013187			
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)	SUB Subcontract Weck- 525.2 Diazinon and Chlorpyrifos (ug/L units)	SUB Subcontract EPA 608 Pesticides/PCBs PP list	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Outfall_004_20251226_Comp (570-261356-1)	12/26/25	07:45 Pacific	G	Water			X	X	6	See Attached Instructions
Outfall_004_20251226_Comp (570-261356-1MS)	12/26/25	07:45 Pacific	G	Water				X	4	See Attached Instructions
Outfall_004_20251226_Comp (570-261356-1MSD)	12/26/25	07:45 Pacific	G	Water				X	4	See Attached Instructions

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
	Relinquished by:	12-30-25 11-	EC	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

ICOC No:
570-497162

Containers

Count	Container Type	Preservative
14	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - EPA 608 - Pesticides/PCBs - PP list	Level 2 package only MDL, EQUIS 5C
1	SUBCONTRACT	SUB - Subcontract - Weck- 525.2 - Diazinon and Chlorpyrifos (ug/L units)	525.2- 24 hour extraction for Diaznon and Chyloriphrous- level IV package needed

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client: 12/30/2025
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***12/30/2025 11 59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator: George Padron
Filled by
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497256.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins CEI Inc		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261356-4
Address: 730 SE Maynard Road,	Due Date Requested: 1/13/2026			Preservation Codes:
City: Cary	TAT Requested (days): N/A			
State, Zip: NC, 27511				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL -Annual Outfall 004 Comp	Project #: 57013187			
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)	SUB 100.2 Asbestos 100.2 "Wastewater" matrix Report both >5um and 10 um	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall_004_20251226_Comp (570-261356-1)	12/26/25	07:45 Pacific	G	Water			X	1	See Attached Instructions

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		12/30/25 1400	EC			
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:

Ver: 10/10/2024

ICOC No:
570-497256

Containers

Count	Container Type	Preservative
1	Plastic 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - 100 2 - Asbestos 100.2 - "Wastewater" matrix Report both>5um and 10 um	Level 4 Report both 5 UM+10UM Reprot Short/Long Fibers - Wastewater matrix

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Date:	12/30/2025
End Time:	2x:43
KI Paper Lot:	NA
Analyst:	JS
Pipette:	N/A

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	143313
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
570-261356-E-1	A	Y	5|2	
570-261356-j-1 MSD	A	Y	5|2	
570-261356-j-1 MSD	A	Y	5|2	
570-261356-A-4	A	Y	5|2	

JS 12/30/25

eurofins Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025		Issued by: XE8X

Job _____

570-261356 Field Sheet

Tracking # 4980 1837 7709

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID. L-11 Corr. Factor (+/-) _____°C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 1.6 °C Corrected 1.6 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials JL Date 12.31.25

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials JL Date 12.31.25

Notes _____

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials JL Date 12.31.25

Login Sample Receipt Checklist

Client: Haley & Aldrich Inc

Job Number: 570-261356-5

Login Number: 261356
List Number: 1
Creator: Patel, Virendra

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.

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ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 2:28 PM

JOB DESCRIPTION

Boeing NPDES SSFL - Annual SWTS 011 Influent Grab

JOB NUMBER

570-261391-5

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

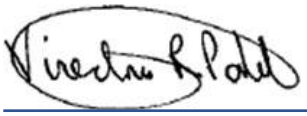
Eurofins Calscience

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
1/27/2026 2:28 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Method Summary 6
- Sample Summary 7

Subcontracted Data 8

Shipping and Receiving Documents 44

- Client Chain of Custody 45
- Field Data Sheets 60
- Sample Receipt Checklist 62

Definitions/Glossary

Client: Haley & Aldrich Inc
Job ID: 570-261391-5
Project/Site: Boeing NPDES SSFL - Annual SWTS 011 Influen
Grab

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
570-261391-5

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 12/27/2025 4:37 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.4°C, 1.4°C and 2.1°C.

Receipt Exceptions
The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): INF001_20251227_Grab_Extra (570-261391-7)

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-261391-5
Project/Site: Boeing NPDES SSFL - Annual SWTS 011
Influent Grab

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-261391-5
Project/Site: Boeing NPDES SSFL - Annual SWTS 011
Influent Grab

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-261391-1	INF001_20251227_Grab	Water	12/27/25 07:45	12/27/25 16:37	CA

Subcontract Data

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/20/2026**

Report ID: **CSE1225.202**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample submitted to Aquatic Bioassay and Consulting Laboratories on 12/29/2025. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 12/27/2025 at 0745. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 12/29/2025 at 1030. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 12/30/2025 to 01/06/2026. Test concentration for the sample was 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
INF001_20251227_Grab	CSE1225.202	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2 and Table 3.

Table 2. Summary of Acute Toxicity Results.

Sample ID	Percent Survival in 100% Sample
Control	100%
INF001_20251227_Grab	100%

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
INF001_20251227_Grab	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	0.95 %

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Fathead	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS™ Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
12/30/2025	*Pimephales promelas*	7d Survival Rate	Copper chloride	19 µg/L	82.03 µg/L	69.62 µg/L 51.4 – 94.3
		Mean Dry Biomass	Copper chloride	38 µg/L	63.15 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	05-9436-7153	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:28	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-9682-9234	**Code:**	CSE1225.202fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	27 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	INF001_20251227_Grab
Sample Age:	77h (3.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.202

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
13-3262-9050	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
03-8744-8492	Mean Dry Biomass-mg	TST-Welch's t Test	<1.0E-05	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
13-3262-9050	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
03-8744-8492	Mean Dry Biomass-mg	Control Resp	0.3497	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.3497	0.3411	0.3583	0.336	0.3673	0.003632	0.01027	2.94%	0.00%
100		8	0.3463	0.3417	0.351	0.34	0.3547	0.001976	0.005589	1.61%	0.95%

7d Survival Rate Detail — MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail — MD5: F755080D040A14A887A8CBD4C158DB17

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3587	0.346	0.342	0.3453	0.336	0.3453	0.3567	0.3673
100		0.3427	0.3547	0.352	0.34	0.3433	0.3433	0.352	0.3427

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	13-3262-9050	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:29	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	05-9436-7153	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:28	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-9682-9234	**Code:**	CSE1225.202fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	27 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	INF001_20251227_Grab
Sample Age:	77h (3.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.202

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

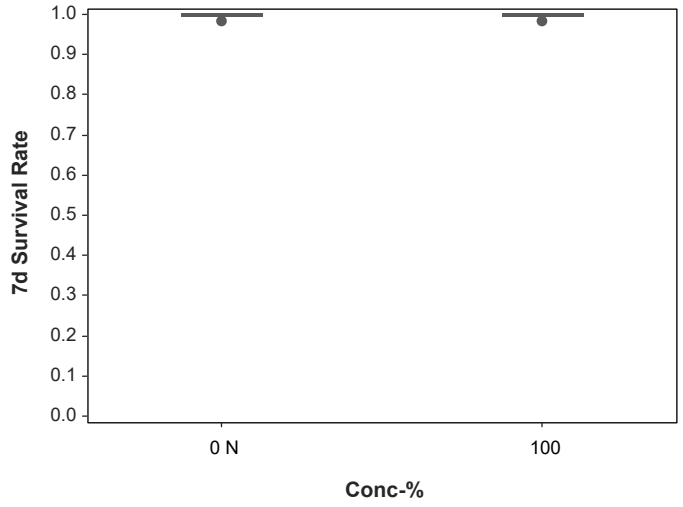
7d Survival Rate Binomials

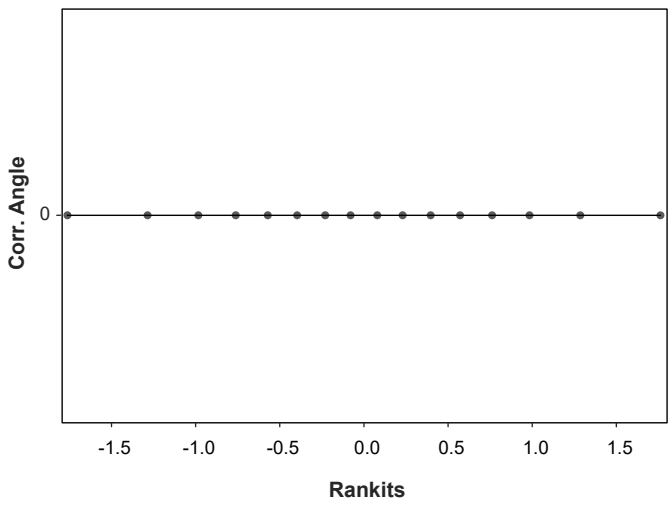
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	13-3262-9050	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:29	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	03-8744-8492	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:29	**MD5 Hash:**	F755080D040A14A887A8CBD4C158DB17	**Editor ID:**	

Batch ID:	05-9436-7153	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:28	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	12-9682-9234	**Code:**	CSE1225.202fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	27 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	INF001_20251227_Grab
Sample Age:	77h (3.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.202

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	12	24.99	0.6955	CDF	<1.0E-05	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	4.444E-05	4.444E-05	1	0.6499	0.4336	Non-Significant Effect
Error	0.0009573	6.838E-05	14			
Total	0.0010018		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	3.478	8.862	0.0833	Equal Variances
	Mod Levene Equality of Variance Test	1.095	8.862	0.3132	Equal Variances
	Variance Ratio F Test	3.378	8.885	0.1307	Equal Variances
Distribution	Anderson-Darling A2 Test	0.8608	3.878	0.0269	Normal Distribution
	D'Agostino Skewness Test	1.073	2.576	0.2834	Normal Distribution
	Kolmogorov-Smirnov D Test	0.2714	0.2471	0.0026	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.9188	0.8408	0.1615	Normal Distribution

Mean Dry Biomass-mg Summary

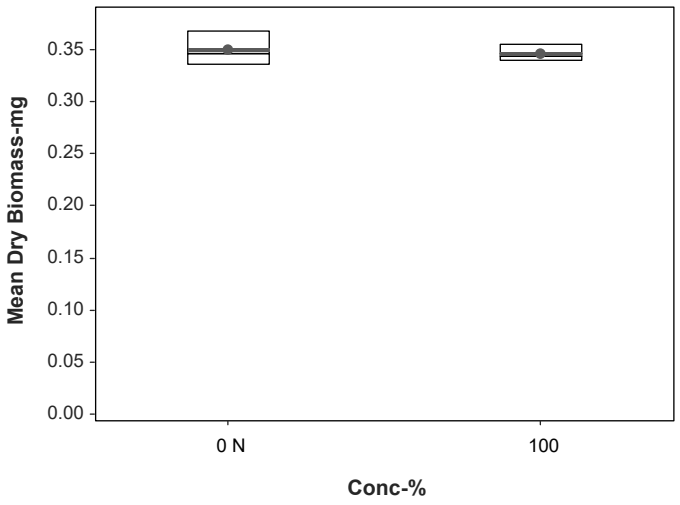
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.3497	0.3411	0.3583	0.3456	0.336	0.3673	0.003632	2.94%	0.00%
100		8	0.3463	0.3417	0.351	0.3433	0.34	0.3547	0.001976	1.61%	0.95%

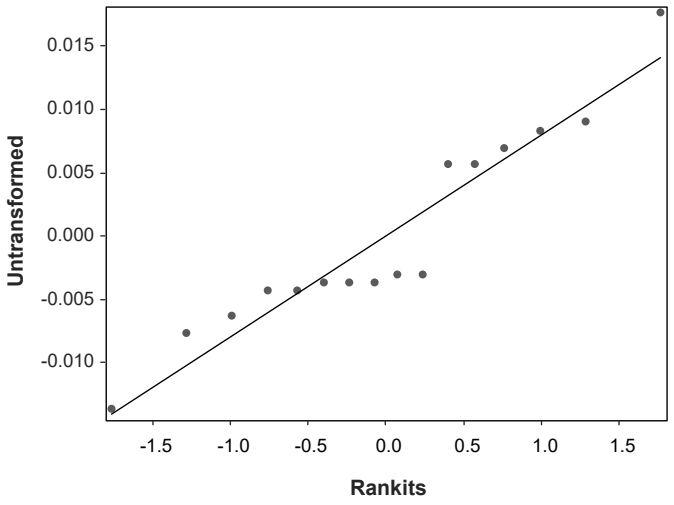
Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3587	0.346	0.342	0.3453	0.336	0.3453	0.3567	0.3673
100		0.3427	0.3547	0.352	0.34	0.3433	0.3433	0.352	0.3427

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	03-8744-8492	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	16 Jan-26 12:45	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:29	**MD5 Hash:**	F755080D040A14A887A8CBD4C158DB17	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	05-9436-7153	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:28	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-9682-9234	**Code:**	CSE1225.202fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	27 Dec-25 07:45	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	INF001_20251227_Grab
Sample Age:	77h (3.4 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.202

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
100		8	27	27	27	27	27	0	0	0.00%	0
Overall		16	42.5	33.97	51.03	27	58	4.002	16.01	37.67%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
100		8	75.75	74.88	76.62	74	77	0.1294	1.035	1.37%	0
Overall		16	198.6	131	266.2	74	325	31.71	126.8	63.88%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
100		8	7.875	7.541	8.209	7	8.3	0.04989	0.3991	5.07%	0
Overall		16	7.819	7.632	8.006	7	8.3	0.08766	0.3507	4.49%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	31	31	31	31	31	0	0	0.00%	0
Overall		16	65.5	46.51	84.49	31	100	8.908	35.63	54.40%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
100		8	7.237	7.112	7.363	7	7.4	0.01882	0.1506	2.08%	0
Overall		16	7.5	7.344	7.656	7	7.8	0.07303	0.2921	3.90%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.14	24.08	24.2	24	24.2	0.009282	0.07426	0.31%	0
Overall		16	24.07	24.02	24.12	24	24.2	0.02183	0.08732	0.36%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
07-6584-2034	7d Survival Rate	Steel Many-One Rank Sum Test	✓	19	38	26.87	9.86%	1
07-0949-7949	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test		38	75	53.39	8.51%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
20-9726-2836	7d Survival Rate	Linear Interpolation (ICPIN)	✓	EC15	36.1	21.18	53.94	1
			✓	EC20	42.35	21.57	59.07	
			✓	EC25	48.88	21.8	64.03	
				EC40	68.47	53.55	78.92	
				EC50	82.03	64.66	91.96	
19-7190-2604	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)		IC15	45.54	44.27	45.75	1
				IC20	48.06	46.88	48.34	
				IC25	50.57	49.43	50.93	
			✓	IC40	58.12	57.14	58.71	
			✓	IC50	63.15	62.17	63.92	

Test Acceptability

				TAC Limits			
Analysis ID	Endpoint	Attribute	Test Stat	Lower	Upper	Overlap	Decision
07-6584-2034	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
20-9726-2836	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
19-7190-2604	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	PMSD	0.08514	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.1520	0.5333	0.9333	0.1000	0.2000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.4000	0.6000	0.0500	0.1000	18.18%	45.00%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3413	0.3547	0.002807	0.005614	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3413	0.35	0.002317	0.004635	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.346	0.3507	0.0009813	0.001963	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3413	0.3507	0.002079	0.004159	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.08533	0.09933	0.003133	0.006266	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0	0.08333	0.02057	0.04114	189.88%	93.75%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: C5F324C8E327E99CF47200B51B720B1C

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Mean Dry Biomass-mg Detail MD5: C0E8E497E3C1FC1F3DE9D694CD00CBB3

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	19	38	26.87	---	0.09859	9.86%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38*	6	10	10	0	CDF	0.0417	Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.21865	1.04373	5	83.82	<1.0E-05	Significant Effect
Error	0.224141	0.0124523	18			
Total	5.44279		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	6.711	4.248	0.0011	Unequal Variances
	Mod Levene Equality of Variance Test	0.7457	4.248	0.5996	Equal Variances
Distribution	Anderson-Darling A2 Test	2.634	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	3.619	2.576	0.0003	Non-Normal Distribution
	D'Agostino Skewness Test	3.884	2.576	0.0001	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	28.18	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2917	0.2056	1.2E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.7217	0.884	2.0E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.0000	0.9333	0.5333	0.9333	0.1000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.6000	0.4000	0.6000	0.0500	18.18%	45.00%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.1870	0.7964	1.5770	1.3100	0.8188	1.3100	0.1227	20.68%	17.65%
75		4	0.8357	0.6755	0.9959	0.8861	0.6847	0.8861	0.0503	12.05%	42.02%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Angular (Corrected) Transformed Detail

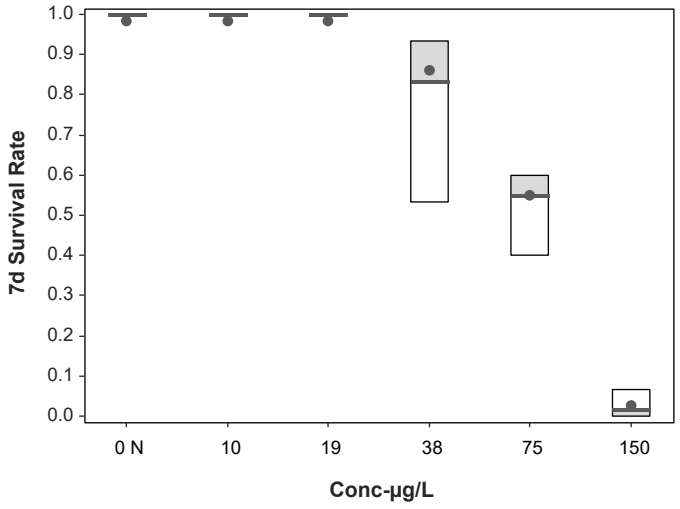
Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		0.8188	1.3100	1.3100	1.3100
75		0.8861	0.8861	0.6847	0.8861
150		0.1295	0.2612	0.1295	0.1295

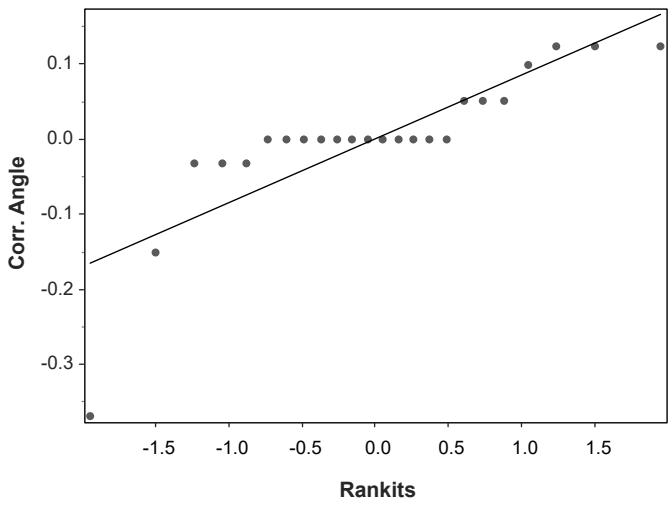
7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.02953	8.51%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	17.5	10	1	CDF	0.7867	Non-Significant Effect
		19	6	21.5	10	1	CDF	0.9855	Non-Significant Effect
		38	6	19	10	2	CDF	0.9055	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.45886	0.091772	5	304.9	<1.0E-05	Significant Effect
Error	0.005418	0.000301	18			
Total	0.464278		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	32.99	15.09	<1.0E-05	Unequal Variances
	Levene Equality of Variance Test	6.766	4.248	0.0010	Unequal Variances
	Mod Levene Equality of Variance Test	0.8401	4.248	0.5387	Equal Variances
Distribution	Anderson-Darling A2 Test	2.692	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	4.107	2.576	4.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	4.332	2.576	1.5E-05	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	35.63	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2638	0.2056	0.0001	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.6777	0.884	<1.0E-05	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3457	0.3413	0.3547	0.002807	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3457	0.3413	0.35	0.002317	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.3477	0.346	0.3507	0.0009814	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3477	0.3413	0.3507	0.002079	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.091	0.08533	0.09933	0.003133	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0.001111	0	0.08333	0.02057	189.88%	93.75%

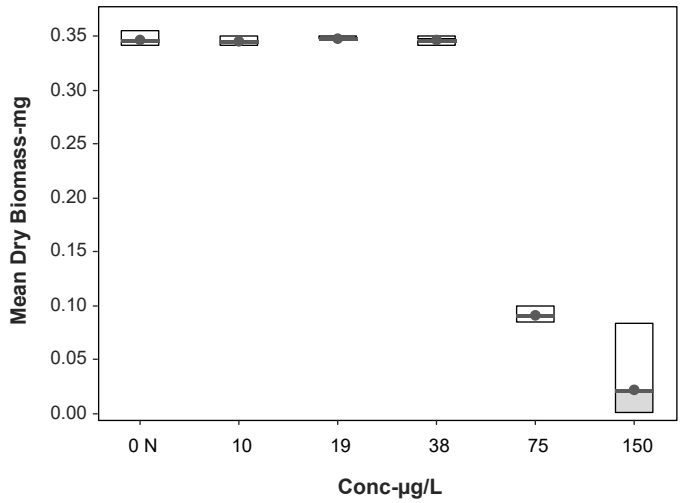
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

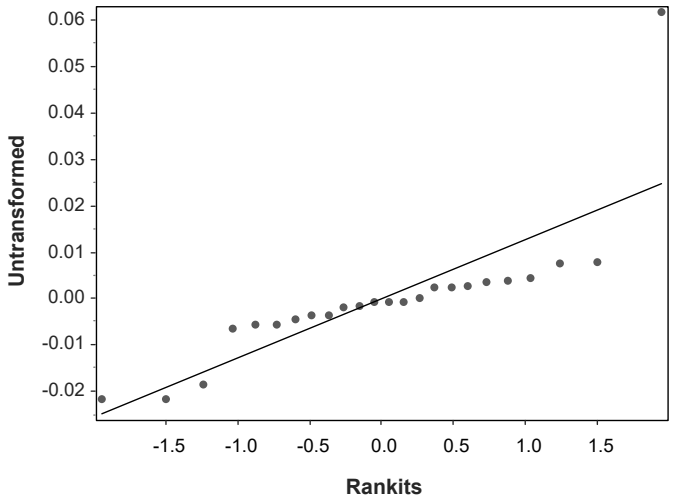
Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	36.1	21.18	53.94
EC20	42.35	21.57	59.07
EC25	48.88	21.8	64.03
EC40	68.47	53.55	78.92
EC50	82.03	64.66	91.96

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.8333	0.9333	0.5333	0.9333	24.00%	16.67%	50/60	0.8333	16.67%
75		4	0.5500	0.6000	0.4000	0.6000	18.18%	45.00%	33/60	0.5500	45.00%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

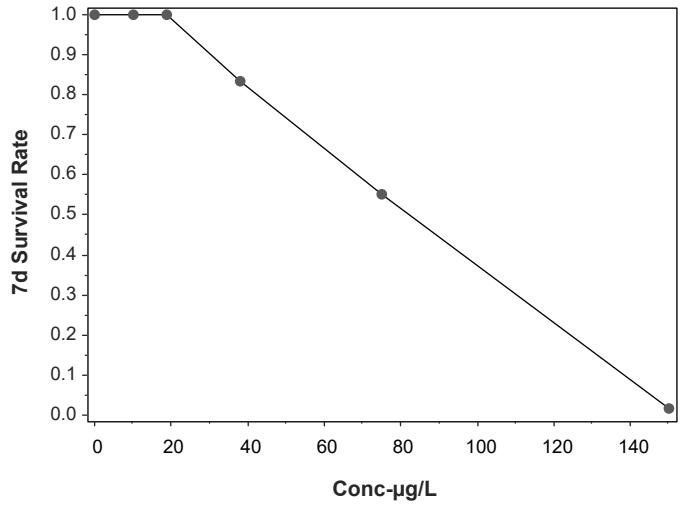
7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1953384	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	45.54	44.27	45.75
IC20	48.06	46.88	48.34
IC25	50.57	49.43	50.93
IC40	58.12	57.14	58.71
IC50	63.15	62.17	63.92

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3468	0.3457	0.3413	0.3547	1.62%	0.00%	0.3468	0.00%
10		4	0.3457	0.3457	0.3413	0.35	1.34%	0.34%	0.3468	0.00%
19		4	0.348	0.3477	0.346	0.3507	0.56%	-0.34%	0.3468	0.00%
38		4	0.3468	0.3477	0.3413	0.3507	1.20%	0.00%	0.3468	0.00%
75		4	0.09167	0.091	0.08533	0.09933	6.84%	73.57%	0.09167	73.57%
150		4	0.02167	0.001111	0	0.08333	189.88%	93.75%	0.02167	93.75%

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

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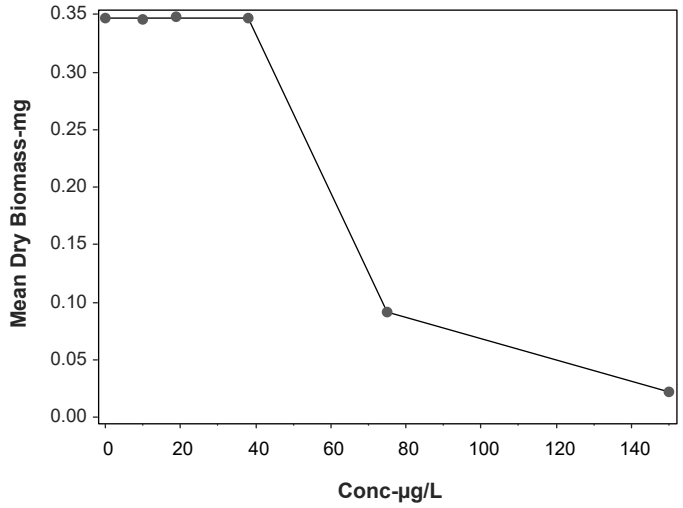


Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX	
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant	
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX	
Sample Age:	---	**Client:**	ABC Labs			

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
150		8	57	57	57	57	57	0	0	0.00%	0
Overall		16	57.5	57.22	57.78	57	58	0.1291	0.5164	0.90%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
10		8	318.4	317.4	319.4	316	320	0.1485	1.188	0.37%	0
19		8	317.4	316.5	318.3	316	319	0.1326	1.061	0.33%	0
38		8	315.6	313.8	317.4	312	318	0.2667	2.134	0.68%	0
75		8	314.1	311.5	316.7	310	317	0.3864	3.091	0.98%	0
150		8	312.8	310	315.5	310	317	0.4159	3.327	1.06%	0
Overall		48	316.6	315.6	317.6	310	325	0.5181	3.589	1.13%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
10		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
19		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
38		8	7.713	7.47	7.955	7	7.9	0.03625	0.29	3.76%	0
75		8	7.725	7.477	7.973	7	7.9	0.03705	0.2964	3.84%	0
150		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
Overall		48	7.735	7.653	7.818	7	7.9	0.04109	0.2847	3.68%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
10		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
19		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
38		8	7.713	7.618	7.807	7.5	7.8	0.01408	0.1126	1.46%	0
75		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
150		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
Overall		48	7.721	7.694	7.748	7.5	7.8	0.0133	0.09216	1.19%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

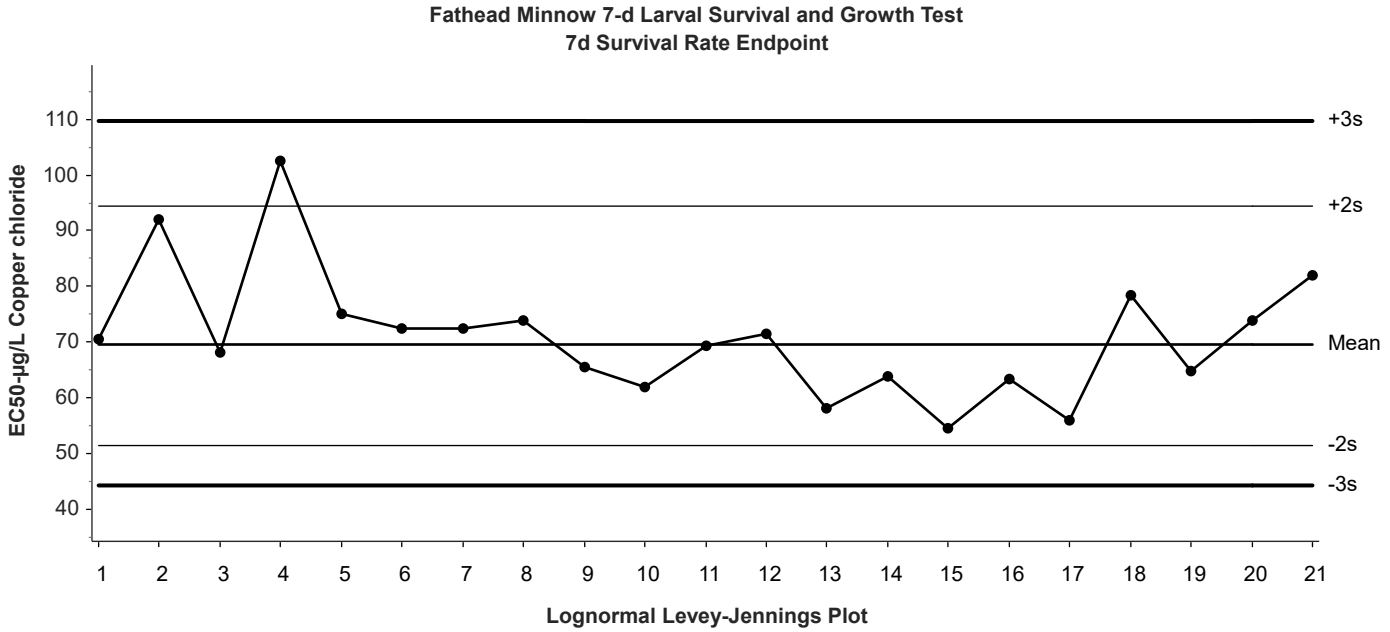
Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.08	24.04	24.11	24	24.1	0.005762	0.0461	0.19%	0
19		8	24.11	24.04	24.18	24	24.2	0.01042	0.08334	0.35%	0
38		8	24.13	24.05	24.2	24	24.2	0.01107	0.08854	0.37%	0
75		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
150		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
Overall		48	24.1	24.07	24.13	24	24.3	0.01348	0.09338	0.39%	0 (0%)

CETIS QC Plot

Report Date: 16 Jan-26 13:03 (1 of 1)

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



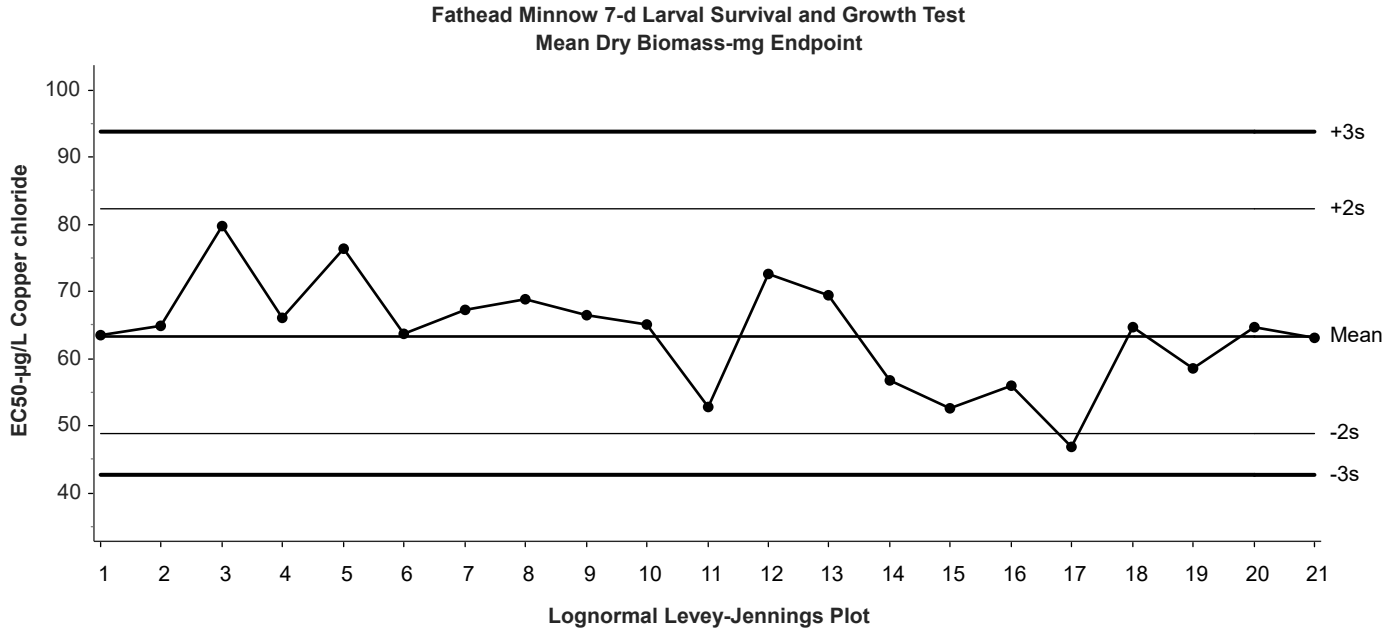
Mean:	69.62	**Count:**	20	**-2s Warning Limit:**	51.4	**-3s Action Limit:**	44.2
Sigma:	NA	**CV:**	15.30%	**+2s Warning Limit:**	94.3	**+3s Action Limit:**	110

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	70.52	0.8988	0.08456			21-2981-7713	03-0489-4574
2			17	13:00	91.94	22.32	1.833			13-3277-6088	03-7751-7547
3			21	15:24	68	-1.616	-0.1549			08-1266-5648	19-4309-1944
4			22	14:55	102.6	33.02	2.559	(+)		07-5558-1243	12-5555-4178
5			28	15:30	75	5.384	0.491			13-4573-3635	11-5047-1832
6			30	15:30	72.36	2.741	0.2545			11-5715-0925	03-3652-0021
7		Apr	4	11:45	72.45	2.832	0.2628			17-3412-6439	09-0505-4831
8			11	15:10	73.72	4.108	0.3779			12-2891-6798	20-3297-8234
9			25	15:00	65.49	-4.131	-0.4032			19-7686-5958	17-2422-4835
10			27	13:00	61.94	-7.675	-0.77			01-1863-5687	10-3453-8425
11		May	2	15:45	69.31	-0.3087	-0.0293			01-5973-7078	19-8547-5138
12			9	15:30	71.53	1.915	0.1789			01-4263-6313	07-3079-9817
13		Aug	9	13:00	58.18	-11.43	-1.183			14-3532-4574	02-3075-3473
14		Oct	6	14:45	63.9	-5.716	-0.5648			18-8099-7551	11-2650-3626
15	2024	Jan	9	13:20	54.55	-15.06	-1.607			14-8299-7228	00-5651-6529
16		Aug	1	15:59	63.35	-6.265	-0.6216			17-2152-6147	10-3671-8471
17	2025	Mar	6	15:00	55.94	-13.68	-1.442			06-4992-6637	09-1125-3834
18		Jul	8	11:21	78.31	8.692	0.7756			00-3393-7264	14-6710-1242
19			10	13:10	64.72	-4.894	-0.4805			07-5897-2938	20-7755-3652
20		Sep	9	13:10	73.75	4.136	0.3805			00-2537-6486	15-9566-8088
21		Dec	30	12:30	82.03	12.41	1.082			00-0985-9985	20-9726-2836

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	Mean Dry Biomass-mg	**Source:**	Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	14	15:30	63.61	0.2356	0.02843			01-1632-8199	05-8079-6953
2			15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
3			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
4			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
5			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
6			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
7			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
8		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
9			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
10			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
11			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
12		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
13			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
14		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
15	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
16		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
17	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
18		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
19			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
20		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
21		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 12/30/25 1230 | Lab ID: **FML** 123025

End Date & Time: 1/6/26 1110 | Age of Organism: 1d.

Toxicant Batch ID: FML122925 | Method: EPA-821-R-02-013

Day/Date	**0** 12/30	**1** 12/31/25	**2** 1/1/26	**3** 1/2/26	**4** 1/3/26	**5** 1/4/26	**6** 1/5/26	**7** 1/6/26
Time	1230	0940	0802	0959	0842	1002	1011	1110
Analyst	CD	CD	CD	CD	CD	CD	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renew ≥80%	Y (N)	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.9	7.1	7.9	7.0
10 ug/L	7.9	7.5	7.8	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.9	7.0
19 ug/L	7.9	7.5	7.9	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.8	7.0
38 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.2	7.8	7.0	7.6	7.0
75 ug/L	7.8	7.4	7.9	7.2	7.8	7.1	7.8	7.0	7.8	7.2	7.9	7.0	7.8	7.0
150 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.1	7.9	7.0	7.4	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
10 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.0	24.0
19 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
38 ug/L	24.2	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
75 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24.0	24.0	24.0
150 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
10 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.8	7.7	7.8	7.7	7.6
19 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.7	7.7	7.8	7.7	7.8
38 ug/L	7.8	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.8	7.7	7.8
75 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
150 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	324
10 ug/L	319	320	318	319	316	319	318	318
19 ug/L	316	319	317	316	317	318	318	318
38 ug/L	312	316	316	314	314	317	318	314
75 ug/L	310	310	314	314	312	317	317	317
150 ug/L	310	310	310	312	310	316	317	317
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
150 ug/L	57	57	57	57	57	57	57	57
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
150 ug/L	104	104	104	104	104	104	104	104

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 12/30/25 End Date: 1/6/26 Lab ID: **FML** 123025

	Analyst	CD	CD	CD	CD	CD	CD	M	M
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
19	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	14	11	11	CD 11	8	8
	2	15	15	15	14	14	14	14	14
	3	15	15	15	14	14	14	14	14
	4	15	15	15	15	15	15	14	14
75	1	15	14	14	12	12	11	9	9
	2	15	15	14	13	10	10	9	9
	3	15	13	10	9	9	7	6	6
	4	15	15	14	12	10	9	5	9
150	1	15	6	4	1	1	0		
	2	15	9	6	4	4	1	0 1	1
	3	15	8	4	3	2	0		
	4	15	5	2	1	1	0		

Balance ID: BAL 1

Analyst: CD

Date/Time in Oven: 1/6/26 ~~12/30/25~~ CD

Date/Time out Oven 1/7/26

Oven Temp (°C): 66.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CA 1	CONTROL	1	1.10790	1.11302	0.00512
2		2	1.10578	1.11096	0.00518
3		3	1.10274	1.10793	0.00519
4		4	1.11310	1.11842	0.00532
CA 5	10	1	1.10772	1.11296	0.00524
6		2	1.10895	1.11407	0.00512
7		3	1.10622	1.11135	0.00513
8		4	1.10652	1.11177	0.00525
CA 9	19	1	1.12274	1.12896	0.00522
10		2	1.10675	1.11194	0.00519
11		3	1.11303	1.11829	0.00526
12		4	1.10416	1.10937	0.00521
CA 13	38	1	1.10460	1.10684	0.00224
14		2	1.10557	1.11083	0.00526
15		3	1.11656	1.12175	0.00519
16		4	1.12686	1.13198	0.00512
CA 17	75	1	1.12045	1.12186	0.00141
18		2	1.10722	1.10871	0.00149
19		3	1.10315	1.10443	0.00128
20		4	1.11397	1.11529	0.00132
—	150	1	—	—	—
CA 21		2	1.12130	1.12155	0.00025
—		3	—	—	—
—		4	—	—	—
CA 22	BLANK	1	1.11005	1.11000	-0.00005

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE 4 — Lab ID: CSE 1225.202
Start Date & Time: 12/30/25 1249 — Date Rec'd: 12/29/25
End Date & Time: 1/6/26 1128 — Age of Organism: 1 d.

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1249	0959	0821	1022	0902	1030	1039	1128
Analyst	CD	CD	CD	CD	CD	CD	T	MW
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renewed≥80%	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y N
Lab ID	.202	.202	.202	.202	.202	.202	.202	.202
ControlBatch	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825	1MHW 122825
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6 7.8	7.4 7.9	7.2 ~~7.9~~	~~7.1~~ 7.8	7.4 7.9	7.1	7.9 7.0
100%	8.3	8.1 8.2	7.3 7.8	7.1 ~~7.8~~	~~7.2~~ 7.9	7.4 8.1	7.3	7.9 7.0
Temperature (°C)								
Control	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0	24.0 24.0
100%	24.2	24.0 24.2	24.0 24.1	24.0 24.2	24.0 24.1	24.0 24.2	24.0	24.1 24.0
pH								
Control	~~7.8~~	~~7.8~~ ~~7.8~~	~~7.8~~ ~~7.7~~	~~7.7~~ ~~7.7~~	~~7.7~~ ~~7.7~~	~~7.8~~ ~~7.8~~	7.4	7.8 7.8
100%	~~7.0~~	~~7.0~~ ~~7.2~~	~~7.1~~ ~~7.1~~	~~7.2~~ ~~7.2~~	~~7.2~~ ~~7.2~~	~~7.2~~ ~~7.4~~	7.4	7.4 7.4
Conductivity (uS/cm)								
Control	320	322	320	321	317	322	322	322
100%	~~76~~	~~75~~	~~74~~	~~76~~	~~75~~	~~76~~	77	77
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
100%	27	27	27	27	27	27	27	27
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
100%	31	31	31	31	31	31	31	31

Residual Chlorine 1st Sample: 0.1 2nd Sample: ~~0.1~~ 3rd Sample: —

Chronic Fathead Minnow Survival and Growth - TST

Client: CSE 4 Lab ID: CSE1225.202

Start Date: 12/30/25 End Date: 1/6/26

Concentration	Replicate	Analyst LD	1 LD	2 LD	3 LD	4 LD	5 LD	6 LD	Final LD
USE CONTROL COD.201	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
100	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15

Oven Temp (°C): 60.0 Date/Time In: 1/6/26 Date/Time Out: 1/7/26

Balance ID: BAL 1 Analyst: LD

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
	CONTROL	1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
CD 1	100	1	1.15728	1.16242	0.00514
2		2	1.15682	1.16214	0.00532
3		3	1.15849	1.16377	0.00528
4		4	1.15099	1.15609	0.00510
5		5	1.14356	1.14871	0.00515
6		6	1.14724	1.15239	0.00515
7		7	1.14671	1.15199	0.00528
8		8	1.15590	1.16104	0.00514

Appendix D

Chain of Custody and Sample Receipt Summary

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:	ANALYSIS REQUIRED
Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Boeing-SSFL NPDES 2023 Permit **Annual Influent Monitoring** **SWTS 011 INFLUENT** **GRAB**	
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714.895.5494 **ECI Project #57013187**		
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)	
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)	

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	A/R/EP: Total Dissolved Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, Ag, As, Ba, Be, Cd, Co, Cu, Cr, Fe, Mn, Ni, Pb, Se, Sb, Tl, V, Zn	A: Cr (VI), Total Dissolved (E218.6)	R: Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium (H-3) (E906.0)	A: Chronic Toxicity - Fathead minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA** *	A: Total Organic Carbon (SM 5310D / E415.2)	A: Monomethyl hydrazine (SW8315M / DV-WC-0077) **Weck Labs in Hacienda Heights, CA**	R: Cyanide (Kelada)	P/EP: Lt Mercury (E1631E) – Total Dissolved	EP: PFAS (Method 537 modified)	Comments
SWTS 011	INF001_20251227_Grab_F	12/27/2025 0745	WM	250 mL Poly	3	None	Yes	X									Filter and preserve w/in 24hrs of receipt at lab.
			WM	250 mL Poly	1	None			X								Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, double bagged	1	None	Yes								X		Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	-W2		WM	1 L Poly	4	HNO3				X							Unfiltered and unpreserved analysis. Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None											
	INF001_20251227_Grab	12/27/2025 0745	WM	* 2.5 Gal Cube	2	None					X						**Deliver to ABC Labs in Ventura, CA**
			WM	40 mL VOA	3	H2SO4						X					
			WM	1 L Glass Amber	1	None							X				**Segregate into a cooler for Weck Labs.**
			WM	500 mL Poly	1	NaOH								X			
			WM	250 mL Poly	2	None										X	Only test the first two rain events of the year.
QA/QC	INF001_20251227_Grab-04	12/27/2025 0745	WQ	250 mL Poly	2	None										X	Only test the first two rain events of the year.

Added C.F. = -0.2 2 0
Therm. = sample receiving
Temp. deg. C = 3.4 2
Chlorine (mg/L) = <0.1
NH3 (mg/L) = <0.1

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
[signature]	12-29-25 / 1030	H&A	[signature]	12/29/25 1030
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

* Hand-delivered to ABC Labs with this copy of the COC

2025-2026 Rainy Season
Version 1

Sample Receipt Summary

AQUATIC BIOASSAY & CONSULTING LABORATORIES, INC.

Client Name: Dupont Tins Consultants

Project Name: # 5701787

Receiving Information

1. Received By (initials): EN
2. Date Received: 12/29/24
3. Time Received: 1034
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - ___ Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): EN

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Shipping and Receiving Documents

Loc: 570
261391

261391

Eurofins Calscience Irvine

CHAIN OF CUSTODY FORM

570-261391 Chain of Custody

Client Name/Address:
Haley & Aldrich
5333 Mission Center Rd Suite 300
San Diego, CA 92108

Eurofins Calscience Project Manager: Virendra Patel
2841 Dow Avenue, Suite #100
Tustin, CA 92780
Tel: 714.895.5494
ECI Project #57013187

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.

Sampler: Adrien Mobeka

Project:
Boeing-SSFL NPDES
2023 Permit
Annual Influent Monitoring
SWTS 011 INFLUENT
GRAB

Project Manager: Katherine Miller
520.289.8606, 520.904.6944 (cell)

Field Manager: Mark Dominick
978.234.5033, 818.599.0702 (cell)

								A	R	R	R	A/R	A	A	R/EP	R/EP	
								ANALYSIS REQUIRED									Field Readings
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	E. coli (SM9221/ SM9223B) Enthalpy Analytical Orange, CA	Conductivity (SM2510B / E120.1)	Oil & Grease (E1664A-HEM)	1,4-Dioxane (E624 (SW8260M_SIM))	Priority Pollutants VOCs and cis-1,2-DCE; 1,1,2-trichloro-1,2,2-trifluoroethane; 1,2-dichloro-1,1,2-trifluoroethane, Cyclohexane, and TCE (E624)	Priority Pollutants-VOCs: 2CVE only (E624) Weck Labs in Hacienda Heights, CA	Priority Pollutants-SVOCs (E625.1 SIM)	LL Mercury (E1631E) -- Total Recoverable	LL Mercury (E1631E) -- Total Dissolved	Comments
																	Field Readings: (Include units)
																	Time of Readings: 0745
																	DO 12.57 mg/L — Meter serial # TRAEFT9B
																	pH 8.30 pH unit
																	Temp 9.29 °C °F
																	TRC 0.0 mg/L
																	Field readings QC
																	Checked by: S. Schiller
																	Date/Time: 12/27/25 0745
1 SWTS 011	INF001_20251227_Grab	12/27/2025 0745	WM	125 mL Poly	1	None			X								
			WM	1 L Glass Amber	2	HCl				X							
			WM	40 mL VOA	3	HCl					X						
			WM	40 mL VOA	3	HCl						X					
			WM	40 mL VOA	3	None							X				**Segregate into a cooler for Weck Labs.**
			WM	125mL Sterile Poly	3	$Na_2S_2O_3$		X									**Segregate into a cooler for Enthalpy. Deliver to lab ASAP 8 hr hold time. Need 1x, 10x, 100x dilutions.**
2 QA/QC	INF001_20251227-05-01	12/27/2025 0745	WQ	40 mL VOA	2	HCl						X					
3	INF001_20251227-05-02		WQ	40 mL VOA	2	None							X				**Add to cooler for Weck Labs.**
	IINF001_20251227_Grab-04	12/27/2025 0745	WQ	1 L Glass Amber	4	None								X			
4			WQ	8oz Clear Glass, double bagged	1	HCl									X		Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
5	INF001_20251227_Grab_F-04		WQ	8oz Clear Glass, double bagged	1	None										X	Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
	12/27/25 16:37	Haley & Aldrich	FC	12-27-25 16:37
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

2025 -2026 Rainy Season
Version 1

1.3/1.4 1.3/1.4 2.0/2.1 1.3/1.4 1.5/1.6 IR4

								A/R/EP	R	R	R	EP	R	A/R	R	A	A/R	A/R	R/EP	A	
Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108 Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714.895.5494 **ECI Project #57013187** TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc. Sampler: Adrien Mobeka				Project: Boeing-SSFL NPDES 2023 Permit **Annual Influent Monitoring** **SWTS 011 INFLUENT** **GRAB** Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell) Field Manager: Merk Dominick 978.234.5033, 818.599.0702 (cell)				ANALYSIS REQUIRED													
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Recoverable Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, Ag, As, Ba, Be, Cd, Co, Cu, Cr, Fe, Mn, Ni, Pb, Se, Sb, Tl, V, Zn	TCDD (and all congeners) (E1613B)	BOD5 (20 degrees C) (E405.1 (SM5210B_BODCalc))	Detergents (MBAS) (SM 5540C / E425.1)	TSS (160.2 (SM2540D))	Turbidity, TDS (SM2540C/E180.1)	Flouride (F-), Chloride (Cl-), Sulfate (SO4), Nitrate-N, Nitrite-N, NO3+NO2-N (E300); Perchlorate (E314.0)	Ammonia-N (E351.1)	Priority Pollutants-Pesticides+PCBs (E608) Weck Labs in Hacienda Heights, CA	Priority Pollutants-SVOCs (E6251 SIM)	Priority Pollutants SVOCs (E8270 SIM) Sub Indeno(1,2,3-cd)pyrene to EMAX	1L Mercury (E1631E) -- Total Recoverable	Cr (VI), Total Recoverable (E218.6)	Comments
SWTS 011	INF001_20251227_Grab	12/27/2025 0745	WM	250 mL Poly	3	HNO_3	Yes	X													
			WM	1 L Glass Amber	2	None			X												
			WM	1 L Poly	1	None				X											
			WM	1 L Poly	1	None					X										
			WM	1 L Poly	1	None						X									
			WM	500 mL Poly	1	None							X								48 hour holding time for turbidity
			WM	250 mL Poly	1	None								X							48 hours Holding Time NO3 & NO2
			WM	250 mL Poly	1	H_2SO_4									X						
			WM	1 L Glass Amber	4	None										X					**Segregate into a cooler for Weck Labs.**
			WM	1 L Glass Amber	12	None	Yes										X				
			WM	1 L Glass Amber	4	None												X			**Segregate into a cooler for EMAX.**
			WM	8oz Clear Glass, double bagged	1	HCL	Yes												X		Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	250 mL Poly	1	None														X	

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
[signature]	12/27/25 16:37	HALEY & ALDRICH	EC	12-27-25 16:37
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: __X__ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: __X__

261391

Eurofins Calscience Irvine

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES 2023 Permit **Annual Influent Monitoring** **SWTS 011 INFLUENT** **GRAB**
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714.895.5494 **EC! Project #57013187**	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)
Sampler: Adrien Mobeka	

								ANALYSIS REQUIRED														
								A/R/EP	A	R	A	A	A	R	R/EP	EP						
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Dissolved Metals: (E200.7): B, Hardness as CaCO3 (E200.8): Al, Ag, As, Ba, Be, Cd, Co, Cu, Cr, Fe, Mn, Ni, Pb, Se, Sb, Tl, V, Zn	Cr (VI), Total Dissolved (E218.6)	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0)	Chronic Toxicity - Fathead minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	Total Organic Carbon (SM 5310D / E415.2)	Monomethyl hydrazine (SW8315M / DV-WC-0077) **Weck Labs in Hacienda Heights, CA**	Cyanide (Kelada)	LL Mercury (E1631E) – Total Dissolved	PFAS (Method 537 modified)	**Comments**
	INF001_20251227_Grab_F	12/27/2025 0745	WM	250 mL Poly	3	None	Yes	X														Filter and preserve w/in 24hrs of receipt at lab.
6			WM	250 mL Poly	1	None			X													Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, double bagged	1	None	Yes								X							Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	INF001_20251227_Grab	12/27/2025 0745	WM	1 L Poly	4	HNO3				X												Unfiltered and unpreserved analysis. Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None																
SWTS 011			WM	2.5 Gal Cube	2	None					X											**Deliver to ABC Labs in Ventura, CA**
1			WM	40 mL VOA	3	H2SO4						X										
			WM	1 L Glass Amber	1	None							X									**Segregate into a cooler for Weck Labs.**
			WM	500 mL Poly	1	NaOH								X								
			WM	250 mL Poly	2	None										X						Only test the first two rain events of the year.
4	QA/QC	INF001_20251227_Grab-04	12/27/2025 0745	WQ	250 mL Poly	2	None										X					Only test the first two rain events of the year.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
[signature]	12/27/25 16:37	HALEY & ALDRICH	[signature] EC	12-27-25 16:37
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH TAT 5-DAY
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497074.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261391-7
Address: 13715 Rider Trail North,	Due Date Requested: 1/9/2026			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual SWTS 011 Influent Grab	Project #: 57013187			
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)	900.0/EvaporationGross Alpha/Beta	903.0/PrecSep_21Radium-226	904.0/PrecSep_0Radium-228	901.1_Cs/Fill_Geo_0K-40 and Cesium-137	905_Sr90/PrecSep_7Strontium-90	A01R_U/ExtChrom_ActinTotal Uranium	906.0/LSC_Dist_SuspTrillium	Total Number of containers	Special Instructions/Note:
			Preservation Code:												
INF001_20251227_Grab (570-261391-1)	12/27/25	07:45 Pacific	G	Water			X	X	X	X	X	X	X	5	Boeing SSFL, DO NOT FILTER; use prep date from preservation

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		12-30-25 7-	EE			
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:

Ver: 10/10/2024

ICOC No:
570-497074

Containers

Count	Container Type	Preservative
1	Amber Glass 1 liter - unpreserved	None
4	Plastic 1 liter - Nitric Acid	Nitric Acid

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client 12/30/2025
Date Order Posted
Order Status. Ready To Process
Prepared By:
Deliver By Date. ***12/30/2025 11:59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator George Padron
Filled by
Sent Date
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497122.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): NELAP Oregon; State - California; State Program Cal		Job #: 570-261391-6
Address: 3051 Fujita Street,	Due Date Requested: 1/9/2026			Preservation Codes:
City: Torrance	TAT Requested (days): N/A			
State, Zip: CA, 90505				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL - Annual SWTS 011 Influent Grab	Project #: 57013187			
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)	SUB Subcontract 625.1 SIM Indeno(1,2,3-cd)Pyrene	Total Number of Containers	Special Instructions/Note:
			Preservation Code:						
INF001_20251227_Grab (570-261391-1)	12/27/25	07:45 Pacific	G	Water			X	4	See Attached Instructions

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: 12-30-25 9-	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:

Ver: 10/10/2024

ICOC No:
570-497122

Containers

Count	Container Type	Preservative
4	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - 625 1 - SIM - Indeno((1,2,3-cd)Pyrene	Report down to MDL, Level IV, EMAX STD DOD EDD

Bottle Order Information

Bottle Order:
Bottle Order #
Request From Client: 12/30/2025
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***12/30/2025 11 59:00PM***
Lab Project Number
PWSID

Order Completion Information

Creator: George Padron
Filled by:
Sent Date.
Sent Via.
Tracking #

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497207 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261391-2
Address: 880 Riverside Parkway	Due Date Requested: 1/12/2026			Preservation Codes:
City: West Sacramento	TAT Requested (days): N/A			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual SWTS 011 Influent Grab	Project #: 57013187			
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)	1613B/1613B_Sox_Sep_P(MOD) Standard List w/ Totals	PFC_IDA_B16/3535_PFC(MOD) PFAS, CA Required & Optional List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
INF001_20251227_Grab (570-261391-1)	12/27/25	07:45 Pacific	G	Water			X	X	4	See QAS, Boeing_w/u to zero, ug/L, Use Boeing glassware.
INF001_20251227_Grab-04 (570-261391-4)	12/27/25	07:45 Pacific	G	Water				X	2	

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: 12/30/25 13-	Company	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: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver 10/10/2024

ICOC No:
570-497207

Containers

Count	Container Type	Preservative
2	Amber Glass 1 liter - unpreserved	None
4	Plastic 250ml - unpreserved	None

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client: *12/30/2025*
Date Order Posted
Order Status. *Ready To Process*
Prepared By:
Deliver By Date. ***12/30/2025 11 59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator *George Padron*
Filled by
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497293.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): NELAP Oregon State California; State Program Cal		Job #: 570-261391-3
Address: 5755 8th Street East,	Due Date Requested: 1/12/2026			
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: Boeing NPDES SSFL Annual SWTS 011 Influent Grab	Project #: 57013187			
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)	1631EMercury, Total	1631E/Filtration_MEMercury, Dissolved	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
INF001_20251227_Grab (570-261391-1)	12/27/25	07:45 Pacific	G	Water			X		1	
INF001_20251227_Grab (570-261391-1MS)	12/27/25	07:45 Pacific	G	Water			X		1	
INF001_20251227_Grab (570-261391 1MSD)	12/27/25	07:45 Pacific	G	Water			X		1	
INF001_20251227_Grab-04 (570-261391-4)	12/27/25	07:45 Pacific	G	Water			X		1	
INF001_20251227_Grab_F-04 (570-261391-5)	12/27/25	07:45 Pacific	G	Water				X	1	
INF001_20251227_Grab_F (570-261391-6)	12/27/25	07:45 Pacific	G	Water				X	1	
INF001_20251227_Grab_F (570-261391-6MS)	12/27/25	07:45 Pacific	G	Water				X	1	
INF001_20251227_Grab_F (570-261391-6MSD)	12/27/25	07:45 Pacific	G	Water				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: 12/30/25 1446	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:

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497312.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Weck Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon; State California, State Program Cal		Job #: 570-261391-8
Address: 14859 East Clark Avenue,	Due Date Requested: 2/3/2026			Preservation Codes:
City: City of Industry	TAT Requested (days): N/A			
State, Zip: CA, 917451396				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Annual SWTS 011 Influent Grab	Project #: 57013187			
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)	SUB Subcontract EPA 608 Pesticides/PCBs PP list	SUB Subcontract Weck- Monomethyl Hydrazine	SUB Subcontract VOCs-2CVE only (E524)	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
INF001_20251227_Grab (570-261391-1)	12/27/25	07:45 Pacific	G	Water			X	X	X	8	See Attached Instructions
INF001_20251227-02 (570-261391-3)	12/27/25	07:45 Pacific	G	Water					X	2	See Attached Instructions

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
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

ICOC No:
570-497312

Containers

Count	Container Type	Preservative
5	Amber Glass 1 liter - unpreserved	None
3	Voa Vial 40ml - unpreserved	None
2	VOA vial 40mL Trip BL - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - EPA 608 - Pesticides/PCBs - PP list	Level IV package, MDL, EQUIS 5C
1	SUBCONTRACT	SUB - Subcontract - Weck- Monomethyl Hydrazine	Level IV package, MDL, EQUIS 5C
1 3	SUBCONTRACT	SUB - Subcontract - VOCs-2CVE only (E624)	Level IV package, MDL, EQUIS 5C

eurofins Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025		Issued by: XE8X

Job _____

570-261391 Field Sheet

Tracking # 4970 0183 8094

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID L-11 Corr. Factor (+ / -) _____°C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 1.2 °C Corrected 1.2 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials M Date 12.31.25

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble ≤ 6 mm (1/4')

Initials M Date 12.31.25

Notes _____

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials M Date 12.31.25

eurofins | Environment Testing

Date:	12/31/2025
End Time:	2&:&9
KI Paper Lot:	14-8&&
Analyst:	JS
Pipette:	NA

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	143313
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
570-261391-W-1	A	Y	5|2	
570-261391-A-1 MS	A	Y	5|2	
570-261391-A-1 MSD	A	Y	5|2	
570-261391-C-4	A	Y	5|2	

JS 12/31/25

Login Sample Receipt Checklist

Client: Haley & Aldrich Inc

Job Number: 570-261391-5
SDG Number:

Login Number: 261391
List Number: 1
Creator: Patel, Virendra

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.	False	Refer to Job Narrative for details.
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.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 2:30 PM

JOB DESCRIPTION

Boeing NPDES SSFL - Routine Outfall 001 Comp

JOB NUMBER

570-261455-1

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

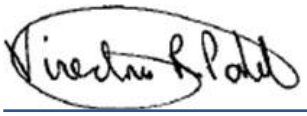
Eurofins Calscience

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
1/27/2026 2:30 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Method Summary 6
- Sample Summary 7

Subcontracted Data 8

Shipping and Receiving Documents 44

- Client Chain of Custody 45

Definitions/Glossary

Client: Haley & Aldrich Inc
Job ID: 570-261455-1
Project/Site: Boeing NPDES SSFL - Routine Outfall 001 Comp

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
570-261455-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 12/29/2025 10:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-261455-1
Project/Site: Boeing NPDES SSFL - Routine Outfall 001
Comp

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-261455-1
Project/Site: Boeing NPDES SSFL - Routine Outfall 001 Comp

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-261455-1	Outfall001_20251228_Comp	Water	12/28/25 13:00	12/29/25 10:30	CA

Subcontract Data

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/20/2026**

Report ID: **CSE1225.203**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample submitted to Aquatic Bioassay and Consulting Laboratories on 12/29/2025. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 12/28/2025 at 1300. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 12/29/2025 at 1030. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 12/30/2025 to 01/06/2026. Test concentration for the sample was 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
Outfall001_20251228_Comp	CSE1225.203	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2 and Table 3.

Table 2. Summary of Acute Toxicity Results.

Sample ID	Percent Survival in 100% Sample
Control	100%
Outfall001_20251228_Comp	100%

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
Outfall001_20251228_Comp	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	-1.19%

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Pimephales promelas	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS^{tm} Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
12/30/2025	*Pimephales promelas*	7d Survival Rate	Copper chloride	19 µg/L	82.03 µg/L	69.62 µg/L 51.4 – 94.3
		Mean Dry Biomass	Copper chloride	38 µg/L	63.15 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	19-3085-5117	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:52	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:30	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	06-3336-9436	**Code:**	CSE1225.203fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	28 Dec-25 13:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall001_20251228_Comp
Sample Age:	48h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.203

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
06-3490-9858	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
09-7515-3045	Mean Dry Biomass-mg	TST-Welch's t Test	<1.0E-05	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
06-3490-9858	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
09-7515-3045	Mean Dry Biomass-mg	Control Resp	0.3497	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.3497	0.3411	0.3583	0.336	0.3673	0.003632	0.01027	2.94%	0.00%
100		8	0.3538	0.3382	0.3695	0.338	0.3927	0.006609	0.01869	5.28%	-1.19%

7d Survival Rate Detail — MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail — MD5: 060EFA2634AB8003E9D87980C044F140

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3587	0.346	0.342	0.3453	0.336	0.3453	0.3567	0.3673
100		0.3687	0.338	0.3473	0.3387	0.356	0.348	0.3927	0.3413

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	06-3490-9858	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:31	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:26	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	19-3085-5117	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:52	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:30	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	06-3336-9436	**Code:**	CSE1225.203fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	28 Dec-25 13:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall001_20251228_Comp
Sample Age:	48h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.203

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

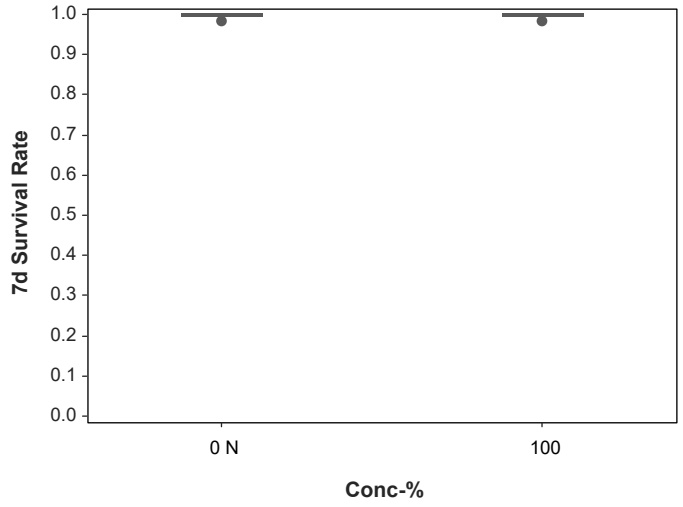
7d Survival Rate Binomials

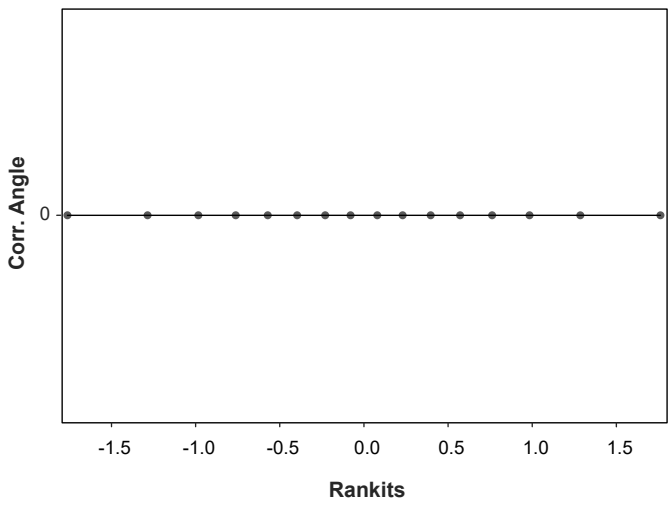
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	06-3490-9858	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:31	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:26	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-7515-3045	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:31	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:26	**MD5 Hash:**	060EFA2634AB8003E9D87980C044F140	**Editor ID:**	

Batch ID:	19-3085-5117	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:52	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:30	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	06-3336-9436	**Code:**	CSE1225.203fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	28 Dec-25 13:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall001_20251228_Comp
Sample Age:	48h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.203

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	9	12.81	0.7027	CDF	<1.0E-05	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6.944E-05	6.944E-05	1	0.3053	0.5893	Non-Significant Effect
Error	0.0031847	0.0002275	14			
Total	0.0032541		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	1.624	8.862	0.2233	Equal Variances
	Mod Levene Equality of Variance Test	0.7303	8.862	0.4072	Equal Variances
	Variance Ratio F Test	3.311	8.885	0.1368	Equal Variances
Distribution	Anderson-Darling A2 Test	0.748	3.878	0.0512	Normal Distribution
	D'Agostino Skewness Test	2.316	2.576	0.0206	Normal Distribution
	Kolmogorov-Smirnov D Test	0.2243	0.2471	0.0305	Normal Distribution
	Shapiro-Wilk W Normality Test	0.8792	0.8408	0.0378	Normal Distribution

Mean Dry Biomass-mg Summary

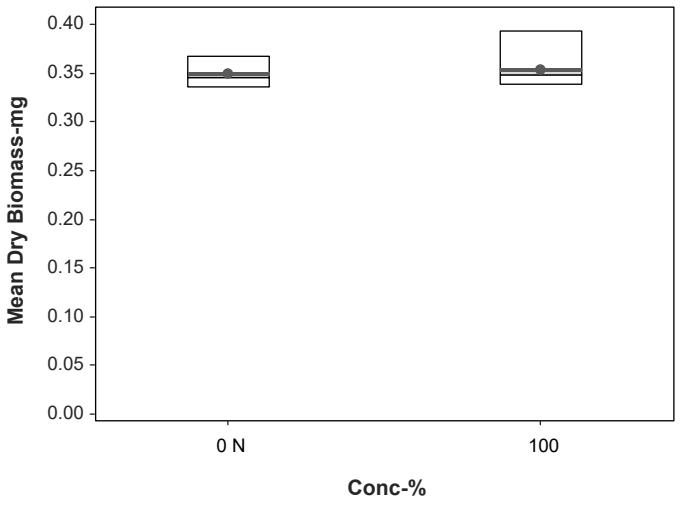
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.3497	0.3411	0.3583	0.3456	0.336	0.3673	0.003632	2.94%	0.00%
100		8	0.3538	0.3382	0.3695	0.3477	0.338	0.3927	0.006609	5.28%	-1.19%

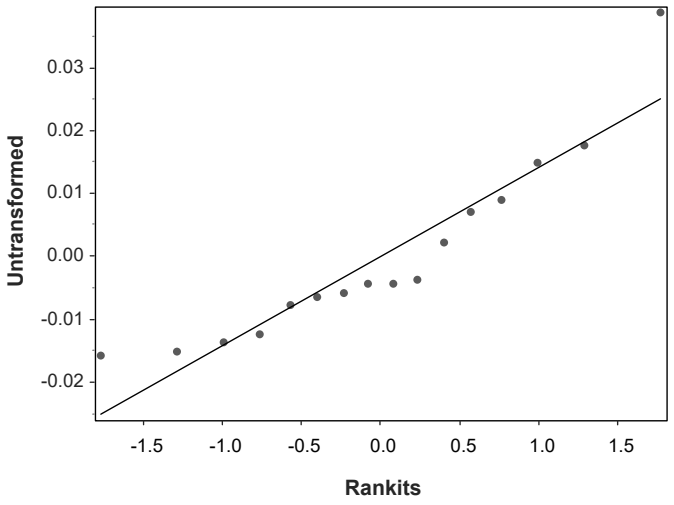
Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3587	0.346	0.342	0.3453	0.336	0.3453	0.3567	0.3673
100		0.3687	0.338	0.3473	0.3387	0.356	0.348	0.3927	0.3413

Fathead Minnow 7-d Larval Survival and Growth Test					**Aquatic Bioassay & Consulting Labs, Inc.**
Analysis ID:	09-7515-3045	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:31	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	15 Jan-26 13:26	**MD5 Hash:**	060EFA2634AB8003E9D87980C044F140	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	19-3085-5117	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:52	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:30	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	06-3336-9436	**Code:**	CSE1225.203fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	28 Dec-25 13:00	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	29 Dec-25 10:30	**CAS (PC):**		**Station:**	Outfall001_20251228_Comp
Sample Age:	48h (3.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE1225.203

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
100		8	46	46	46	46	46	0	0	0.00%	0
Overall		16	52	48.7	55.3	46	58	1.549	6.197	11.92%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
100		8	162.4	160.1	164.7	160	168	0.3403	2.722	1.68%	0
Overall		16	241.9	198.1	285.6	160	325	20.53	82.14	33.96%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
100		8	7.887	7.58	8.195	7	8.2	0.04602	0.3682	4.67%	0
Overall		16	7.825	7.646	8.004	7	8.2	0.08391	0.3357	4.29%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	62	62	62	62	62	0	0	0.00%	0
Overall		16	81	70.54	91.46	62	100	4.906	19.62	24.23%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
100		8	7	7	7	7	7	0	0	0.00%	0
Overall		16	7.381	7.171	7.592	7	7.8	0.09883	0.3953	5.36%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.14	24.04	24.24	24	24.3	0.01484	0.1187	0.49%	0
Overall		16	24.07	24.01	24.13	24	24.3	0.02695	0.1078	0.45%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
07-6584-2034	7d Survival Rate	Steel Many-One Rank Sum Test	✓	19	38	26.87	9.86%	1
07-0949-7949	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test		38	75	53.39	8.51%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
20-9726-2836	7d Survival Rate	Linear Interpolation (ICPIN)	✓	EC15	36.1	21.18	53.94	1
			✓	EC20	42.35	21.57	59.07	
			✓	EC25	48.88	21.8	64.03	
				EC40	68.47	53.55	78.92	
				EC50	82.03	64.66	91.96	
19-7190-2604	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)		IC15	45.54	44.27	45.75	1
				IC20	48.06	46.88	48.34	
				IC25	50.57	49.43	50.93	
			✓	IC40	58.12	57.14	58.71	
			✓	IC50	63.15	62.17	63.92	

Test Acceptability

				TAC Limits			
Analysis ID	Endpoint	Attribute	Test Stat	Lower	Upper	Overlap	Decision
07-6584-2034	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
20-9726-2836	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
19-7190-2604	Mean Dry Biomass-mg	Control Resp	0.3468	0.25	<<	Yes	Passes Criteria
07-0949-7949	Mean Dry Biomass-mg	PMSD	0.08514	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.1520	0.5333	0.9333	0.1000	0.2000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.4000	0.6000	0.0500	0.1000	18.18%	45.00%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3413	0.3547	0.002807	0.005614	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3413	0.35	0.002317	0.004635	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.346	0.3507	0.0009813	0.001963	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3413	0.3507	0.002079	0.004159	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.08533	0.09933	0.003133	0.006266	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0	0.08333	0.02057	0.04114	189.88%	93.75%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: C5F324C8E327E99CF47200B51B720B1C

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Mean Dry Biomass-mg Detail MD5: C0E8E497E3C1FC1F3DE9D694CD00CBB3

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	19	38	26.87	---	0.09859	9.86%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38*	6	10	10	0	CDF	0.0417	Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.21865	1.04373	5	83.82	<1.0E-05	Significant Effect
Error	0.224141	0.0124523	18			
Total	5.44279		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	6.711	4.248	0.0011	Unequal Variances
	Mod Levene Equality of Variance Test	0.7457	4.248	0.5996	Equal Variances
Distribution	Anderson-Darling A2 Test	2.634	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	3.619	2.576	0.0003	Non-Normal Distribution
	D'Agostino Skewness Test	3.884	2.576	0.0001	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	28.18	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2917	0.2056	1.2E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.7217	0.884	2.0E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.8333	0.5151	1.0000	0.9333	0.5333	0.9333	0.1000	24.00%	16.67%
75		4	0.5500	0.3909	0.7091	0.6000	0.4000	0.6000	0.0500	18.18%	45.00%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.1870	0.7964	1.5770	1.3100	0.8188	1.3100	0.1227	20.68%	17.65%
75		4	0.8357	0.6755	0.9959	0.8861	0.6847	0.8861	0.0503	12.05%	42.02%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

Angular (Corrected) Transformed Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		0.8188	1.3100	1.3100	1.3100
75		0.8861	0.8861	0.6847	0.8861
150		0.1295	0.2612	0.1295	0.1295

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test					Aquatic Bioassay & Consulting Labs, Inc.
Analysis ID:	07-6584-2034	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

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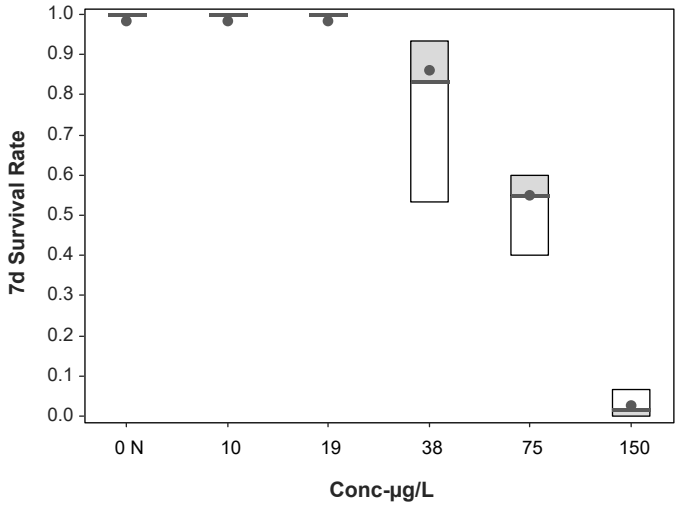
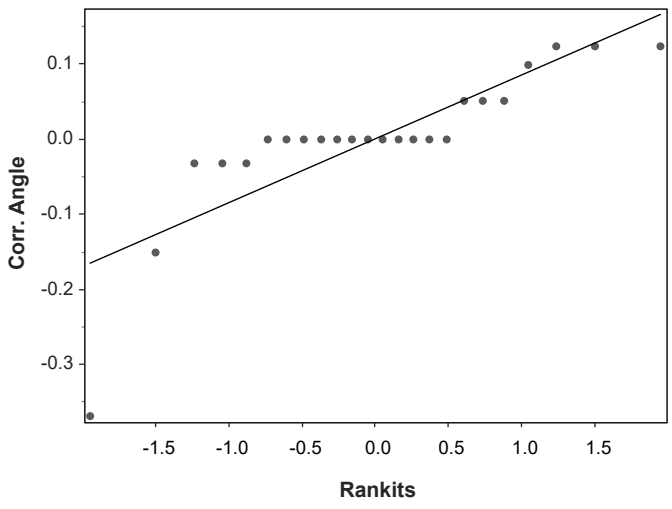




Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.02953	8.51%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	17.5	10	1	CDF	0.7867	Non-Significant Effect
		19	6	21.5	10	1	CDF	0.9855	Non-Significant Effect
		38	6	19	10	2	CDF	0.9055	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.45886	0.091772	5	304.9	<1.0E-05	Significant Effect
Error	0.005418	0.000301	18			
Total	0.464278		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	32.99	15.09	<1.0E-05	Unequal Variances
	Levene Equality of Variance Test	6.766	4.248	0.0010	Unequal Variances
	Mod Levene Equality of Variance Test	0.8401	4.248	0.5387	Equal Variances
Distribution	Anderson-Darling A2 Test	2.692	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	4.107	2.576	4.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	4.332	2.576	1.5E-05	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	35.63	9.21	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2638	0.2056	0.0001	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.6777	0.884	<1.0E-05	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3468	0.3379	0.3558	0.3457	0.3413	0.3547	0.002807	1.62%	0.00%
10		4	0.3457	0.3383	0.353	0.3457	0.3413	0.35	0.002317	1.34%	0.34%
19		4	0.348	0.3449	0.3511	0.3477	0.346	0.3507	0.0009814	0.56%	-0.34%
38		4	0.3468	0.3402	0.3535	0.3477	0.3413	0.3507	0.002079	1.20%	0.00%
75		4	0.09167	0.0817	0.1016	0.091	0.08533	0.09933	0.003133	6.84%	73.57%
150		4	0.02167	-0.0438	0.08713	0.001111	0	0.08333	0.02057	189.88%	93.75%

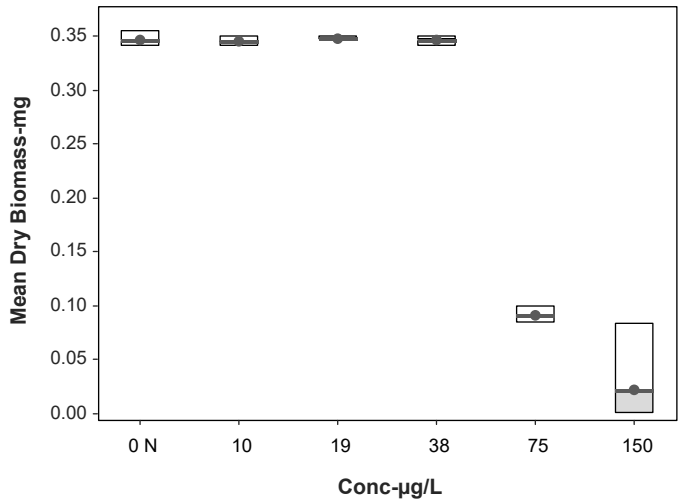
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

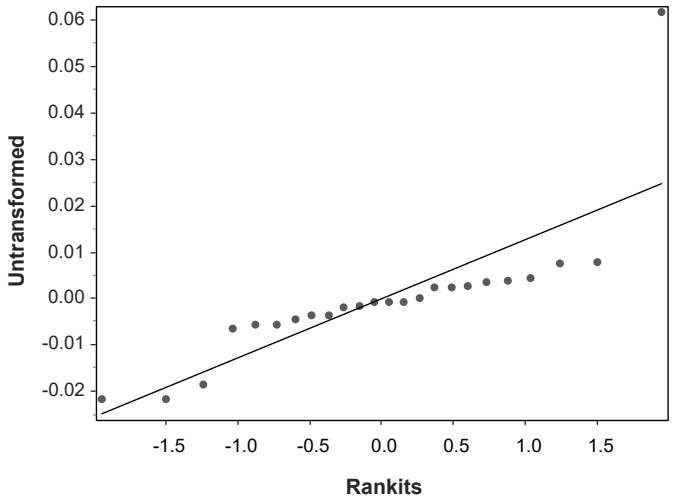
Analysis ID:	07-0949-7949	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	36.1	21.18	53.94
EC20	42.35	21.57	59.07
EC25	48.88	21.8	64.03
EC40	68.47	53.55	78.92
EC50	82.03	64.66	91.96

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.8333	0.9333	0.5333	0.9333	24.00%	16.67%	50/60	0.8333	16.67%
75		4	0.5500	0.6000	0.4000	0.6000	18.18%	45.00%	33/60	0.5500	45.00%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.5333	0.9333	0.9333	0.9333
75		0.6000	0.6000	0.4000	0.6000
150		0.0000	0.0667	0.0000	0.0000

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		8/15	14/15	14/15	14/15
75		9/15	9/15	6/15	9/15
150		0/15	1/15	0/15	0/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9726-2836	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C5F324C8E327E99CF47200B51B720B1C	**Editor ID:**	

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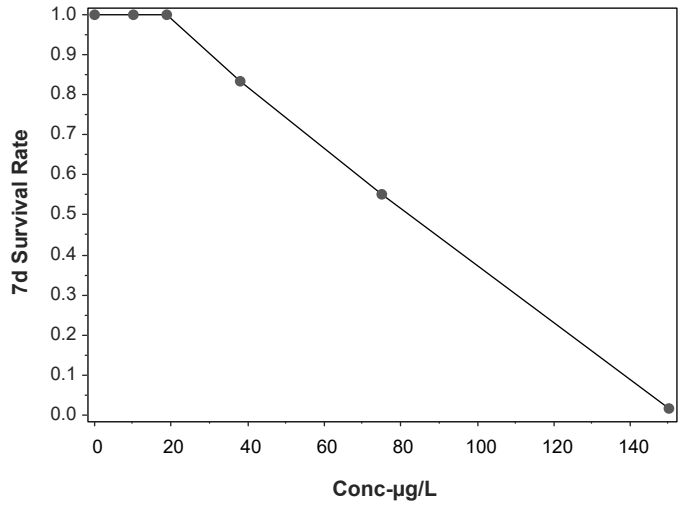

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1953384	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	45.54	44.27	45.75
IC20	48.06	46.88	48.34
IC25	50.57	49.43	50.93
IC40	58.12	57.14	58.71
IC50	63.15	62.17	63.92

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3468	0.3457	0.3413	0.3547	1.62%	0.00%	0.3468	0.00%
10		4	0.3457	0.3457	0.3413	0.35	1.34%	0.34%	0.3468	0.00%
19		4	0.348	0.3477	0.346	0.3507	0.56%	-0.34%	0.3468	0.00%
38		4	0.3468	0.3477	0.3413	0.3507	1.20%	0.00%	0.3468	0.00%
75		4	0.09167	0.091	0.08533	0.09933	6.84%	73.57%	0.09167	73.57%
150		4	0.02167	0.001111	0	0.08333	189.88%	93.75%	0.02167	93.75%

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3413	0.3453	0.346	0.3547
10		0.3493	0.3413	0.342	0.35
19		0.348	0.346	0.3507	0.3473
38		0.3493	0.3507	0.346	0.3413
75		0.094	0.09933	0.08533	0.088
150		0	0.08333	0	0.003333

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-7190-2604	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	15 Jan-26 13:49	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	15 Jan-26 13:45	**MD5 Hash:**	C0E8E497E3C1FC1F3DE9D694CD00CBB	**Editor ID:**	

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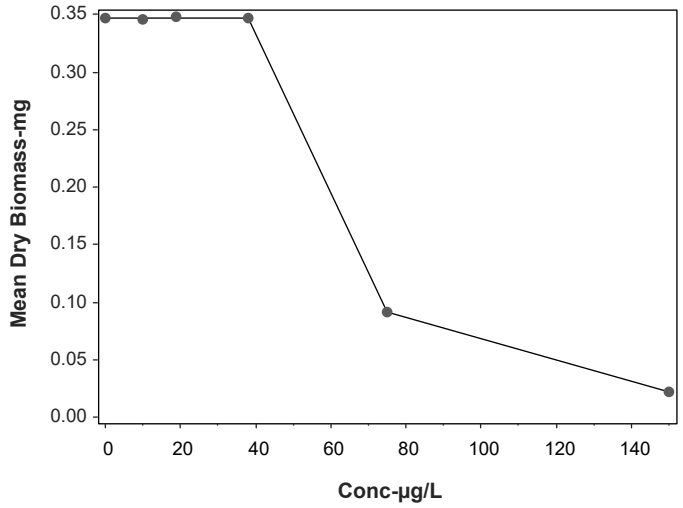


Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-8497-3973	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos	
Start Date:	30 Dec-25 12:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	06 Jan-26 11:10	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	17-9445-3538	**Code:**	FML123025	**Project:**	REF TOX	
Sample Date:	30 Dec-25 12:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant	
Receipt Date:	30 Dec-25 12:30	**CAS (PC):**		**Station:**	REF TOX	
Sample Age:	---	**Client:**	ABC Labs			

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58	58	58	58	58	0	0	0.00%	0
150		8	57	57	57	57	57	0	0	0.00%	0
Overall		16	57.5	57.22	57.78	57	58	0.1291	0.5164	0.90%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	321.4	319.8	322.9	319	325	0.2309	1.847	0.57%	0
10		8	318.4	317.4	319.4	316	320	0.1485	1.188	0.37%	0
19		8	317.4	316.5	318.3	316	319	0.1326	1.061	0.33%	0
38		8	315.6	313.8	317.4	312	318	0.2667	2.134	0.68%	0
75		8	314.1	311.5	316.7	310	317	0.3864	3.091	0.98%	0
150		8	312.8	310	315.5	310	317	0.4159	3.327	1.06%	0
Overall		48	316.6	315.6	317.6	310	325	0.5181	3.589	1.13%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.502	8.023	7	7.9	0.03892	0.3114	4.01%	0
10		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
19		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
38		8	7.713	7.47	7.955	7	7.9	0.03625	0.29	3.76%	0
75		8	7.725	7.477	7.973	7	7.9	0.03705	0.2964	3.84%	0
150		8	7.738	7.485	7.99	7	7.9	0.03776	0.3021	3.90%	0
Overall		48	7.735	7.653	7.818	7	7.9	0.04109	0.2847	3.68%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.763	7.719	7.806	7.7	7.8	0.00647	0.05176	0.67%	0
10		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
19		8	7.725	7.651	7.799	7.6	7.8	0.01108	0.08864	1.15%	0
38		8	7.713	7.618	7.807	7.5	7.8	0.01408	0.1126	1.46%	0
75		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
150		8	7.7	7.611	7.789	7.5	7.8	0.01336	0.1069	1.39%	0
Overall		48	7.721	7.694	7.748	7.5	7.8	0.0133	0.09216	1.19%	0 (0%)

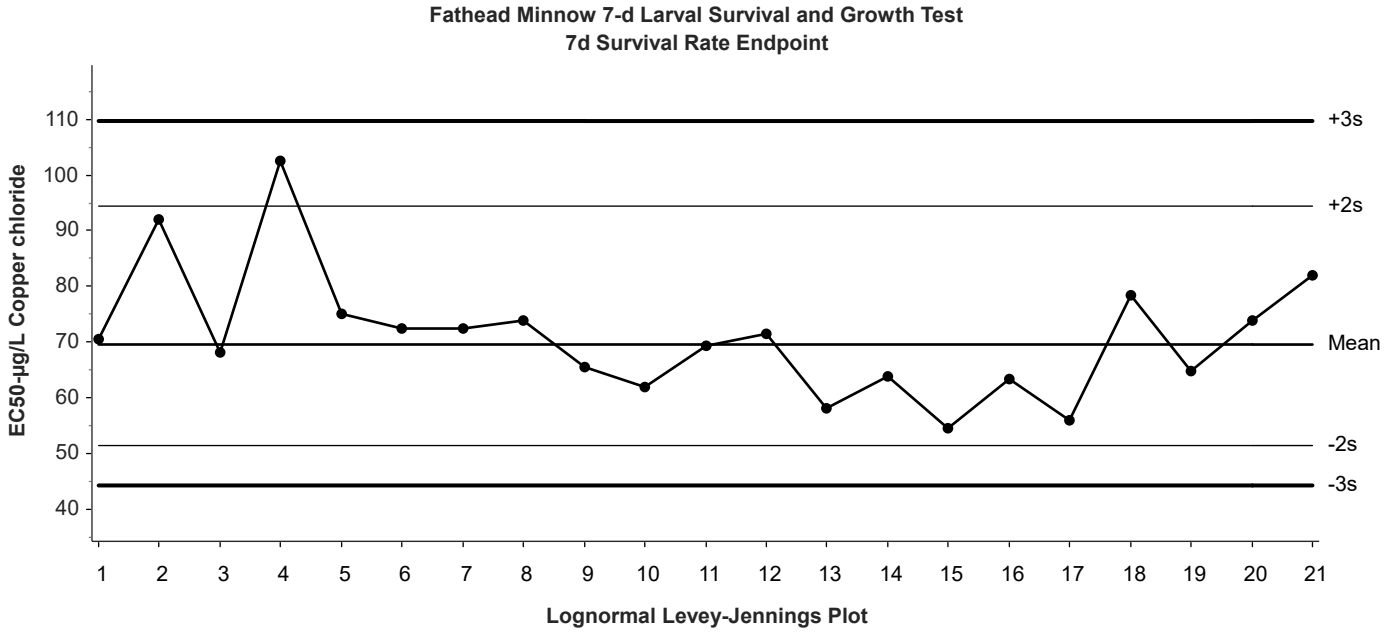
Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.08	24.04	24.11	24	24.1	0.005762	0.0461	0.19%	0
19		8	24.11	24.04	24.18	24	24.2	0.01042	0.08334	0.35%	0
38		8	24.13	24.05	24.2	24	24.2	0.01107	0.08854	0.37%	0
75		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
150		8	24.15	24.06	24.24	24	24.3	0.01336	0.1068	0.44%	0
Overall		48	24.1	24.07	24.13	24	24.3	0.01348	0.09338	0.39%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



Mean:	69.62	**Count:**	20	**-2s Warning Limit:**	51.4	**-3s Action Limit:**	44.2
Sigma:	NA	**CV:**	15.30%	**+2s Warning Limit:**	94.3	**+3s Action Limit:**	110

Quality Control Data

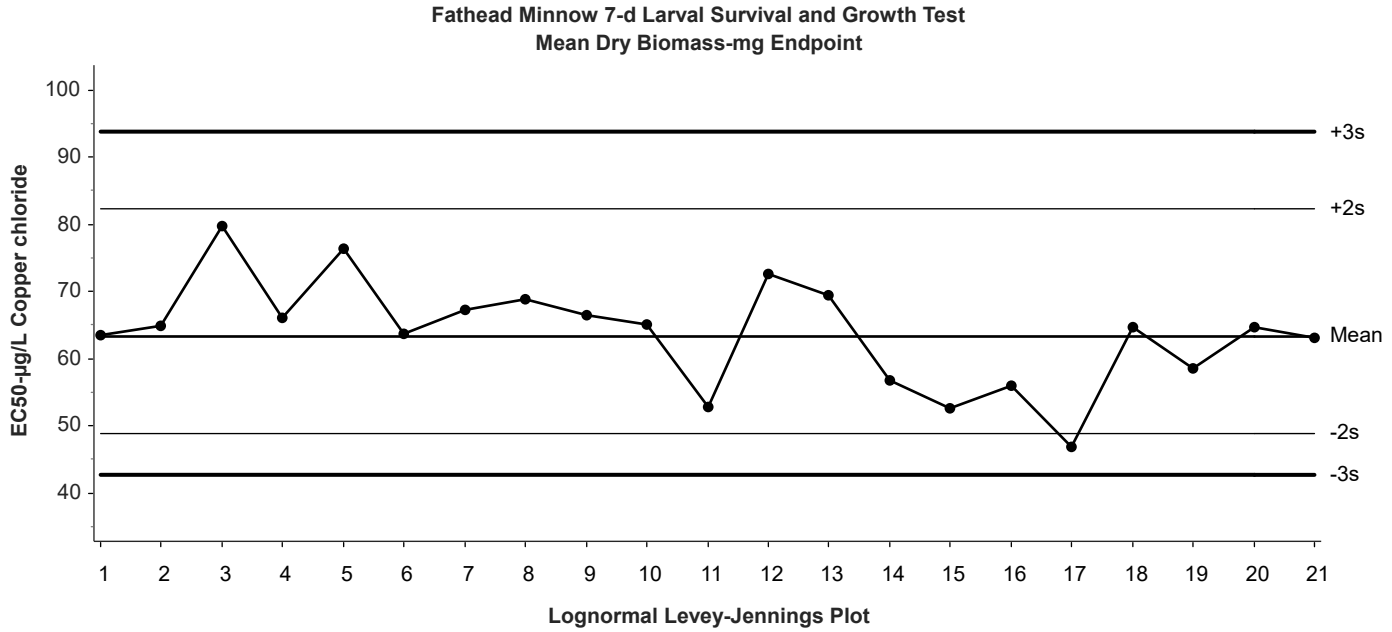
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	70.52	0.8988	0.08456			21-2981-7713	03-0489-4574
2			17	13:00	91.94	22.32	1.833			13-3277-6088	03-7751-7547
3			21	15:24	68	-1.616	-0.1549			08-1266-5648	19-4309-1944
4			22	14:55	102.6	33.02	2.559	(+)		07-5558-1243	12-5555-4178
5			28	15:30	75	5.384	0.491			13-4573-3635	11-5047-1832
6			30	15:30	72.36	2.741	0.2545			11-5715-0925	03-3652-0021
7		Apr	4	11:45	72.45	2.832	0.2628			17-3412-6439	09-0505-4831
8			11	15:10	73.72	4.108	0.3779			12-2891-6798	20-3297-8234
9			25	15:00	65.49	-4.131	-0.4032			19-7686-5958	17-2422-4835
10			27	13:00	61.94	-7.675	-0.77			01-1863-5687	10-3453-8425
11		May	2	15:45	69.31	-0.3087	-0.0293			01-5973-7078	19-8547-5138
12			9	15:30	71.53	1.915	0.1789			01-4263-6313	07-3079-9817
13		Aug	9	13:00	58.18	-11.43	-1.183			14-3532-4574	02-3075-3473
14		Oct	6	14:45	63.9	-5.716	-0.5648			18-8099-7551	11-2650-3626
15	2024	Jan	9	13:20	54.55	-15.06	-1.607			14-8299-7228	00-5651-6529
16		Aug	1	15:59	63.35	-6.265	-0.6216			17-2152-6147	10-3671-8471
17	2025	Mar	6	15:00	55.94	-13.68	-1.442			06-4992-6637	09-1125-3834
18		Jul	8	11:21	78.31	8.692	0.7756			00-3393-7264	14-6710-1242
19			10	13:10	64.72	-4.894	-0.4805			07-5897-2938	20-7755-3652
20		Sep	9	13:10	73.75	4.136	0.3805			00-2537-6486	15-9566-8088
21		Dec	30	12:30	82.03	12.41	1.082			00-0985-9985	20-9726-2836

CETIS QC Plot

Report Date: 20 Jan-26 14:16 (1 of 1)

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	Mean Dry Biomass-mg	**Source:**	Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	14	15:30	63.61	0.2356	0.02843			01-1632-8199	05-8079-6953
2			15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
3			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
4			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
5			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
6			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
7			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
8		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
9			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
10			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
11			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
12		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
13			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
14		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
15	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
16		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
17	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
18		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
19			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
20		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
21		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 12/30/25 1230 | Lab ID: **FML** 123025

End Date & Time: 1/6/26 1110 | Age of Organism: 1d.

Toxicant Batch ID: FML122925 | Method: EPA-821-R-02-013

Day/Date	**0** 12/30	**1** 12/31/25	**2** 1/1/26	**3** 1/2/26	**4** 1/3/26	**5** 1/4/26	**6** 1/5/26	**7** 1/6/26
Time	1230	0940	0802	0959	0842	1002	1011	1110
Analyst	CD	CD	CD	CD	CD	CD	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renew ≥80%	Y (N)	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—	IMHW 122825	—
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.9	7.1	7.9	7.0
10 ug/L	7.9	7.5	7.8	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.9	7.0
19 ug/L	7.9	7.5	7.9	7.3	7.8	7.1	7.9	7.1	7.8	7.3	7.8	7.1	7.8	7.0
38 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.2	7.8	7.0	7.6	7.0
75 ug/L	7.8	7.4	7.9	7.2	7.8	7.1	7.8	7.0	7.8	7.2	7.9	7.0	7.8	7.0
150 ug/L	7.8	7.4	7.9	7.3	7.8	7.1	7.8	7.0	7.8	7.1	7.9	7.0	7.4	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
10 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.1	24.0	24.0	24.0
19 ug/L	24.1	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
38 ug/L	24.2	24.0	24.1	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.0	24.0
75 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24.0	24.0	24.0
150 ug/L	24.2	24.0	24.1	24.0	24.2	24.0	24.2	24.0	24.2	24.0	24.3	24	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
10 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.8	7.7	7.8	7.7	7.6
19 ug/L	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.7	7.7	7.8	7.7	7.8
38 ug/L	7.8	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.8	7.7	7.8
75 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
150 ug/L	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.7	7.8
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	324
10 ug/L	319	320	318	319	316	319	318	318
19 ug/L	316	319	317	316	317	318	318	318
38 ug/L	312	316	316	314	314	317	318	314
75 ug/L	310	310	314	314	312	317	317	317
150 ug/L	310	310	310	312	310	316	317	317
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
150 ug/L	57	57	57	57	57	57	57	57
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
150 ug/L	104	104	104	104	104	104	104	104

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 12/30/25 End Date: 1/6/26 Lab ID: **FML** 123025

	Analyst	CD	CD	CD	CD	CD	CD	M	M
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
19	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	14	11	11	CD 11	8	8
	2	15	15	15	14	14	14	14	14
	3	15	15	15	14	14	14	14	14
	4	15	15	15	15	15	15	14	14
75	1	15	14	14	12	12	11	9	9
	2	15	15	14	13	10	10	9	9
	3	15	13	10	9	9	7	6	6
	4	15	15	14	12	10	9	5	9
150	1	15	6	4	1	1	0		
	2	15	9	6	4	4	1	0 1	1
	3	15	8	4	3	2	0		
	4	15	5	2	1	1	0		

Balance ID: BAL 1

Analyst: CD

Date/Time in Oven: 1/6/26 ~~12/30/25~~ CD

Date/Time out Oven 1/7/26

Oven Temp (°C): 66.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
CA 1	CONTROL	1	1.10790	1.11302	0.00512
2		2	1.10578	1.11096	0.00518
3		3	1.10274	1.10793	0.00519
4		4	1.11310	1.11842	0.00532
CA 5	10	1	1.10772	1.11296	0.00524
6		2	1.10895	1.11407	0.00512
7		3	1.10622	1.11135	0.00513
8		4	1.10652	1.11177	0.00525
CA 9	19	1	1.12274	1.12896	0.00522
10		2	1.10675	1.11194	0.00519
11		3	1.11303	1.11829	0.00526
12		4	1.10416	1.10937	0.00521
CA 13	38	1	1.10460	1.10684	0.00224
14		2	1.10557	1.11083	0.00526
15		3	1.11656	1.12175	0.00519
16		4	1.12686	1.13198	0.00512
CA 17	75	1	1.12045	1.12186	0.00141
18		2	1.10722	1.10871	0.00149
19		3	1.10315	1.10443	0.00128
20		4	1.11397	1.11529	0.00132
—	150	1	—	—	—
CA 21		2	1.12130	1.12155	0.00025
—		3	—	—	—
—		4	—	—	—
CA 22	BLANK	1	1.11005	1.11000	-0.00005

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE 5
Start Date & Time: 12/30/25 1252
End Date & Time: 1/6/26 1130

Lab ID: CSE 1225.203
Date Rec'd: 12/29/25
Age of Organism: 1d.

Day/Date	0 12/30	1 12/31/25	2 1/1/26	3 1/2/26	4 1/3/26	5 1/4/26	6 1/5/26	7 1/6/26
Time	1252	1008	0826	1027	0907	1037	1041	1130
Analyst	ED	ED	ED	ED	ED	ED	M	M
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N
Renewed≥80%	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Lab ID	.203	.203	.203	.203	.203	.203	.203	.203
ControlBatch	MHW 122825	MHW 122825	MHW 122825	MHW 122825	MHW 122825	MHW 122825	MHW 122825	MHW 122825
YSI ID	B	B	B	B	B	B	B	B
Therm ID	2	2	2	2	2	2	3	3
C.F. (°C)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.9	7.6	7.8	7.4	7.9	7.2	7.9	7.1	7.8	7.4	7.9	7.1	7.9	7.0
100%	8.2	7.9	8.0	7.3	8.0	7.4	8.0	7.2	7.9	7.3	8.0	7.3	8.0	7.0
Temperature (°C)								
Control	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
100%	24.2	24.0	24.3	24.0	24.2	24.0	24.2	24.0	24.0	24.0	24.2	24.0	24.0	24.0
pH								
Control	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.8
100%	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Conductivity (uS/cm)								
Control	320	322	320	321	319	322	322	324
100%	162	160	163	160	162	160	164	168
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	58	58
100%	46	46	46	46	46	46	46	46
Hardness (mg/L CaCO3)								
Control	60	60	60	60	60	60	60	60
100%	62	62	62	62	62	62	62	62

Residual Chlorine 1st Sample: <0.1 2nd Sample: — 3rd Sample: —

Chronic Fathead Minnow Survival and Growth - TST

Client: CSE 5 Lab ID: CSE 1225.203

Start Date: 12/30/25 End Date: 1/26/26

Concentration	Replicate	Analyst	1	2	3	4	5	6	Final
USE CONTROL CSE.201	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
100	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	14	15
	8	15	15	15	15	15	15	15	15

Oven Temp (°C): 116.0 Date/Time In: 1/16/26 Date/Time Out: 1/7/26

Balance ID: BAL 1 Analyst:

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
	CONTROL	1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
CF 1	100	1	1.16230	1.16744	0.00514
2		2	1.15559	1.16092	0.00533
3		3	1.15776	1.16296	0.00520
4		4	1.15578	1.16088	0.00510
5		5	1.16728	1.17245	0.00517
6		6	1.16934	1.17471	0.00537
7		7	1.15439	1.15982	0.00543
8		8	1.14800	1.15327	0.00527

Appendix D

Chain of Custody and Sample Receipt Summary

CHAIN OF CUSTODY FORM

A/R

Client Name/Address:	Project:	ANALYSIS REQUIRED
Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Boeing-SSFL NPDES Permit 2023 **Routine** **Outfall 001** **COMPOSITE**	
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**		
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)	
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)	

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) ABC Labs in Ventura, CA	Comments
Outfall 001	-203 Outfall001_20251228_Comp	12/28/2025/1300	WM	2.5 Gal Cube	2	None	No	X	**Only test if first or second rain events of the year. Deliver to ABC Labs in Ventura, CA**

Added C.F. = 20.2 °C
Therm. = sample receiving
Temp. deg. C = 13.1
Chlorine (mg/L) = 0.0
NH3 (mg/L) = 40.1

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Mark Dominick	12-29-25/1030	H&A	[signature]	12/29/25 1030
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
RUSH 5-DAY TAT
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

2025-2026 Rainy Season
Version 1

Sample Receipt Summary

AQUATIC BIOASSAY & CONSULTING LABORATORIES, INC.

Client Name: Euphoria Consultants

Project Name: # 57013187

Receiving Information

1. Received By (initials): EM
2. Date Received: 12/29/25
3. Time Received: 1034
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - 1 Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): EM

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Shipping and Receiving Documents

CHAIN OF CUSTODY FORM

| | | |

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 4:44 PM

JOB DESCRIPTION

Boeing NPDES SSFL - Routine Outfall 001 COMP

JOB NUMBER

570-261745-5

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

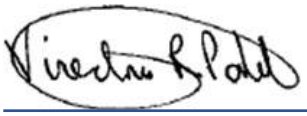
Eurofins Calscience

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
1/27/2026 4:44 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Detection Summary 6
- Method Summary 7
- Sample Summary 8

Subcontracted Data 9

Shipping and Receiving Documents 45

- Client Chain of Custody 46
- Field Data Sheets 60
- Sample Receipt Checklist 62

Definitions/Glossary

Client: Haley & Aldrich Inc
Job ID: 570-261745-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 001 COMF

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
570-261745-5

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 1/2/2026 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.4°C, 2.6°C and 3.0°C.

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Detection Summary

Client: Haley & Aldrich Inc
Job ID: 570-261745-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 001
COMP

Client Sample ID: Outfall001_20260102_Comp
Lab Sample ID: 570-261745-1

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-261745-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 001
COMP

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-261745-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 001
COMP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-261745-1	Outfall001_20260102_Comp	Water	01/02/26 10:05	01/02/26 17:00	CA

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/27/2026**

Report ID: **CSE0126.001**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample submitted to Aquatic Bioassay and Consulting Laboratories on 01/05/2026. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 01/02/2026 at 1005. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 01/05/2026 at 0821. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 01/06/2026 to 01/13/2026. Test concentration for the sample was 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
Outfall001_20260102_Comp	CSE0126.001	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2 and Table 3.

Table 2. Summary of Chronic *Pimephales promelas* Toxicity Results.

Sample ID	Survival in 100% Sample	Mean Dry Biomass
Outfall001_20260102_Comp	100%	0.348 mg

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Test Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
Outfall001_20260102_Comp	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	-0.70%

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Pimephales promelas	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS™ Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
01/06/2026	*Pimephales promelas*	7d Survival	Copper chloride	38 µg/L	60.37 µg/L	70.11 µg/L 51.3 – 95.8
		Mean Dry Biomass	Copper chloride	38 µg/L	58.5 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-7317-3114	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:12	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	18-5269-6259	**Code:**	CSE0126.001fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:05	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.001

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
11-5149-3425	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
08-6623-5087	Mean Dry Biomass-mg	TST-Welch's t Test	<1.0E-05	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
11-5149-3425	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
08-6623-5087	Mean Dry Biomass-mg	Control Resp	0.346	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.346	0.336	0.356	0.3367	0.3667	0.00422	0.01194	3.45%	0.00%
100		8	0.3484	0.339	0.3578	0.3367	0.3713	0.003978	0.01125	3.23%	-0.70%

7d Survival Rate Detail MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail MD5: C8AA5D166E0AF01B928AC55FB1C1DB31

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3413	0.3627	0.3667	0.346	0.3393	0.3367	0.3373	0.338
100		0.348	0.3407	0.3367	0.3473	0.3413	0.344	0.358	0.3713

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	11-5149-3425	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:38	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	09-7317-3114	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:12	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	18-5269-6259	**Code:**	CSE0126.001fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:05	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.001

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	11-5149-3425	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:38	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

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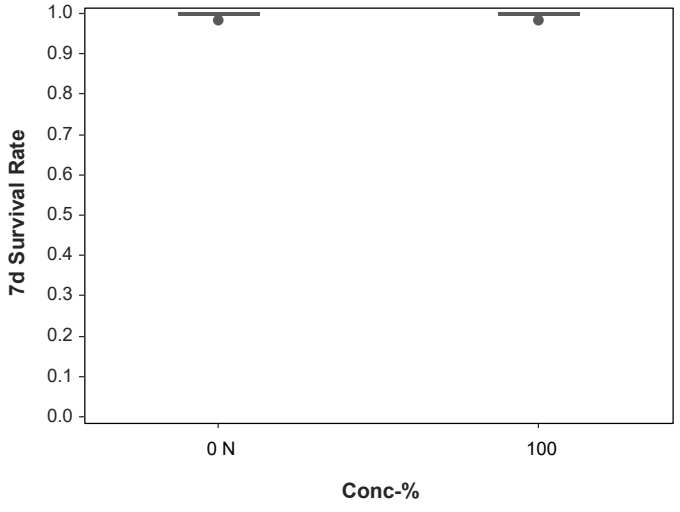

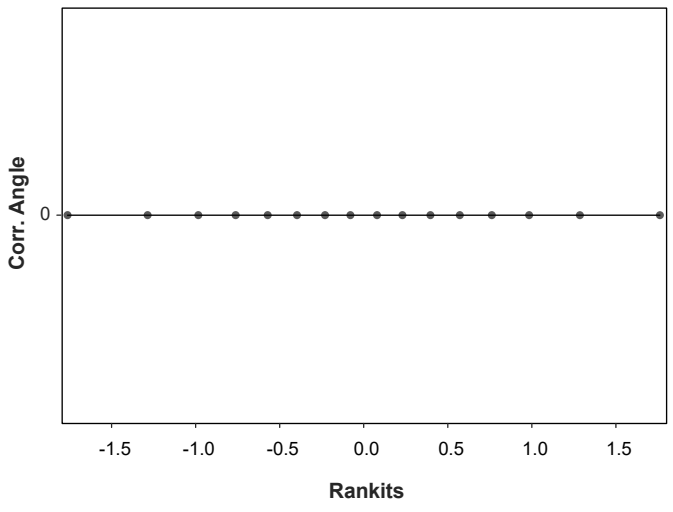

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	08-6623-5087	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:38	**MD5 Hash:**	C8AA5D166E0AF01B928AC55FB1C1DB31	**Editor ID:**	

Batch ID:	09-7317-3114	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:12	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	18-5269-6259	**Code:**	CSE0126.001fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:05	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.001

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	13	17.49	0.6938	CDF	<1.0E-05	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.3361E-05	2.3361E-05	1	0.1736	0.6832	Non-Significant Effect
Error	0.0018835	0.00013454	14			
Total	0.00190686		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	0.1242	8.862	0.7298	Equal Variances
	Mod Levene Equality of Variance Test	0.008192	8.862	0.9292	Equal Variances
	Variance Ratio F Test	1.125	8.885	0.8801	Equal Variances
Distribution	Anderson-Darling A2 Test	1.4	3.878	0.0007	Non-Normal Distribution
	D'Agostino Skewness Test	2.022	2.576	0.0431	Normal Distribution
	Kolmogorov-Smirnov D Test	0.25	0.2471	0.0086	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.8208	0.8408	0.0052	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.346	0.336	0.356	0.3403	0.3367	0.3667	0.00422	3.45%	0.00%
100		8	0.3484	0.339	0.3578	0.3457	0.3367	0.3713	0.003978	3.23%	-0.70%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3413	0.3627	0.3667	0.346	0.3393	0.3367	0.3373	0.338
100		0.348	0.3407	0.3367	0.3473	0.3413	0.344	0.358	0.3713

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	08-6623-5087	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:41	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:38	**MD5 Hash:**	C8AA5D166E0AF01B928AC55FB1C1DB31	**Editor ID:**	

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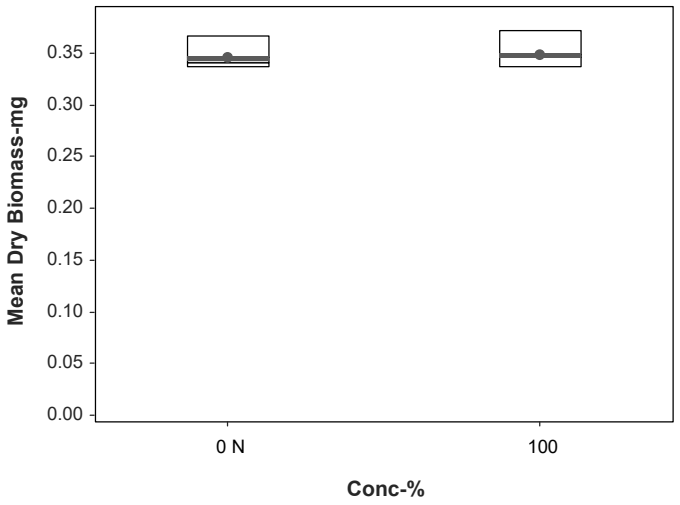

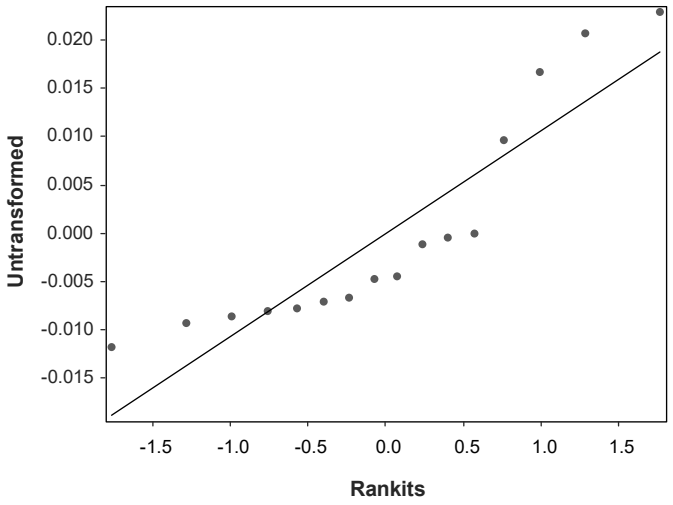

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-7317-3114	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:12	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	18-5269-6259	**Code:**	CSE0126.001fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:05	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.6 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.001

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58.25	57.86	58.64	58	59	0.05786	0.4629	0.79%	0
100		8	27	27	27	27	27	0	0	0.00%	0
Overall		16	42.62	34.02	51.23	27	59	4.035	16.14	37.87%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	311.8	308.7	314.8	305	316	0.4519	3.615	1.16%	0
100		8	177.2	174	180.5	171	182	0.4899	3.919	2.21%	0
Overall		16	244.5	207.4	281.6	171	316	17.39	69.55	28.45%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.825	7.558	8.092	7.1	8.1	0.03995	0.3196	4.08%	0
100		8	7.875	7.597	8.153	7.1	8.1	0.04159	0.3327	4.23%	0
Overall		16	7.85	7.681	8.019	7.1	8.1	0.07906	0.3162	4.03%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	33	33	33	33	33	0	0	0.00%	0
Overall		16	66.5	48.06	84.94	33	100	8.65	34.6	52.03%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.688	7.453	7.922	7.3	8	0.035	0.28	3.64%	0
100		8	7.088	6.943	7.232	6.9	7.3	0.02159	0.1727	2.44%	0
Overall		16	7.388	7.184	7.591	6.9	8	0.09569	0.3828	5.18%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.06	23.99	24.14	24	24.2	0.01145	0.09156	0.38%	0
Overall		16	24.03	23.99	24.07	24	24.2	0.0176	0.07042	0.29%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
02-8744-0682	7d Survival Rate	Steel Many-One Rank Sum Test	✓	38	75	53.39	5.18%	1
06-8328-3004	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test	✓	38	75	53.39	8.85%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
04-7357-4908	7d Survival Rate	Linear Interpolation (ICPIN)		EC15	42.3	38.45	45.94	1
				EC20	44.88	41.46	48.34	
				EC25	47.47	44.43	50.64	
				EC40	55.21	52.46	58	
				EC50	60.37	57.62	63.56	
07-9263-1577	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)	✓	IC15	40.56	28	45.53	1
			✓	IC20	43.12	35.91	47.75	
			✓	IC25	45.68	38.93	50.17	
			✓	IC40	53.37	47.88	57.34	
			✓	IC50	58.5	53.99	62.08	

Test Acceptability

				TAC Limits			
Analysis ID	Endpoint	Attribute	Test Stat	Lower	Upper	Overlap	Decision
02-8744-0682	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
04-7357-4908	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
06-8328-3004	Mean Dry Biomass-mg	Control Resp	0.3595	0.25	<<	Yes	Passes Criteria
07-9263-1577	Mean Dry Biomass-mg	Control Resp	0.3595	0.25	<<	Yes	Passes Criteria
06-8328-3004	Mean Dry Biomass-mg	PMSD	0.08852	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.9333	0.8467	1.0200	0.8667	1.0000	0.0272	0.0544	5.83%	6.67%
75		4	0.2167	0.1151	0.3182	0.1333	0.2667	0.0319	0.0638	29.46%	78.33%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3595	0.3368	0.3822	0.3453	0.3793	0.00713	0.01426	3.97%	0.00%
10		4	0.348	0.3402	0.3558	0.3413	0.352	0.002449	0.004899	1.41%	3.20%
19		4	0.3468	0.3403	0.3534	0.3433	0.3513	0.002062	0.004123	1.19%	3.52%
38		4	0.3235	0.2698	0.3772	0.2733	0.346	0.01687	0.03373	10.43%	10.01%
75		4	0.064	0.02475	0.1032	0.03067	0.08333	0.01233	0.02466	38.54%	82.20%
150		4	0.005167	-0.01128	0.02161	0	0.02067	0.005167	0.01033	200.00%	98.56%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: 94FB553A5435121D49A0AECAA8AA728E

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.9333	0.9333	0.8667	1.0000
75		0.2000	0.1333	0.2667	0.2667
150		0.0000	0.0000	0.0000	0.0667

Mean Dry Biomass-mg Detail MD5: 9162B03D940BA285B4D38979DAAD9905

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3453	0.3567	0.3567	0.3793
10		0.3513	0.3413	0.352	0.3473
19		0.3433	0.3493	0.3513	0.3433
38		0.346	0.3353	0.2733	0.3393
75		0.06	0.03067	0.082	0.08333
150		0	0	0	0.02067

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		14/15	14/15	13/15	15/15
75		3/15	2/15	4/15	4/15
150		0/15	0/15	0/15	1/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-8744-0682	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck	
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	38	75	53.39	---	0.05181	5.18%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38	6	12	10	1	CDF	0.1424	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6.56508	1.31302	5	379.1	<1.0E-05	Significant Effect
Error	0.0623407	0.00346337	18			
Total	6.62742		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	3.555	4.248	0.0207	Equal Variances
	Mod Levene Equality of Variance Test	1.938	4.248	0.1376	Equal Variances
Distribution	Anderson-Darling A2 Test	2.428	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	1.811	2.576	0.0701	Normal Distribution
	D'Agostino Skewness Test	0.402	2.576	0.6877	Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	3.442	9.21	0.1789	Normal Distribution
	Kolmogorov-Smirnov D Test	0.3333	0.2056	<1.0E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.8327	0.884	0.0011	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.9333	0.8467	1.0000	0.9333	0.8667	1.0000	0.0272	5.83%	6.67%
75		4	0.2167	0.1151	0.3182	0.2444	0.1333	0.2667	0.0319	29.46%	78.33%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-8744-0682	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.3140	1.1550	1.4730	1.3100	1.1970	1.4410	0.0500	7.60%	8.81%
75		4	0.4807	0.3527	0.6086	0.5163	0.3738	0.5426	0.0402	16.73%	66.65%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.9333	0.9333	0.8667	1.0000
75		0.2000	0.1333	0.2667	0.2667
150		0.0000	0.0000	0.0000	0.0667

Angular (Corrected) Transformed Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		1.3100	1.3100	1.1970	1.4410
75		0.4636	0.3738	0.5426	0.5426
150		0.1295	0.1295	0.1295	0.2612

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		14/15	14/15	13/15	15/15
75		3/15	2/15	4/15	4/15
150		0/15	0/15	0/15	1/15

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-8744-0682	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

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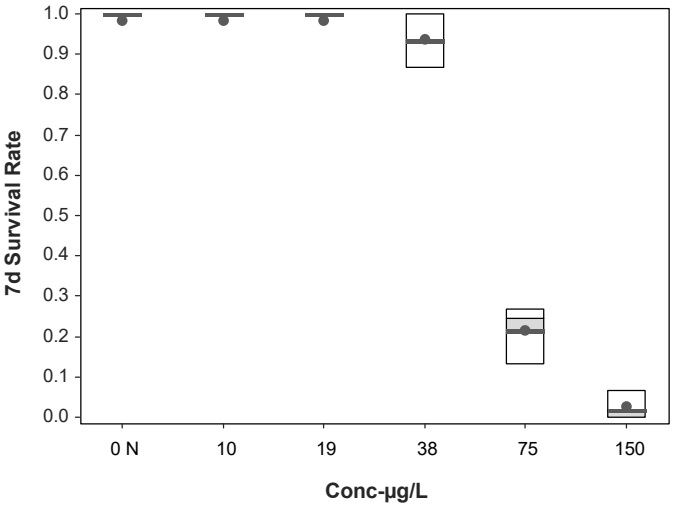
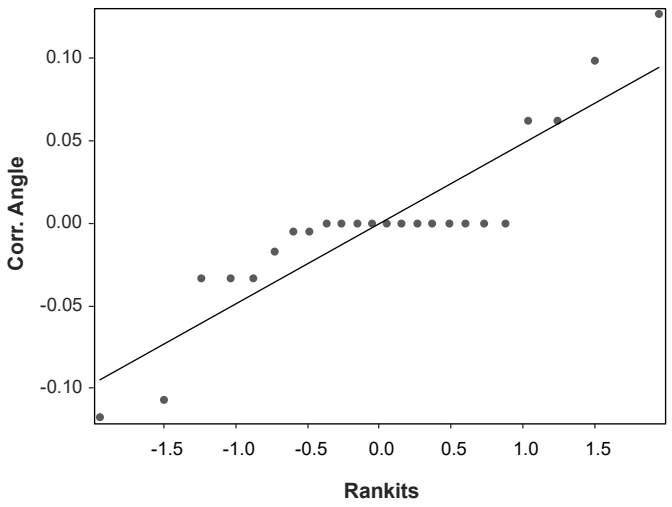




Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	06-8328-3004	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck	
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.03182	8.85%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	13	10	0	CDF	0.2311	Non-Significant Effect
		19	6	12	10	0	CDF	0.1424	Non-Significant Effect
		38	6	11	10	0	CDF	0.0805	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.521778	0.104356	5	298.5	<1.0E-05	Significant Effect
Error	0.006292	0.00034956	18			
Total	0.52807		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	15.13	15.09	0.0098	Unequal Variances
	Levene Equality of Variance Test	3.307	4.248	0.0272	Equal Variances
	Mod Levene Equality of Variance Test	0.9513	4.248	0.4725	Equal Variances
Distribution	Anderson-Darling A2 Test	1.126	3.878	0.0061	Non-Normal Distribution
	D'Agostino Kurtosis Test	2.236	2.576	0.0254	Normal Distribution
	D'Agostino Skewness Test	2.592	2.576	0.0095	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	11.72	9.21	0.0029	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2184	0.2056	0.0044	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.8705	0.884	0.0054	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3595	0.3368	0.3822	0.3567	0.3453	0.3793	0.007131	3.97%	0.00%
10		4	0.348	0.3402	0.3558	0.3493	0.3413	0.352	0.002449	1.41%	3.20%
19		4	0.3468	0.3403	0.3534	0.3453	0.3433	0.3513	0.002062	1.19%	3.52%
38		4	0.3235	0.2698	0.3772	0.3373	0.2733	0.346	0.01687	10.43%	10.01%
75		4	0.064	0.02475	0.1032	0.071	0.03067	0.08333	0.01233	38.54%	82.20%
150		4	0.005167	-0.01128	0.02161	0	0	0.02067	0.005167	200.00%	98.56%

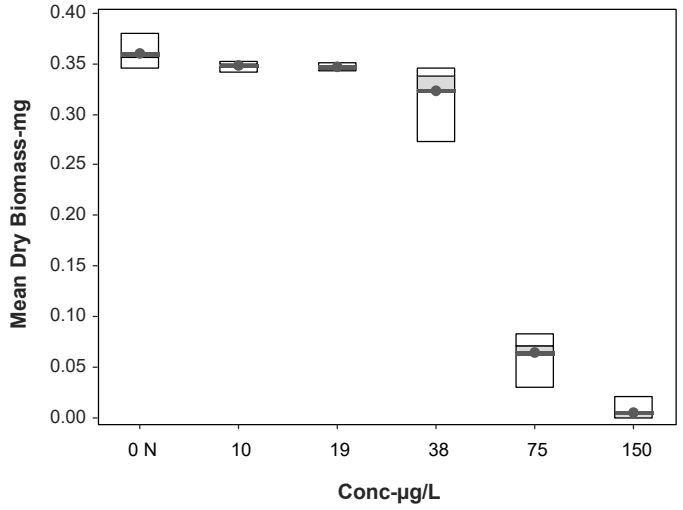
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

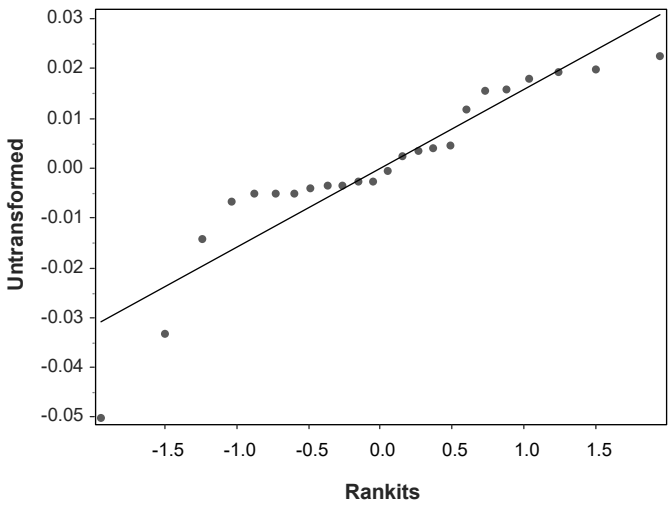
Analysis ID:	06-8328-3004	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3453	0.3567	0.3567	0.3793
10		0.3513	0.3413	0.352	0.3473
19		0.3433	0.3493	0.3513	0.3433
38		0.346	0.3353	0.2733	0.3393
75		0.06	0.03067	0.082	0.08333
150		0	0	0	0.02067

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-7357-4908	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	42.3	38.45	45.94
EC20	44.88	41.46	48.34
EC25	47.47	44.43	50.64
EC40	55.21	52.46	58
EC50	60.37	57.62	63.56

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.9333	0.9333	0.8667	1.0000	5.83%	6.67%	56/60	0.9333	6.67%
75		4	0.2167	0.2444	0.1333	0.2667	29.46%	78.33%	13/60	0.2167	78.33%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.9333	0.9333	0.8667	1.0000
75		0.2000	0.1333	0.2667	0.2667
150		0.0000	0.0000	0.0000	0.0667

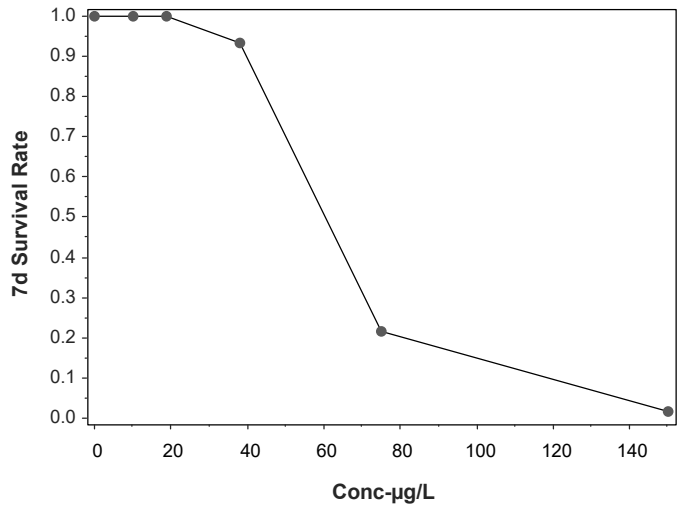
7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		14/15	14/15	13/15	15/15
75		3/15	2/15	4/15	4/15
150		0/15	0/15	0/15	1/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-7357-4908	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-9263-1577	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	511090	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	40.56	28	45.53
IC20	43.12	35.91	47.75
IC25	45.68	38.93	50.17
IC40	53.37	47.88	57.34
IC50	58.5	53.99	62.08

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3595	0.3567	0.3453	0.3793	3.97%	0.00%	0.3595	0.00%
10		4	0.348	0.3493	0.3413	0.352	1.41%	3.20%	0.348	3.20%
19		4	0.3468	0.3453	0.3433	0.3513	1.19%	3.52%	0.3468	3.53%
38		4	0.3235	0.3373	0.2733	0.346	10.43%	10.01%	0.3235	10.01%
75		4	0.064	0.071	0.03067	0.08333	38.54%	82.20%	0.064	82.20%
150		4	0.005167	0	0	0.02067	200.00%	98.56%	0.005167	98.56%

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3453	0.3567	0.3567	0.3793
10		0.3513	0.3413	0.352	0.3473
19		0.3433	0.3493	0.3513	0.3433
38		0.346	0.3353	0.2733	0.3393
75		0.06	0.03067	0.082	0.08333
150		0	0	0	0.02067

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-9263-1577	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

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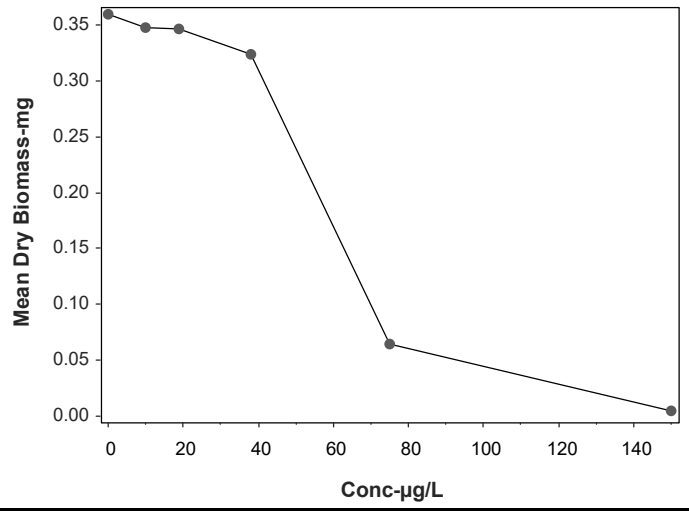


Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58.25	57.86	58.64	58	59	0.05786	0.4629	0.79%	0
150		8	60	60	60	60	60	0	0	0.00%	0
Overall		16	59.12	58.61	59.64	58	60	0.2394	0.9574	1.62%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	311.8	308.7	314.8	305	316	0.4519	3.615	1.16%	0
10		8	310.6	309.9	311.4	310	312	0.1145	0.9161	0.29%	0
19		8	309.5	308.9	310.1	309	311	0.09449	0.7559	0.24%	0
38		8	308	307	309	307	310	0.1494	1.195	0.39%	0
75		8	307.6	306.5	308.7	306	310	0.1628	1.302	0.42%	0
150		8	307.5	306.3	308.7	306	310	0.1768	1.414	0.46%	0
Overall		48	309.2	308.5	309.9	305	316	0.3399	2.355	0.76%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.713	7.354	8.071	7	8.1	0.05363	0.4291	5.56%	0
10		8	7.775	7.49	8.06	7	8.1	0.04265	0.3412	4.39%	0
19		8	7.763	7.484	8.041	7	8.1	0.04169	0.3335	4.30%	0
38		8	7.75	7.464	8.036	7	8.1	0.04278	0.3423	4.42%	0
75		8	7.738	7.445	8.03	7	8.1	0.04378	0.3503	4.53%	0
150		8	7.713	7.418	8.007	7	8.1	0.04404	0.3523	4.57%	0
Overall		48	7.742	7.643	7.841	7	8.1	0.04918	0.3407	4.40%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.663	7.448	7.877	7.3	8	0.032	0.256	3.34%	0
10		8	7.538	7.348	7.727	7.2	7.8	0.0283	0.2264	3.00%	0
19		8	7.512	7.326	7.699	7.2	7.8	0.0279	0.2232	2.97%	0
38		8	7.487	7.29	7.685	7.2	7.8	0.02946	0.2357	3.15%	0
75		8	7.462	7.284	7.641	7.2	7.8	0.02667	0.2134	2.86%	0
150		8	7.425	7.226	7.624	7.1	7.8	0.02969	0.2375	3.20%	0
Overall		48	7.515	7.447	7.582	7.1	8	0.03355	0.2325	3.09%	0 (0%)

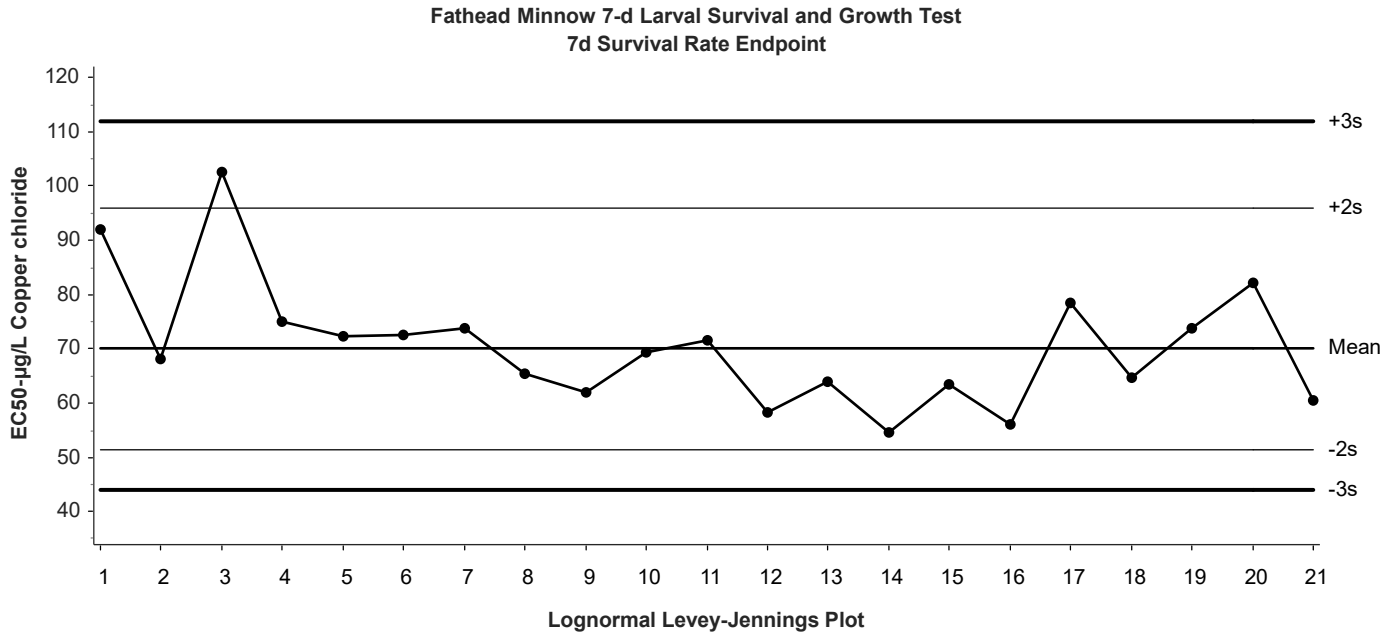
Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.03	23.99	24.06	24	24.1	0.005778	0.04623	0.19%	0
19		8	24.04	23.98	24.1	24	24.2	0.009295	0.07436	0.31%	0
38		8	24.04	23.98	24.1	24	24.2	0.009295	0.07436	0.31%	0
75		8	24.05	23.96	24.14	24	24.3	0.01336	0.1069	0.44%	0
150		8	24.05	23.96	24.14	24	24.3	0.01336	0.1069	0.44%	0
Overall		48	24.03	24.01	24.06	24	24.3	0.01087	0.07532	0.31%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



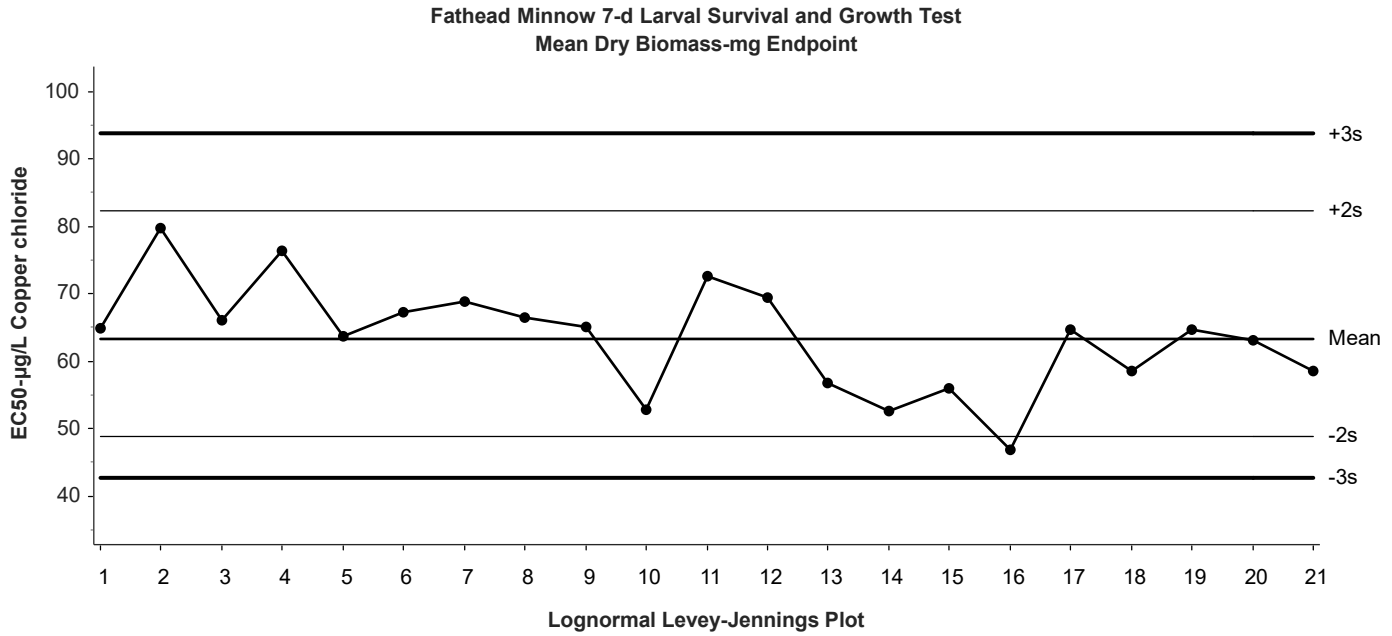
Mean:	70.11	**Count:**	20	**-2s Warning Limit:**	51.3	**-3s Action Limit:**	43.9
Sigma:	NA	**CV:**	15.70%	**+2s Warning Limit:**	95.8	**+3s Action Limit:**	112

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	17	13:00	91.94	21.83	1.737			13-3277-6088	03-7751-7547
2			21	15:24	68	-2.105	-0.1953			08-1266-5648	19-4309-1944
3			22	14:55	102.6	32.53	2.442	(+)		07-5558-1243	12-5555-4178
4			28	15:30	75	4.895	0.4323			13-4573-3635	11-5047-1832
5			30	15:30	72.36	2.252	0.2025			11-5715-0925	03-3652-0021
6		Apr	4	11:45	72.45	2.343	0.2106			17-3412-6439	09-0505-4831
7			11	15:10	73.72	3.619	0.3224			12-2891-6798	20-3297-8234
8			25	15:00	65.49	-4.62	-0.4367			19-7686-5958	17-2422-4835
9			27	13:00	61.94	-8.164	-0.7932			01-1863-5687	10-3453-8425
10		May	2	15:45	69.31	-0.7977	-0.07331			01-5973-7078	19-8547-5138
11			9	15:30	71.53	1.426	0.129			01-4263-6313	07-3079-9817
12		Aug	9	13:00	58.18	-11.92	-1.194			14-3532-4574	02-3075-3473
13		Oct	6	14:45	63.9	-6.205	-0.5937			18-8099-7551	11-2650-3626
14	2024	Jan	9	13:20	54.55	-15.55	-1.607			14-8299-7228	00-5651-6529
15		Aug	1	15:59	63.35	-6.754	-0.6489			17-2152-6147	10-3671-8471
16	2025	Mar	6	15:00	55.94	-14.17	-1.446			06-4992-6637	09-1125-3834
17		Jul	8	11:21	78.31	8.203	0.7089			00-3393-7264	14-6710-1242
18			10	13:10	64.72	-5.383	-0.5118			07-5897-2938	20-7755-3652
19		Sep	9	13:10	73.75	3.647	0.3249			00-2537-6486	15-9566-8088
20		Dec	30	12:30	82.03	11.93	1.006			00-0985-9985	20-9726-2836
21	2026	Jan	6	13:30	60.37	-9.733	-0.9575			06-7109-6378	04-7357-4908

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	Mean Dry Biomass-mg	**Source:**	Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
2			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
3			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
4			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
5			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
6			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
7		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
8			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
9			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
10			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
11		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
12			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
13		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
14	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
15		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
16	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
17		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
18			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
19		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
20		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604
21	2026	Jan	6	13:30	58.5	-4.874	-0.6133			06-7109-6378	07-9263-1577

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 1/6/26 1330
End Date & Time: 1/13/26 1544
Toxicant Batch ID: FML010526
Lab ID: FML 010626
Age of Organism: 1d
Method: EPA-821-R-02-013

Day/Date	0 1/6	1 1/7	2 1/8	3 1/9	4 1/10/26	5 1/11/26	6 1/12/26	7 1/13/26
Time	1330	0900	0951	1008	0916	0830	0835	1342
Analyst	KD	KD	KD	KD	CD	CD	LW	LW
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Renew ≥80%	Y (N)	Y (N)	(Y) N	(Y) N	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMW 020626	-	120825	120825		-	-	-
YSI ID	B	B	B	B	B	B	B	BY
Therm ID	3	3	5	5	2	2	3	3
C.F. (°C)	0.0	0.0	-0.4	-0.4	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.7	7.1	7.8 7.3	7.9 7.1	8.1 7.3	8.0 7.2	8.0 7.0	8.0 7.1
10 ug/L	7.7	7.0	7.8 7.2	7.8 7.1	8.1 7.2	8.0 7.1	7.8 7.0	8.0 7.0
19 ug/L	7.7	7.0	7.8 7.2	7.8 7.1	8.1 7.2	8.0 7.1	7.8 7.0	7.9 7.0
38 ug/L	7.6	7.0	7.9 7.2	7.8 7.0	8.1 7.1	8.0 7.0	7.7 7.0	7.9 7.0
75 ug/L	7.5	7.0	7.9 7.1	7.8 7.0	8.1 7.1	7.9 7.0	7.7 7.0	8.0 7.0
150 ug/L	7.4	7.0	7.9 7.1	7.8 7.0	8.1 7.1	7.9 7.0	7.7 7.0	7.9 7.0
Temperature (°C)								
Control	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0
10 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.1	24.0 24.0
19 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.2	24.0 24.0
38 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.2	24.0 24.0
75 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.3	24.0 24.0
150 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.3	24.0 24.0
pH								
Control	7.3	7.3	7.4 7.7	7.7 7.7	8.0 7.6	7.8 7.6	7.8 7.8	7.8 7.4
10 ug/L	7.2	7.2	7.3 7.3	7.4 7.3	7.5 7.6	7.8 7.5	7.6 7.5	7.7 7.4
19 ug/L	7.2	7.2	7.3 7.3	7.3 7.3	7.5 7.6	7.8 7.5	7.6 7.5	7.7 7.7
38 ug/L	7.2	7.2	7.2 7.2	7.3 7.2	7.5 7.6	7.8 7.4	7.5 7.5	7.7 7.7
75 ug/L	7.2	7.2	7.2 7.2	7.3 7.2	7.5 7.6	7.8 7.4	7.5 7.5	7.6 7.6
150 ug/L	7.1	7.1	7.2 7.2	7.2 7.2	7.5 7.6	7.8 7.4	7.5 7.5	7.6 7.5
Conductivity (uS/cm)								
Control	310	316	315	305	310	312	311	315
10 ug/L	311	310	310	312	310	310	310	312
19 ug/L	309	309	309	309	309	310	310	311
38 ug/L	309	307	308	308	308	309	309	310
75 ug/L	306	307	307	307	307	308	309	310
150 ug/L	309	306	307	307	306	307	308	310
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	59	59
150 ug/L	LW	LW	LW	LW	LW	LW	LW	LW
Hardness (mg/L CaCO3)								
Control	LW	LW	LW	LW	LW	LW	LW	LW
150 ug/L	LW	LW	LW	LW	LW	LW	LW	LW

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 1/6/26 End Date: 1/13/26 Lab ID: **FML** 010626

	Analyst	N	M	[illegible]	[illegible]	LD	LD	N	LD
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	7 / 15	15	15	15	15
	2	15	15	15	9 / 15	15	15	15	15
	3	15	15	15	9 / 15	15	15	15	15
	4	15	15	15	12 / 15	15	15	15	15
19	1	15	16	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	15	15	15	15	15	14
	2	15	15	15	15	15	15	15	14
	3	15	15	15	15	15	15	15	13
	4	15	15	15	15	15	15	15	15
75	1	15	15	14	7	7	7	3	3
	2	15	15	15	9	9	9	2	2
	3	15	15	14	9	9	9	4	4
	4	15	15	15	12	12	12	4	4
150	1	15	9	9	3	3	3	0	—
	2	15	1	0					
	3	15	3	3	1	1	1	0	—
	4	15	5	5	2	2	2	1	1

Balance ID: BAL 1

Analyst: LD

Date/Time in Oven: 1/13/26

Date/Time out Oven 1/14/26

Oven Temp (°C): 62.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
DA 1	CONTROL	1	1.16141	1.16659	0.00518
2		2	1.14692	1.15227	0.00535
3		3	1.16034	1.16569	0.00535
4		4	1.16102	1.16671	0.00569
DA 5	10	1	1.16084	1.16611	0.00527
6		2	1.15786	1.16298	0.00512
7		3	1.16761	1.17289	0.00528
8		4	1.15824	1.16345	0.00521
DA 9	19	1	1.16074	1.16589	0.00515
10		2	1.16857	1.17381	0.00524
11		3	1.17269	1.17796	0.00527
12		4	1.15629	1.16144	0.00515
DA 13	38	1	1.16084	1.16603	0.00519
14		2	1.15389	1.15892	0.00503
15		3	1.15623	1.16033	0.00410
16		4	1.15569	1.16078	0.00509
DA 17	75	1	1.17331	1.17421	0.00090
18		2	1.15653	1.15699	0.00046
19		3	1.15909	1.16032	0.00123
20		4	1.16002	1.16127	0.00125
—	150	1	—	—	—
—		2	—	—	—
—		3	—	—	—
DA 21		4	1.15862	1.15893	0.00031
DA 22	BLANK	1	1.16124	1.16120	-0.00004

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE 1
Start Date & Time: 1/6/26 1530
End Date & Time: 1/13/26 1512

Lab ID: CSE0126.001
Date Rec'd: 1/5/26
Age of Organism: 10

Day/Date	0 1/6	1 1/7/26	2 1/8	3 1/9	4 1/10/26	5 1/11/26	6 1/12/26	7 1/13/26
Time	1530	1001	1205	1141	1010	0918	1127	1512
Analyst	MM	MM	SS	JS	JD	JD	JS	
Fed	(Y) N	(Y) N	Y N	Y N	(Y) N	(Y) N	Y N	Y (N)
Renewed≥80%	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Lab ID	.001	.001	.001	.001	.001	.001	.001	.001
ControlBatch	1MHW122624	1MHW122824	1MHW122826	1MHW122826	1MHW122826	1MHW122826	MMHW011126	1MHW011126
YSI ID	B	B	B	B	B	B	B	B
Therm ID	3	3	5	5	2	2	5	3
C.F. (°C)	0.0	0.0	+0.4	−0.4	0.0	0.0	−0.4	0.0
Dissolved Oxygen (mg/L)								
Control	7.7	7.1 7.8	7.3 7.5	7.1 8.1	7.3 8.0	7.2 8.0	7.0 8.0	7.1
100%	8.1	7.3 8.1	7.3 8.0	7.0 8.1	7.1 7.9	7.1 7.8	7.1 7.9	7.1
Temperature (°C)								
Control	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0
100%	24.0	24.0 24.2	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.2	24.0 24.0	24.0
pH								
Control	7.3	7.3 7.4	7.4 7.4	7.4 8.0	7.6 8.0	7.6 7.8	7.8 7.8	7.8
100%	6.9	6.9 6.9	6.9 6.9	6.8 7.1	6.9 7.1	6.9 7.2	7.2 7.3	7.3
Conductivity (uS/cm)								
Control	310	316	315	305	310	312	311	315
100%	171	172	177	177	179	180	180	182
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	59	59
100%	27	27	27	27	29	27	27	29
Hardness (mg/L CaCO3)								
Control	100	100	100	100	100	100	100	100
100%	33	33	33	33	33	33	33	33

Residual Chlorine 1st Sample: 0.1 2nd Sample: ~ 3rd Sample: ~

Chronic Fathead Minnow Survival and Growth - TST

Client: CSE 1 Lab ID: CSE0126.001

Start Date: 1/6/26 End Date: 1/13/26

Concentration	Replicate	Analyst	1	2	3	4	5	6	Final
CONTROL	1	LC	15	15	15	15	15	15	15
	2	LC	15	15	15	15	15	15	15
	3	LC	15	15	15	15	15	15	15
	4	LC	15	15	15	15	15	15	15
	5	LC	15	15	15	15	15	15	15
	6	LC	15	15	15	15	15	15	15
	7	LC	15	15	15	15	15	15	15
	8	LC	15	15	15	15	15	15	15
100	1	LC	15	15	15	15	15	15	15
	2	LC	15	15	15	15	15	15	15
	3	LC	15	15	15	15	15	15	15
	4	LC	15	15	15	15	15	15	15
	5	LC	15	15	15	15	15	15	15
	6	LC	15	15	15	15	15	15	15
	7	LC	15	15	15	15	15	15	15
	8	LC	15	15	15	15	15	15	15

Oven Temp (°C): 62.0 Date/Time In: 1/13/26 1530 Date/Time Out: 1/14/26 1530

Balance ID: BAL 1 Analyst: LC

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
DH 1	CONTROL	1	1.15289	1.15801	0.00512
2		2	1.16301	1.16845	0.00544
3		3	1.15710	1.16260	0.00550
4		4	1.16073	1.16592	0.00519
5		5	1.16203	1.16712	0.00509
6		6	1.16068	1.16573	0.00505
7		7	1.16234	1.16740	0.00506
8		8	1.15185	1.15692	0.00507
DH 9	100	1	1.16017	1.16539	0.00522
10		2	1.16233	1.16744	0.00511
11		3	1.16659	1.17164	0.00505
12		4	1.17719	1.18240	0.00521
13		5	1.18158	1.18670	0.00512
14		6	1.16580	1.17096	0.00516
15		7	1.16134	1.16671	0.00537
16		8	1.15925	1.16482	0.00557

Appendix D

Chain of Custody and Sample Receipt Summary

CHAIN OF CUSTODY FORM

-001

Added C.F. = ~0.3°C 2
Therm. = sample receiving
Temp. deg. C = 5.4
Chlorine (mg/L) = <0.1
NH3 (mg/L) <0.1

Client Name/Address: Haley & Aldrich, 5333 Mission Center Rd Suite 300, San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 **Routine** **Outfall 001** **COMPOSITE**
Eurofins Calscience Project Manager: Virendra Patel, 2841 Dow Avenue, Suite #100, Tustin, CA 92780, Tel: 714-895-5494 **ECI Project #57013187**	
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	ANALYSIS REQUIRED: Total Dissolved Metals: (E200.8): Al, Cd, Cu, Pb, Se, Zn	LL Mercury (E1631E) – Total Dissolved	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0) - **Sub to St. Louis**	* Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	1,4-Dioxane (E624 (SW8260M_SIM))	Cyanide (Kelada)	Monomethyl hydrazine (SW8315M/DW-WC-0077) **Weck Labs in Hacienda Heights, CA**			Comments
Outfall 001	Outfall001_20260102_Comp_F	1/2/2026 1005	WM	250 mL Poly	3	None	Yes	X									Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, dbl bagged	1	None	Yes		X								Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	Outfall001_20260102_Comp	1/2/2026 1005	WM	500 mL Poly	1	NaOH							X				
			WM	1 L Poly	4	HNO3				X							Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None											
			* WM	2.5 Gal Cube	2	None					X						Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA.**
			WM	40 mL VOA	3	HCl						X					
			WM	1 L Glass Amber	1	None								X			**Segregate into a cooler for Weck Labs.**
QA/QC	Outfall001_20260102_Grab_F-04	1/2/2026 1005	WQ	8oz Clear Glass, dbl bagged	1	None			X								Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Mark Dominick	1-5-26/0821	G:A	Brigada Mata	1/5/26 0824
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
5-DAY RUSH TAT
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

* Hand-delivered to ABC Labs with this copy of the COC

Sample Receipt Summary

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Client Name: EARTHJUSTICE

Project Name: OUTFALL 001 & 011

Receiving Information

1. Received By (initials): DM
2. Date Received: 1/5/26
3. Time Received: 0821
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - ___ Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): DM

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Subcontract Data

Shipping and Receiving Documents

570-261745 Chain of Custody

CHAIN OF CUSTODY FORM

Loc: 570
261745

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 **Routine** **Outfall 001** **COMPOSITE**
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	R Total Recoverable Metals:(E200.8): Al, Cd, Cu, Pb, Se, Zn	R TCDD (and all congeners) (E1613B) - **Sub to Sacramento**	R BOD5 (20 degrees C) (E405.1 (SM5210B_BODCalc))	R LL Mercury (E1631E) -- Total Recoverable	R Chloride (Cl-), Sulfate (SO4), Nitrate-N, Nitrite-N, NO3+NO2-N (E300)	R Turbidity, TDS (SM2540C/E180.1)	R TSS (160.2 (SM2540D))	R Routine Pesticides/PCBs - alpha-BHC, 4,4-DDE, Heptachlor, and PCB Aroclors (E608) **Weck Labs in Hacienda Heights, CA**	R Routine SVOCs - 2,4,6 Trichlorophenol; 2,4 Dinitrotoluene; Bis(2-ethylhexyl)phthalate, NDMA, Pentachlorophenol, Benzidine; 3,3-Dichlorobenzidene (E625)	R Routine SVOCs (E625.1 SIM) **Sub Indeno(1,2,3-cd)pyrene to EMAX**	R Ammonia-N (E351.1)	R Detergents (MBAS) (SM5540C/E425.1)	Comments
1 Outfall 001	Outfall001_20260102_Comp	1/2/2026 1005	WM	250 mL Poly	3	HNO3	Yes	X												
			WM	1 L Glass Amber	2	None			X											
			WM	1 L Poly	1	None				X										
			WM	8oz Clear Glass, dbl bagged	1	HCL	Yes				X									Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	250 mL Poly	1	None						X								48 hours Holding Time NO_3 & NO_2
			WM	500 mL Poly	1	None							X							48 hour holding time for turbidity
			WM	1 L Poly	1	None								X						
			WM	1 L Glass Amber	4	None									X					**Segregate into a cooler for Weck Labs.**
			WM	1 L Glass Amber	12	None	Yes									X				
			WM	1 L Glass Amber	4	None											X			**Segregate into a cooler for EMAX.**
			WM	250 mL Poly	1	H_2SO_4												X		
			WM	1 L Poly	1	None													X	
2 QA/QC	Outfall001_20260102_Grab-04	1/2/2026 1005	WM	8oz Clear Glass, dbl bagged	1	HCL					X									Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	1 L Glass Amber	2 ~~3~~	None										X				

ANALYSIS REQUIRED

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Michelle Dallalah	1/2/26 12:30	H&A		EC 1/2/26 1230
	1/2/26 1700	EC		1/2/26 1700

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: __X__ Normal: _____
5-DAY RUSH TAT
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: __X__

2025-2026 Rainy Season
Version 1

VU92

2.4/2.6, 2.2/2.4, 2.8/3.0 IRS

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 Routine Outfall 001 COMPOSITE
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)

								ANALYSIS REQUIRED										
								R	R	R	A/R	R	R	R				
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Dissolved Metals: (E200.8): Al, Cd, Cu, Pb, Se, Zn	LL Mercury (E1631E) – Total Dissolved	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0) - Sub to St. Louis	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) ABC Labs in Ventura, CA	1,4-Dioxane (E624 (SW8260M_SIM))	Cyanide (Kelada)	Monomethyl hydrazine (SW8315M/DV-WC-0077) Weck Labs in Hacienda Heights, CA			Comments
Outfall 001	3 Outfall001_20260102_Comp_F	1/2/2026 1005	WM	250 mL Poly	3	None	Yes	X										Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, dbl bagged	1	None	Yes		X									Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	1 Outfall001_20260102_Comp	1/2/2026 1005	WM	500 mL Poly	1	NaOH								X				
			WM	1 L Poly	4	HNO3				X								Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None												
			WM	2.5 Gal Cube	2	None					X							Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA.**
			WM	40 mL VOA	3	HCl						X						
			WM	1 L Glass Amber	1	None									X			**Segregate into a cooler for Weck Labs.**
QA/QC	4 Outfall001_20260102_Grab_F-04	1/2/2026 1005	WQ	8oz Clear Glass, dbl bagged	1	None			X									Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Michelle Dallalah	1/2/26 12:30	HEA	FC	1/2/26 1230
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
	1/2/26 1700	EC		1/2/26 1700
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
5-DAY RUSH TAT
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497598.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): NELAP Oregon, State California; State Program Cal		Job #: 570-261745-3
Address: 5755 8th Street East,	Due Date Requested: 1/15/2026			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: Boeing NPDES SSFL Routine Outfall 001 COMP	Project #: 57013187			
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)	1631E Mercury, Total	1631E/Filtration_ME Mercury, Dissolved	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Outfall001_20260102_Comp (570-261745-1)	1/2/26	10:05 Pacific	G	Water			X		1	
Outfall001_20260102_Comp (570-261745-1MS)	1/2/26	10:05 Pacific	G	Water			X		1	
Outfall001_20260102_Comp (570-261745-1MSD)	1/2/26	10:05 Pacific	G	Water			X		1	
Outfall001_20260102_Grab-04 (570-261745-2)	1/2/26	10:05 Pacific	G	Water			X		1	
Outfall001_20260102_Comp_F (570-261745-3)	1/2/26	10:05 Pacific	G	Water				X	1	
Outfall001_20260102_Comp_F (570-261745-3MS)	1/2/26	10:05 Pacific	G	Water				X	1	
Outfall001_20260102_Comp_F (570-261745-3MSD)	1/2/26	10:05 Pacific	G	Water				X	1	
Outfall001_20260102_Grab_F-04 (570-261745-4)	1/2/26	10:05 Pacific	G	Water				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
	Relinquished by:	Date/Time: 1-5-26	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

ICOC No:
570-497598

Containers

Count	Container Type	Preservative
2	Clear Glass 250ml - HCL	Hydrochloric Acid
2	Clear Glass 250mL - unpreserved	None
4	No Container	None

Bottle Order Information

Bottle Order
Bottle Order #:
Request From Client: 1/5/2026
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***1/5/2026 11 59·00PM***
Lab Project Number
PWSID

Order Completion Information

Creator· *George Padron*
Filled by
Sent Date.
Sent Via
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #:
						Seal #:
						Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #:
						Seal #:
						Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497666.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261745-6
Address: 13715 Rider Trail North,	Due Date Requested: 1/14/2026			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 001 COMP	Project #: 57013187			
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)	901.1_Cs/Fill_Geo_0K-40 and Cesium-137	A01R_U/ExtChrom_ActinTotal Uranium	900.0/EvaporationGross Alpha/Beta	903.0/PrecSep_21Radium-226	904.0/PrecSep_0Radium-228	905_Sr90/PrecSep_7Strontium-90	906.0/LSC_Dist_SuspTritium	Total Number of containers	Special Instructions/Note:
			Preservation Code:												
Outfall001_20260102_Comp (570-261745-1)	1/2/26	10:05 Pacific	G	Water			X	X	X	X	X	X	X	5	Boeing SSFL, DO NOT FILTER; use prep date from preservation

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: 1-5-26 13-	Company	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:

Ver: 10/10/2024

ICOC No:
570-497666

Containers

Count	Container Type	Preservative
1	Amber Glass 1 liter - unpreserved	None
4	Plastic 1 liter - Nitric Acid	Nitric Acid

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client: *1/5/2026*
Date Order Posted
Order Status: *Ready To Process*
Prepared By
Deliver By Date. ***1/5/2026 11:59:00PM***
Lab Project Number:
PWSID.

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date.
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497750.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261745-2
Address: 880 Riverside Parkway	Due Date Requested: 1/15/2026			Preservation Codes:
City: West Sacramento	TAT Requested (days): N/A			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 001 COMP	Project #: 57013187			
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)	1613B/1613B_Sox_Sep_P(MOD) Standard List w/ Totals	Total Number of Containers	Special Instructions/Note:
			Preservation Code:						
Outfall001_20260102_Comp (570-261745-1)	1/2/26	10:05 Pacific	G	Water			X	2	See QAS, Boeing_w/u to zero, ug/L, Use Boeing glassware.

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: 1-6-26 8-	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:

Ver: 10/10/2024

ICOC No.
570-497750

Containers

Count	Container Type	Preservative
2	Amber Glass 1 liter - unpreserved	None

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client 1/6/2026
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***1/6/2026 11 59:00PM***
Lab Project Number:
PWSID:

Order Completion Information

Creator George Padron
Filled by:
Sent Date.
Sent Via.
Tracking #

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497772.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261745-4
Address: 3051 Fujita Street,	Due Date Requested: 1/14/2026			Preservation Codes:
City: Torrance	TAT Requested (days): N/A			
State, Zip: CA, 90505				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 001 COMP	Project #: 57013187			
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)	SUB Subcontract 8270C SIM Indeno(1,2,3-cd)Pyrene	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall001_20260102_Comp (570-261745-1)	1/2/26	10:05 Pacific	G	Water			X	4	See Attached Instructions

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
	1-6-26 9-	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

ICOC No:
570-497772

Containers

Count	Container Type	Preservative
4	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - 8270C - SIM - Indeno((1,2,3-cd)Pyrene	Report down to MDL, Level IV, EMAX STD DOD EDD

Bottle Order Information

Bottle Order
Bottle Order #:
Request From Client: 1/6/2026
Date Order Posted
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***1/6/2026 11 59:00PM***
Lab Project Number
PWSID:

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date.
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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Date:	1/6/2026
End Time:	1421
KI Paper Lot:	na
Analyst:	VL
Pipette:	NO

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0 2N)	143313
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
570-261745-A-2	A	Y	5 2	ND
570-261745-N-1	A	Y	5 2	

eurofins Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025		Issued by: XE8X

Job _____

570-261745 Field Sheet

Tracking # 4910 0184 0705

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID 611 Corr. Factor (+ / -) _____ °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Seal

Cooler ID _____

Temp Observed 1.6 °C Corrected 1.6 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials JH Date 1.7.26

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4')

Initials JH Date 1.7.26

Notes _____

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☑	☐

Initials JH Date 1.7.26

Login Sample Receipt Checklist

Client: Haley & Aldrich Inc

Job Number: 570-261745-5

Login Number: 261745
List Number: 1
Creator: Chapman, Allyson

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Katherine Miller
Haley & Aldrich Inc
201 E. Washington St.
Suite 1795
Phoenix AZ 85004

Generated 1/27/2026 4:37 PM

JOB DESCRIPTION

Boeing NPDES SSFL - Routine Outfall 011 COMP

JOB NUMBER

570-261755-5

Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

Eurofins Calscience

Job Notes

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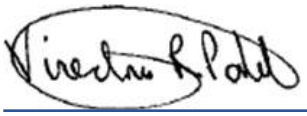
The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed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

Authorization



Generated
1/27/2026 4:37 PM

Authorized for release by
Virendra Patel, Project Manager I
Virendra.Patel@et.eurofinsus.com
714 895-5494

Table of Contents

Cover Title Page 1

Data Summaries 4

- Definitions 4
- Case Narrative 5
- Detection Summary 6
- Method Summary 7
- Sample Summary 8

Subcontracted Data 9

Shipping and Receiving Documents 45

- Client Chain of Custody 46
- Field Data Sheets 60
- Sample Receipt Checklist 62

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
570-261755-5

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 1/2/2026 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.1°C, 2.4°C and 2.7°C.

Subcontract Work
Method Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013): This method was subcontracted to Aquatic Bioassay. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Detection Summary

Client: Haley & Aldrich Inc
Job ID: 570-261755-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 011
COMP

Client Sample ID: Outfall011_20260102_Comp
Lab Sample ID: 570-261755-1

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Haley & Aldrich Inc
Job ID: 570-261755-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 011
COMP

Method	Method Description	Protocol	Laboratory
EPA	Bioassay	EPA	Aquatic

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

Aquatic = Aquatic Bioassay & Consulting, 29 North Olive Street, Ventura, CA 93001

Sample Summary

Client: Haley & Aldrich Inc
Job ID: 570-261755-5
Project/Site: Boeing NPDES SSFL - Routine Outfall 011
COMP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
570-261755-1	Outfall011_20260102_Comp	Water	01/02/26 10:35	01/02/26 17:00	CA

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Toxicity Testing Report

Date of Issue: **01/27/2026**

Report ID: **CSE0126.002**

Prepared for: **Eurofins Calscience**
2841 Dow Avenue1 Suite #100
Tustin, CA 92780

Project: **#57013187**

Enclosed are the toxicity test results for the original sample submitted to Aquatic Bioassay and Consulting Laboratories on 01/05/2026. A total of 1 sample was received for testing in accordance with the attached chain of custody (Appendix D).

Statements of Quality Assurance:

- Aquatic Bioassay and Consulting Laboratories is certified by the California Environmental Laboratory Accreditation Program (ELAP Certificate #1907).
- Tests have met test acceptability criteria and are considered valid.
- All data have been reviewed and verified.

Sincerely,

Elizabeth Maturino

Elizabeth Maturino, Senior Toxicologist
805 643-5621 ext. 100

Brianna Jones

Brianna Jones, QC Manager
805-643-5621 ext. 280

Sample Information & Test Description

Test material consisted of 1 sample collected by Eurofins Calscience on 01/02/2026 at 1035. Sample was delivered to Aquatic Bioassay and Consulting Laboratories (ABCL) on 01/05/2026 at 0821. Upon receipt, the temperature, ammonia and chlorine were measured for each sample and recorded on the chain of custody. Testing was conducted at ABCL during the period of 01/06/2026 to 01/13/2026. Test concentration for the sample was 100%.

Table 1. Sample Information & Test Description.

Sample ID	Laboratory ID	Sample Matrix	Test Method	Test Organism
Outfall011_20260102_Comp	CSE0126.002	WM	EPA-821-R-02-013	*Pimephales promelas*

Analysis

All statistical results were calculated using the Comprehensive Environmental Toxicity Information System (CETIS™), version 2.1.5.6 based on flowchart specifications in the corresponding USEPA method. Organism performance in the test samples is compared to observed performance in the laboratory's concurrent negative control. Additionally, a more recent EPA-recommended Test of Significant Toxicity (TST) approach was utilized.

Results

Mean survival and statistical differences from control for each test, including individual replicate data, are included in the CETIS™ Statistical Analysis Report in Appendix A. The raw data sheets are also included in Appendix C. A summary of the test results is shown in Table 2.

Table 2. Summary of Chronic *Pimephales promelas* Toxicity Results.

Sample ID	Survival in 100% Sample	Mean Dry Biomass
Outfall011_20260102_Comp	100%	0.3037 mg

Table 3. Test of Significant Toxicity (TST) Results.

Sample ID	Organism	Endpoint	TST Result (Pass/Fail)	Percent Effect
Outfall011_20260102_Comp	*Pimephales promelas*	7-day Survival	Pass	0%
		Biomass	Pass	12.24%

Quality Control and Quality Assurance

Negative Control

The negative control met the test acceptability criteria (TAC) described in table 4.

Table 4. Test Acceptability Criteria.

Test Organism	Endpoint	Test Acceptability Criteria
Pimephales promelas	7-day Survival	≥80%
	Biomass	≥0.25 mg/organism

Positive Control

A standard reference toxicant (SRT) functions as a positive control to monitor laboratory performance and the sensitivity of test organisms. The EC_{50}/IC_{50} should fall within two standard deviations of the historical EC_{50}/IC_{50} mean, indicating test organism sensitivity was typical. The CETIS^{tm} Statistical Analysis Report for the SRT along with the QC chart are found in Appendix B. The concurrent SRT results are summarized in table 5.

Table 5. Standard Reference Toxicant Test Results.

Test Date	Test Organism	Endpoint	Toxicant	NOEC	EC_{50}	Historical EC_{50} Mean (±2 SD Range)
01/06/2026	*Pimephales promelas*	7d Survival	Copper chloride	38 µg/L	60.37 µg/L	70.11 µg/L 51.3 – 95.8
		Mean Dry Biomass	Copper chloride	38 µg/L	58.5 µg/L	63.37 µg/L 48.8 – 82.3

Bold indicates result outside of control limits (±2SD). See attached SRT Control Limit Exceedance Form in Appendix.

References

United States Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* EPA-821-R-02-013. EPA.gov.

United States Environmental Protection Agency, 2010. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. Office of Wastewater Management. EPA 833-R-10-003.

Definitions

NOEC (No Observed Effect Concentration): Highest concentration tested that yields no observed effect.

LOEC (Lowest Observed Effect Concentration): Lowest concentration tested that yields observed effect.

EC_{50}: Effective Concentration which causes an adverse effect to 50% of test organisms.

IC_{50}: Inhibitory Concentration which causes a 50% reduction in growth or reproduction.

EC_{25}: Effective Concentration which causes an adverse effect to 25% of test organisms.

IC_{25}: Inhibitory Concentration which causes a 25% reduction in growth or reproduction.

TU_C: Chronic Toxic Unit (100/NOEC).

TU_a: Acute Toxic Unit ($100/LC_{50}$). *< 50% mortality in 100% concentration, then TU_a= (log(%mortality))/1.7

Percent Effect: Relative difference between the control and the sample result.

Negative Control: experimental group with no treatment where no effect is anticipated. Serves as the baseline for comparison.

Positive Control: experimental group with known treatment where an effect is anticipated.

Appendix A

CETIS™ Statistical Analysis Reports:

Test Samples

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	07-6633-5003	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:35	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:11	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-0650-9634	**Code:**	CSE0126.002fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:35	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.002

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
03-6886-8080	7d Survival Rate	TST-Welch's t Test	<0.25	100% passed 7d survival rate	1
12-2326-1294	Mean Dry Biomass-mg	TST-Welch's t Test	0.1691	100% passed mean dry biomass-mg	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
03-6886-8080	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
12-2326-1294	Mean Dry Biomass-mg	Control Resp	0.346	0.25	<<	Yes	Passes Criteria

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	8	0.346	0.336	0.356	0.3367	0.3667	0.00422	0.01194	3.45%	0.00%
100		8	0.3037	0.2023	0.405	0.005333	0.3767	0.04286	0.1212	39.92%	12.24%

7d Survival Rate Detail MD5: F33D79D05FEF902C5DB24788526CB24A

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Mean Dry Biomass-mg Detail MD5: E8B212A9347F773C4CF1D20C9952A399

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3413	0.3627	0.3667	0.346	0.3393	0.3367	0.3373	0.338
100		0.3367	0.338	0.342	0.005333	0.342	0.3433	0.3767	0.3453

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	03-6886-8080	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:22	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:20	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

Batch ID:	07-6633-5003	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:35	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:11	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-0650-9634	**Code:**	CSE0126.002fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:35	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.002

Data Transform	Alt Hyp	TST_b	Comparison Result
Angular (Corrected)	C*b < T	0.75	100% passed 7d survival rate endpoint

TST-Welch's t Test

Control	vs	Conc-%	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	0.3603	---		<0.25	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	14			
Total	0		15			

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

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
100		8	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410
100		1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410	1.4410

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	03-6886-8080	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:22	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:20	**MD5 Hash:**	F33D79D05FEF902C5DB24788526CB24A	**Editor ID:**	

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15	15/15	15/15	15/15	15/15

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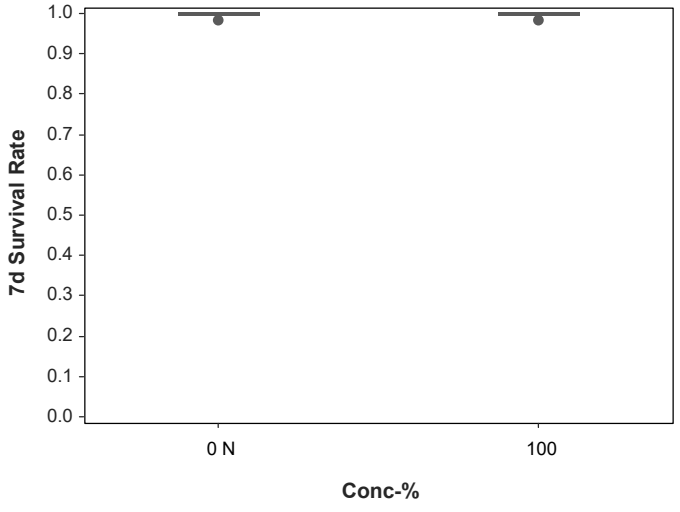
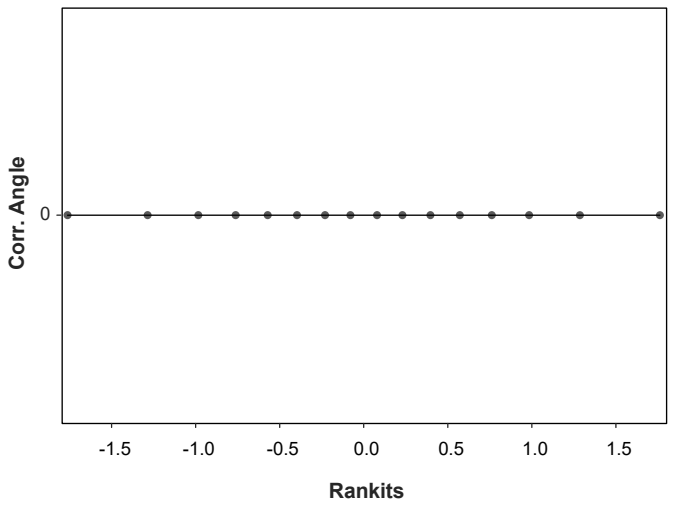




Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-2326-1294	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:22	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:20	**MD5 Hash:**	E8B212A9347F773C4CF1D20C9952A399	**Editor ID:**	

Batch ID:	07-6633-5003	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:35	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:11	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-0650-9634	**Code:**	CSE0126.002fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:35	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.002

Data Transform	Alt Hyp	TST_b	Comparison Result
Untransformed	C*b < T	0.75	100% passed mean dry biomass-mg endpoint

TST-Welch's t Test

Control	vs	Conc-%	df	Test Stat	Critical	P-Type	P-Value	Decision(α:25%)
Negative Control		100*	7	1.028	0.7111	CDF	0.1691	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.00716845	0.00716845	1	0.9664	0.3423	Non-Significant Effect
Error	0.103845	0.00741752	14			
Total	0.111014		15			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	4.065	8.862	0.0634	Equal Variances
	Mod Levene Equality of Variance Test	0.926	8.862	0.3522	Equal Variances
	Variance Ratio F Test	103.1	8.885	<1.0E-05	Unequal Variances
Distribution	Anderson-Darling A2 Test	3.05	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	4.492	2.576	<1.0E-05	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.3928	0.2471	<1.0E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.5462	0.8408	<1.0E-05	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	8	0.346	0.336	0.356	0.3403	0.3367	0.3667	0.00422	3.45%	0.00%
100		8	0.3037	0.2023	0.405	0.342	0.005333	0.3767	0.04286	39.92%	12.24%

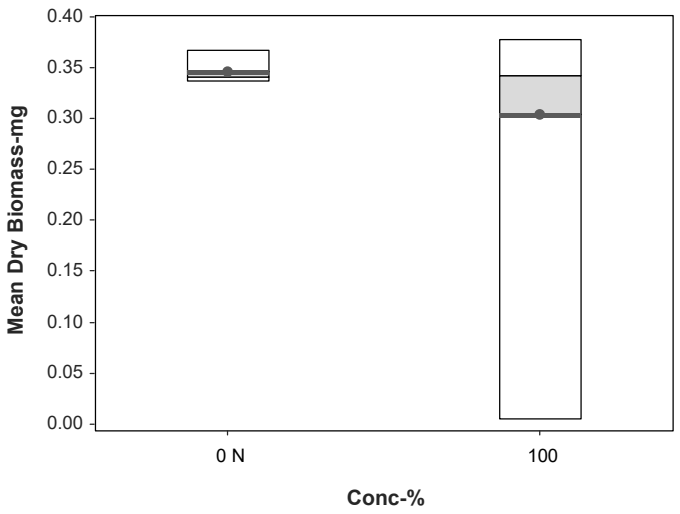
Mean Dry Biomass-mg Detail

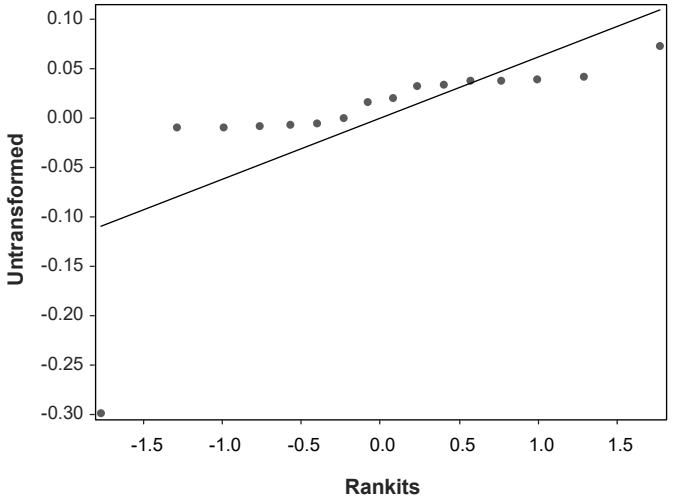
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	N	0.3413	0.3627	0.3667	0.346	0.3393	0.3367	0.3373	0.338
100		0.3367	0.338	0.342	0.005333	0.342	0.3433	0.3767	0.3453

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-2326-1294	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	22 Jan-26 13:22	**Analysis:**	Parametric Bioequivalence-Two Sample	**Status Level:**	1
Edit Date:	22 Jan-26 13:20	**MD5 Hash:**	E8B212A9347F773C4CF1D20C9952A399	**Editor ID:**	

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	07-6633-5003	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Arnel Ramos		
Start Date:	06 Jan-26 15:35	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-25 15:11	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	---	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	12-0650-9634	**Code:**	CSE0126.002fml	**Project:**	Boeing-SSFL NPDES Permit 2023
Sample Date:	02 Jan-26 10:35	**Material:**	Sample Water	**Source:**	Bioassay Report
Receipt Date:	05 Jan-26 08:21	**CAS (PC):**		**Station:**	Outfall011_20260102_Comp
Sample Age:	4d 5h (5.1 °C)	**Client:**	Eurofins Calscience		

Comments: Report ID: CSE0126.002

Alkalinity (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58.25	57.86	58.64	58	59	0.05786	0.4629	0.79%	0
100		8	30	30	30	30	30	0	0	0.00%	0
Overall		16	44.12	36.35	51.9	30	59	3.648	14.59	33.07%	0 (0%)

Conductivity-µmhos

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	311.8	308.7	314.8	305	316	0.4519	3.615	1.16%	0
100		8	160.6	155.9	165.3	153	168	0.7006	5.605	3.49%	0
Overall		16	236.2	194.5	277.8	153	316	19.54	78.17	33.10%	0 (0%)

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.825	7.558	8.092	7.1	8.1	0.03995	0.3196	4.08%	0
100		8	8	7.821	8.179	7.8	8.4	0.02673	0.2138	2.67%	0
Overall		16	7.913	7.764	8.061	7.1	8.4	0.06945	0.2778	3.51%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
100		8	43	43	43	43	43	0	0	0.00%	0
Overall		16	71.5	55.82	87.18	43	100	7.359	29.43	41.17%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.688	7.453	7.922	7.3	8	0.035	0.28	3.64%	0
100		8	6.863	6.819	6.906	6.8	6.9	0.006468	0.05175	0.75%	0
Overall		16	7.275	7.025	7.525	6.8	8	0.1171	0.4683	6.44%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
100		8	24.08	23.98	24.17	24	24.3	0.01456	0.1165	0.48%	0
Overall		16	24.04	23.99	24.08	24	24.3	0.02213	0.08851	0.37%	0 (0%)

Appendix B

CETIS™ Statistical Analysis Reports:

Standard Reference Toxicant and QC Charts

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
02-8744-0682	7d Survival Rate	Steel Many-One Rank Sum Test	✓	38	75	53.39	5.18%	1
06-8328-3004	Mean Dry Biomass-mg	Steel Many-One Rank Sum Test	✓	38	75	53.39	8.85%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	µg/L	95% LCL	95% UCL	S
04-7357-4908	7d Survival Rate	Linear Interpolation (ICPIN)		EC15	42.3	38.45	45.94	1
				EC20	44.88	41.46	48.34	
				EC25	47.47	44.43	50.64	
				EC40	55.21	52.46	58	
				EC50	60.37	57.62	63.56	
07-9263-1577	Mean Dry Biomass-mg	Linear Interpolation (ICPIN)	✓	IC15	40.56	28	45.53	1
			✓	IC20	43.12	35.91	47.75	
			✓	IC25	45.68	38.93	50.17	
			✓	IC40	53.37	47.88	57.34	
			✓	IC50	58.5	53.99	62.08	

Test Acceptability

				TAC Limits			
Analysis ID	Endpoint	Attribute	Test Stat	Lower	Upper	Overlap	Decision
02-8744-0682	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
04-7357-4908	7d Survival Rate	Control Resp	1	0.8	<<	Yes	Passes Criteria
06-8328-3004	Mean Dry Biomass-mg	Control Resp	0.3595	0.25	<<	Yes	Passes Criteria
07-9263-1577	Mean Dry Biomass-mg	Control Resp	0.3595	0.25	<<	Yes	Passes Criteria
06-8328-3004	Mean Dry Biomass-mg	PMSD	0.08852	0.12	0.3	Yes	Below Criteria

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
38		4	0.9333	0.8467	1.0200	0.8667	1.0000	0.0272	0.0544	5.83%	6.67%
75		4	0.2167	0.1151	0.3182	0.1333	0.2667	0.0319	0.0638	29.46%	78.33%
150		4	0.0167	-0.0364	0.0697	0.0000	0.0667	0.0167	0.0333	200.00%	98.33%

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	4	0.3595	0.3368	0.3822	0.3453	0.3793	0.00713	0.01426	3.97%	0.00%
10		4	0.348	0.3402	0.3558	0.3413	0.352	0.002449	0.004899	1.41%	3.20%
19		4	0.3468	0.3403	0.3534	0.3433	0.3513	0.002062	0.004123	1.19%	3.52%
38		4	0.3235	0.2698	0.3772	0.2733	0.346	0.01687	0.03373	10.43%	10.01%
75		4	0.064	0.02475	0.1032	0.03067	0.08333	0.01233	0.02466	38.54%	82.20%
150		4	0.005167	-0.01128	0.02161	0	0.02067	0.005167	0.01033	200.00%	98.56%

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Detail MD5: 94FB553A5435121D49A0AECAA8AA728E

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.9333	0.9333	0.8667	1.0000
75		0.2000	0.1333	0.2667	0.2667
150		0.0000	0.0000	0.0000	0.0667

Mean Dry Biomass-mg Detail MD5: 9162B03D940BA285B4D38979DAAD9905

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3453	0.3567	0.3567	0.3793
10		0.3513	0.3413	0.352	0.3473
19		0.3433	0.3493	0.3513	0.3433
38		0.346	0.3353	0.2733	0.3393
75		0.06	0.03067	0.082	0.08333
150		0	0	0	0.02067

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		14/15	14/15	13/15	15/15
75		3/15	2/15	4/15	4/15
150		0/15	0/15	0/15	1/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-8744-0682	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck	
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	38	75	53.39	---	0.05181	5.18%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	18	10	1	CDF	0.8333	Non-Significant Effect
		19	6	18	10	1	CDF	0.8333	Non-Significant Effect
		38	6	12	10	1	CDF	0.1424	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6.56508	1.31302	5	379.1	<1.0E-05	Significant Effect
Error	0.0623407	0.00346337	18			
Total	6.62742		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
	Levene Equality of Variance Test	3.555	4.248	0.0207	Equal Variances
	Mod Levene Equality of Variance Test	1.938	4.248	0.1376	Equal Variances
Distribution	Anderson-Darling A2 Test	2.428	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Kurtosis Test	1.811	2.576	0.0701	Normal Distribution
	D'Agostino Skewness Test	0.402	2.576	0.6877	Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	3.442	9.21	0.1789	Normal Distribution
	Kolmogorov-Smirnov D Test	0.3333	0.2056	<1.0E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.8327	0.884	0.0011	Non-Normal Distribution

7d Survival Rate Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
38		4	0.9333	0.8467	1.0000	0.9333	0.8667	1.0000	0.0272	5.83%	6.67%
75		4	0.2167	0.1151	0.3182	0.2444	0.1333	0.2667	0.0319	29.46%	78.33%
150		4	0.0167	0.0000	0.0697	0.0000	0.0000	0.0667	0.0167	200.00%	98.33%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-8744-0682	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Angular (Corrected) Transformed Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
10		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
19		4	1.4410	1.4410	1.4420	1.4410	1.4410	1.4410	0.0000	0.00%	0.00%
38		4	1.3140	1.1550	1.4730	1.3100	1.1970	1.4410	0.0500	7.60%	8.81%
75		4	0.4807	0.3527	0.6086	0.5163	0.3738	0.5426	0.0402	16.73%	66.65%
150		4	0.1624	0.0576	0.2672	0.1295	0.1295	0.2612	0.0329	40.55%	88.73%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.9333	0.9333	0.8667	1.0000
75		0.2000	0.1333	0.2667	0.2667
150		0.0000	0.0000	0.0000	0.0667

Angular (Corrected) Transformed Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.4410	1.4410	1.4410	1.4410
10		1.4410	1.4410	1.4410	1.4410
19		1.4410	1.4410	1.4410	1.4410
38		1.3100	1.3100	1.1970	1.4410
75		0.4636	0.3738	0.5426	0.5426
150		0.1295	0.1295	0.1295	0.2612

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		14/15	14/15	13/15	15/15
75		3/15	2/15	4/15	4/15
150		0/15	0/15	0/15	1/15

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-8744-0682	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

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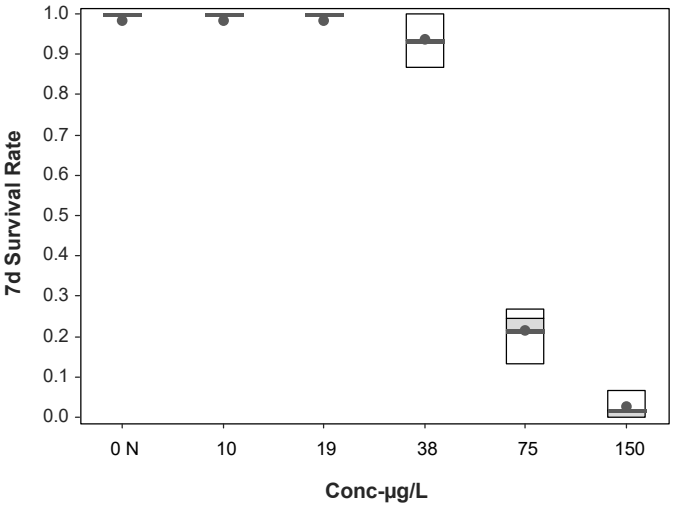
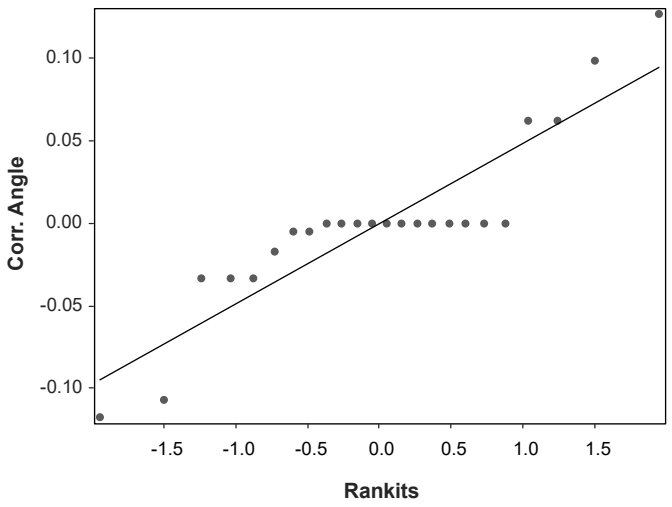




Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	06-8328-3004	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck	
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water	
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:** 1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	38	75	53.39	---	0.03182	8.85%

Steel Many-One Rank Sum Test

Control	vs	Conc-µg/L	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control		10	6	13	10	0	CDF	0.2311	Non-Significant Effect
		19	6	12	10	0	CDF	0.1424	Non-Significant Effect
		38	6	11	10	0	CDF	0.0805	Non-Significant Effect
		75*	6	10	10	0	CDF	0.0417	Significant Effect
		150*	6	10	10	0	CDF	0.0417	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.521778	0.104356	5	298.5	<1.0E-05	Significant Effect
Error	0.006292	0.00034956	18			
Total	0.52807		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	15.13	15.09	0.0098	Unequal Variances
	Levene Equality of Variance Test	3.307	4.248	0.0272	Equal Variances
	Mod Levene Equality of Variance Test	0.9513	4.248	0.4725	Equal Variances
Distribution	Anderson-Darling A2 Test	1.126	3.878	0.0061	Non-Normal Distribution
	D'Agostino Kurtosis Test	2.236	2.576	0.0254	Normal Distribution
	D'Agostino Skewness Test	2.592	2.576	0.0095	Non-Normal Distribution
	D'Agostino-Pearson K2 Omnibus Test	11.72	9.21	0.0029	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.2184	0.2056	0.0044	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.8705	0.884	0.0054	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	4	0.3595	0.3368	0.3822	0.3567	0.3453	0.3793	0.007131	3.97%	0.00%
10		4	0.348	0.3402	0.3558	0.3493	0.3413	0.352	0.002449	1.41%	3.20%
19		4	0.3468	0.3403	0.3534	0.3453	0.3433	0.3513	0.002062	1.19%	3.52%
38		4	0.3235	0.2698	0.3772	0.3373	0.2733	0.346	0.01687	10.43%	10.01%
75		4	0.064	0.02475	0.1032	0.071	0.03067	0.08333	0.01233	38.54%	82.20%
150		4	0.005167	-0.01128	0.02161	0	0	0.02067	0.005167	200.00%	98.56%

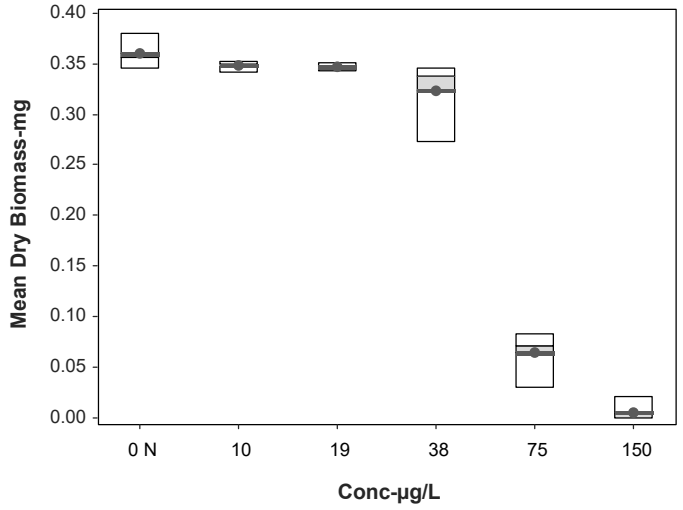
Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

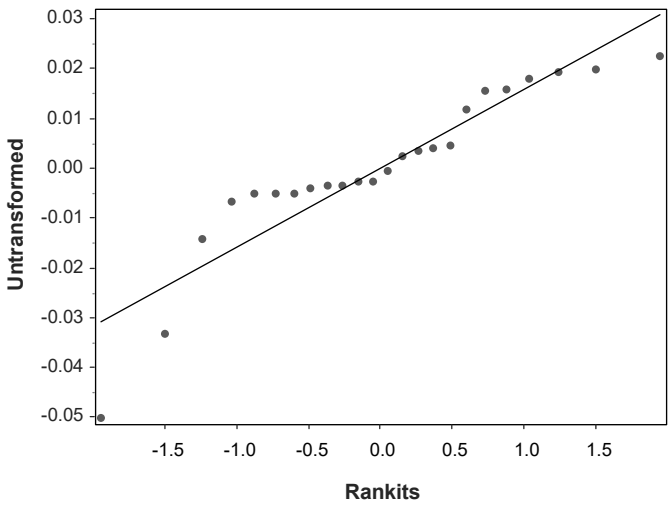
Analysis ID:	06-8328-3004	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3453	0.3567	0.3567	0.3793
10		0.3513	0.3413	0.352	0.3473
19		0.3433	0.3493	0.3513	0.3433
38		0.346	0.3353	0.2733	0.3393
75		0.06	0.03067	0.082	0.08333
150		0	0	0	0.02067

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-7357-4908	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC15	42.3	38.45	45.94
EC20	44.88	41.46	48.34
EC25	47.47	44.43	50.64
EC40	55.21	52.46	58
EC50	60.37	57.62	63.56

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	N	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
10		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
19		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	60/60	1.0000	0.00%
38		4	0.9333	0.9333	0.8667	1.0000	5.83%	6.67%	56/60	0.9333	6.67%
75		4	0.2167	0.2444	0.1333	0.2667	29.46%	78.33%	13/60	0.2167	78.33%
150		4	0.0167	0.0000	0.0000	0.0667	200.00%	98.33%	1/60	0.0167	98.33%

7d Survival Rate Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000
19		1.0000	1.0000	1.0000	1.0000
38		0.9333	0.9333	0.8667	1.0000
75		0.2000	0.1333	0.2667	0.2667
150		0.0000	0.0000	0.0000	0.0667

7d Survival Rate Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		14/15	14/15	13/15	15/15
75		3/15	2/15	4/15	4/15
150		0/15	0/15	0/15	1/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-7357-4908	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	94FB553A5435121D49A0AECAA8AA728E	**Editor ID:**	

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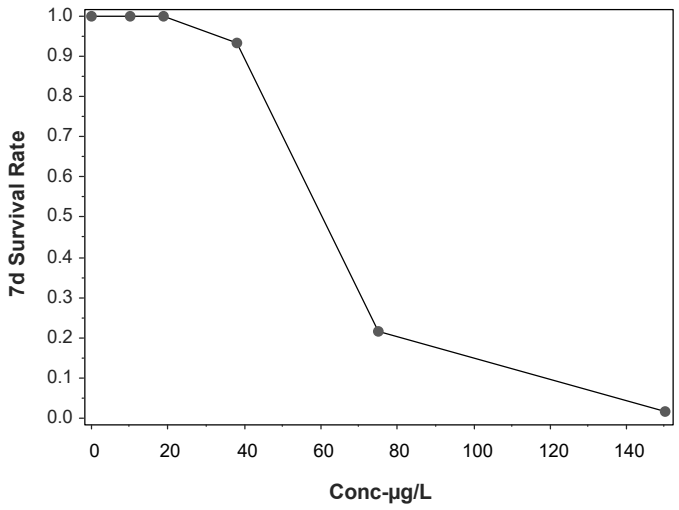


Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-9263-1577	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX
Sample Age:	---	**Client:**	ABC Labs		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	511090	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC15	40.56	28	45.53
IC20	43.12	35.91	47.75
IC25	45.68	38.93	50.17
IC40	53.37	47.88	57.34
IC50	58.5	53.99	62.08

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Conc-µg/L	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	N	4	0.3595	0.3567	0.3453	0.3793	3.97%	0.00%	0.3595	0.00%
10		4	0.348	0.3493	0.3413	0.352	1.41%	3.20%	0.348	3.20%
19		4	0.3468	0.3453	0.3433	0.3513	1.19%	3.52%	0.3468	3.53%
38		4	0.3235	0.3373	0.2733	0.346	10.43%	10.01%	0.3235	10.01%
75		4	0.064	0.071	0.03067	0.08333	38.54%	82.20%	0.064	82.20%
150		4	0.005167	0	0	0.02067	200.00%	98.56%	0.005167	98.56%

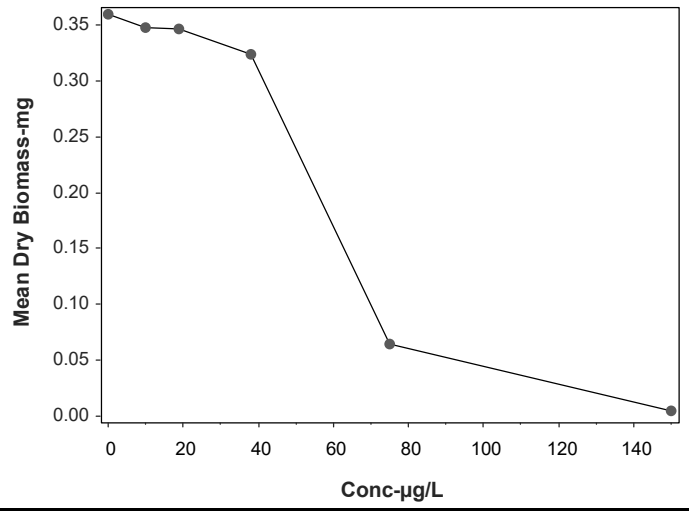
Mean Dry Biomass-mg Detail

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	N	0.3453	0.3567	0.3567	0.3793
10		0.3513	0.3413	0.352	0.3473
19		0.3433	0.3493	0.3513	0.3433
38		0.346	0.3353	0.2733	0.3393
75		0.06	0.03067	0.082	0.08333
150		0	0	0	0.02067

Fathead Minnow 7-d Larval Survival and Growth Test | **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-9263-1577	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	23 Jan-26 15:10	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	21 Jan-26 17:08	**MD5 Hash:**	9162B03D940BA285B4D38979DAAD9905	**Editor ID:**	

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	17-1710-3413	**Test Type:**	Growth-Survival (7d)	**Analyst:**	Justin Dyck		
Start Date:	06 Jan-26 13:30	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water		
Ending Date:	13 Jan-26 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	Aquatic Biosystems, CO	**Age:**	1d

Sample ID:	15-2266-5463	**Code:**	FML010626	**Project:**	REF TOX		
Sample Date:	06 Jan-26 13:30	**Material:**	Copper chloride	**Source:**	Reference Toxicant		
Receipt Date:	06 Jan-26 13:30	**CAS (PC):**		**Station:**	REF TOX		
Sample Age:	---	**Client:**	ABC Labs				

Alkalinity (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	58.25	57.86	58.64	58	59	0.05786	0.4629	0.79%	0
150		8	60	60	60	60	60	0	0	0.00%	0
Overall		16	59.12	58.61	59.64	58	60	0.2394	0.9574	1.62%	0 (0%)

Conductivity-µmhos

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	311.8	308.7	314.8	305	316	0.4519	3.615	1.16%	0
10		8	310.6	309.9	311.4	310	312	0.1145	0.9161	0.29%	0
19		8	309.5	308.9	310.1	309	311	0.09449	0.7559	0.24%	0
38		8	308	307	309	307	310	0.1494	1.195	0.39%	0
75		8	307.6	306.5	308.7	306	310	0.1628	1.302	0.42%	0
150		8	307.5	306.3	308.7	306	310	0.1768	1.414	0.46%	0
Overall		48	309.2	308.5	309.9	305	316	0.3399	2.355	0.76%	0 (0%)

Dissolved Oxygen-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.713	7.354	8.071	7	8.1	0.05363	0.4291	5.56%	0
10		8	7.775	7.49	8.06	7	8.1	0.04265	0.3412	4.39%	0
19		8	7.763	7.484	8.041	7	8.1	0.04169	0.3335	4.30%	0
38		8	7.75	7.464	8.036	7	8.1	0.04278	0.3423	4.42%	0
75		8	7.738	7.445	8.03	7	8.1	0.04378	0.3503	4.53%	0
150		8	7.713	7.418	8.007	7	8.1	0.04404	0.3523	4.57%	0
Overall		48	7.742	7.643	7.841	7	8.1	0.04918	0.3407	4.40%	0 (0%)

Hardness (CaCO3)-mg/L

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	100	100	100	100	100	0	0	0.00%	0
150		8	104	104	104	104	104	0	0	0.00%	0
Overall		16	102	100.9	103.1	100	104	0.5164	2.066	2.03%	0 (0%)

pH-Units

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	7.663	7.448	7.877	7.3	8	0.032	0.256	3.34%	0
10		8	7.538	7.348	7.727	7.2	7.8	0.0283	0.2264	3.00%	0
19		8	7.512	7.326	7.699	7.2	7.8	0.0279	0.2232	2.97%	0
38		8	7.487	7.29	7.685	7.2	7.8	0.02946	0.2357	3.15%	0
75		8	7.462	7.284	7.641	7.2	7.8	0.02667	0.2134	2.86%	0
150		8	7.425	7.226	7.624	7.1	7.8	0.02969	0.2375	3.20%	0
Overall		48	7.515	7.447	7.582	7.1	8	0.03355	0.2325	3.09%	0 (0%)

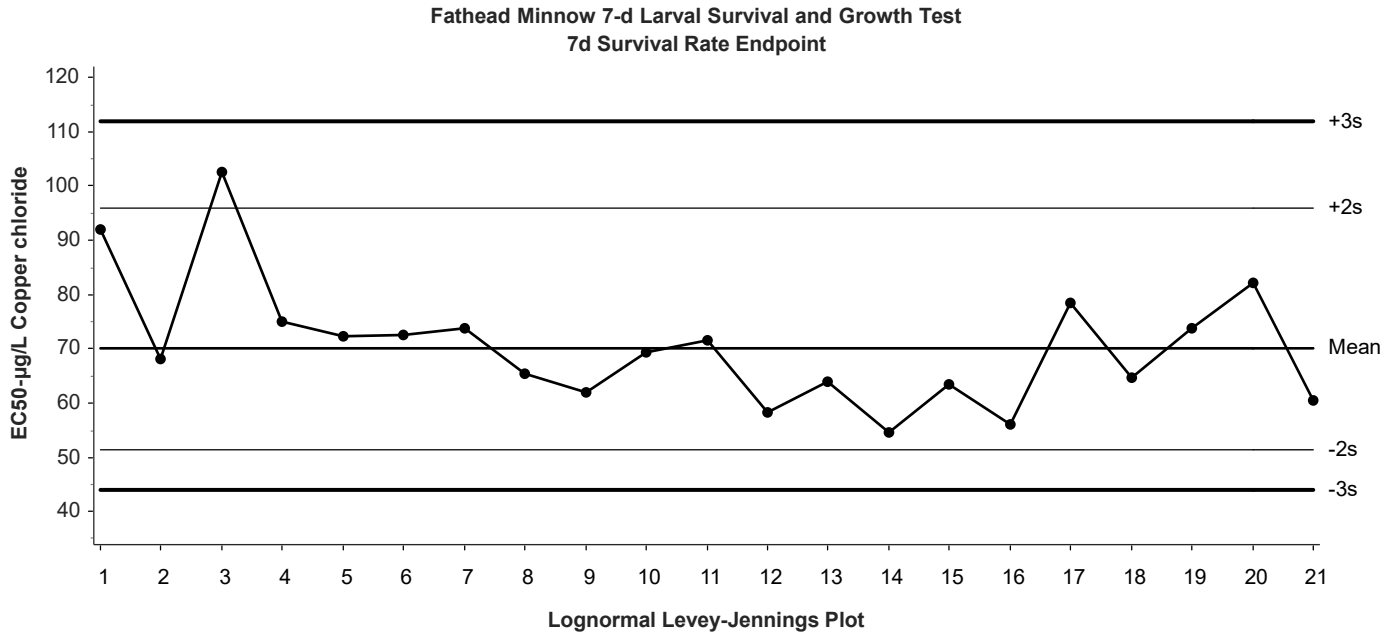
Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Temperature-°C

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	8	24	24	24	24	24	0	0	0.00%	0
10		8	24.03	23.99	24.06	24	24.1	0.005778	0.04623	0.19%	0
19		8	24.04	23.98	24.1	24	24.2	0.009295	0.07436	0.31%	0
38		8	24.04	23.98	24.1	24	24.2	0.009295	0.07436	0.31%	0
75		8	24.05	23.96	24.14	24	24.3	0.01336	0.1069	0.44%	0
150		8	24.05	23.96	24.14	24	24.3	0.01336	0.1069	0.44%	0
Overall		48	24.03	24.01	24.06	24	24.3	0.01087	0.07532	0.31%	0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	7d Survival Rate	**Source:**	Reference Toxicant-REF



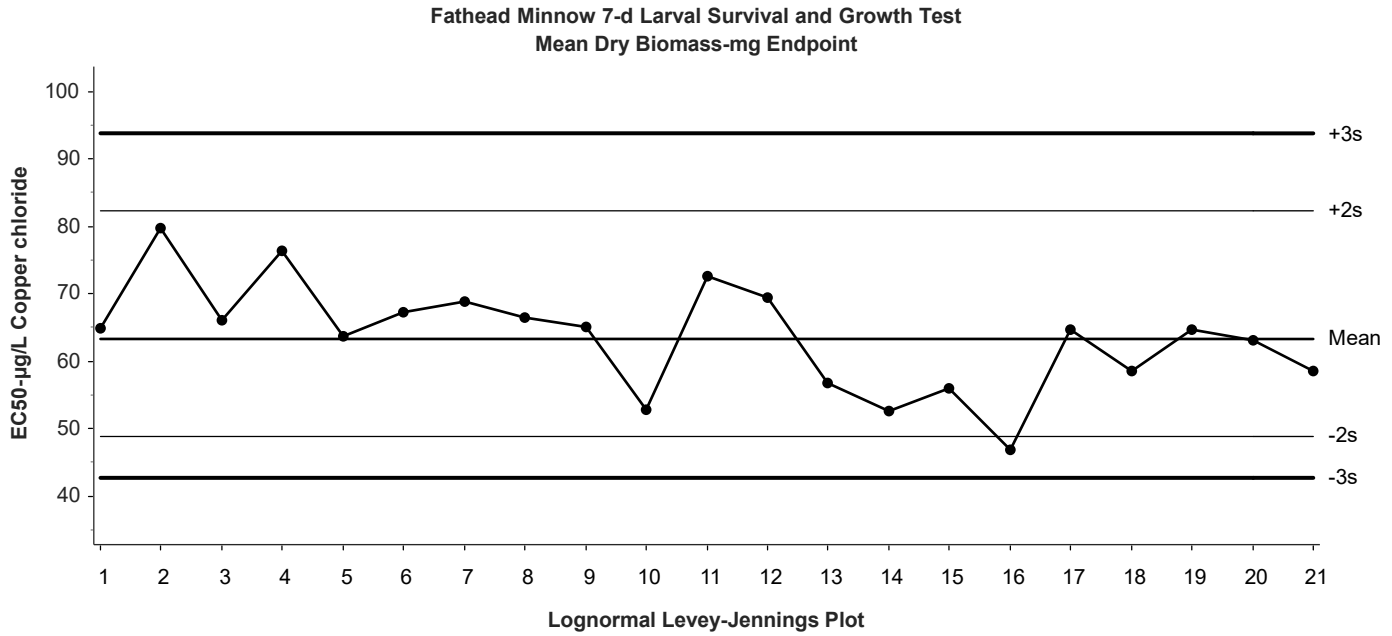
Mean:	70.11	**Count:**	20	**-2s Warning Limit:**	51.3	**-3s Action Limit:**	43.9
Sigma:	NA	**CV:**	15.70%	**+2s Warning Limit:**	95.8	**+3s Action Limit:**	112

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	17	13:00	91.94	21.83	1.737			13-3277-6088	03-7751-7547
2			21	15:24	68	-2.105	-0.1953			08-1266-5648	19-4309-1944
3			22	14:55	102.6	32.53	2.442	(+)		07-5558-1243	12-5555-4178
4			28	15:30	75	4.895	0.4323			13-4573-3635	11-5047-1832
5			30	15:30	72.36	2.252	0.2025			11-5715-0925	03-3652-0021
6		Apr	4	11:45	72.45	2.343	0.2106			17-3412-6439	09-0505-4831
7			11	15:10	73.72	3.619	0.3224			12-2891-6798	20-3297-8234
8			25	15:00	65.49	-4.62	-0.4367			19-7686-5958	17-2422-4835
9			27	13:00	61.94	-8.164	-0.7932			01-1863-5687	10-3453-8425
10		May	2	15:45	69.31	-0.7977	-0.07331			01-5973-7078	19-8547-5138
11			9	15:30	71.53	1.426	0.129			01-4263-6313	07-3079-9817
12		Aug	9	13:00	58.18	-11.92	-1.194			14-3532-4574	02-3075-3473
13		Oct	6	14:45	63.9	-6.205	-0.5937			18-8099-7551	11-2650-3626
14	2024	Jan	9	13:20	54.55	-15.55	-1.607			14-8299-7228	00-5651-6529
15		Aug	1	15:59	63.35	-6.754	-0.6489			17-2152-6147	10-3671-8471
16	2025	Mar	6	15:00	55.94	-14.17	-1.446			06-4992-6637	09-1125-3834
17		Jul	8	11:21	78.31	8.203	0.7089			00-3393-7264	14-6710-1242
18			10	13:10	64.72	-5.383	-0.5118			07-5897-2938	20-7755-3652
19		Sep	9	13:10	73.75	3.647	0.3249			00-2537-6486	15-9566-8088
20		Dec	30	12:30	82.03	11.93	1.006			00-0985-9985	20-9726-2836
21	2026	Jan	6	13:30	60.37	-9.733	-0.9575			06-7109-6378	04-7357-4908

Fathead Minnow 7-d Larval Survival and Growth Test **Aquatic Bioassay & Consulting Labs, Inc.**

Test Type:	Growth-Survival (7d)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-013 (2002)	**Endpoint:**	Mean Dry Biomass-mg	**Source:**	Reference Toxicant-REF



Mean:	63.37	**Count:**	20	**-2s Warning Limit:**	48.8	**-3s Action Limit:**	42.8
Sigma:	NA	**CV:**	13.10%	**+2s Warning Limit:**	82.3	**+3s Action Limit:**	93.7

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	15	14:00	64.95	1.577	0.1884			21-2981-7713	18-6144-0321
2			17	13:00	79.74	16.37	1.76			13-3277-6088	02-7330-5214
3			21	15:24	66.12	2.752	0.3257			08-1266-5648	07-2673-1083
4			22	14:55	76.37	13	1.429			07-5558-1243	17-7675-9749
5			28	15:30	63.78	0.4088	0.04927			13-4573-3635	10-4627-8925
6			30	15:30	67.31	3.936	0.4617			11-5715-0925	18-9309-5191
7		Apr	4	11:45	68.89	5.52	0.64			17-3412-6439	09-3955-7714
8			11	15:10	66.6	3.228	0.3808			12-2891-6798	14-4210-3134
9			25	15:00	65.21	1.84	0.2193			19-7686-5958	15-4324-8451
10			27	13:00	52.79	-10.58	-1.4			01-1863-5687	11-4579-7357
11		May	2	15:45	72.55	9.182	1.037			01-5973-7078	20-9677-7450
12			9	15:30	69.4	6.025	0.696			01-4263-6313	19-5424-8780
13		Oct	6	14:45	56.73	-6.638	-0.8479			18-8099-7551	05-1444-9651
14	2024	Jan	9	13:20	52.68	-10.69	-1.416			14-8299-7228	08-4892-6835
15		Aug	1	15:59	56.07	-7.302	-0.9381			17-2152-6147	20-2349-5171
16	2025	Mar	6	15:00	46.84	-16.53	-2.317	(-)		06-4992-6637	05-1468-2705
17		Jul	8	11:21	64.82	1.453	0.1737			00-3393-7264	20-4395-8848
18			10	13:10	58.58	-4.788	-0.602			07-5897-2938	16-8103-8524
19		Sep	9	13:10	64.77	1.401	0.1676			00-2537-6486	12-2027-6755
20		Dec	30	12:30	63.15	-0.2246	-0.02721			00-0985-9985	19-7190-2604
21	2026	Jan	6	13:30	58.5	-4.874	-0.6133			06-7109-6378	07-9263-1577

Appendix C

Raw Data Bench Sheets

Chronic Fathead Minnow Chemical Analysis- Standard Reference Toxicant

Start Date & Time: 1/6/26 1330
End Date & Time: 1/13/26 1534
Toxicant Batch ID: FML010526

Lab ID: FML 010626
Age of Organism: 1D
Method: EPA-821-R-02-013

Day/Date	0 1/6	1 1/7	2 1/8	3 1/9	4 1/10/26	5 1/11/26	6 1/12/26	7 1/13/26
Time	1330	0900	0951	1008	0916	0830	0835	1342
Analyst	KD	KD	KD	KD	CD	CD	LW	LW
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Renew ≥80%	Y (N)	Y (N)	(Y) N	(Y) N	(Y) N	Y (N)	(Y) N	Y (N)
DilutionBatch	IMW 020626	-	120825	120825		-	-	-
YSI ID	B	B	B	B	B	B	B	BY
Therm ID	3	3	5	5	2	2	3	3
C.F. (°C)	0.0	0.0	-0.4	-0.4	0.0	0.0	0.0	0.0
Dissolved Oxygen (mg/L)								
Control	7.7	7.1	7.8 7.3	7.9 7.1	8.1 7.3	8.0 7.2	8.0 7.0	8.0 7.1
10 ug/L	7.7	7.0	7.8 7.2	7.8 7.1	8.1 7.2	8.0 7.1	7.8 7.0	8.0 7.0
19 ug/L	7.7	7.0	7.8 7.2	7.8 7.1	8.1 7.2	8.0 7.1	7.8 7.0	7.9 7.0
38 ug/L	7.6	7.0	7.9 7.2	7.8 7.0	8.1 7.1	8.0 7.0	7.7 7.0	7.9 7.0
75 ug/L	7.5	7.0	7.9 7.1	7.8 7.0	8.1 7.1	7.9 7.0	7.7 7.0	8.0 7.0
150 ug/L	7.4	7.0	7.9 7.1	7.8 7.0	8.1 7.1	7.9 7.0	7.7 7.0	7.9 7.0
Temperature (°C)								
Control	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0
10 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.1	24.0 24.0
19 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.2	24.0 24.0
38 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.2	24.0 24.0
75 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.3	24.0 24.0
150 ug/L	24.0	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.3	24.0 24.0
pH								
Control	7.3	7.3	7.4 7.7	7.4 7.7	8.0 7.6	7.8 7.6	7.8 7.8	7.8 7.8
10 ug/L	7.2	7.2	7.3 7.3	7.4 7.3	7.5 7.6	7.8 7.5	7.6 7.5	7.7 7.8
19 ug/L	7.2	7.2	7.3 7.3	7.3 7.3	7.5 7.6	7.8 7.5	7.6 7.5	7.7 7.7
38 ug/L	7.2	7.2	7.2 7.2	7.3 7.2	7.5 7.6	7.8 7.4	7.5 7.5	7.7 7.7
75 ug/L	7.2	7.2	7.2 7.2	7.3 7.2	7.5 7.6	7.8 7.4	7.5 7.5	7.6 7.6
150 ug/L	7.1	7.1	7.2 7.2	7.2 7.2	7.5 7.6	7.8 7.4	7.5 7.5	7.6 7.6
Conductivity (uS/cm)								
Control	310	316	315	305	310	312	311	315
10 ug/L	311	310	310	312	310	310	310	312
19 ug/L	309	309	309	309	309	310	310	311
38 ug/L	309	307	308	308	308	309	309	310
75 ug/L	306	307	307	307	307	308	309	310
150 ug/L	309	306	307	307	306	307	308	310
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	59	59
150 ug/L	LW	LW	LW	LW	LW	LW	LW	LW
Hardness (mg/L CaCO3)								
Control	LW	LW	LW	LW	LW	LW	LW	LW
150 ug/L	LW	LW	LW	LW	LW	LW	LW	LW

Chronic Juvenile Fathead Minnow Survival and Growth – Standard Reference Toxicant

Start Date: 1/6/26 End Date: 1/13/26 Lab ID: **FML** 010626

	Analyst	N	M	[illegible]	[illegible]	CD	CD	N	CD
Conc. (ug/L)	Rep.#	Exposed	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
CONTROL	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
10	1	15	15	15	7 / 15	15	15	15	15
	2	15	15	15	9 / 15	15	15	15	15
	3	15	15	15	9 / 15	15	15	15	15
	4	15	15	15	12 / 15	15	15	15	15
19	1	15	16	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
38	1	15	15	15	15	15	15	15	14
	2	15	15	15	15	15	15	15	14
	3	15	15	15	15	15	15	15	13
	4	15	15	15	15	15	15	15	15
75	1	15	15	14	7	7	7	3	3
	2	15	15	15	9	9	9	2	2
	3	15	15	14	9	9	9	4	4
	4	15	15	15	12	12	12	4	4
150	1	15	9	9	3	3	3	0	—
	2	15	1	0					
	3	15	3	3	1	1	1	0	—
	4	15	5	5	2	2	2	1	1

Balance ID: BAL 1

Analyst: CD

Date/Time in Oven: 1/13/26

Date/Time out Oven 1/14/26

Oven Temp (°C): 62.0

Chamber #	Conc. (ug/L)	Rep #	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
DA 1	CONTROL	1	1.16141	1.16659	0.00518
2		2	1.14692	1.15227	0.00535
3		3	1.16034	1.16569	0.00535
4		4	1.16102	1.16671	0.00569
DA 5	10	1	1.16084	1.16611	0.00527
6		2	1.15786	1.16298	0.00512
7		3	1.16761	1.17289	0.00528
8		4	1.15824	1.16345	0.00521
DA 9	19	1	1.16074	1.16589	0.00515
10		2	1.16857	1.17381	0.00524
11		3	1.17269	1.17796	0.00527
12		4	1.15629	1.16144	0.00515
DA 13	38	1	1.16084	1.16603	0.00519
14		2	1.15389	1.15892	0.00503
15		3	1.15623	1.16033	0.00410
16		4	1.15569	1.16078	0.00509
DA 17	75	1	1.17331	1.17421	0.00090
18		2	1.15653	1.15699	0.00046
19		3	1.15909	1.16032	0.00123
20		4	1.16002	1.16127	0.00125
—	150	1	—	—	—
—		2	—	—	—
—		3	—	—	—
DA 21		4	1.15862	1.15893	0.00031
DA 22	BLANK	1	1.16124	1.16120	-0.00004

Chronic Fathead Minnow Chemical Analysis

Client ID: CSE2
Start Date & Time: 1/6/26 1535
End Date & Time: 1/13/26 1517

Lab ID: CSE0126.002
Date Rec'd: 1/15/26
Age of Organism: 11

Day/Date	0 1/6	1 1/7/26	2 1/8	3 1/9	4 1/10/26	5 1/11/26	6 1/12/26	7 1/13/26
Time	1535	1005	1221	1147	1014	0921	1129	1517
Analyst	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fed	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Renewed≥80%	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)
Lab ID	.002	.002	.002	.002	.002	.002	.002	.002
ControlBatch	1M HW 122825	1M HW 122825	1M HW 122825	1M HW 122825	1M HW 122825	1M HW 122825	1M HW 122825	1M HW 122825
YSI ID	B	B	B	B	B	B	B	B
Therm ID	3	3	5	5	2	2	5	3
C.F. (°C)	0.0	0.0	-0.4	-0.4	0.0	0.0	-0.4	0.0
Dissolved Oxygen (mg/L)								
Control	7.7	7.1 7.8	7.3 7.5	7.1 8.1	7.3 8.0	7.2 8.0	7.0 8.0	7.1
100%	8.4	7.2 8.2	7.4 8.1	7.0 7.9	7.0 7.8	7.1 7.9	7.1 7.9	7.8
Temperature (°C)								
Control	24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0 24.0	24.0
100%	24.0	24.0 24.3	24.0 24.0	24.0 24.0	24.0 24.1	24.0 24.2	24.0 24.0	24.0
pH								
Control	7.3	7.3 7.4	7.4 7.4	7.4 8.0	7.0 8.0	7.6 7.8	7.8 7.8	7.4
100%	6.8	6.9 6.8	6.8 6.8	6.8 6.9	6.8 6.9	6.8 6.9	6.9 6.9	6.9
Conductivity (uS/cm)								
Control	310	316	315	305	310	312	311	315
100%	153	154	157	165	160	162	166	168
Alkalinity (mg/L CaCO3)								
Control	58	58	58	58	58	58	59	59
100%	30	30	30	30	30	30	30	30
Hardness (mg/L CaCO3)								
Control	140	140	140	140	140	140	140	140
100%	43	43	43	43	43	43	43	43

Residual Chlorine 1st Sample: <0.1 2nd Sample: — 3rd Sample: —

Chronic Fathead Minnow Survival and Growth - TST

Client: CSEZ Lab ID: CSE0126.002

Start Date: 1/6/26 End Date: 1/13/26

Concentration	Replicate	Analyst AN	1 AR	2	3	4 CO	5 CO	6	Final W
USE CONTROL of CSE0126.001	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
100	1	15	15	15	15	15	15	15	15
	2	15	15	15	15	15	15	15	15
	3	15	15	15	15	15	15	15	15
	4	15	15	15	15	15	15	15	15
	5	15	15	15	15	15	15	15	15
	6	15	15	15	15	15	15	15	15
	7	15	15	15	15	15	15	15	15
	8	15	15	15	15	15	15	15	15

Oven Temp (°C): 60.0 Date/Time In: 1/13/26 1530 Date/Time Out: 1/14/26 1530

Balance ID: BAL 1 Analyst: CO

Chamber #	Concentration	Replicate	Boat Tare (g)	Boat + Fish (g)	Fish Weight (g)
	CONTROL	1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
DI 1	100	1	1.14876	1.15381	0.00505
2		2	1.15623	1.16130	0.00507
3		3	1.16268	1.16781	0.00513
4		4	1.13971	1.14479	0.00508
5		5	1.16129	1.16642	0.00513
6		6	1.16075	1.16590	0.00515
7		7	1.16115	1.16680	0.00565
8		8	1.16376	1.16894	0.00518

Appendix D

Chain of Custody and Sample Receipt Summary

CHAIN OF CUSTODY FORM

-002

Added C.F. = -0.3 °C
Therm. = sample receiving 1
Temp. deg. C = 5.1
Chrlorine (mg/L) = <0.1
NH3 (mg/L) = <0.1

Client Name/Address: Haley & Aldrich, 5333 Mission Center Rd Suite 300, San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 **Routine** **Outfall 011** **COMPOSITE**
Eurofins Calscience Project Manager: Virendra Patel, 2841 Dow Avenue, Suite #100, Tustin, CA 92780, Tel: 714-895-5494 **ECI Project #57013187**	
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	ANALYSIS REQUIRED: Total Dissolved Metals: (E200.8): Al, Cd, Cu, Pb, Se, Zn	LL Mercury (E1631E) -- Total Dissolved	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0) - **Sub to St. Louis**	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) **ABC Labs in Ventura, CA**	1,4-Dioxane (E624 (SW8260M_SIM))	Cyanide (Kelada)	Monomethyl hydrazine (SW8315M/DV-WC-0077) **Weck Labs in Hacienda Heights, CA**			Comments
Outfall 011	Outfall011_20260102_Comp_F	1/2/2026 1035	WM	250 mL Poly	3	None	Yes	X									Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, dbl bagged	1	None	Yes		X								Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
	Outfall011_20260102_Comp	1/2/2026 1035	WM	500 mL Poly	1	NaOH							X				
			WM	1 L Poly	4	HNO3				X							Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None											
			*WM	2.5 Gal Cube	2	None					X						Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA.**
			WM	40 mL VOA	3	HCl						X					
			WM	1 L Glass Amber	1	None								X			**Segregate into a cooler for Weck Labs.**
QA/QC	Outfall011_20260102_Grab_F-04	1/2/2026 1035	WQ	8oz Clear Glass, dbl bagged	1	None			X								Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Mark Dominick	1-5-26/	H;A	Virginia Mobeka	1/5/26 0821
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
5-DAY RUSH TAT
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

* Hand-delivered to ABC Labs with this copy of the COC

2025-2026 Rainy Season
Version 1

Sample Receipt Summary

AQUATIC BIOASSAY
& CONSULTING LABORATORIES, INC.

Client Name: ENVIRONMENTAL SCIENCE

Project Name: SUTTER 001 & 011

Receiving Information

1. Received By (initials): CM
2. Date Received: 1/5/26
3. Time Received: 0821
5. Courier Information (Circle One):
   - Client
   - FedEx
   - UPS
   - GLS
   - ABCL Driver
   - Ontrac
   - DHL
   - Other: _____
6. Shipping Container Information (Put the # of containers or circle none)
   - ___ Cooler
   - ___ Styrofoam Cooler
   - None
   - ___ Carboy
   - ___ Boxes
   - Other _____
7. Ice Type (Circle One)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - None

Inspection Information:

1. Inspected By (initials): CM

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
   a. If No was the client notified..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s) ..... Yes / No
5. Correct containers and volume for all analyses indicated ..... Yes / No
6. All samples received within method holding time ..... Yes / No
7. Correct preservation used for all analyses indicated ..... Yes / No
8. Name of sampler included on COC(s) ..... Yes / No

Comments:

Rev. 003, March 18, 2024

Subcontract Data

Shipping and Receiving Documents

Loc: 570
261755

CHAIN OF CUSTODY FORM

570-261755 Chain of Custody

Client Name/Address:
Haley & Aldrich
5333 Mission Center Rd Suite 300
San Diego, CA 92108

Eurofins Calscience Project Manager: Virendra Patel
2841 Dow Avenue, Suite #100
Tustin, CA 92780
Tel: 714-895-5494

ECI Project #57013187

Project:
Boeing-SSFL NPDES
Permit 2023
Routine
Outfall 011
COMPOSITE

Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.

Project Manager: Katherine Miller
520.289.8606, 520.904.6944 (cell)

Sampler: Adrien Mobeka

Field Manager: Mark Dominick
978.234.5033, 818.599.0702 (cell)

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	R Total Recoverable Metals:(E200.8): Al, Cd, Cu, Pb, Se, Zn	R TCDD (and all congeners) (E1613B) - **Sub to Sacramento**	R BOD5 (20 degrees C) (E405.1 (SM5210B_BODCalc))	R LL Mercury (E1631E) -- Total Recoverable	R Chloride [Cl-], Sulfate [SO4], Nitrate-N, Nitrite-N, NO3+NO2-N (E300)	R Turbidity, TDS (SM2540C/E180.1)	R TSS (160.2 (SM2540D))	R Routine Pesticides/PCBs - alpha-BHC, 4,4-DDE, Heptachlor, and PCB Aroclors (E608) **Weck Labs in Hacienda Heights, CA**	R Routine SVOCs - 2,4,6 Trichlorophenol; 2,4 Dinitrotoluene; Bis(2-ethylhexyl)phthalate, NDMA, Pentachlorophenol, Benzidine; 3,3-Dichlorobenzidene (E625)	R Routine SVOCs (E625.1 SIM) **Sub Indeno(1,2,3-cd)pyrene to EMAX**	R Ammonia-N (E351.1)	R Detergents (MBAS) (SM5540C/E425.1)	Comments
Outfall 011	Outfall011_20260102_Comp	1/2/2026 1035	WM	250 mL Poly	3	HNO3	Yes	X												
			WM	1 L Glass Amber	2	None			X											
			WM	1 L Poly	1	None				X										
			WM	8oz Clear Glass, dbl bagged	1	HCL	Yes				X									Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	250 mL Poly	1	None						X								48 hours Holding Time NO_3 & NO_2
			WM	500 mL Poly	1	None							X							48 hour holding time for turbidity
			WM	1 L Poly	1	None								X						
			WM	1 L Glass Amber	4	None									X					**Segregate into a cooler for Weck Labs.**
			WM	1 L Glass Amber	12	None	Yes									X				
			WM	1 L Glass Amber	4	None											X			**Segregate into a cooler for EMAX.**
			WM	250 mL Poly	1	H_2SO_4												X		
			WM	1 L Poly	1	None													X	
QA/QC	Outfall011_20260102_Grab-04	1/2/2026 1035	WM	8oz Clear Glass, dbl bagged	1	HCL					X									Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
			WM	1 L Glass Amber	4	None										X				

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:
Michelle Dallalah	1/2/26 12:30	H&A	[signature] EC	1/2/26 1230
[signature]	1/2/26 1700	EC	[signature]	1/2/26 1700
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: __X__ Normal: _____
5-DAY RUSH TAT
Sample Integrity: (Check)
Intact: _____ On Ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: __X__

2025-2026 Rainy Season
Version 1

1.9/2.1, 2.5/2.7, 2.2/2.4 IRS

261755

CHAIN OF CUSTODY FORM

Client Name/Address: Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2023 **Routine** **Outfall 011** **COMPOSITE**
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 **ECI Project #57013187**	
Eurofins Calscience's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement#2022-24-Eurofins by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience, Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)
Sampler: Adrien Mobeka	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)

								ANALYSIS REQUIRED											
								R	R	R	A/R	R	R	R					
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	MS/MSD	Total Dissolved Metals: (E200.8): Al, Cd, Cu, Pb, Se, Zn	LL Mercury (E1631E) – Total Dissolved	Gross Alpha, Gross Beta (E900.0); Total Combined Radium 226 & 228 (E903, E904); K-40, Cesium-137 (E901); Strontium-90 (E905); Uranium (HASL-300 U-02 or A-01-R); Tritium [H-3] (E906.0) - Sub to St. Louis	Chronic Toxicity - Fathead Minnow (EPA-821-R-02-013) ABC Labs in Ventura, CA	1,4-Dioxane (E624 (SW8260M_SIM))	Cyanide (Kelada)	Monomethyl hydrazine (SW8315M/DV-WC-0077) Weck Labs in Hacienda Heights, CA				Comments
3	Outfall011_20260102_Comp_F	1/2/2026 1035	WM	250 mL Poly	3	None	Yes	X											Filter and preserve w/in 24hrs of receipt at lab.
			WM	8oz Clear Glass, dbl bagged	1	None	Yes		X										Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.
Outfall 011	Outfall011_20260102_Comp	1/2/2026 1035	WM	500 mL Poly	1	NaOH								X					
			WM	1 L Poly	4	HNO3				X									Unfiltered analysis, Separate RAD onto another workorder. Analyze duplicate, not MS/MSD.
			WM	1 L Glass Amber	1	None													
1			WM	2.5 Gal Cube	2	None					X								Only test if first or second rain events of the year. **Deliver to ABC Labs in Ventura, CA.**
			WM	40 mL VOA	3	HCl						X							
			WM	1 L Glass Amber	1	None								X					**Segregate into a cooler for Weck Labs.**
4 QA/QC	Outfall011_20260102_Grab_F-04	1/2/2026 1035	WQ	8oz Clear Glass, dbl bagged	1	None			X										Filter and preserve w/in 24hrs of receipt at lab. Sample receiving DO NOT OPEN BAG. Bag to be opened in Mercury Prep using clean procedures.

Legend: A=Annual, C=Conditional, EP=Expert Panel, R=Routine, Q=Quarterly, QRSW=Quarterly Receiving Water, S=Semi-Annual

Relinquished by: Michelle Dallalah	Date/Time: 1/2/26 12:30	Company: H&A	Received by:	Date/Time: 1/2/26 1230
Relinquished by: Rudy M	Date/Time: 1/2/26 1700	Company: EC	Received by:	Date/Time: 1/2/26 1700
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: ___X___ Normal: _____
5-DAY RUSH TAT
Sample Integrity: (Check)
Intact: _____ On ice: _____
Store samples for 6 months.
Data Requirements: (Check)
No Level IV: _____ All Level IV: ___X___

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497616.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261755-3
Address: 5755 8th Street East,	Due Date Requested: 1/15/2026			
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: *Boeing NPDES SSFL Routine Outfall 011 COMP*	Project #: 57013187			
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)	1631EMercury, Total	1631E/Filtration_MEMercury, Dissolved	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Outfall011_20260102_Comp (570-261755-1)	1/2/26	10:35 Pacific	G	Water			X		1	
Outfall011_20260102_Comp (570-261755-1MS)	1/2/26	10:35 Pacific	G	Water			X		1	
Outfall011_20260102_Comp (570-261755-1MSD)	1/2/26	10:35 Pacific	G	Water			X		1	
Outfall011_20260102_Grab-04 (570-261755-2)	1/2/26	10:35 Pacific	G	Water			X		1	
Outfall011_20260102_Comp_F (570-261755-3)	1/2/26	10:35 Pacific	G	Water				X	1	
Outfall011_20260102_Comp_F (570-261755-3MS)	1/2/26	10:35 Pacific	G	Water				X	1	
Outfall011_20260102_Comp_F (570-261755-3MSD)	1/2/26	10:35 Pacific	G	Water				X	1	
Outfall011_20260102_Grab_F-04 (570-261755-4)	1/2/26	10:35 Pacific	G	Water				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: 1-5-26 9-	Company	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: ☐ Yes ☐ No	Custody Seal No.	*Cooler Temperature(s) °C and Other Remarks:*

ICOC No:
570-497616

Containers

Count	Container Type	Preservative
2	Mercury-LL Method 1631 Sample Kit	None
2	Mercury-LL Method 1631 Sample Kit - Diss	None
4	No Container	None

Bottle Order Information

Bottle Order
Bottle Order #:
Request From Client: 1/5/2026
Date Order Posted:
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***1/5/2026 11 59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative	Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497633.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261755-4
Address: 3051 Fujita Street,	Due Date Requested: 1/14/2026			Preservation Codes:
City: Torrance	TAT Requested (days): N/A			
State, Zip: CA, 90505				
Phone: N/A	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 011 COMP	Project #: 57013187			
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 (Wewater, Sesolid, Owaste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB Subcontract 8270C SIM Indeno(1,2,3-cd)Pyrene	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall011_20260102_Comp (570-261755-1)	1/2/26	10:35 Pacific	G	Water			X	4	See Attached Instructions

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: 1-5-26 10 -	Company CE	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:

Ver: 10/10/2024

ICOC No:
570-497633

Containers

Count	Container Type	Preservative
4	Amber Glass 1 liter - unpreserved	None

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1	SUBCONTRACT	SUB - Subcontract - 8270C - SIM - Indeno((1,2,3-cd)Pyrene	Report down to MDL, Level IV EMAX STD DOD EDD

Bottle Order Information

Bottle Order
Bottle Order #.
Request From Client: 1/5/2026
Date Order Posted.
Order Status. *Ready To Process*
Prepared By
Deliver By Date. ***1/5/2026 11:59:00PM***
Lab Project Number:
PWSID

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date
Sent Via.
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM *immediately if an error* is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497678.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261755-6
Address: 13715 Rider Trail North,	Due Date Requested: 2/4/2026			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 011 COMP	Project #: 57013187			
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)	900.0/EvaporationGross Alpha/Beta	906.0/LSC_Diel_SuepTritium	905_Sr90/PrecSep_75trontium-90	903.0/PrecSep_21Radium-226	904.0/PrecSep_0Radium-228	A01R_U/ExtChrom_ActinTotal Uranium	901.1_Cs/Fill_Geo_0K-40 and Cesium-137	Total Number of Containers	Special Instructions/Note:
			Preservation Code:												
Outfall011_20260102_Comp (570-261755-1)	1/2/26	10:35 Pacific	G	Water			X	X	X	X	X	X	X	5	Boeing SSFL, DO NOT FILTER; use prep date from preservation. Ok to Preserve

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: 1-5-26 15-	Company	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:

Ver: 10/10/2024

ICOC No:
570-497678

Containers

Count	Container Type	Preservative
1	Amber Glass 1 liter - unpreserved	None
4	Plastic 1 liter - Nitric Acid	Nitric Acid

Bottle Order Information

Bottle Order
Bottle Order #
Request From Client 1/5/2026
Date Order Posted
Order Status. Ready To Process
Prepared By
Deliver By Date. ***1/5/2026 11:59:00PM***
Lab Project Number
PWSID

Order Completion Information

Creator George Padron
Filled by
Sent Date.
Sent Via
Tracking #

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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: Patel, Virendra	Carrier Tracking No(s): N/A	COC No: 570-497746.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Virendra.Patel@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP Oregon; State California; State Program Cal		Job #: 570-261755-2
Address: 880 Riverside Parkway	Due Date Requested: 1/15/2026			Preservation Codes:
City: West Sacramento	TAT Requested (days): N/A			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Boeing NPDES SSFL Routine Outfall 011 COMP	Project #: 57013187			
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)	1613B/1613B_Sox_Sep_P(MOD) Standard List w/ Totals	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Outfall011_20260102_Comp (570-261755-1)	1/2/26	10:35 Pacific	G	Water			X	2	See QAS, Boeing_w/u to zero, ug/L, Use Boeing glassware.

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: 1-626-8-	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:

Ver 10/10/2024

ICOC No
570-497746

Containers

Count	Container Type	Preservative
2	Amber Glass 1 liter - unpreserved	None

Bottle Order Information

Bottle Order:
Bottle Order #.
Request From Client: *1/6/2026*
Date Order Posted
Order Status. *Ready To Process*
Prepared By:
Deliver By Date. ***1/6/2026 11 59:00PM***
Lab Project Number:
PWSID:

Order Completion Information

Creator *George Padron*
Filled by:
Sent Date
Sent Via
Tracking #

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

eurofins | Environment Testing

Date:	1/6/2026
End Time:	1412
KI Paper Lot:	na
Analyst:	VR
Pipette:	ND

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	143313
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
570-261755-V-1	A	Y	5 2	ND
570-261755-A-2	A	Y	5 2	

eurofins Environment Testing	Document Title: Sample Receiving Notes		
	Eurofins Document Reference : S-SR-FRM72109	Revision: 3	Historical Reference: QA-812
	Effective date : 18 Jul 2025		Issued by: XE8X

Job _____

570-261755 Field Sheet

Tracking # 4970 0184 0680

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID L11 Corr. Factor (+ / -) _____ °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal Peel

Cooler ID _____

Temp Observed 3.1 °C Corrected 3.1 °C

From Temp Blank ☐ Sandwich ☑ Sidewall ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials ZH Date 1.7.26

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials ZH Date 1.7.26

Notes _____

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials ZH Date 1.7.26

Login Sample Receipt Checklist

Client: Haley & Aldrich Inc

Job Number: 570-261755-5

Login Number: 261755
List Number: 1
Creator: Chapman, Allyson

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.

Data Usability Summary Report

Project Name: The Boeing Company, Santa Susana Field Laboratory, NPDES

Project Description: Quarter Four, 2025 Stormwater Samples

Sample Dates: November 16, 2025 through January 2, 2026

Analytical Laboratory: Eurofins Calscience, Tustin, CA

Validation Performed by: Kristina Ilina

Validation Reviewed by: Eric Hitchens

Validation Date: February 10, 2026

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the analytical results for Sample Delivery Group(s) (SDG) listed. This DUSR is organized into the following sections:

1. **Quarter Four, 2025**
2. **Explanations**
3. **Glossary**
4. **Abbreviations**
5. **Qualifiers**

References

This data validation and usability assessment was performed per the guidance and requirements established by the United States Environmental Protection Agency (USEPA) using the following reference materials:

- USEPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Chlorinated Dioxin/Furan Data Review;
- NFG for Inorganic Data Review; and
- The project-specific Quality Assurance Project Plan (QAPP), herein referred to as the specified limits (see References section).

Data reported in this sampling event were reported to the laboratory estimated detection limit (EDL) or method detection limit (MDL). Results found between the EDL or MDL and laboratory reporting limit (RL) are flagged J as estimated.

Sample data were qualified in accordance with the laboratory's standard operating procedures (SOP). The results presented in each laboratory report were found to be compliant with the data quality objectives (DQO) for the project and, therefore, usable; any exceptions are noted in the following pages.

1. Quarter Four, 2025

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG numbers:

- 5702557371;
- 5702557372;
- 5702557802;
- 5702562243;
- 5702608753;
- 5702608771;
- 5702608773;
- 5702608791;
- 5702608792;
- 5702608811;
- 5702608851;
- 5702613441;
- 5702613563;
- 5702617451;
- 5702617452;
- 5702617502;
- 5702617521;
- 5702617552; and
- 5702617562.

Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol.

- Samples for E1613B analysis were subcontracted to Eurofins Sacramento in West Sacramento, CA.
- Samples for 1631E analysis were subcontracted to Eurofins Seattle Specialty Metals in Tacoma, WA.

Samples were also received appropriately, identified correctly, and analyzed according to the COC.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Date	Matrix	Methods
Outfall002_20251116_Comp	N	570-255737-1	11/16/2025	WM	A, C
INF002_20251117_Grab	N	570-255780-1	11/17/2025	WM	A
Outfall018_20251119_Comp	N	570-256224-1	11/19/2025	WM	A
INF002_20251223_Grab	N	570-260875-1	12/23/2025	WM	A
Outfall002_20251225_Comp	N	570-260877-1	12/25/2025	WM	C
Outfall009_20251225_Comp	N	570-260879-1	12/25/2025	WM	B, C
Outfall001_20251227_Comp	N	570-260881-1	12/27/2025	WM	C
Outfall018_20251226_Comp	N	570-260885-1	12/26/2025	WM	C
Outfall011_20251226_Comp	N	570-261344-1	12/26/2025	WM	C
Outfall_004_20251226_Comp	N	570-261356-1	12/26/2025	WM	B
Outfall001_20260102_Comp	N	570-261745-1	01/02/2026	WM	A, C
Outfall002_20260102_Comp	N	570-261750-1	01/02/2026	WM	A
Outfall009_20260102_Comp	N	570-261752-1	01/02/2026	WM	C
Outfall011_20260102_Comp	N	570-261755-1	01/02/2026	WM	A
Outfall018_20260102_Comp	N	570-261756-1	01/02/2026	WM	A
Outfall002_20251225_Comp	N	570-260877-1	12/25/2025	WM	A

Method Holding Times			
A.	E1613B	High Resolution Dioxins/Furans	1 year
B.	E1631E	Determination of Total Mercury by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry	90 days
C.	E200.8	Metals (by Mass Spectrometer), Total	180 days for liquid, preserved

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.3 REPORTING LIMITS AND SAMPLE DILUTIONS

The RLs for the samples within this SDG met or were below the minimum RL requirements specified by the project specific QAPP.

All sample dilutions were reviewed and found to be justified. Only detected analytes were reported from a sample dilution analysis.

1.4 SURROGATE RECOVERY COMPLIANCE

Refer to Section E 1.2. The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified quality control (QC) limits.

1.5 BLANK SAMPLE ANALYSIS

Refer to Section E 1.3. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred. Any exceptions are noted in Table 1.

The analysis of the blank samples for field quality control was free of target compounds, with the following exceptions:

Blank Type	Date of Blank	Analyte Detected in Blank	Concentration (µg/L)	Qualifier	Affected Samples
FB	12/26/2025	Mercury, Total	0.67	NA	None, samples are >10x Blank

1.6 LABORATORY CONTROL SAMPLES

Refer to Section E 1.4. Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS/LCSD) analyses associated with client samples exhibited recoveries and relative percent differences (RPDs) within the specified limits with the exceptions listed in Table 1.

1.7 MATRIX SPIKE SAMPLES

Refer to Section E 1.5. The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD) analysis:

Lab Sample Number	Matrix Spike/Matrix Spike Duplicate Sample Client ID	Method(s)
570-255737-1	Outfall002_20251116_Comp	E200.8 (Aluminum)
570-260877-1	Outfall002_20251225_Comp	
570-260881-1	Outfall001_20251227_Comp	
570-260885-1	Outfall018_20251226_Comp	
570-261745-1	Outfall001_20260102_Comp	
570-261752-1	Outfall009_20260102_Comp	
570-260879-1	Outfall009_20251225_Comp	
		E1631E

The MS/MSD recoveries and the relative percent difference (RPD) between the MS and MSD results were within the specified limits, with the following exceptions:

- In cases where the native sample results were ≥ 4x the spike added, data was not qualified.

1.8 DUPLICATE SAMPLE ANALYSIS

Refer to Section E 1.6. The laboratory did not analyze any laboratory duplicates as per the method or laboratory SOP.

1.9 PRECISION AND ACCURACY

Refer to Section E 1.7. Where required by the method, some measurement of analytical accuracy and precision was reported for each method with the site samples.

1.10 ESTIMATED MAXIMUM POSSIBLE CONCENTRATION (EMPC)

Refer to Section E 1.8. A result previously qualified as a non-detect for method blank contamination was not further qualified as an EMPC. The EMPC flags reported by the laboratory are listed in Table 3.

1.11 CALIBRATION BLANKS

Refer to Section E 1.9. Calibration blanks had no detections, with the following exceptions:

Blank Type	Date of Blank	Time	Analyte Detected in	Concentration	Qualifier	Affected Samples
CCB	12/03/2025	1056	Aluminum	5.24 J	NA	None, samples are >10x Blank

1.12 INTERFERENCE CHECK SAMPLES AND INDUCTIVELY COUPLED PLASMA/MASS SPECTROMETRY TUNE

Refer to Section E 1.10. Percent recoveries were within the specified limits. The CRI, when used, verifies the reporting limit for each analyte with control limits of 70 to 130 percent.

1.13 SAMPLE RESULT VERIFICATION

A portion of the sample results were tracked through the relevant sample preparation steps, raw data outputs, transcriptions, conversions and/or calculations and have been confirmed to be accurate and representative of the sample conditions.

Sample ID	Method	Analyte	Reported Result	Recalculated Result	Result Status
Outfall001_20251227_Comp	E200.8	Aluminum	3300	3316	Confirmed
Outfall001_20260102_Comp			1100	1095	Confirmed

1.14 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable as no data was rejected. A summary of qualifiers applied to this data set is shown in Table 4.

2. Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.2 Surrogate Recovery Compliance
  - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determining the efficiency of the extraction procedure by evaluating the percent recovery (%R) of the compounds.
- E 1.3 Blank Sample Analysis
  - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
  - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.4 Laboratory Control Samples
  - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.5 Matrix Spike Samples
  - Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effects of the sample matrix on the sample preparation procedures and measurement methodologies.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
  - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
- E 1.7 Precision and Accuracy
  - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
  - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%R) of certain spiked compounds. This can be assessed using LCS, blank spike (BS), MS, and/or surrogate recoveries.

- E 1.8 Dioxin/Furan Estimated Maximum Possible Concentration
  - An Estimated Maximum Possible Concentration (EMPC) is a worst-case estimate of the concentration for a dioxin/furan based on all identification criteria being met except the ion abundance ratio criteria, or if a peak representing a chlorinated diphenyl ether was detected.
- E 1.9 Calibration Blanks
  - Calibration blanks help determine the validity of the analytical results by determining the presence and magnitude of contamination resulting from laboratory activities or baseline drift during analysis. Initial Calibration Blanks (ICBs) are analyzed after the standards and prior to the Initial Calibration Verification (ICV) sample. Continuing Calibration Blanks (CCBs) are analyzed immediately after every Continuing Calibration Verification (CCV) sample.
- E 1.10 Interference Check Samples and Inductively Coupled Plasma/Mass Spectrometry Tune
  - Inorganic analysis requires an interference check sample be run to determine the validity of the analytical results based on the instrument's ability to overcome interferences typical of those found in samples. Percent recoveries of the interferents or analytes must be between 80 and 120 percent.
  - Inorganic analysis performed by a mass spectrometer also requires an Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) tune check that serves as an initial demonstration of instrument stability and precision.
  - The Contract Laboratory Program no longer requires the Contract Required Quantitation Limit Check Standard (CRI) for inorganic analysis, which is run after calibrations, though some laboratories still provide the CRI as well as the required RL standard check.

3. Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
  - EB Equipment Blank Sample
  - FB Field Blank Sample
  - FD Field Duplicate Sample
  - N Primary Sample
  - TB Trip Blank Sample
- Units:
  - % SURVIVAL percent survival
  - µg/L microgram per liter
  - mg/kg milligrams per kilogram
  - mg/L milligram per liter
  - mL/L milliliters per liter
  - mpn/100mL most probable number per 100 milliliters
  - NTU nephelometric turbidity unit
  - pCi/L picocuries per liter
  - umhos/cm micromhos per centimeter
- Matrices:
  - WM Stormwater
  - WMQ Water Quality control matrix
- Table Footnotes:
  - NA Not applicable
  - ND Non-detect
  - NR Not reported
- Common Symbols:
  - % percent
  - < less than
  - ≤ less than or equal to
  - > greater than
  - ≥ greater than or equal to
  - = equal
  - °C degrees Celsius
  - ± plus or minus
  - ~ approximately
  - x times (multiplier)
- Fractions:
  - D Dissolved (filtered)
  - N Normal (method cannot be filtered)
  - T Total (unfiltered)

4. Abbreviations

%D	Percent Difference
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation
2s	2 sigma
4,4-DDT	4 4-dichlorodiphenyltrichloroethane
Abs Diff	Absolute Difference
amu	atomic mass unit
BPJ	Best Professional Judgement
BS	Blank Spike
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CCVL	Continuing Calibration Verification Low
COC	Chain of Custody
COM	Combined Isotope Calculation
Cr (VI)	Hexavalent Chromium
CRI	Collision Reaction Interface
DQO	data quality objective
DUSR	Data Usability Summary Report
EMPC	Estimated Maximum Possible Concentration
FBK	Field Blank Contamination
FDP	Field Duplicate
GC	Gas Chromatograph
GC/MS	Gas Chromatography/Mass Spectrometry
GPC	Gel Permeation Chromatography
HCl	Hydrochloric Acid
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP/MS	Inductively Coupled Plasma/ Mass Spectrometry
ICV	Initial Calibration Verification
ICVL	Initial Calibration Verification Low
IPA	Isopropyl Alcohol
LC	Laboratory Control
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MDC	Minimum Detectable Concentration
MDL	Laboratory Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
NH_3	Ammonia
PCB	Polychlorinated Biphenyl
PDS	Post Digestion Spike
PEM	Performance Evaluation Mixture
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
R^2	R-squared value
Ra-226	Radium-226
Ra-228	Radium-228
RESC	Resolution Check Measure
RER	Relative Error Ratio
RL	Laboratory Reporting Limit
RPD	Relative Percent Difference
RRF	Relative Response Factors
RT	Retention Time
SAP	sampling analysis plan
SDG	Sample Delivery Group
SIM	Selected ion monitoring
SOP	Laboratory Standard Operating Procedures
SPE	Solid Phase Extraction
SVOC	Semi-Volatile Organic Compounds
TIC	Tentatively Identified Compound
TKN	Total Kjeldahl Nitrogen
TPH	Total Petroleum Hydrocarbon
TPU	Total Propagated Uncertainty
amu	atomic mass unit
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compounds

5. Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Laboratory Qualifiers:

BA	Relative percent difference out of control.
BU	Analyzed out of holding time.
BV	Sample received after holding time expired.
J,DX	Results found between the EDL or MDL and laboratory RL.
LM	MS and/or MSD above acceptance limits. See Blank Spike (LCS).
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS).
LR	LCS/LCSD recovery below method control limits.
LQ	LCS/LCSD recovery above method control limits.
MB	Analyte present in the method blank.
PI	Primary and confirm results varied by > than 40% RPD.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio; the measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U	Result is less than the sample detection limit.

- Validation Notes:

--	Based on validation of the data, a qualifier was not required.
*1	Improper preservation of sample.
*3	Initial and/or continuing calibration recoveries were outside acceptable control limits.
*10	Value was estimated detect or estimated non-detect (J, UJ) due to deficiencies in quantitation of the constituent including constituents reported by the laboratory as estimated maximum possible concentration (EMPC) values.
*III	Unusual problems found with the data that have been described in the validation report.
B	Presumed contamination as indicated by the preparation (method) blank results.
C	Calibration %RSD or %D was noncompliant. [or] Correlation coefficient is <0.995.
D	The analysis with this flag should not be used because another more technically sound analysis is available.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.
E	Duplicates showed poor agreement.

F Presumed contamination as indicated by the field blank (FB) or equipment blank (EB) results.

H Holding times were exceeded.

I Internal standard performance was unsatisfactory. [or] ICP ICS results were unsatisfactory.

L LCS/LCSD % recovery or RPD was not within control limits.

Q MS/MSD recovery or RPD was outside of control limits.

R Calibration RRF was <0.05 or %R for calibration is not within control limits. [or] %R for calibration is not within control limits.

RPD Pesticides and PCB Confirmation Column RPD Exceeded.

S Surrogate recovery was outside QC limits [or] the sequence or number of standards used for the calibration was incorrect.

T Presumed contamination as indicated by the trip blank (TB) results.

- Validation Qualifiers:

= No Qualifier.

J Estimated value.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analyte has been "tentatively identified" or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

R As a validation qualifier, results are rejected; the presence or absence of analyte cannot be verified.

U Result not detected.

UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.

References

1. Haley & Aldrich, Inc., 2015. Quality Assurance Project Field Plan for Santa Susana Field Laboratory Stormwater Sampling Program. December.
2. United States Environmental Protection Agency, 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.
3. United States Environmental Protection Agency (USEPA), 2011. USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review. EPA-540-R-11-016. September.

Attachments:

Table 1 - Method Blanks Detections
Table 2 - LCS/LCSD % Recoveries
Table 3 - EMPC Flags
Table 4 - Summary of Qualifiers

TABLE 1
METHOD BLANKS DETECTIONS
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

SDG	Batch	Analyte Detected in Blank	Concentration	Qualifier	Affected Samples
570-255737-2; 570-256224-3	895776	1,2,3,4,7,8-HxCDD	0.00000176 J,DX	RL U	Outfall002_20251116_Comp
		1,2,3,6,7,8-HxCDD	0.00000174 J,DX q	RL U	
		1,2,3,7,8,9-HxCDD	0.00000274 J,DX q	RL U	
		1,2,3,7,8,9-HxCDF	0.00000225 J,DX q	RL U	
		2,3,4,6,7,8-HxCDF	0.00000252 J,DX	RL U	
		1,2,3,4,6,7,8-HpCDD	0.00000276 J,DX q	RL U	Outfall018_20251119_Comp
		OCDD	0.00000604 J,DX q	RL U	
		OCDF	0.00000475 J,DX q	RL U	
570-260877-3	897644	1,2,3,4,6,7,8-HpCDD	0.00000156 J,DX q	NA	None, sample > 10x blank
		1,2,3,4,7,8,9-HpCDF	0.000000638 J,DX q	RL U	Outfall002_20251225_Comp
		OCDD	0.00000682 J,DX q	NA	None, sample > 10x blank
		OCDF	0.00000429 J,DX q	NA	None, sample > 10x blank
570-255780-2	897344	1,2,3,4,7,8-HxCDD	0.00000282 J,DX q	NA	None, sample is ND
		1,2,3,6,7,8-HxCDD	0.00000409 J,DX	NA	None, sample is ND
		1,2,3,4,7,8-HxCDF	0.00000226 J,DX q	NA	None, sample is ND
		1,2,3,6,7,8-HxCDF	0.00000213 J,DX q	NA	None, sample is ND
		1,2,3,7,8,9-HxCDF	0.00000377 J,DX q	NA	None, sample is ND
		2,3,4,6,7,8-HxCDF	0.00000442 J,DX	NA	None, sample is ND
		1,2,3,4,6,7,8-HpCDD	0.00000476 J,DX q	RL U	INF002_20251117_Grab
		1,2,3,4,6,7,8-HpCDF	0.00000611 J,DX q	RL U	
		1,2,3,4,7,8,9-HpCDF	0.00000385 J,DX q	NA	None, sample is ND
		OCDD	0.0000267 J,DX q	NA	None, sample > 10x blank
		OCDF	0.0000207 J,DX q	NA	None, sample is ND
570-261745-2; 570-261750-2; 570-261755-2; 570-261756-2.	897318	OCDD	0.0000112 J,DX	RL U	Outfall001_20260102_Comp; Outfall002_20260102_Comp; Outfall011_20260102_Comp; Outfall018_20260102_Comp.
		OCDF	0.00000321 J,DX	RL U	

TABLE 2
LCS/LCSD % RECOVERIES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

SDG #	Sample Type	Batch ID	Analyte	%R	Qualifier	Affected Samples
570-255737-2; 570-256224-3	LCS	895776	1,2,3,6,7,8-HxCDF	75%	J/UJ	Outfall002_20251116_Comp; Outfall018_20251119_Comp
			1,2,3,7,8,9-HxCDF	76%	J/UJ	Outfall002_20251116_Comp; Outfall018_20251119_Comp
570-255780-2	LCS/LCSD	897344	OCDD	176%/160%	J/None	INF002_20251117_Grab
570-260875-3		896520	OCDD	152%/175%	J/None	None, sample is ND
570-261745-2; 570-261750-2; 570-261755-2; 570-261756-2.		897318	1,2,3,4,6,7,8-HpCDD	151%/175%	J/None	Outfall001_20260102_Comp; Outfall002_20260102_Comp
			1,2,3,4,6,7,8-HpCDF	135%/160%	J/None	Outfall002_20260102_Comp
			1,2,3,4,7,8,9-HpCDF	141%/158%	J/None	None, sample is ND*
			OCDD	181%/205%	J/None	None, sample is ND*
	LCSD		1,2,3,6,7,8-HxCDD	151%	J/None	None, sample is ND
			1,2,3,4,7,8-HxCDF	143%	J/None	None, sample is ND
			1,2,3,6,7,8-HxCDF	140%	J/None	None, sample is ND
			1,2,3,7,8,9-HxCDF	135%	J/None	None, sample is ND
			OCDF	176%	J/None	None, sample is ND*
570-260877-3	LCS/LCSD	897644	CDD	154%/146%	J/None	Outfall002_20251225_Comp

** Qualified ND based on EMPC qualification.*

TABLE 3
EMPC FLAGS
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

SDG #	Lab ID	Method	Analyte	Concentration (ug/L)	Qualifier	Affected Samples
5702557372	570-255737-1	E1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1.3E-06	UJ	Outfall002_20251116_Comp
5702557372	570-255737-1	E1613B	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.2E-06	UJ	Outfall002_20251116_Comp
5702562243	570-256224-1	E1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6.7E-07	UJ	Outfall018_20251119_Comp
5702617452	570-261745-1	E1613B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	7.3E-07	UJ	Outfall001_20260102_Comp
5702617452	570-261745-1	E1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	3.4E-06	UJ	Outfall001_20260102_Comp
5702617552	570-261755-1	E1613B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	1.9E-06	UJ	Outfall011_20260102_Comp
5702617552	570-261755-1	E1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5.7E-07	UJ	Outfall011_20260102_Comp
5702617562	570-261756-1	E1613B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	8.4E-07	UJ	Outfall018_20260102_Comp
5702608773	570-260877-1	E1613B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	3.6E-06	UJ	Outfall002_20251225_Comp
5702608773	570-260877-1	E1613B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.0E-06	UJ	Outfall002_20251225_Comp
5702608773	570-260877-1	E1613B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.1E-06	UJ	Outfall002_20251225_Comp
5702608773	570-260877-1	E1613B	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.5E-06	UJ	Outfall002_20251225_Comp
5702608773	570-260877-1	E1613B	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.1E-06	UJ	Outfall002_20251225_Comp
5702608773	570-260877-1	E1613B	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	4.0E-07	UJ	Outfall002_20251225_Comp

TABLE 4
SUMMARY OF QUALIFIERS
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

SDG#	Location	Sample ID	Sample Date	Lab ID	Method	Fraction	Analyte	Result	Laboratory Qualifier	Final Validated Qualifier	Validation Note	Unit	Notes
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	8.2E-05	J,DXMB	J	DNQ	µg/L	Sample > 10x blank
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	3.3E-05	J,DX	J	DNQ	µg/L	
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1.3E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.2E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	6.7E-07	J,DXMBq	U	B	µg/L	Report ND at sample concentration
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	2.2E-06	J,DXLR	J	DNQ,L	µg/L	
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.6E-06	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	8.0E-07	JDXLRM	UJ	B,L	µg/L	Report ND at sample concentration
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.8E-06	J,DXMBq	U	B	µg/L	Report ND at sample concentration
5702557372	OUTFALL 002	Outfall002_20251116_Comp	11/16/2025	570-255737-1	E1613B	N	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2.3E-06	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702557802	SWTS018 (INF002)	INF002_20251117_Grab	11/17/2025	570-255780-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3.8E-04	MBLQ	J	L	µg/L	
5702557802	SWTS018 (INF002)	INF002_20251117_Grab	11/17/2025	570-255780-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	7.8E-06	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702557802	SWTS018 (INF002)	INF002_20251117_Grab	11/17/2025	570-255780-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	2.9E-05	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	2.8E-06	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1.6E-05	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6.7E-07	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	2.9E-06	J,DXMBq	U	B	µg/L	Report ND at sample concentration
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	8.8E-07	J,DX	J	DNQ	µg/L	
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	ND	ULR	UJ	L	µg/L	
5702562243	OUTFALL 018	Outfall018_20251119_Comp	11/19/2025	570-256224-1	E1613B	N	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	ND	ULR	UJ	L	µg/L	
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	8.0E-05	J,DXMB	J	DNQ	µg/L	
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1.7E-03	MBLQ	J	L	µg/L	
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	3.3E-05	J,DX	J	DNQ	µg/L	
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1.8E-06	J,DXqMB	U	B	µg/L	Report ND at sample concentration
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.1E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.0E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration

TABLE 4
SUMMARY OF QUALIFIERS
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

SDG#	Location	Sample ID	Sample Date	Lab ID	Method	Fraction	Analyte	Result	Laboratory Qualifier	Final Validated Qualifier	Validation Note	Unit	Notes
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.5E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5.4E-06	J,DX	J	DNQ	µg/L	
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	4.0E-07	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	3.6E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.1E-06	J,DXq	UJ	*10	µg/L	Report ND at sample concentration
5702608773	OUTFALL 002	Outfall002_20251225_Comp	12/25/2025	570-260877-1	E1613B	N	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2.2E-06	J,DX	J	DNQ	µg/L	
5702617452	OUTFALL 001	Outfall001_20260102_Comp	1/2/2026	570-261745-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	6.5E-06	J,DXqMB	U	B	µg/L	Report ND at sample concentration
5702617452	OUTFALL 001	Outfall001_20260102_Comp	1/2/2026	570-261745-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	5.2E-05	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702617452	OUTFALL 001	Outfall001_20260102_Comp	1/2/2026	570-261745-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	3.4E-06	J,DXqLQ	UJ	*10	µg/L	Report ND at sample concentration
5702617452	OUTFALL 001	Outfall001_20260102_Comp	1/2/2026	570-261745-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	8.8E-06	J,DXLQ	J	DNQ,L	µg/L	
5702617452	OUTFALL 001	Outfall001_20260102_Comp	1/2/2026	570-261745-1	E1613B	N	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	7.3E-07	J,DXqLQ	UJ	*10	µg/L	Report ND at sample concentration
5702617502	OUTFALL 002	Outfall002_20260102_Comp	1/2/2026	570-261750-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	8.0E-06	J,DXqMB	U	B	µg/L	Report ND at sample concentration
5702617502	OUTFALL 002	Outfall002_20260102_Comp	1/2/2026	570-261750-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3.6E-05	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702617502	OUTFALL 002	Outfall002_20260102_Comp	1/2/2026	570-261750-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	2.7E-06	J,DXLQ	J	DNQ,L	µg/L	
5702617502	OUTFALL 002	Outfall002_20260102_Comp	1/2/2026	570-261750-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	4.9E-06	J,DXLQ	J	DNQ,L	µg/L	
5702617552	OUTFALL 011	Outfall011_20260102_Comp	1/2/2026	570-261755-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	3.3E-06	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702617552	OUTFALL 011	Outfall011_20260102_Comp	1/2/2026	570-261755-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	2.3E-05	J,DXMB	U	B	µg/L	Report ND at sample concentration
5702617552	OUTFALL 011	Outfall011_20260102_Comp	1/2/2026	570-261755-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5.7E-07	J,DXqLQ	UJ	*10	µg/L	Report ND at sample concentration
5702617552	OUTFALL 011	Outfall011_20260102_Comp	1/2/2026	570-261755-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	1.9E-06	J,DXqLQ	UJ	*10	µg/L	Report ND at sample concentration
5702617562	OUTFALL 018	Outfall018_20260102_Comp	1/2/2026	570-261756-1	E1613B	N	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	6.9E-06	J,DXqMB	U	B	µg/L	Report ND at sample concentration
5702617562	OUTFALL 018	Outfall018_20260102_Comp	1/2/2026	570-261756-1	E1613B	N	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	8.4E-07	J,DXqLQ	UJ	*10	µg/L	Report ND at sample concentration

Notes:
µg/L = Micrograms per liter
**10 = Value was estimated detect or estimated non-detect (J, UJ) due to deficiencies in quantitation of the constituent including constituents reported by the laboratory as estimated maximum possible concentration (EMPC) values.*
B = Presumed contamination as indicated by the preparation (method) blank results.
L = LCS/LCSD % recovery or RPD was not within control limits.
DNQ = The reported result is above the method detection limit but is less than the reporting limit.
N = Not applicable
J = Estimated value.
U = Result not detected.
UJ = Result not detected at the estimated reporting limit.

APPENDIX F

Analytical Laboratory Methods, Method Detection Limits, Reporting Limits, QA/QC Procedures, and ELAP Certifications, Fourth Quarter 2025

APPENDIX F

TABLE OF CONTENTS

Table F - Annual List of Analytical Methods by Analyte with Laboratory Reporting Limits and Method Detection Limits

1. Eurofins Calscience CA Certificate of Environmental Laboratory Accreditation and Fields of Accreditation

2. Eurofins Sacramento CA Certificate of Environmental Laboratory Accreditation and Fields of Accreditation

3. Eurofins St. Louis CA Certificate of Environmental Laboratory Accreditation and Fields of Accreditation

4. Eurofins Seattle CA Certificate of Environmental Laboratory Accreditation and Fields of Accreditation

5. Eurofins Calscience Quality Assurance Manual for Environmental Analytical Services

6. Aquatic Bioassay & Consulting Laboratories, Inc. CA Certificate of Environmental Laboratory Accreditation

7. Aquatic Bioassay & Consulting Laboratories, Inc. CA Environmental Laboratory Accreditation Program Fields of Accreditation

8. Weck Laboratories, Inc. CA Environmental Laboratory Accreditation and Fields of Accreditation

9. Enthalpy Analytical, LLC CA Certificate of Environmental Laboratory Accreditation

10. Enthalpy Analytical, LLC CA Environmental Laboratory Accreditation Program Fields of Accreditation

11. EMAX Laboratories, Inc. CA Certificate of Environmental Laboratory Accreditation and Fields of Accreditation

TABLE F
ANNUAL LIST OF ANALYTICAL METHODS BY ANALYTE WITH LABORATORY RLS AND MDLS
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Method	Analyte	Units	2025 Laboratory MDL	2025 Laboratory RL	SWRCB ML	Laboratory vs ML[1]	Permit Limits						
							Daily Maximum Limits	Daily Maximum Limits	Daily Maximum Limits	Receiving Water Limits	Receiving Water Limits	Receiving Water Limits	Receiving Water Sediment Limits
							001, 002 011, 018	003-007, 009, 010	008	Bell Creek	Arroyo Simi (RSW-002)	Arroyo Simi (RSW-003)	Arroyo Simi
EPA 624.1	1,1,1-Trichloroethane	µg/L	0.19	0.5	2	--[b]							
EPA 624.1	1,1,2,2-Tetrachloroethane	µg/L	0.15	0.5	1	--[b]							
EPA 624.1	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	1.1	2	n/a	--[d]							
EPA 624.1	1,1,2-Trichloroethane	µg/L	0.2	0.5	2	--[b]							
EPA 624.1	1,1-Dichloroethane	µg/L	0.23	0.5	1	--[b]							
EPA 624.1	1,1-Dichloroethene	µg/L	0.19	0.5	2	--[a]	6.0						
EPA 1613B	1,2,3,4,6,7,8-HpCDD[8]	µg/L	3E-7 - 4.2E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,4,6,7,8-HpCDF[8]	µg/L	9E-8 - 3.4E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,4,7,8,9-HpCDF[8]	µg/L	1.2E-7 - 3.8E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,4,7,8-HxCDD[8]	µg/L	1.3E-7 - 5E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,4,7,8-HxCDF[8]	µg/L	1.1E-7 - 3.2E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,6,7,8-HxCDD[8]	µg/L	1.3E-7 - 4.8E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,6,7,8-HxCDF[8]	µg/L	1E-7 - 2.8E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,7,8,9-HxCDD[8]	µg/L	1.3E-7 - 4.2E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,7,8,9-HxCDF[8]	µg/L	9.8E-8 - 3.6E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,7,8-PeCDD[8]	µg/L	2E-7 - 5.1E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	1,2,3,7,8-PeCDF[8]	µg/L	1.2E-7 - 2.3E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 624.1	1,2,4-Trichlorobenzene	µg/L	0.18	1	n/a	--[d]							
EPA 625.1 -Low-level	1,2,4-Trichlorobenzene	µg/L	0.079 - 0.085	0.19 - 0.21	5	--[b]							
EPA 624.1	1,2-Dichloro-1,1,2-trifluoroethane	µg/L	0.78	2	n/a	--[d]							
EPA 624.1	1,2-Dichlorobenzene	µg/L	0.16	0.5	2	--[b]							
EPA 625.1 -Low-level	1,2-Dichlorobenzene	µg/L	0.074 - 0.08	0.19 - 0.21	2	--[b]							
EPA 624.1	1,2-Dichloroethane	µg/L	0.17	0.5	2	--[a]	0.5						
EPA 624.1	1,2-Dichloropropane	µg/L	0.17	0.5	1	--[b]							
EPA 625.1 -Low-level	1,2-Diphenylhydrazine/Azobenzene	µg/L	0.023 - 0.025	0.19 - 0.21	1	--[b]							
EPA 624.1	1,3-Dichlorobenzene	µg/L	0.13	0.5	2	--[b]							
EPA 625.1 -Low-level	1,3-Dichlorobenzene	µg/L	0.076 - 0.082	0.19 - 0.21	1	--[b]							
EPA 624.1	1,4-Dichlorobenzene	µg/L	0.12	0.5	2	--[b]							
EPA 625.1 -Low-level	1,4-Dichlorobenzene	µg/L	0.073 - 0.079	0.19 - 0.21	1	--[b]							
8260B - Low-level	1,4-Dioxane	µg/L	0.55	1	n/a	--[d]							
EPA 1613B	2,3,4,6,7,8-HxCDF[8]	µg/L	9.3E-8 - 3E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	2,3,4,7,8-PeCDF[8]	µg/L	1.2E-7 - 2.3E-6	4.8E-5 - 5.7E-5	0.00005	--[b]							
EPA 1613B	2,3,7,8-TCDD[8]	µg/L	1.9E-7 - 3.3E-6	9.5E-6 - 1.1E-5	0.00001	--[b]							
EPA 1613B	2,3,7,8-TCDF[8]	µg/L	1E-7 - 2.4E-6	9.5E-6 - 1.1E-5	0.00001	--[b]							
EPA 625.1 -Low-level	2,4,6-Trichlorophenol	µg/L	0.056 - 0.063	0.95 - 1.1	10	--[a]	13						
EPA 625.1 -Low-level	2,4-Dichlorophenol	µg/L	0.045 - 0.048	0.96 - 1	5	--[b]							
EPA 625.1 -Low-level	2,4-Dimethylphenol	µg/L	0.062 - 0.066	0.19 - 0.21	2	--[b]							
EPA 625.1 -Low-level	2,4-Dinitrophenol	µg/L	2.5 - 2.6	4.8 - 5.1	5	--[b]							
EPA 625.1 -Low-level	2,4-Dinitrotoluene	µg/L	0.12 - 0.14	0.19 - 0.22	5	--[a]	18						
EPA 625.1 -Low-level	2,6-Dinitrotoluene	µg/L	0.064 - 0.069	0.19 - 0.21	5	--[b]							
EPA 624.1	2-Chloroethyl vinyl ether	µg/L	0.59 - 0.92	2 - 5	n/a	--[d]							
EPA 625.1 -Low-level	2-Chloronaphthalene	µg/L	0.064 - 0.068	0.19 - 0.21	10	--[b]							
EPA 625.1 -Low-level	2-Chlorophenol	µg/L	0.055 - 0.059	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	2-Methyl-4,6-Dinitrophenol	µg/L	1.6 - 1.8	4.8 - 5.1	5	--[b]							
EPA 625.1 -Low-level	2-Nitrophenol	µg/L	1.4 - 1.5	4.8 - 5.1	10	--[b]							
EPA 625.1 -Low-level	3,3'-Dichlorobenzidine	µg/L	0.52 - 0.59	4.8 - 5.4	5	--[g]	0.077		0.077				
Pesticides, Low Level (EPA 608.3)	4,4'-DDD	µg/L	0.0027 - 0.0032	0.005 - 0.050	0.05	--[b]							
Pesticides (SW8081A)	4,4'-DDD	µg/g	0.00014	0.001	n/a	--[c]							0.002
Pesticides, Low Level (EPA 608.3)	4,4'-DDE	µg/L	0.0018 - 0.010	0.005 - 0.050	0.05	--[g]	0.00059		0.00059				
Pesticides (SW8081A)	4,4'-DDE	µg/g	0.00014	0.001	n/a	--[c]							0.0014
Pesticides, Low Level (EPA 608.3)	4,4'-DDT	µg/L	0.00028 - 0.010	0.005 - 0.050	0.01	--[b]							
Pesticides (SW8081A)	4,4'-DDT	µg/g	0.00023	0.001	n/a	--[c]							0.0003

TABLE F
ANNUAL LIST OF ANALYTICAL METHODS BY ANALYTE WITH LABORATORY RLS AND MDLS
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Method	Analyte	Units	2025 Laboratory MDL	2025 Laboratory RL	SWRCB ML	Laboratory vs ML[1]	Permit Limits						
							Daily Maximum Limits	Daily Maximum Limits	Daily Maximum Limits	Receiving Water Limits	Receiving Water Limits	Receiving Water Limits	Receiving Water Sediment Limits
							001, 002 011, 018	003-007, 009, 010	008	Bell Creek	Arroyo Simi (RSW-002)	Arroyo Simi (RSW-003)	Arroyo Simi
EPA 625.1 -Low-level	4-Bromophenyl phenyl ether	µg/L	0.052 - 0.056	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	4-Chloro-3-methylphenol	µg/L	0.053 - 0.056	0.96 - 1	1	--[b]							
EPA 625.1 -Low-level	4-Chlorophenyl phenyl ether	µg/L	0.059 - 0.063	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	4-Nitrophenol	µg/L	0.76 - 0.81	4.8 - 5.1	10	--[b]							
EPA 625.1 -Low-level	Acenaphthene	µg/L	0.062 - 0.067	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	Acenaphthylene	µg/L	0.062 - 0.066	0.19 - 0.21	10	--[b]							
EPA 624.1	Acrolein	µg/L	1.8	5	5	--[b]							
EPA 624.1	Acrylonitrile	µg/L	0.98	2	2	--[b]							
Pesticides, Low Level (EPA 608.3)	Aldrin	µg/L	0.0031 - 0.010	0.005 - 0.010	0.005	--[i]							
Pesticides, Low Level (EPA 608.3)	alpha-BHC	µg/L	0.0024 - 0.005	0.005 - 0.0058	0.01	--[a]	0.03						
Pesticides, Low Level (EPA 608.3)	alpha-Endosulfan	µg/L	0.0019 - 0.005	0.005 - 0.0058	0.02	--[b]							
ICP/MS 200.8	Aluminum	mg/L	0.0029 - 0.0086	0.015	n/a	--[c]	1.0	1.0	1.0				
General Chemistry, EPA 350.1	Ammonia - N	mg/L	0.023	0.075	n/a	--[c]	10.1		10.1				
General Chemistry, SM4500-NH3C	Ammonia - N	mg/Kg	83	100	n/a	--[d]							
EPA 625.1 -Low-level	Anthracene	µg/L	0.025 - 0.027	0.19 - 0.21	10	--[b]							
ICP/MS 200.8	Antimony	µg/L	0.36 - 0.79	2	0.5	--[h]	6.0	6.0	6.0				
PCB, Low Level (EPA 608.3)	Aroclor 1016	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1016	µg/g	0.0078	0.01	n/a	--[c]							0.12
PCB, Low Level (EPA 608.3)	Aroclor 1221	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1221	µg/g	0.0078	0.01	n/a	--[c]							0.12
PCB, Low Level (EPA 608.3)	Aroclor 1232	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1232	µg/g	0.0078	0.01	n/a	--[c]							0.12
PCB, Low Level (EPA 608.3)	Aroclor 1242	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1242	µg/g	0.0078	1	n/a	--[c]							0.12
PCB, Low Level (EPA 608.3)	Aroclor 1248	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1248	µg/g	0.0078	0.01	n/a	--[c]							0.12
PCB, Low Level (EPA 608.3)	Aroclor 1254	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1254	µg/g	0.0051	0.01	n/a	--[c]							0.12
PCB, Low Level (EPA 608.3)	Aroclor 1260	µg/L	0.0001 - 0.5	0.1 - 1	0.5	--[b]							
PCB (SW8082)	Aroclor 1260	µg/g	0.0051	0.01	n/a	--[c]							0.12
ICP/MS 200.8	Arsenic	µg/L	0.16	1	2	--[a]	10.0		10.0				
EPA 100.2	Asbestos	MFL	n/a[2]	0.106	n/a	--[d]							
ICP/MS 200.8	Barium	mg/L	0.00017 - 0.00054	0.001	n/a	--[c]	1.0						
EPA 624.1	Benzene	µg/L	0.1	0.5	2	--[b]							
EPA 625.1 -Low-level	Benzidine	µg/L	0.89 - 1	4.8 - 5.4	5	--[g]	0.00054		0.00054				
EPA 625.1 -Low-level	Benzo(a)anthracene	µg/L	0.057 - 0.061	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	Benzo(a)pyrene	µg/L	0.028 - 0.03	0.19 - 0.21	10	--[b]							
EPA 625.1 -Low-level	Benzo(b)fluoranthene	µg/L	0.066 - 0.07	0.19 - 0.21	10	--[b]							
EPA 625.1 -Low-level	Benzo(g,h,i)perylene	µg/L	0.057 - 0.061	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	Benzo(k)fluoranthene	µg/L	0.066 - 0.071	0.19 - 0.21	10	--[b]							
ICP/MS 200.8	Beryllium	µg/L	0.23 - 0.26	0.5	0.5	--[a]	4.0						
Pesticides, Low Level (EPA 608.3)	beta-BHC	µg/L	0.0015 - 0.00174	0.005 - 0.0058	0.005	--[b]							
Pesticides, Low Level (EPA 608.3)	beta-Endosulfan	µg/L	0.0019 - 0.022	0.005 - 0.0058	0.01	--[b]							
General Chemistry, SM5210B	Biochemical Oxygen Demand (BOD)(5-Day @ 20 deg. C)	mg/L	1	2	n/a	--[c]	30						
EPA 625.1 -Low-level	Bis (2-chloroethoxy) methane	µg/L	0.068 - 0.073	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	Bis (2-chloroethyl) ether	µg/L	0.066 - 0.071	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	Bis (2-chloroisopropyl) ether	µg/L	0.083 - 0.089	0.19 - 0.21	2	--[b]							
EPA 625.1 -Low-level	Bis (2-ethylhexyl) phthalate	µg/L	1 - 1.2	4.8 - 5.4	5	--[a]	4.0	4.0					
EPA-600-R-95-136	Bivalve Embryo Toxicity (Mytilus edulis)	n/a	n/a	n/a	n/a	--[e]							
ICP/MS 200.7	Boron	mg/L	0.0035 - 0.026	0.5	n/a	--[c]		1.0	1.0				
EPA 624.1	Bromoform	µg/L	0.25	1	2	--[b]							
EPA 624.1	Bromomethane	µg/L	0.38	0.5	2	--[b]							
EPA 625.1 -Low-level	Butyl benzylphthalate	µg/L	0.33 - 0.36	0.96 - 1	10	--[b]							
ICP/MS 200.8	Cadmium	µg/L	0.047 - 0.13	1	0.25	--[a]	3.1	4.0	3.1				

TABLE F
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FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

							Permit Limits						
Method	**Analyte**	**Units**	**2025 Laboratory MDL**	**2025 Laboratory RL**	**SWRCB ML**	**Laboratory vs ML[1]**	**Daily Maximum Limits 001, 002 011, 018**	**Daily Maximum Limits 003-007, 009, 010**	**Daily Maximum Limits 008**	**Receiving Water Limits Bell Creek**	**Receiving Water Limits Arroyo Simi (RSW-002)**	**Receiving Water Limits Arroyo Simi (RSW-003)**	**Receiving Water Sediment Limits Arroyo Simi**
EPA 624.1	Carbon tetrachloride	µg/L	0.2	0.5	2	--[b]							
Radiochemistry, EPA 901.1	Cesium-137	pCi/L	8.06 - 36.6	20	n/a	--[d]							
Pesticides, Low Level (EPA 608.3)	Chlordane	µg/L	0.043 - 0.50	0.5 - 1.0	0.1	--[i]							
Pesticides (SW8081A)	Chlordane	µg/g	0.00082	0.005	n/a	--[c]							0.0033
General Chemistry, EPA 300	Chloride	mg/L	0.36	1	n/a	--[c]	150	150	150				
General Chemistry, (Field Test)	Chlorine, Total Residual[3]	mg/L	n/a	0.01	n/a	--[c]	0.1						
EPA 624.1	Chlorobenzene	µg/L	0.14	0.5	2	--[b]							
EPA 624.1	Chlorodibromomethane	µg/L	0.13	0.5	2	--[b]							
EPA 624.1	Chloroethane	µg/L	0.36	1	2	--[b]							
EPA 624.1	Chloroform	µg/L	0.25	0.5	2	--[b]							
EPA 624.1	Chloromethane (Methyl Chloride)	µg/L	0.23	0.5	2	--[b]							
EPA 525.2	Chlorpyrifos	µg/L	0.004 - 0.081	0.01 - 0.2	n/a	--[c]					0.014		
ICP/MS 200.8	Chromium	µg/L	0.14 - 0.54	2	0.5	--[h]	16						
EPA 218.6	Chromium III (Trivalent)	µg/L	3	50	n/a	--[d]							
EPA 218.6	Chromium VI (Hexavalent)	µg/L	0.051	0.2	n/a	--[c]	16						
EPA-821-R-02-013	Chronic Toxicity	Pass or Fail, % Effect	n/a	n/a	n/a	--[e]	Pass or % Effect <50	Pass or % Effect <50	Pass or % Effect <50				
EPA 625.1 -Low-level	Chrysene	µg/L	0.054 - 0.058	0.19 - 0.21	10	--[b]							
EPA 624.1	cis-1,2-Dichloroethene	µg/L	0.24	0.5	n/a	--[d]							
EPA 624.1	cis-1,3-Dichloropropene	µg/L	0.14	0.5	2	--[b]							
ICP/MS 200.8	Cobalt	µg/L	0.05 - 0.14	1	n/a	--[d]							
Radiochemistry, EPA 903/904	Combined Radium-226 & Radium-228	pCi/L	n/a	1.00(4)	n/a	--[c]	5.0	5.0	5.0				
General Chemistry, SM 2510	Conductivity at 25 C	µmhos/cm	1	1	n/a	--[d]							
ICP/MS 200.8	Copper	µg/L	0.24 - 0.32	2	0.5	--[a]	67.5	31	67.5				
EPA KELADA	Cyanide	µg/L	2.7	5	n/a	--[c]	8.5	9.5	9.5				
EPA 624.1	Cyclohexane	µg/L	0.8	2	n/a	--[d]							
Pesticides, Low Level (EPA 608.3)	delta-BHC	µg/L	0.0019 - 0.020	0.005 - 0.020	0.005	--[i]							
General Chemistry, SM5540	Detergents (as MBAS)	mg/L	0.052 - 0.062	0.2	n/a	--[c]	0.5						
EPA 525.2	Diazinon	µg/L	0.0034 - 0.068	0.01 - 0.2	n/a	--[c]					0.010		
EPA 625.1 -Low-level	Dibenzo(a,h)anthracene	µg/L	0.14 - 0.15	0.19 - 0.21	10	--[b]							
EPA 624.1	Dichlorobromomethane	µg/L	0.13	0.5	2	--[b]							
Pesticides, Low Level (EPA 608.3)	Dieldrin	µg/L	0.0017 - 0.010	0.005 - 0.010	0.01	--[b]							
Pesticides (SW8081A)	Dieldrin	µg/g	0.00011	0.0002	n/a	--[c]							0.0002
EPA 625.1 -Low-level	Diethyl phthalate	µg/L	0.19 - 0.21	1.9 - 2.1	2	--[b]							
EPA 625.1 -Low-level	Dimethyl phthalate	µg/L	1.6 - 1.7	1.9 - 2.1	2	--[b]							
EPA 625.1 -Low-level	Di-n-butyl phthalate	µg/L	0.68 - 0.73	1.9 - 2.1	10	--[b]							
EPA 625.1 -Low-level	Di-n-octyl phthalate	µg/L	0.072 - 0.078	2.9 - 3.1	10	--[b]							
General Chemistry, (Field Test)	Dissolved Oxygen[3]	mg/L	n/a	0.1	n/a	--[d]							
Biological, SM9223B	E. Coli	MPN/100ml	n/a	1	n/a	--[c]				235	320	320	
Pesticides, Low Level (EPA 608.3)	Endosulfan sulfate	µg/L	0.0028 - 0.0034	0.005 - 0.0058	0.05	--[b]							
Pesticides, Low Level (EPA 608.3)	Endrin	µg/L	0.004 - 0.01	0.005 - 0.01	0.01	--[b]							
Pesticides, Low Level (EPA 608.3)	Endrin aldehyde	µg/L	0.0039 - 0.0046	0.005 - 0.0058	0.01	--[b]							
EPA 624.1	Ethylbenzene	µg/L	0.09	0.5	2	--[b]							
General Chemistry, (Field Test)	Flow[3]	mgd	n/a	n/a	n/a	--[c]	117.83	64.33	7.21				
EPA 625.1 -Low-level	Fluoranthene	µg/L	0.053 - 0.057	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	Fluorene	µg/L	0.057 - 0.061	0.19 - 0.21	10	--[b]							
General Chemistry, EPA 300	Fluoride	mg/L	0.046	0.1	n/a	--[c]	1.6	1.6	1.6				
Pesticides, Low Level (EPA 608.3)	gamma-BHC (Lindane)	µg/L	0.0015 - 0.005	0.005 - 0.0058	0.02	--[b]							
Radiochemistry, EPA 900	Gross Alpha	pCi/L	1.11 - 8.42	3	n/a	--[c]	15	15	15				
Radiochemistry, EPA 900	Gross Beta	pCi/L	0.84 - 2.48	4	n/a	--[c]	4[5]	4[5]	4[5]				

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FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Method	Analyte	Units	2025 Laboratory MDL	2025 Laboratory RL	SWRCB ML	Laboratory vs ML[1]	Permit Limits						
							Daily Maximum Limits	Daily Maximum Limits	Daily Maximum Limits	Receiving Water Limits	Receiving Water Limits	Receiving Water Limits	Receiving Water Sediment Limits
							001, 002 011, 018	003-007, 009, 010	008	Bell Creek	Arroyo Simi (RSW-002)	Arroyo Simi (RSW-003)	Arroyo Simi
SM2340	Hardness (as CaCO3)	mg/L	0.42 - 3.1	2 - 7.1	n/a	--[d]							
Pesticides, Low Level (EPA 608.3)	Heptachlor	µg/L	0.0023 - 0.50	0.005 - 0.50	0.01	--[i]	0.00042						
Pesticides, Low Level (EPA 608.3)	Heptachlor epoxide	µg/L	0.0018 - 0.005	0.005 - 0.0058	0.01	--[b]							
EPA 625.1 -Low-level	Hexachlorobenzene	µg/L	0.067 - 0.072	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	Hexachlorobutadiene	µg/L	0.11 - 0.12	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	Hexachlorocyclopentadiene	µg/L	0.1 - 0.11	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	Hexachloroethane	µg/L	0.093 - 0.1	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	Indeno(1,2,3-cd)pyrene	µg/L	0.13 - 0.14	0.19 - 0.21	10	--[g]	0.1						
ICP/MS 200.8	Iron	mg/L	0.0037 - 0.018	0.02	n/a	--[d]							
EPA 625.1 -Low-level	Isophorone	µg/L	0.068 - 0.073	0.19 - 0.21	1	--[b]							
ICP/MS 200.8	Lead	µg/L	0.058 - 0.12	1	0.5	--[a]	5.2	5.2	5.2				
ICP/MS 200.8	Manganese	µg/L	0.41 - 1.4	1 - 2	n/a	--[c]	50						
E1631	Mercury	µg/L	0.0002	0.0005	0.5	--[a]	0.10	0.024	0.024				
EPA 624.1	Methylene chloride	µg/L	0.63	2	2	--[b]							
SW8315	Monomethyl hydrazine	µg/L	0.62	2	n/a	--[d]							
EPA 624.1	Naphthalene	µg/L	0.17	1	n/a	--[d]							
EPA 625.1 -Low-level	Naphthalene	µg/L	0.054 - 0.058	0.19 - 0.21	1	--[b]							
ICP/MS 200.8	Nickel	µg/L	0.17 - 0.6	2	1	--[a]	94	100	86				
General Chemistry, EPA 300	Nitrate - N	mg/L	0.0195 - 0.02	0.1	n/a	--[c]	8		8				
General Chemistry, EPA 300	Nitrate + Nitrite as Nitrogen (N)	mg/L	0.01 - 0.091	0.05 - 0.1	n/a	--[c]	8	10	8				
General Chemistry, EPA 300	Nitrite - N	mg/L	0.090 - 0.091	0.1	n/a	--[c]	1		1				
EPA 625.1 -Low-level	Nitrobenzene	µg/L	0.081 - 0.087	0.19 - 0.21	1	--[b]							
EPA 625.1 -Low-level	n-Nitrosodimethylamine	µg/L	0.087 - 0.099	0.19 - 0.22	5	--[a]	16						
EPA 625.1 -Low-level	n-Nitroso-di-n-propylamine	µg/L	0.057 - 0.062	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	n-Nitrosodiphenylamine	µg/L	0.03 - 0.032	0.19 - 0.21	1	--[b]							
EPA 1613B	OCDD[8]	µg/L	2.3E-7 - 6.8E-6	9.5E-5 - 0.00011	0.0001	--[b]							
EPA 1613B	OCDF[8]	µg/L	3.3E-7 - 2.9E-6	9.5E-5 - 0.00011	0.0001	--[b]							
General Chemistry, EPA 1664	Oil & Grease	mg/L	0.49 - 0.55	0.97 - 1.1	n/a	--[c]	15	15	15				
General Chemistry, D4464	Particle Size Distribution[6]	%	0.01	0.01	n/a	--[d]							
EPA 625.1 -Low-level	Pentachlorophenol	µg/L	0.092 - 0.1	0.95 - 1.1	5	--[a]	1	1					
SM2540G	Percent Moisture	%	n/a	n/a	n/a	--[d]							
EPA 314.0	Perchlorate	µg/L	0.43 - 0.91	2	n/a	--[c]	6.0	6.0	6.0				
General Chemistry, (Field Test)	pH[3]	S.U.	n/a	0.01	n/a	--[c]	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	
EPA 625.1 -Low-level	Phenanthrene	µg/L	0.065 - 0.07	0.19 - 0.21	5	--[b]							
EPA 625.1 -Low-level	Phenol	µg/L	0.032 - 0.034	0.96 - 1	1	--[b]							
Radiochemistry, EPA 901.1	Potassium-40	pCi/L	164 - 294	164 - 294	n/a	--[d]							
EPA 625.1 -Low-level	Pyrene	µg/L	0.064 - 0.069	0.19 - 0.21	10	--[b]							
EPA-600-R-94-025	Sediment Toxicity (Eohaustorius estuarius)	n/a	n/a	n/a	n/a	--[e]							
ICP/MS 200.8	Selenium	µg/L	0.42 - 0.52	2	2	--[a]	8.2		5				
General Chemistry, SM2540F	Settleable Solids	ml/L	0.1	0.1	n/a	--[d]							
ICP/MS 200.8	Silver	µg/L	0.23 - 0.36	1	0.25	--[h]	4.1						
Radiochemistry, EPA 905.0	Strontium-90	pCi/L	0.433 - 1.56	3	n/a	--[c]	8.0	8.0	8.0				
General Chemistry, EPA 300	Sulfate	mg/L	0.18 - 0.185	1	n/a	--[c]	300	250	300				
EPA 1613B	TCDD TEQ[8]	µg/L	n/a	n/a	n/a	--[e]	2.8E-08	2.8E-08	2.8E-08				
General Chemistry, (Field Test)	Temperature[3]	°F	n/a	0.1	n/a	--[c]	80	80	80	80	80	80	
EPA 624.1	Tetrachloroethene	µg/L	0.14	0.5	2	--[b]							
ICP/MS 200.8	Thallium	µg/L	0.055 - 0.11	1	1	--[a]	2.0	2.0	2.0				
EPA 624.1	Toluene	µg/L	0.11	0.5	2	--[b]							
General Chemistry, SM2540C	Total Dissolved Solids	mg/L	5.7 - 8.4	10	n/a	--[c]	950	850	950				
General Chemistry, SM5310B	Total Organic Carbon	mg/L	0.265 - 0.3	0.50	n/a	--[d]							
General Chemistry, SW9060	Total Organic Carbon[7]	mg/Kg	340	500	n/a	--[d]							
General Chemistry, SM2540D	Total Suspended Solids	mg/L	0.8 - 16	20-Jan	n/a	--[d]							
Pesticides, Low Level (EPA 608.3)	Toxaphene	µg/L	0.15 - 2.5	0.5 - 2.5	0.5	--[b]							

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NPDES PERMIT CA0001309

							Permit Limits						
Method	**Analyte**	**Units**	**2025 Laboratory MDL**	**2025 Laboratory RL**	**SWRCB ML**	**Laboratory vs ML[1]**	**Daily Maximum Limits 001, 002 011, 018**	**Daily Maximum Limits 003-007, 009, 010**	**Daily Maximum Limits 008**	**Receiving Water Limits Bell Creek**	**Receiving Water Limits Arroyo Simi (RSW-002)**	**Receiving Water Limits Arroyo Simi (RSW-003)**	**Receiving Water Sediment Limits Arroyo Simi**
Pesticides (SW8081A)	Toxaphene	µg/g	0.0031	0.005	0.5	--[f]							0.0006
EPA 624.1	trans-1,2-Dichloroethene	µg/L	0.19	0.5	1	--[b]							
EPA 624.1	trans-1,3-Dichloropropene	µg/L	0.16	0.5	2	--[b]							
EPA 624.1	Trichloroethene	µg/L	0.11	0.5	2	--[a]	5						
Radiochemistry, EPA 906.0	Tritium	pCi/L	227 - 467	500	n/a	--[c]	20,000	20,000	20,000				
General Chemistry, SM 2130	Turbidity	NTU	0.4 - 0.65	0.5 - 1	n/a	--[d]							
Radiochemistry, HASL-300 U Mod	Uranium	pCi/L	0.114 - 0.777	1	n/a	--[c]	20	20	20				
ICP/MS 200.8	Vanadium	µg/L	0.17 - 0.55	2	n/a	--[d]							
EPA 624.1	Vinyl chloride	µg/L	0.16	0.5	2	--[b]							
General Chemistry, (Field Test)	Water Velocity[3]	ft/sec	n/a	0.1	n/a	--[d]							
ICP/MS 200.8	Zinc	µg/L	2.8 - 4.5	20	1	--[h]	159	120	159				

Notes:
The RLs and MDLs may vary slightly based on a number of factors such as instrument used, dilution factor, aliquot, blank contamination, etc.

Columns are used to compare laboratory's reporting limits (RLs) and method detection limits (MDLs) to the SWRCB Minimum Levels (MLs) and the permit limits (PLs).
(1) This column indicates the status of analytical capabilities if the ML is less than the laboratory RL and/or MDL. See explanation for "--" below.
The following designations summarize the comparison of RLs, MDLs, MLs, and permit limits:
-- = Laboratory reporting limit meets ML if applicable and permit limit requirements.
--[a] Laboratory reporting limit or method detection limit meets ML and permit limit requirements.
--[b] Laboratory reporting limit or method detection limit meets ML. This analyte has no permit limit requirements.
--[c] Laboratory reporting limit or method detection limit meets permit limit. This analyte has no ML.
--[d] This analyte has no ML or permit limit.
--[e] This analyte is a calculation or chronic toxicity and does not have a reporting limit. This calculation or chronic toxicity has no ML.
--[f] This analyte has no ML. Laboratory reporting limit or method detection limit does not meet permit limit.
--[g] Laboratory reporting limit or method detection limit meets ML, but does not meet permit limit requirements.
--[h] Laboratory reporting limit or method detection limit does not meet the ML, but does meet permit limit requirements.
--[i] Laboratory reporting limit or method detection limit does not meet the ML for some samples as the laboratory raised the limits due to matrix interference.

In the above context, "meet" means equal to or less than (i.e., if a Laboratory reporting limit or method detection limit meets a criteria, the laboratory reporting limit is less than or equal to that criteria).
The receiving water sediment limits do not have a ML and are included for reference only.

(2) The MDL for asbestos varies based upon the sample.
(3) Field tests are measured in the field. The RL is the lowest limit of the instrument. The MDL is not relevant for field parameters.
(4) This value is the minimum detectable activity (MDA) which applies only to radiological constituents.
(5) Pemit limit is measured in millirem/year, but sample results are reported in pCi/L.
(6) Particle size distribution is reported in percent units. Permit asks for particle size distribution units in µm, but data is provided in percent (%).
(7) Total organic carbon (TOC) is reported in dry weight units. Permit asks for TOC units in % dry weight, but data is provided in dry unit milligrams per kilogram (mg/kg).
(8) Dioxins are reported in µg/L. Permit asks for dioxin units in pg/L but data is reported in µg/L.

No SRAM or PFAS parameters not already listed above are included in this table.

Acronyms:
µg/g = micrograms per gram
µg/kg = micrograms per kilogram
µg/L = micrograms per liter
µmhos/cm = micromhos per centimeter
CVE = Common Vulnerabilities and Exposures
EPA = United States Environmental Protection Agency
ICP/MS = Inductively Coupled Plasma Mass Spectrometry
MFL = million fibers per liter
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ml/L = milliliters per liter
MPN/100ml = most probable number per 100 milliliters
n/a = not applicable
NDMA = N-Nitrosodimethylamine
NTU = nephelometric turbidity unit
PCB = polychlorinated biphenyl
pCi/L = picoCuries per liter
SWRCB = State Water Resources Control Board

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins Calscience

2841 Dow Avenue

Tustin, CA 92780

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **3082**

Effective Date: **8/1/2024**

Expiration Date: **7/31/2026**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins Calscience

2841 Dow Avenue
Tustin, CA 92780
Phone: 7148955494

Certificate Number: 3082
Expiration Date: 7/31/2026

Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water

108.009	001	Turbidity	EPA 180.1
108.013	001	Calcium	EPA 200.7
108.013	002	Magnesium	EPA 200.7
108.013	003	Phosphorus,Total	EPA 200.7
108.013	004	Potassium	EPA 200.7
108.013	005	Silica, Dissolved	EPA 200.7
108.013	006	Sodium	EPA 200.7
108.015	001	Calcium	EPA 200.8
108.015	002	Magnesium	EPA 200.8
108.015	003	Potassium	EPA 200.8
108.015	005	Sodium	EPA 200.8
108.017	001	Bromide	EPA 300.0
108.017	002	Chloride	EPA 300.0
108.017	003	Fluoride	EPA 300.0
108.017	004	Nitrate (as N)	EPA 300.0
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0
108.017	006	Nitrite (as N)	EPA 300.0
108.017	007	Phosphate,Ortho (as P)	EPA 300.0
108.017	008	Sulfate (as SO4)	EPA 300.0
108.019	001	Bromide	EPA 300.1
108.025	001	Ammonia (as N)	EPA 350.1
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2
108.035	001	Phosphate,Ortho (as P)	EPA 365.1
108.035	002	Phosphorus,Total	EPA 365.1
108.045	001	Chemical Oxygen Demand	EPA 410.4
108.047	001	Phenols, Total	EPA 420.1
108.053	001	Oil & Grease, Total Recoverable	EPA 1664 A
108.053	002	Oil & Grease, Total Recoverable	EPA 1664 B
108.055	001	Color	SM 2120 B-2011
108.059	001	Turbidity	SM 2130 B-2011
108.061	001	Acidity	SM 2310 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011

108.067	001	Hardness	SM 2340 C-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.070	001	Residue, Total	SM 2540 B-2015
108.072	001	Residue, Filterable TDS	SM 2540 C-2015
108.074	001	Residue, Non-filterable TSS	SM 2540 D-2015
108.076	001	Residue, Volatile	SM 2540 E-2015
108.078	001	Residue, Settleable	SM 2540 F-2015
108.109	001	Chlorine, Total Residual	SM 4500-Cl F-2011
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.124	001	Cyanide, Total	SM 4500-CN- E-2016
108.128	001	Cyanide, Available	SM 4500-CN- G-2016
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.139	001	Ammonia (as N)	SM 4500-NH3 C-2011
108.139	002	Kjeldahl Nitrogen,Total (as N)	SM 4500-NH3 C-2011
108.140	001	Ammonia (as N)	SM 4500-NH3 D-2011
108.153	001	Nitrite (as N)	SM 4500-NO2 B-2011
108.174	001	Oxygen, Dissolved	SM 4500-O G-2016
108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011
108.175	002	Phosphorus,Total	SM 4500-P E-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.206	001	Biochemical Oxygen Demand	SM 5210 B-2016
108.206	002	Carbonaceous BOD	SM 5210 B-2016
108.219	001	Organic Carbon-Total (TOC)	SM 5310 D-2011
108.225	001	Surfactants	SM 5540 C-2011
108.335	001	Cyanide, Total	Kelada-01

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7
109.623	002	Antimony	EPA 200.7
109.623	003	Arsenic	EPA 200.7
109.623	004	Barium	EPA 200.7
109.623	005	Beryllium	EPA 200.7
109.623	006	Boron	EPA 200.7
109.623	007	Cadmium	EPA 200.7
109.623	008	Chromium	EPA 200.7
109.623	009	Cobalt	EPA 200.7
109.623	010	Copper	EPA 200.7
109.623	011	Iron	EPA 200.7
109.623	012	Lead	EPA 200.7
109.623	013	Manganese	EPA 200.7
109.623	014	Molybdenum	EPA 200.7
109.623	015	Nickel	EPA 200.7

109.623	016	Selenium	EPA 200.7
109.623	017	Silver	EPA 200.7
109.623	018	Thallium	EPA 200.7
109.623	019	Tin	EPA 200.7
109.623	020	Titanium	EPA 200.7
109.623	021	Vanadium	EPA 200.7
109.623	022	Zinc	EPA 200.7
109.625	001	Aluminum	EPA 200.8
109.625	002	Antimony	EPA 200.8
109.625	003	Arsenic	EPA 200.8
109.625	004	Barium	EPA 200.8
109.625	005	Beryllium	EPA 200.8
109.625	006	Boron	EPA 200.8
109.625	007	Cadmium	EPA 200.8
109.625	008	Chromium	EPA 200.8
109.625	009	Cobalt	EPA 200.8
109.625	010	Copper	EPA 200.8
109.625	012	Iron	EPA 200.8
109.625	013	Lead	EPA 200.8
109.625	014	Manganese	EPA 200.8
109.625	015	Molybdenum	EPA 200.8
109.625	016	Nickel	EPA 200.8
109.625	017	Selenium	EPA 200.8
109.625	018	Silver	EPA 200.8
109.625	019	Thallium	EPA 200.8
109.625	020	Tin	EPA 200.8
109.625	021	Titanium	EPA 200.8
109.625	022	Vanadium	EPA 200.8
109.625	023	Zinc	EPA 200.8
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
109.635	001	Mercury	EPA 245.1

Field of Accreditation:110 - Volatile Organic Constituents in Non-Potable Water

110.020	001	Benzene	EPA 602
110.020	006	Ethylbenzene	EPA 602
110.020	007	Toluene	EPA 602
110.040	001	Acetone	EPA 624.1
110.040	002	Acetonitrile	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1

110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	027	Ethanol	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	036	Tetrahydrofuran	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.040	047	2-Butanone (MEK)	EPA 624.1

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3

111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1

111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	108	N-nitrosodimethylamine	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	139	Acetophenone	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	142	n-decane (n-C10)	EPA 625.1
111.160	143	1,2-Diphenylhydrazine	EPA 625.1
111.160	144	n-octadecane (n-C18)	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.160	148	2-Methylnaphthalene	EPA 625.1
111.160	151	2,4,5-Trichlorophenol	EPA 625.1

Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste

114.315	001	Aluminum	EPA 6010 B

114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	006	Boron	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	008	Calcium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	012	Iron	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	014	Magnesium	EPA 6010 B
114.315	015	Manganese	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	018	Potassium	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	021	Sodium	EPA 6010 B
114.315	022	Strontium	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	024	Tin	EPA 6010 B
114.315	025	Titanium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.325	001	Aluminum	EPA 6010 D
114.325	002	Antimony	EPA 6010 D
114.325	003	Arsenic	EPA 6010 D
114.325	004	Barium	EPA 6010 D
114.325	005	Beryllium	EPA 6010 D
114.325	006	Boron	EPA 6010 D
114.325	007	Cadmium	EPA 6010 D
114.325	008	Calcium	EPA 6010 D
114.325	009	Chromium	EPA 6010 D
114.325	010	Cobalt	EPA 6010 D
114.325	011	Copper	EPA 6010 D
114.325	012	Iron	EPA 6010 D
114.325	013	Lead	EPA 6010 D
114.325	014	Magnesium	EPA 6010 D
114.325	015	Manganese	EPA 6010 D
114.325	016	Molybdenum	EPA 6010 D

114.325	017	Nickel	EPA 6010 D
114.325	018	Potassium	EPA 6010 D
114.325	019	Selenium	EPA 6010 D
114.325	020	Silver	EPA 6010 D
114.325	021	Sodium	EPA 6010 D
114.325	022	Strontium	EPA 6010 D
114.325	023	Thallium	EPA 6010 D
114.325	024	Tin	EPA 6010 D
114.325	025	Titanium	EPA 6010 D
114.325	026	Vanadium	EPA 6010 D
114.325	027	Zinc	EPA 6010 D
114.335	001	Aluminum	EPA 6020
114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	011	Manganese	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020
114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020
114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.345	001	Aluminum	EPA 6020 B
114.345	002	Antimony	EPA 6020 B
114.345	003	Arsenic	EPA 6020 B
114.345	004	Barium	EPA 6020 B
114.345	005	Beryllium	EPA 6020 B
114.345	006	Cadmium	EPA 6020 B
114.345	007	Calcium	EPA 6020 B
114.345	008	Chromium	EPA 6020 B
114.345	009	Cobalt	EPA 6020 B
114.345	010	Copper	EPA 6020 B
114.345	011	Iron	EPA 6020 B
114.345	012	Lead	EPA 6020 B
114.345	013	Magnesium	EPA 6020 B

114.345	014	Manganese	EPA 6020 B
114.345	016	Nickel	EPA 6020 B
114.345	017	Potassium	EPA 6020 B
114.345	018	Selenium	EPA 6020 B
114.345	019	Silver	EPA 6020 B
114.345	020	Sodium	EPA 6020 B
114.345	021	Thallium	EPA 6020 B
114.345	022	Vanadium	EPA 6020 B
114.345	023	Zinc	EPA 6020 B
114.345	024	Molybdenum	EPA 6020 B
114.435	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
114.465	001	Chromium VI (Hexavalent Chromium)	EPA 7199
114.535	001	Mercury	EPA 7471 A
114.545	001	Mercury	EPA 7471 B
114.725	001	Cyanide, Total	EPA 9014
114.725	001	Cyanide, Total	EPA 9014
114.745	001	Fluoride	EPA 9056
114.755	001	Fluoride	EPA 9056 A
114.805	001	Oil & Grease (n-Hexane Extractable Materials)	EPA 9071 B

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.135	001	Corrosivity - pH Determination	EPA 9045 C
115.145	001	Corrosivity - pH Determination	EPA 9045 D

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.220	001	Gasoline Range Organics (GRO)	EPA 8015 B
116.221	001	Gasoline Range Organics (GRO)	EPA 8015 C
116.225	001	Benzene	EPA 8021 B
116.225	017	Ethylbenzene	EPA 8021 B
116.225	023	Toluene	EPA 8021 B
116.225	028	m+p-Xylene	EPA 8021 B
116.225	029	o-Xylene	EPA 8021 B
116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B

116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B

116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
116.265	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
116.265	059	Diisopropyl ether (DIPE)	EPA 8260 B
116.265	060	1,4-Dioxane	EPA 8260 B
116.265	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 B
116.265	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
116.266	001	Gasoline Range Organics (GRO)	EPA 8260 B
116.266	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8260 B
116.275	001	Benzene	EPA 8260 D
116.275	002	Bromobenzene	EPA 8260 D
116.275	003	Bromochloromethane	EPA 8260 D
116.275	004	Bromodichloromethane	EPA 8260 D
116.275	005	Bromoform	EPA 8260 D
116.275	006	Bromomethane (Methyl Bromide)	EPA 8260 D
116.275	007	n-Butylbenzene	EPA 8260 D
116.275	008	sec-Butylbenzene	EPA 8260 D
116.275	009	tert-Butylbenzene	EPA 8260 D
116.275	010	Carbon Disulfide	EPA 8260 D
116.275	011	Carbon Tetrachloride	EPA 8260 D
116.275	012	Chlorobenzene	EPA 8260 D
116.275	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D
116.275	014	Chloroethane	EPA 8260 D
116.275	015	Chloroform	EPA 8260 D
116.275	016	Chloromethane (Methyl Chloride)	EPA 8260 D
116.275	017	Dibromomethane	EPA 8260 D
116.275	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D
116.275	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D
116.275	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D
116.275	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D
116.275	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D
116.275	023	Ethylbenzene	EPA 8260 D
116.275	024	Hexachlorobutadiene	EPA 8260 D
116.275	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D
116.275	026	Methylene Chloride (Dichloromethane)	EPA 8260 D
116.275	027	Naphthalene	EPA 8260 D
116.275	029	N-propylbenzene	EPA 8260 D
116.275	030	Styrene	EPA 8260 D
116.275	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D
116.275	032	Toluene	EPA 8260 D
116.275	033	Trichloroethylene (Trichloroethene)	EPA 8260 D
116.275	034	Trichlorofluoromethane	EPA 8260 D
116.275	035	Vinyl Chloride	EPA 8260 D

116.275	036	m+p-Xylene	EPA 8260 D
116.275	037	o-Xylene	EPA 8260 D
116.275	040	1,1-Dichloroethane	EPA 8260 D
116.275	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D
116.275	042	1,1,1-Trichloroethane	EPA 8260 D
116.275	043	1,1,1,2-Tetrachloroethane	EPA 8260 D
116.275	044	1,1,2,2-Tetrachloroethane	EPA 8260 D
116.275	045	1,1,2-Trichloroethane	EPA 8260 D
116.275	046	1,2-Dichlorobenzene	EPA 8260 D
116.275	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D
116.275	048	1,2-Dibromoethane (EDB)	EPA 8260 D
116.275	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D
116.275	050	1,2-Dichloropropane	EPA 8260 D
116.275	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D
116.275	052	1,2,4-Trichlorobenzene	EPA 8260 D
116.275	053	1,3-Dichlorobenzene	EPA 8260 D
116.275	054	1,4-Dichlorobenzene	EPA 8260 D
116.275	055	2-Chloroethyl vinyl Ether	EPA 8260 D
116.275	056	4-Chlorotoluene	EPA 8260 D
116.275	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D
116.275	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 D
116.275	059	Diisopropyl ether (DIPE)	EPA 8260 D
116.275	060	1,4-Dioxane	EPA 8260 D
116.275	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 D
116.275	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 D
116.276	001	Gasoline Range Organics (GRO)	EPA 8260 D

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B
117.235	004	Oil Range Organics (ORO) [LUFT Range]	EPA 8015 B
117.245	002	Diesel Range Organics (DRO)	EPA 8015 C
117.245	004	Oil Range Organics (ORO) [LUFT Range]	EPA 8015 C
117.255	006	n-Butyl Alcohol (1-Butanol)	EPA 8015 B
117.255	012	Ethanol	EPA 8015 B
117.255	018	Isobutyl Alcohol	EPA 8015 B
117.255	019	Isopropyl Alcohol (Isopropanol)	EPA 8015 B
117.255	020	Methanol	EPA 8015 B
117.265	006	n-Butyl Alcohol (1-Butanol)	EPA 8015 C
117.265	012	Ethanol	EPA 8015 C
117.265	016	Isobutyl Alcohol	EPA 8015 C
117.265	017	Isopropyl Alcohol (Isopropanol)	EPA 8015 C
117.265	018	Methanol	EPA 8015 C
117.315	001	Aldrin	EPA 8081 A

117.315	002	alpha-BHC	EPA 8081 A
117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A
117.325	001	Aldrin	EPA 8081 B
117.325	002	alpha-BHC	EPA 8081 B
117.325	003	beta-BHC	EPA 8081 B
117.325	004	delta-BHC	EPA 8081 B
117.325	005	gamma-BHC (Lindane)	EPA 8081 B
117.325	006	Chlordane (total)	EPA 8081 B
117.325	008	4,4'-DDD	EPA 8081 B
117.325	009	4,4'-DDE	EPA 8081 B
117.325	010	4,4'-DDT	EPA 8081 B
117.325	011	Dieldrin	EPA 8081 B
117.325	012	Endosulfan I	EPA 8081 B
117.325	013	Endosulfan II	EPA 8081 B
117.325	014	Endosulfan Sulfate	EPA 8081 B
117.325	015	Endrin	EPA 8081 B
117.325	016	Endrin Aldehyde	EPA 8081 B
117.325	017	Endrin Ketone	EPA 8081 B
117.325	018	Heptachlor	EPA 8081 B
117.325	019	Heptachlor Epoxide	EPA 8081 B
117.325	020	Methoxychlor	EPA 8081 B
117.325	021	Toxaphene	EPA 8081 B
117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082

117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.345	001	Aroclor 1016	EPA 8082 A
117.345	002	Aroclor 1221	EPA 8082 A
117.345	003	Aroclor 1232	EPA 8082 A
117.345	004	Aroclor 1242	EPA 8082 A
117.345	005	Aroclor 1248	EPA 8082 A
117.345	006	Aroclor 1254	EPA 8082 A
117.345	007	Aroclor 1260	EPA 8082 A
117.405	001	Azinphos Methyl	EPA 8141 A
117.405	002	Chlorpyrifos	EPA 8141 A
117.405	005	Diazinon	EPA 8141 A
117.405	006	Dichlorvos (DDVP)	EPA 8141 A
117.405	007	Disulfoton	EPA 8141 A
117.405	008	Malathion	EPA 8141 A
117.405	009	Parathion Ethyl	EPA 8141 A
117.405	010	Parathion Methyl	EPA 8141 A
117.405	011	Phorate	EPA 8141 A
117.405	012	Ronnel	EPA 8141 A
117.405	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
117.415	001	Azinphos Methyl	EPA 8141 B
117.415	002	Chlorpyrifos	EPA 8141 B
117.415	003	Demeton-O	EPA 8141 B
117.415	004	Demeton-S	EPA 8141 B
117.415	005	Diazinon	EPA 8141 B
117.415	006	Dichlorvos (DDVP)	EPA 8141 B
117.415	007	Disulfoton	EPA 8141 B
117.415	008	Malathion	EPA 8141 B
117.415	009	Parathion Ethyl	EPA 8141 B
117.415	010	Parathion Methyl	EPA 8141 B
117.415	011	Phorate	EPA 8141 B
117.415	012	Ronnel	EPA 8141 B
117.415	013	Stirophos (Tetrachlorovinphos)	EPA 8141 B
117.425	001	2,4-D	EPA 8151 A
117.425	002	2,4-DB	EPA 8151 A
117.425	003	2,4,5-TP (Silvex)	EPA 8151 A
117.425	004	2,4,5-T	EPA 8151 A
117.425	005	Dalapon	EPA 8151 A
117.425	006	Dicamba	EPA 8151 A
117.425	007	Dichloroprop	EPA 8151 A

117.425	008	Dinoseb	EPA 8151 A
117.425	009	MCPA	EPA 8151 A
117.425	010	MCPP	EPA 8151 A
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C
117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C
117.435	028	Pentachlorobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	040	2,6-Dichlorophenol	EPA 8270 C

117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	052	Aldrin	EPA 8270 C
117.435	053	alpha-BHC	EPA 8270 C
117.435	054	beta-BHC	EPA 8270 C
117.435	055	delta-BHC	EPA 8270 C
117.435	056	gamma-BHC (Lindane)	EPA 8270 C
117.435	057	4,4'-DDD	EPA 8270 C
117.435	058	4,4'-DDE	EPA 8270 C
117.435	059	4,4'-DDT	EPA 8270 C
117.435	060	Dieldrin	EPA 8270 C
117.435	061	Dinoseb	EPA 8270 C
117.435	062	Endosulfan I	EPA 8270 C
117.435	063	Endosulfan II	EPA 8270 C
117.435	064	Endosulfan Sulfate	EPA 8270 C
117.435	065	Endrin	EPA 8270 C
117.435	066	Endrin Aldehyde	EPA 8270 C
117.435	067	Endrin Ketone	EPA 8270 C
117.435	068	Heptachlor	EPA 8270 C
117.435	069	Heptachlor Epoxide	EPA 8270 C
117.435	070	Methoxychlor	EPA 8270 C
117.435	074	Disulfoton	EPA 8270 C
117.435	076	Parathion Ethyl	EPA 8270 C
117.435	077	Parathion Methyl	EPA 8270 C
117.435	078	Phorate	EPA 8270 C
117.435	087	N-nitrosodiethylamine	EPA 8270 C
117.435	088	N-nitrosodimethylamine	EPA 8270 C
117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C

117.445	001	Acenaphthene	EPA 8270 E
117.445	002	Acenaphthylene	EPA 8270 E
117.445	003	Aniline	EPA 8270 E
117.445	004	Anthracene	EPA 8270 E
117.445	005	Benzidine	EPA 8270 E
117.445	006	Benzoic Acid	EPA 8270 E
117.445	007	Benzo(a)anthracene	EPA 8270 E
117.445	008	Benzo(b)fluoranthene	EPA 8270 E
117.445	009	Benzo(k)fluoranthene	EPA 8270 E
117.445	010	Benzo(g,h,i)perylene	EPA 8270 E
117.445	011	Benzo(a)pyrene	EPA 8270 E
117.445	012	Benzyl Alcohol	EPA 8270 E
117.445	013	Bis(2-chloroethoxy) Methane	EPA 8270 E
117.445	014	Bis(2-chloroethyl) Ether	EPA 8270 E
117.445	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E
117.445	016	Butyl Benzyl Phthalate	EPA 8270 E
117.445	017	Chrysene	EPA 8270 E
117.445	018	Dibenz(a,h)anthracene	EPA 8270 E
117.445	019	Dibenzofuran	EPA 8270 E
117.445	020	Di-n-butyl Phthalate	EPA 8270 E
117.445	021	Diethyl Phthalate	EPA 8270 E
117.445	022	Dimethyl Phthalate	EPA 8270 E
117.445	023	Di-n-octyl Phthalate	EPA 8270 E
117.445	024	Fluoranthene	EPA 8270 E
117.445	025	Fluorene	EPA 8270 E
117.445	026	Naphthalene	EPA 8270 E
117.445	027	Nitrobenzene	EPA 8270 E
117.445	028	Pentachlorobenzene	EPA 8270 E
117.445	029	Pentachlorophenol	EPA 8270 E
117.445	031	1,2-Dichlorobenzene	EPA 8270 E
117.445	032	1,3-Dichlorobenzene	EPA 8270 E
117.445	033	1,4-Dichlorobenzene	EPA 8270 E
117.445	034	2-Chloronaphthalene	EPA 8270 E
117.445	035	2-Chlorophenol	EPA 8270 E
117.445	036	2,4-Dichlorophenol	EPA 8270 E
117.445	037	2,4-Dimethylphenol	EPA 8270 E
117.445	038	2,4-Dinitrophenol	EPA 8270 E
117.445	039	2,4-Dinitrotoluene	EPA 8270 E
117.445	040	2,6-Dichlorophenol	EPA 8270 E
117.445	041	2,6-Dinitrotoluene	EPA 8270 E
117.445	042	2-Nitroaniline	EPA 8270 E
117.445	043	2-Nitrophenol	EPA 8270 E

117.445	044	3-Nitroaniline	EPA 8270 E
117.445	045	3,3'-Dichlorobenzidine	EPA 8270 E
117.445	046	4-Chloroaniline	EPA 8270 E
117.445	047	4-Chloro-3-methylphenol	EPA 8270 E
117.445	048	4-Bromophenyl Phenyl Ether	EPA 8270 E
117.445	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E
117.445	050	4-Nitroaniline	EPA 8270 E
117.445	051	4-Nitrophenol	EPA 8270 E
117.445	052	Aldrin	EPA 8270 E
117.445	053	alpha-BHC	EPA 8270 E
117.445	054	beta-BHC	EPA 8270 E
117.445	055	delta-BHC	EPA 8270 E
117.445	056	gamma-BHC (Lindane)	EPA 8270 E
117.445	057	4,4'-DDD	EPA 8270 E
117.445	058	4,4'-DDE	EPA 8270 E
117.445	059	4,4'-DDT	EPA 8270 E
117.445	060	Dieldrin	EPA 8270 E
117.445	061	Dinoseb	EPA 8270 E
117.445	062	Endosulfan I	EPA 8270 E
117.445	063	Endosulfan II	EPA 8270 E
117.445	064	Endosulfan Sulfate	EPA 8270 E
117.445	065	Endrin	EPA 8270 E
117.445	066	Endrin Aldehyde	EPA 8270 E
117.445	067	Endrin Ketone	EPA 8270 E
117.445	068	Heptachlor	EPA 8270 E
117.445	069	Heptachlor Epoxide	EPA 8270 E
117.445	070	Methoxychlor	EPA 8270 E
117.445	074	Disulfoton	EPA 8270 E
117.445	076	Parathion Ethyl	EPA 8270 E
117.445	077	Parathion Methyl	EPA 8270 E
117.445	078	Phorate	EPA 8270 E
117.445	087	N-nitrosodiethylamine	EPA 8270 E
117.445	088	N-nitrosodimethylamine	EPA 8270 E
117.445	089	N-nitrosodiphenylamine	EPA 8270 E
117.445	090	N-nitroso-di-n-propylamine	EPA 8270 E
117.445	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 E
117.445	092	Isophorone	EPA 8270 E
117.445	093	2-Methylnaphthalene	EPA 8270 E
117.445	094	Phenanthrene	EPA 8270 E
117.485	001	Acetaldehyde	EPA 8315 A
117.485	010	Formaldehyde	EPA 8315 A
117.535	001	1,3,5-Trinitrobenzene	EPA 8330

117.535	002	1,3-Dinitrobenzene	EPA 8330
117.535	003	Nitrobenzene	EPA 8330
117.535	004	2,4-Dinitrotoluene	EPA 8330
117.535	005	2,4,6-Trinitrotoluene	EPA 8330
117.535	006	2,6-Dinitrotoluene	EPA 8330
117.535	007	2-Nitrotoluene	EPA 8330
117.535	008	3-Nitrotoluene	EPA 8330
117.535	009	4-Nitrotoluene	EPA 8330
117.545	001	1,3,5-Trinitrobenzene	EPA 8330 A
117.545	002	1,3-Dinitrobenzene	EPA 8330 A
117.545	003	Nitrobenzene	EPA 8330 A
117.545	004	2,4,6-Trinitrotoluene	EPA 8330 A
117.545	005	2,4-Dinitrotoluene	EPA 8330 A
117.545	006	2,6-Dinitrotoluene	EPA 8330 A
117.545	007	2-Nitrotoluene	EPA 8330 A
117.545	008	3-Nitrotoluene	EPA 8330 A
117.545	009	4-Nitrotoluene	EPA 8330 A

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	001	Aluminum	EPA 6010 B
130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	006	Boron	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	008	Calcium	EPA 6010 B
130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	012	Iron	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	014	Magnesium	EPA 6010 B
130.010	015	Manganese	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B
130.010	017	Nickel	EPA 6010 B
130.010	018	Potassium	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	021	Sodium	EPA 6010 B
130.010	022	Strontium	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	024	Tin	EPA 6010 B

130.010	025	Titanium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B
130.020	001	Aluminum	EPA 6010 D
130.020	002	Antimony	EPA 6010 D
130.020	003	Arsenic	EPA 6010 D
130.020	004	Barium	EPA 6010 D
130.020	005	Beryllium	EPA 6010 D
130.020	006	Boron	EPA 6010 D
130.020	007	Cadmium	EPA 6010 D
130.020	008	Calcium	EPA 6010 D
130.020	009	Chromium	EPA 6010 D
130.020	010	Cobalt	EPA 6010 D
130.020	011	Copper	EPA 6010 D
130.020	012	Iron	EPA 6010 D
130.020	013	Lead	EPA 6010 D
130.020	014	Magnesium	EPA 6010 D
130.020	015	Manganese	EPA 6010 D
130.020	016	Molybdenum	EPA 6010 D
130.020	017	Nickel	EPA 6010 D
130.020	018	Potassium	EPA 6010 D
130.020	019	Selenium	EPA 6010 D
130.020	020	Silver	EPA 6010 D
130.020	021	Sodium	EPA 6010 D
130.020	022	Strontium	EPA 6010 D
130.020	023	Thallium	EPA 6010 D
130.020	024	Tin	EPA 6010 D
130.020	025	Titanium	EPA 6010 D
130.020	026	Vanadium	EPA 6010 D
130.020	027	Zinc	EPA 6010 D
130.030	001	Aluminum	EPA 6020
130.030	002	Antimony	EPA 6020
130.030	003	Arsenic	EPA 6020
130.030	004	Barium	EPA 6020
130.030	005	Beryllium	EPA 6020
130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	009	Copper	EPA 6020
130.030	010	Lead	EPA 6020
130.030	011	Manganese	EPA 6020
130.030	012	Nickel	EPA 6020

130.030	013	Silver	EPA 6020
130.030	014	Thallium	EPA 6020
130.030	015	Zinc	EPA 6020
130.030	016	Molybdenum	EPA 6020
130.030	017	Selenium	EPA 6020
130.030	018	Vanadium	EPA 6020
130.040	001	Aluminum	EPA 6020 B
130.040	002	Antimony	EPA 6020 B
130.040	003	Arsenic	EPA 6020 B
130.040	004	Barium	EPA 6020 B
130.040	005	Beryllium	EPA 6020 B
130.040	006	Cadmium	EPA 6020 B
130.040	007	Calcium	EPA 6020 B
130.040	008	Chromium	EPA 6020 B
130.040	009	Cobalt	EPA 6020 B
130.040	010	Copper	EPA 6020 B
130.040	011	Iron	EPA 6020 B
130.040	012	Lead	EPA 6020 B
130.040	013	Magnesium	EPA 6020 B
130.040	014	Manganese	EPA 6020 B
130.040	016	Nickel	EPA 6020 B
130.040	017	Potassium	EPA 6020 B
130.040	018	Selenium	EPA 6020 B
130.040	019	Silver	EPA 6020 B
130.040	020	Sodium	EPA 6020 B
130.040	021	Thallium	EPA 6020 B
130.040	022	Vanadium	EPA 6020 B
130.040	023	Zinc	EPA 6020 B
130.040	024	Molybdenum	EPA 6020 B
130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199
130.250	001	Mercury	EPA 7470 A
130.470	001	Fluoride	EPA 9056
130.480	001	Fluoride	EPA 9056 A

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.060	001	Ignitability	EPA 1010
131.070	001	Ignitability	EPA 1010 A
131.110	001	Corrosivity - pH Determination	EPA 9040 B
131.120	001	Corrosivity - pH Determination	EPA 9040 C

Field of Accreditation:132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.015	001	Gasoline Range Organics (GRO)	EPA 8015 B

132.016	001	Gasoline Range Organics (GRO)	EPA 8015 C
132.020	001	Benzene	EPA 8021 B
132.020	017	Ethylbenzene	EPA 8021 B
132.020	023	Toluene	EPA 8021 B
132.020	028	m+p-Xylene	EPA 8021 B
132.020	029	o-Xylene	EPA 8021 B
132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B
132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B

132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
132.060	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
132.060	059	Diisopropyl ether (DIPE)	EPA 8260 B
132.060	060	1,4-Dioxane	EPA 8260 B
132.060	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 B
132.060	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
132.061	001	Gasoline Range Organics (GRO)	EPA 8260 B
132.070	001	Benzene	EPA 8260 D
132.070	002	Bromobenzene	EPA 8260 D
132.070	003	Bromochloromethane	EPA 8260 D
132.070	004	Bromodichloromethane	EPA 8260 D
132.070	005	Bromoform	EPA 8260 D
132.070	006	Bromomethane (Methyl Bromide)	EPA 8260 D
132.070	007	n-Butylbenzene	EPA 8260 D
132.070	008	sec-Butylbenzene	EPA 8260 D
132.070	009	tert-Butylbenzene	EPA 8260 D
132.070	010	Carbon Disulfide	EPA 8260 D
132.070	011	Carbon Tetrachloride	EPA 8260 D
132.070	012	Chlorobenzene	EPA 8260 D
132.070	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D
132.070	014	Chloroethane	EPA 8260 D
132.070	015	Chloroform	EPA 8260 D
132.070	016	Chloromethane (Methyl Chloride)	EPA 8260 D
132.070	017	Dibromomethane	EPA 8260 D
132.070	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D

132.070	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D
132.070	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D
132.070	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D
132.070	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D
132.070	023	Ethylbenzene	EPA 8260 D
132.070	024	Hexachlorobutadiene	EPA 8260 D
132.070	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D
132.070	026	Methylene Chloride (Dichloromethane)	EPA 8260 D
132.070	027	Naphthalene	EPA 8260 D
132.070	029	N-propylbenzene	EPA 8260 D
132.070	030	Styrene	EPA 8260 D
132.070	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D
132.070	032	Toluene	EPA 8260 D
132.070	033	Trichloroethylene (Trichloroethene)	EPA 8260 D
132.070	034	Trichlorofluoromethane	EPA 8260 D
132.070	035	Vinyl Chloride	EPA 8260 D
132.070	036	m+p-Xylene	EPA 8260 D
132.070	037	o-Xylene	EPA 8260 D
132.070	040	1,1-Dichloroethane	EPA 8260 D
132.070	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D
132.070	042	1,1,1-Trichloroethane	EPA 8260 D
132.070	043	1,1,1,2-Tetrachloroethane	EPA 8260 D
132.070	044	1,1,2,2-Tetrachloroethane	EPA 8260 D
132.070	045	1,1,2-Trichloroethane	EPA 8260 D
132.070	046	1,2-Dichlorobenzene	EPA 8260 D
132.070	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D
132.070	048	1,2-Dibromoethane (EDB)	EPA 8260 D
132.070	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D
132.070	050	1,2-Dichloropropane	EPA 8260 D
132.070	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D
132.070	052	1,2,4-Trichlorobenzene	EPA 8260 D
132.070	053	1,3-Dichlorobenzene	EPA 8260 D
132.070	054	1,4-Dichlorobenzene	EPA 8260 D
132.070	055	2-Chloroethyl vinyl Ether	EPA 8260 D
132.070	056	4-Chlorotoluene	EPA 8260 D
132.070	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D
132.070	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 D
132.070	059	Diisopropyl ether (DIPE)	EPA 8260 D
132.070	060	1,4-Dioxane	EPA 8260 D
132.070	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 D
132.070	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 D
132.071	001	Gasoline Range Organics (GRO)	EPA 8260 D

Field of Accreditation:133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.020	002	Diesel Range Organics (DRO)	EPA 8015 C
133.030	006	n-Butyl Alcohol (1-Butanol)	EPA 8015 B
133.030	012	Ethanol	EPA 8015 B
133.030	018	Isobutyl Alcohol	EPA 8015 B
133.030	019	Isopropyl Alcohol (Isopropanol)	EPA 8015 B
133.030	020	Methanol	EPA 8015 B
133.040	006	n-Butyl Alcohol (1-Butanol)	EPA 8015 C
133.040	012	Ethanol	EPA 8015 C
133.040	016	Isobutyl Alcohol	EPA 8015 C
133.040	017	Isopropyl Alcohol (Isopropanol)	EPA 8015 C
133.040	018	Methanol	EPA 8015 C
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.110	001	Aldrin	EPA 8081 B
133.110	002	alpha-BHC	EPA 8081 B
133.110	003	beta-BHC	EPA 8081 B
133.110	004	delta-BHC	EPA 8081 B
133.110	005	gamma-BHC (Lindane)	EPA 8081 B
133.110	006	Chlordane	EPA 8081 B
133.110	008	4,4'-DDD	EPA 8081 B
133.110	009	4,4'-DDE	EPA 8081 B
133.110	010	4,4'-DDT	EPA 8081 B

133.110	011	Dieldrin	EPA 8081 B
133.110	012	Endosulfan I	EPA 8081 B
133.110	013	Endosulfan II	EPA 8081 B
133.110	014	Endosulfan Sulfate	EPA 8081 B
133.110	015	Endrin	EPA 8081 B
133.110	016	Endrin Aldehyde	EPA 8081 B
133.110	017	Endrin Ketone	EPA 8081 B
133.110	018	Heptachlor	EPA 8081 B
133.110	019	Heptachlor Epoxide	EPA 8081 B
133.110	020	Methoxychlor	EPA 8081 B
133.110	021	Toxaphene	EPA 8081 B
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.130	001	Aroclor 1016	EPA 8082 A
133.130	002	Aroclor 1221	EPA 8082 A
133.130	003	Aroclor 1232	EPA 8082 A
133.130	004	Aroclor 1242	EPA 8082 A
133.130	005	Aroclor 1248	EPA 8082 A
133.130	006	Aroclor 1254	EPA 8082 A
133.130	007	Aroclor 1260	EPA 8082 A
133.190	001	Azinphos Methyl	EPA 8141 A
133.190	002	Chlorpyrifos	EPA 8141 A
133.190	005	Diazinon	EPA 8141 A
133.190	006	Dichlorvos (DDVP)	EPA 8141 A
133.190	007	Disulfoton	EPA 8141 A
133.190	008	Malathion	EPA 8141 A
133.190	009	Parathion Ethyl	EPA 8141 A
133.190	010	Parathion Methyl	EPA 8141 A
133.190	011	Phorate	EPA 8141 A
133.190	012	Ronnel	EPA 8141 A
133.190	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
133.210	001	Azinphos Methyl	EPA 8141 B
133.210	002	Chlorpyrifos	EPA 8141 B
133.210	003	Demeton-O	EPA 8141 B
133.210	004	Demeton-S	EPA 8141 B
133.210	005	Diazinon	EPA 8141 B
133.210	006	Dichlorvos (DDVP)	EPA 8141 B

133.210	007	Disulfoton	EPA 8141 B
133.210	008	Malathion	EPA 8141 B
133.210	009	Parathion Ethyl	EPA 8141 B
133.210	010	Parathion Methyl	EPA 8141 B
133.210	011	Phorate	EPA 8141 B
133.210	012	Ronnel	EPA 8141 B
133.210	013	Stirophos (Tetrachlorovinphos)	EPA 8141 B
133.220	001	2,4-D	EPA 8151 A
133.220	002	2,4-DB	EPA 8151 A
133.220	003	2,4,5-TP (Silvex)	EPA 8151 A
133.220	004	2,4,5-T	EPA 8151 A
133.220	005	Dalapon	EPA 8151 A
133.220	006	Dicamba	EPA 8151 A
133.220	007	Dichloroprop	EPA 8151 A
133.220	008	Dinoseb	EPA 8151 A
133.220	009	MCPA	EPA 8151 A
133.220	010	MCPP	EPA 8151 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C

133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	028	Pentachlorobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	040	2,6-Dichlorophenol	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	052	Aldrin	EPA 8270 C
133.230	053	alpha-BHC	EPA 8270 C
133.230	054	beta-BHC	EPA 8270 C
133.230	055	delta-BHC	EPA 8270 C
133.230	056	gamma-BHC (Lindane)	EPA 8270 C
133.230	057	4,4'-DDD	EPA 8270 C
133.230	058	4,4'-DDE	EPA 8270 C
133.230	059	4,4'-DDT	EPA 8270 C
133.230	060	Dieldrin	EPA 8270 C
133.230	062	Endosulfan I	EPA 8270 C
133.230	063	Endosulfan II	EPA 8270 C
133.230	064	Endosulfan Sulfate	EPA 8270 C
133.230	065	Endrin	EPA 8270 C
133.230	066	Endrin Aldehyde	EPA 8270 C
133.230	067	Endrin Ketone	EPA 8270 C
133.230	068	Heptachlor	EPA 8270 C
133.230	069	Heptachlor Epoxide	EPA 8270 C

133.230	070	Methoxychlor	EPA 8270 C
133.230	074	Disulfoton	EPA 8270 C
133.230	077	Parathion Methyl	EPA 8270 C
133.230	078	Phorate	EPA 8270 C
133.230	087	N-nitrosodiethylamine	EPA 8270 C
133.230	088	N-nitrosodimethylamine	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.240	001	Acenaphthene	EPA 8270 E
133.240	002	Acenaphthylene	EPA 8270 E
133.240	003	Aniline	EPA 8270 E
133.240	004	Anthracene	EPA 8270 E
133.240	005	Benzidine	EPA 8270 E
133.240	006	Benzoic Acid	EPA 8270 E
133.240	007	Benzo(a)anthracene	EPA 8270 E
133.240	008	Benzo(b)fluoranthene	EPA 8270 E
133.240	009	Benzo(k)fluoranthene	EPA 8270 E
133.240	010	Benzo(g,h,i)perylene	EPA 8270 E
133.240	011	Benzo(a)pyrene	EPA 8270 E
133.240	012	Benzyl Alcohol	EPA 8270 E
133.240	013	Bis(2-chloroethoxy) Methane	EPA 8270 E
133.240	014	Bis(2-chloroethyl) Ether	EPA 8270 E
133.240	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E
133.240	016	Butyl Benzyl Phthalate	EPA 8270 E
133.240	017	Chrysene	EPA 8270 E
133.240	018	Dibenz(a,h)anthracene	EPA 8270 E
133.240	019	Dibenzofuran	EPA 8270 E
133.240	020	Di-n-butyl Phthalate	EPA 8270 E
133.240	021	Diethyl Phthalate	EPA 8270 E
133.240	022	Dimethyl Phthalate	EPA 8270 E
133.240	023	Di-n-octyl Phthalate	EPA 8270 E
133.240	024	Fluoranthene	EPA 8270 E
133.240	025	Fluorene	EPA 8270 E
133.240	026	Naphthalene	EPA 8270 E
133.240	027	Nitrobenzene	EPA 8270 E
133.240	028	Pentachlorobenzene	EPA 8270 E
133.240	029	Pentachlorophenol	EPA 8270 E
133.240	031	1,2-Dichlorobenzene	EPA 8270 E

133.240	032	1,3-Dichlorobenzene	EPA 8270 E
133.240	033	1,4-Dichlorobenzene	EPA 8270 E
133.240	034	2-Chloronaphthalene	EPA 8270 E
133.240	035	2-Chlorophenol	EPA 8270 E
133.240	036	2,4-Dichlorophenol	EPA 8270 E
133.240	037	2,4-Dimethylphenol	EPA 8270 E
133.240	038	2,4-Dinitrophenol	EPA 8270 E
133.240	039	2,4-Dinitrotoluene	EPA 8270 E
133.240	040	2,6-Dichlorophenol	EPA 8270 E
133.240	041	2,6-Dinitrotoluene	EPA 8270 E
133.240	042	2-Nitroaniline	EPA 8270 E
133.240	043	2-Nitrophenol	EPA 8270 E
133.240	044	3-Nitroaniline	EPA 8270 E
133.240	045	3,3'-Dichlorobenzidine	EPA 8270 E
133.240	046	4-Chloroaniline	EPA 8270 E
133.240	047	4-Chloro-3-methylphenol	EPA 8270 E
133.240	048	4-Bromophenyl Phenyl Ether	EPA 8270 E
133.240	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E
133.240	050	4-Nitroaniline	EPA 8270 E
133.240	051	4-Nitrophenol	EPA 8270 E
133.240	052	Aldrin	EPA 8270 E
133.240	053	alpha-BHC	EPA 8270 E
133.240	054	beta-BHC	EPA 8270 E
133.240	055	delta-BHC	EPA 8270 E
133.240	056	gamma-BHC (Lindane)	EPA 8270 E
133.240	057	4,4'-DDD	EPA 8270 E
133.240	058	4,4'-DDE	EPA 8270 E
133.240	059	4,4'-DDT	EPA 8270 E
133.240	060	Dieldrin	EPA 8270 E
133.240	062	Endosulfan I	EPA 8270 E
133.240	063	Endosulfan II	EPA 8270 E
133.240	064	Endosulfan Sulfate	EPA 8270 E
133.240	065	Endrin	EPA 8270 E
133.240	066	Endrin Aldehyde	EPA 8270 E
133.240	067	Endrin Ketone	EPA 8270 E
133.240	068	Heptachlor	EPA 8270 E
133.240	069	Heptachlor Epoxide	EPA 8270 E
133.240	070	Methoxychlor	EPA 8270 E
133.240	074	Disulfoton	EPA 8270 E
133.240	077	Parathion Methyl	EPA 8270 E
133.240	078	Phorate	EPA 8270 E
133.240	087	N-nitrosodiethylamine	EPA 8270 E

133.240	088	N-nitrosodimethylamine	EPA 8270 E
133.240	089	N-nitrosodiphenylamine	EPA 8270 E
133.240	090	N-nitroso-di-n-propylamine	EPA 8270 E
133.240	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 E
133.240	092	Isophorone	EPA 8270 E
133.240	093	2-Methylnaphthalene	EPA 8270 E
133.240	094	Phenanthrene	EPA 8270 E
133.280	001	Acetaldehyde	EPA 8315 A
133.280	010	Formaldehyde	EPA 8315 A
133.340	001	1,3,5-Trinitrobenzene	EPA 8330
133.340	002	1,3-Dinitrobenzene	EPA 8330
133.340	003	Nitrobenzene	EPA 8330
133.340	004	2,4,6-Trinitrotoluene	EPA 8330
133.340	005	2,4-Dinitrotoluene	EPA 8330
133.340	006	2,6-Dinitrotoluene	EPA 8330
133.340	007	2-Nitrotoluene	EPA 8330
133.340	008	3-Nitrotoluene	EPA 8330
133.340	009	4-Nitrotoluene	EPA 8330
133.350	001	1,3,5-Trinitrobenzene	EPA 8330 A
133.350	002	1,3-Dinitrobenzene	EPA 8330 A
133.350	003	Nitrobenzene	EPA 8330 A
133.350	004	2,4,6-Trinitrotoluene	EPA 8330 A
133.350	005	2,4-Dinitrotoluene	EPA 8330 A
133.350	006	2,6-Dinitrotoluene	EPA 8330 A
133.350	007	2-Nitrotoluene	EPA 8330 A
133.350	008	3-Nitrotoluene	EPA 8330 A
133.350	009	4-Nitrotoluene	EPA 8330 A

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins Sacramento

880 Riverside Parkway

West Sacramento, CA 95605

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2897**

Effective Date: **2/1/2024**

Expiration Date: **1/31/2026**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
Phone: 9163735600

Certificate Number: 2897
Expiration Date: 1/31/2026

Field of Accreditation:		102 - Inorganic Chemistry of Drinking Water	
102.045	001	Perchlorate	EPA 314.0
102.047	001	Perchlorate	EPA 331.0
Field of Accreditation:		105 - Semi-volatile Organic Chemistry of Drinking Water	
105.103	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-P	EPA 533
105.103	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF	EPA 533
105.103	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 533
105.103	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 533
105.103	005	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 533
105.103	006	Perfluorobutanoic Acid (PFBA)	EPA 533
105.103	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 533
105.103	008	1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	EPA 533
105.103	009	Perfluorodecanoic Acid (PFDA)	EPA 533
105.103	010	Perfluorododecanoic Acid (PFDoA)	EPA 533
105.103	011	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	EPA 533
105.103	012	Perfluoroheptane Sulfonic Acid (PFHpS)	EPA 533
105.103	013	Perfluoroheptanoic Acid (PFHpA)	EPA 533
105.103	014	1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	EPA 533
105.103	015	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 533
105.103	016	Perfluorohexanoic Acid (PFHxA)	EPA 533
105.103	017	Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 533
105.103	018	Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 533
105.103	019	Perfluorononanoic Acid (PFNA)	EPA 533
105.103	020	1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	EPA 533
105.103	021	Perfluorooctane Sulfonic Acid (PFOS)	EPA 533
105.103	022	Perfluorooctanoic Acid (PFOA)	EPA 533
105.103	023	Perfluoropentanoic Acid (PFPeA)	EPA 533
105.103	024	Perfluoropentane Sulfonic Acid (PFPeS)	EPA 533
105.103	025	Perfluoroundecanoic Acid (PFUnDA)	EPA 533
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-P	EPA 537.1
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF	EPA 537.1
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1

105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOS	EPA 537.1
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1
105.106	016	Perfluorotetradecanoic Acid (PFTeDA)	EPA 537.1
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1
105.230	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B

Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1
108.009	001	Turbidity	EPA 180.1
108.017	001	Bromide	EPA 300.0
108.017	002	Chloride	EPA 300.0
108.017	003	Fluoride	EPA 300.0
108.017	004	Nitrate (as N)	EPA 300.0
108.017	006	Nitrite (as N)	EPA 300.0
108.017	007	Phosphate,Ortho (as P)	EPA 300.0
108.017	008	Sulfate (as SO4)	EPA 300.0
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2
108.033	002	Nitrite (as N)	EPA 353.2
108.045	001	Chemical Oxygen Demand	EPA 410.4
108.059	001	Turbidity	SM 2130 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.250	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	002	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	003	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	004	Total Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	005	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	006	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	007	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	008	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	009	Total Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	010	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B

111.250	011	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	012	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	013	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	014	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	015	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	016	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	017	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	018	Total Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	019	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	020	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	021	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	022	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	023	Total Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	024	OCDD	EPA 1613 B
111.250	025	OCDF	EPA 1613 B
111.265	001	Perfluorobutanoic Acid (PFBA)	EPA 1633
111.265	002	Perfluoropentanoic Acid (PFPeA)	EPA 1633
111.265	003	Perfluorohexanoic Acid (PFHxA)	EPA 1633
111.265	004	Perfluoroheptanoic Acid (PFHpA)	EPA 1633
111.265	005	Perfluorooctanoic Acid (PFOA)	EPA 1633
111.265	006	Perfluorononanoic Acid (PFNA)	EPA 1633
111.265	007	Perfluorodecanoic Acid (PFDA)	EPA 1633
111.265	008	Perfluoroundecanoic Acid (PFUnDA)	EPA 1633
111.265	009	Perfluorododecanoic Acid (PFDoA)	EPA 1633
111.265	010	Perfluorotridecanoic Acid (PFTrDA)	EPA 1633
111.265	011	Perfluorotetradecanoic Acid (PFTeDA)	EPA 1633
111.265	012	Perfluorobutane Sulfonic Acid (PFBS)	EPA 1633
111.265	013	Perfluoropentane Sulfonic Acid (PFPeS)	EPA 1633
111.265	014	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 1633
111.265	015	Perfluoroheptane Sulfonic Acid (PFHpS)	EPA 1633
111.265	016	Perfluorooctane Sulfonic Acid (PFOS)	EPA 1633
111.265	017	Perfluorononane Sulfonic Acid (PFNS)	EPA 1633
111.265	018	Perfluorodecane Sulfonic Acid (PFDS)	EPA 1633
111.265	019	Perfluorododecanesulfonic acid (PFDoS)	EPA 1633
111.265	020	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	EPA 1633
111.265	021	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	EPA 1633
111.265	022	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	EPA 1633
111.265	023	Perfluorooctane Sulfonamide (PFOSAm)	EPA 1633
111.265	024	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	EPA 1633
111.265	025	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	EPA 1633
111.265	026	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOS	EPA 1633
111.265	027	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 1633

111.265	028	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	EPA 1633
111.265	029	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	EPA 1633
111.265	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 1633
111.265	031	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 1633
111.265	032	Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 1633
111.265	033	Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 1633
111.265	034	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 1633
111.265	035	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF	EPA 1633
111.265	036	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-P	EPA 1633
111.265	037	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	EPA 1633
111.265	038	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	EPA 1633
111.265	039	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	EPA 1633
111.265	040	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	EPA 1633
111.265	041	Perfluorohexadecanoic Acid (PFHxDA)	EPA 1633
111.345	001	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	002	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	003	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	004	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	005	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOS	DoD QSM Version 5.1 (or newer)
111.345	006	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
111.345	007	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
111.345	008	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
111.345	009	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
111.345	010	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
111.345	011	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
111.345	012	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
111.345	013	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
111.345	014	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
111.345	015	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
111.345	016	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
111.345	017	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
111.345	018	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	019	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
111.345	020	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
111.345	021	Perfluorotetradecanoic Acid (PFTeDA)	DoD QSM Version 5.1 (or newer)
111.345	022	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
111.345	023	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
111.345	024	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-P	DoD QSM Version 5.1 (or newer)
111.345	025	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF	DoD QSM Version 5.1 (or newer)
111.345	026	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
111.345	027	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	028	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)

111.345	029	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
111.345	031	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
111.345	032	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
111.345	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
111.345	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
111.345	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
111.345	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
111.345	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
111.345	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
111.345	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

Field of Accreditation: 115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.135	001	Corrosivity - pH Determination	EPA 9045 C
115.145	001	Corrosivity - pH Determination	EPA 9045 D

Field of Accreditation: 117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C
117.470	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
117.470	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
117.470	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290

117.470	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
117.470	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290
117.470	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290
117.470	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.470	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.470	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290
117.470	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
117.470	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
117.470	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
117.470	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290
117.470	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.472	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
117.472	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
117.472	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
117.472	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
117.472	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290 A
117.472	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
117.472	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
117.472	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
117.472	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
117.472	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
117.472	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290 A
117.472	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
117.472	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
117.472	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A

117.472	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
117.472	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
117.472	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
117.575	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
117.575	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-P	DoD QSM Version 5.1 (or newer)
117.575	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF	DoD QSM Version 5.1 (or newer)
117.575	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
117.575	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
117.575	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOS	DoD QSM Version 5.1 (or newer)
117.575	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
117.575	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
117.575	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
117.575	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
117.575	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
117.575	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
117.575	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
117.575	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
117.575	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
117.575	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
117.575	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
117.575	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
117.575	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
117.575	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
117.575	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
117.575	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
117.575	029	Perfluorotetradecanoic Acid (PFTeDA)	DoD QSM Version 5.1 (or newer)
117.575	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
117.575	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
117.575	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
117.575	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
117.575	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
117.575	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)

117.575	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
117.575	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
117.575	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
117.575	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

Field of Accreditation: 130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199
130.470	001	Fluoride	EPA 9056
130.480	001	Fluoride	EPA 9056 A

Field of Accreditation: 131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.110	001	Corrosivity - pH Determination	EPA 9040 B
131.120	001	Corrosivity - pH Determination	EPA 9040 C

Field of Accreditation: 133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.265	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
133.265	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
133.265	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
133.265	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290
133.265	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290
133.265	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
133.265	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290

133.265	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290
133.265	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290
133.265	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290
133.265	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
133.265	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
133.265	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
133.265	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290
133.265	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290
133.265	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290
133.267	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
133.267	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
133.267	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
133.267	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290 A
133.267	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
133.267	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
133.267	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
133.267	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
133.267	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
133.267	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290 A
133.267	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
133.267	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
133.267	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
133.267	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
133.267	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
133.267	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
133.380	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)

133.380	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
133.380	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-P	DoD QSM Version 5.1 (or newer)
133.380	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF	DoD QSM Version 5.1 (or newer)
133.380	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
133.380	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
133.380	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOS	DoD QSM Version 5.1 (or newer)
133.380	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
133.380	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
133.380	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
133.380	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
133.380	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
133.380	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
133.380	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
133.380	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
133.380	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
133.380	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
133.380	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
133.380	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
133.380	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
133.380	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
133.380	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
133.380	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
133.380	029	Perfluorotetradecanoic Acid (PFTeDA)	DoD QSM Version 5.1 (or newer)
133.380	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
133.380	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
133.380	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
133.380	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
133.380	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
133.380	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
133.380	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
133.380	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
133.380	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins St. Louis

13715 Rider Trail North

Earth City, MO 63045

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2886**

Effective Date: **7/1/2025**

Expiration Date: **6/30/2026**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins St. Louis

13715 Rider Trail North
Earth City, MO 63045
Phone: 3142988566

Certificate Number: 2886
Expiration Date: 6/30/2026

				Primary Accreditation Body
Field of Accreditation: 106 - Radionuclides in Drinking Water				
106.010	001	Gross Alpha	EPA 900.0	FL
106.010	002	Gross Beta	EPA 900.0	FL
106.050	002	Radium-226	EPA 903.0	FL
106.060	001	Radium-228	EPA 904.0	FL
106.070	003	Strontium-90	EPA 905.0	FL
106.080	001	Tritium	EPA 906.0	FL
106.092	001	Uranium	EPA 200.8	FL
106.230	001	Uranium	DOE U-02	FL
106.270	001	Gross Alpha	SM 7110 C	FL
106.610	001	Radon-222	SM 7500-Rn	FL
Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water				
108.013	001	Calcium	EPA 200.7	LA
108.013	002	Magnesium	EPA 200.7	LA
108.013	004	Potassium	EPA 200.7	LA
108.013	006	Sodium	EPA 200.7	LA
108.015	001	Calcium	EPA 200.8	LA
108.015	002	Magnesium	EPA 200.8	LA
108.015	003	Potassium	EPA 200.8	LA
108.015	005	Sodium	EPA 200.8	LA
Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water				
109.623	001	Aluminum	EPA 200.7	LA
109.623	002	Antimony	EPA 200.7	LA
109.623	003	Arsenic	EPA 200.7	LA
109.623	004	Barium	EPA 200.7	LA
109.623	005	Beryllium	EPA 200.7	LA
109.623	006	Boron	EPA 200.7	LA
109.623	007	Cadmium	EPA 200.7	LA
109.623	008	Chromium	EPA 200.7	LA
109.623	009	Cobalt	EPA 200.7	LA
109.623	010	Copper	EPA 200.7	LA
109.623	011	Iron	EPA 200.7	LA
109.623	012	Lead	EPA 200.7	LA
109.623	013	Manganese	EPA 200.7	LA

109.623	014	Molybdenum	EPA 200.7	LA
109.623	015	Nickel	EPA 200.7	LA
109.623	016	Selenium	EPA 200.7	LA
109.623	017	Silver	EPA 200.7	LA
109.623	018	Thallium	EPA 200.7	LA
109.623	019	Tin	EPA 200.7	LA
109.623	020	Titanium	EPA 200.7	LA
109.623	021	Vanadium	EPA 200.7	LA
109.623	022	Zinc	EPA 200.7	LA
109.625	001	Aluminum	EPA 200.8	LA
109.625	002	Antimony	EPA 200.8	LA
109.625	003	Arsenic	EPA 200.8	LA
109.625	004	Barium	EPA 200.8	LA
109.625	005	Beryllium	EPA 200.8	LA
109.625	007	Cadmium	EPA 200.8	LA
109.625	008	Chromium	EPA 200.8	LA
109.625	009	Cobalt	EPA 200.8	LA
109.625	010	Copper	EPA 200.8	LA
109.625	012	Iron	EPA 200.8	LA
109.625	013	Lead	EPA 200.8	LA
109.625	014	Manganese	EPA 200.8	LA
109.625	015	Molybdenum	EPA 200.8	LA
109.625	016	Nickel	EPA 200.8	LA
109.625	017	Selenium	EPA 200.8	LA
109.625	018	Silver	EPA 200.8	LA
109.625	019	Thallium	EPA 200.8	LA
109.625	020	Tin	EPA 200.8	LA
109.625	021	Titanium	EPA 200.8	LA
109.625	022	Vanadium	EPA 200.8	LA
109.625	023	Zinc	EPA 200.8	LA
109.635	001	Mercury	EPA 245.1	LA

Field of Accreditation:112 - Radionuclides in Non-Potable Water

112.001	001	Gross Alpha	EPA 900.0	LA
112.001	002	Gross Beta	EPA 900.0	LA
112.003	001	Total Alpha Radium	EPA 903.0	LA

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.325	001	Aluminum	EPA 6010 D	LA
114.325	002	Antimony	EPA 6010 D	LA
114.325	003	Arsenic	EPA 6010 D	LA
114.325	004	Barium	EPA 6010 D	LA
114.325	005	Beryllium	EPA 6010 D	LA
114.325	006	Boron	EPA 6010 D	LA

114.325	007	Cadmium	EPA 6010 D	LA
114.325	008	Calcium	EPA 6010 D	LA
114.325	009	Chromium	EPA 6010 D	LA
114.325	010	Cobalt	EPA 6010 D	LA
114.325	011	Copper	EPA 6010 D	LA
114.325	012	Iron	EPA 6010 D	LA
114.325	013	Lead	EPA 6010 D	LA
114.325	014	Magnesium	EPA 6010 D	LA
114.325	015	Manganese	EPA 6010 D	LA
114.325	016	Molybdenum	EPA 6010 D	LA
114.325	017	Nickel	EPA 6010 D	LA
114.325	018	Potassium	EPA 6010 D	LA
114.325	019	Selenium	EPA 6010 D	LA
114.325	020	Silver	EPA 6010 D	LA
114.325	021	Sodium	EPA 6010 D	LA
114.325	022	Strontium	EPA 6010 D	LA
114.325	023	Thallium	EPA 6010 D	LA
114.325	024	Tin	EPA 6010 D	LA
114.325	025	Titanium	EPA 6010 D	LA
114.325	026	Vanadium	EPA 6010 D	LA
114.325	027	Zinc	EPA 6010 D	LA
114.345	001	Aluminum	EPA 6020 B	LA
114.345	002	Antimony	EPA 6020 B	LA
114.345	003	Arsenic	EPA 6020 B	LA
114.345	004	Barium	EPA 6020 B	LA
114.345	005	Beryllium	EPA 6020 B	LA
114.345	006	Cadmium	EPA 6020 B	LA
114.345	007	Calcium	EPA 6020 B	LA
114.345	008	Chromium	EPA 6020 B	LA
114.345	009	Cobalt	EPA 6020 B	LA
114.345	010	Copper	EPA 6020 B	LA
114.345	011	Iron	EPA 6020 B	LA
114.345	012	Lead	EPA 6020 B	LA
114.345	013	Magnesium	EPA 6020 B	LA
114.345	014	Manganese	EPA 6020 B	LA
114.345	016	Nickel	EPA 6020 B	LA
114.345	017	Potassium	EPA 6020 B	LA
114.345	018	Selenium	EPA 6020 B	LA
114.345	019	Silver	EPA 6020 B	LA
114.345	020	Sodium	EPA 6020 B	LA
114.345	021	Thallium	EPA 6020 B	LA
114.345	022	Vanadium	EPA 6020 B	LA

114.345	023	Zinc	EPA 6020 B	LA
114.345	024	Molybdenum	EPA 6020 B	LA
114.545	001	Mercury	EPA 7471 B	LA

Field of Accreditation: 118 - Radionuclides in Hazardous Waste

118.315	001	Gross Alpha	EPA 9310	LA
118.315	002	Gross Beta	EPA 9310	LA
118.325	001	Total Alpha Radium	EPA 9315	LA
118.335	001	Radium-228	EPA 9320	LA
118.345	001	Gamma Emitters	DOE 4.5.2.3	LA
118.465	001	Strontium	DOE Sr-02	LA
118.485	001	Uranium	DOE U-02	LA

Field of Accreditation: 130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.020	001	Aluminum	EPA 6010 D	LA
130.020	002	Antimony	EPA 6010 D	LA
130.020	003	Arsenic	EPA 6010 D	LA
130.020	004	Barium	EPA 6010 D	LA
130.020	005	Beryllium	EPA 6010 D	LA
130.020	006	Boron	EPA 6010 D	LA
130.020	007	Cadmium	EPA 6010 D	LA
130.020	008	Calcium	EPA 6010 D	LA
130.020	009	Chromium	EPA 6010 D	LA
130.020	010	Cobalt	EPA 6010 D	LA
130.020	011	Copper	EPA 6010 D	LA
130.020	012	Iron	EPA 6010 D	LA
130.020	013	Lead	EPA 6010 D	LA
130.020	014	Magnesium	EPA 6010 D	LA
130.020	015	Manganese	EPA 6010 D	LA
130.020	016	Molybdenum	EPA 6010 D	LA
130.020	017	Nickel	EPA 6010 D	LA
130.020	018	Potassium	EPA 6010 D	LA
130.020	019	Selenium	EPA 6010 D	LA
130.020	020	Silver	EPA 6010 D	LA
130.020	021	Sodium	EPA 6010 D	LA
130.020	022	Strontium	EPA 6010 D	LA
130.020	023	Thallium	EPA 6010 D	LA
130.020	024	Tin	EPA 6010 D	LA
130.020	025	Titanium	EPA 6010 D	LA
130.020	026	Vanadium	EPA 6010 D	LA
130.020	027	Zinc	EPA 6010 D	LA
130.040	001	Aluminum	EPA 6020 B	LA
130.040	002	Antimony	EPA 6020 B	LA
130.040	003	Arsenic	EPA 6020 B	LA

130.040	004	Barium	EPA 6020 B	LA
130.040	005	Beryllium	EPA 6020 B	LA
130.040	006	Cadmium	EPA 6020 B	LA
130.040	007	Calcium	EPA 6020 B	LA
130.040	008	Chromium	EPA 6020 B	LA
130.040	009	Cobalt	EPA 6020 B	LA
130.040	010	Copper	EPA 6020 B	LA
130.040	011	Iron	EPA 6020 B	LA
130.040	012	Lead	EPA 6020 B	LA
130.040	013	Magnesium	EPA 6020 B	LA
130.040	014	Manganese	EPA 6020 B	LA
130.040	016	Nickel	EPA 6020 B	LA
130.040	017	Potassium	EPA 6020 B	LA
130.040	018	Selenium	EPA 6020 B	LA
130.040	019	Silver	EPA 6020 B	LA
130.040	020	Sodium	EPA 6020 B	LA
130.040	021	Thallium	EPA 6020 B	LA
130.040	022	Vanadium	EPA 6020 B	LA
130.040	023	Zinc	EPA 6020 B	LA
130.040	024	Molybdenum	EPA 6020 B	LA
130.250	001	Mercury	EPA 7470 A	LA

Field of Accreditation: 134 - Radionucleotides in Hazardous Waste (Matrix Aqueous)

134.010	001	Gross Alpha	EPA 9310	LA
134.010	002	Gross Beta	EPA 9310	LA
134.020	001	Total Alpha Radium	EPA 9315	LA
134.030	001	Radium-228	EPA 9320	LA
134.040	001	Gamma Emitters	DOE 4.5.2.3	LA
134.170	001	Strontium	DOE Sr-02	LA
134.190	001	Uranium	DOE U-02	LA

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins Seattle

5755 8th Street East

Tacoma, WA 98424

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2954**

Effective Date: **7/8/2025**

Expiration Date: **7/7/2026**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins Seattle

5755 8th Street East
Tacoma, WA 98424
Phone: 2539222310

Certificate Number: 2954
Expiration Date: 7/7/2026

				Primary Accreditation Body
Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste				
114.010	001	Antimony	EPA 6010 B	OR
114.010	002	Arsenic	EPA 6010 B	OR
114.010	003	Barium	EPA 6010 B	OR
114.010	004	Beryllium	EPA 6010 B	OR
114.010	005	Cadmium	EPA 6010 B	OR
114.010	006	Chromium	EPA 6010 B	OR
114.010	007	Cobalt	EPA 6010 B	OR
114.010	008	Copper	EPA 6010 B	OR
114.010	009	Lead	EPA 6010 B	OR
114.010	010	Molybdenum	EPA 6010 B	OR
114.010	011	Nickel	EPA 6010 B	OR
114.010	012	Selenium	EPA 6010 B	OR
114.010	013	Silver	EPA 6010 B	OR
114.010	014	Thallium	EPA 6010 B	OR
114.010	015	Vanadium	EPA 6010 B	OR
114.010	016	Zinc	EPA 6010 B	OR
114.020	001	Antimony	EPA 6020	OR
114.020	002	Arsenic	EPA 6020	OR
114.020	003	Barium	EPA 6020	OR
114.020	004	Beryllium	EPA 6020	OR
114.020	005	Cadmium	EPA 6020	OR
114.020	006	Chromium	EPA 6020	OR
114.020	007	Cobalt	EPA 6020	OR
114.020	008	Copper	EPA 6020	OR
114.020	009	Lead	EPA 6020	OR
114.020	010	Molybdenum	EPA 6020	OR
114.020	011	Nickel	EPA 6020	OR
114.020	012	Selenium	EPA 6020	OR
114.020	013	Silver	EPA 6020	OR
114.020	014	Thallium	EPA 6020	OR
114.020	015	Vanadium	EPA 6020	OR
114.020	016	Zinc	EPA 6020	OR
114.140	001	Mercury	EPA 7470 A	OR

114.141	001	Mercury	EPA 7471 A	OR
114.221	001	Cyanide, Total	EPA 9012 A	OR
114.241	001	Corrosivity - pH Determination	EPA 9045 C	OR
114.325	001	Aluminum	EPA 6010 D	OR
114.325	002	Antimony	EPA 6010 D	OR
114.325	003	Arsenic	EPA 6010 D	OR
114.325	004	Barium	EPA 6010 D	OR
114.325	005	Beryllium	EPA 6010 D	OR
114.325	006	Boron	EPA 6010 D	OR
114.325	007	Cadmium	EPA 6010 D	OR
114.325	008	Calcium	EPA 6010 D	OR
114.325	009	Chromium	EPA 6010 D	OR
114.325	010	Cobalt	EPA 6010 D	OR
114.325	011	Copper	EPA 6010 D	OR
114.325	012	Iron	EPA 6010 D	OR
114.325	013	Lead	EPA 6010 D	OR
114.325	014	Magnesium	EPA 6010 D	OR
114.325	015	Manganese	EPA 6010 D	OR
114.325	016	Molybdenum	EPA 6010 D	OR
114.325	017	Nickel	EPA 6010 D	OR
114.325	018	Potassium	EPA 6010 D	OR
114.325	019	Selenium	EPA 6010 D	OR
114.325	020	Silver	EPA 6010 D	OR
114.325	021	Sodium	EPA 6010 D	OR
114.325	022	Strontium	EPA 6010 D	OR
114.325	023	Thallium	EPA 6010 D	OR
114.325	024	Tin	EPA 6010 D	OR
114.325	025	Titanium	EPA 6010 D	OR
114.325	026	Vanadium	EPA 6010 D	OR
114.325	027	Zinc	EPA 6010 D	OR
114.345	001	Aluminum	EPA 6020 B	OR
114.345	002	Antimony	EPA 6020 B	OR
114.345	003	Arsenic	EPA 6020 B	OR
114.345	004	Barium	EPA 6020 B	OR
114.345	005	Beryllium	EPA 6020 B	OR
114.345	006	Cadmium	EPA 6020 B	OR
114.345	008	Chromium	EPA 6020 B	OR
114.345	009	Cobalt	EPA 6020 B	OR
114.345	010	Copper	EPA 6020 B	OR
114.345	011	Iron	EPA 6020 B	OR
114.345	012	Lead	EPA 6020 B	OR
114.345	014	Manganese	EPA 6020 B	OR

114.345	015	Mercury	EPA 6020 B	OR
114.345	016	Nickel	EPA 6020 B	OR
114.345	018	Selenium	EPA 6020 B	OR
114.345	019	Silver	EPA 6020 B	OR
114.345	021	Thallium	EPA 6020 B	OR
114.345	022	Vanadium	EPA 6020 B	OR
114.345	023	Zinc	EPA 6020 B	OR
114.345	024	Molybdenum	EPA 6020 B	OR
114.545	001	Mercury	EPA 7471 B	OR
114.715	001	Cyanide, Total	EPA 9012 B	OR
114.715	002	Cyanide, Amenable	EPA 9012 B	OR
114.765	001	Organic Carbon-Total (TOC)	EPA 9060 A	OR
or	001	Corrosivity - pH Determination	EPA 9040 B	OR

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.145	001	Corrosivity - pH Determination	EPA 9045 D	OR

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.010	000	EDB and DBCP	EPA 8011	OR
116.030	001	Gasoline Range Organics (GRO)	EPA 8015 B	OR
116.080	000	Volatile Organic Compounds	EPA 8260 B	OR
116.080	120	Oxygenates	EPA 8260 B	OR
116.275	001	Benzene	EPA 8260 D	OR
116.275	002	Bromobenzene	EPA 8260 D	OR
116.275	003	Bromochloromethane	EPA 8260 D	OR
116.275	004	Bromodichloromethane	EPA 8260 D	OR
116.275	005	Bromoform	EPA 8260 D	OR
116.275	006	Bromomethane (Methyl Bromide)	EPA 8260 D	OR
116.275	007	n-Butylbenzene	EPA 8260 D	OR
116.275	008	sec-Butylbenzene	EPA 8260 D	OR
116.275	009	tert-Butylbenzene	EPA 8260 D	OR
116.275	010	Carbon Disulfide	EPA 8260 D	OR
116.275	011	Carbon Tetrachloride	EPA 8260 D	OR
116.275	012	Chlorobenzene	EPA 8260 D	OR
116.275	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D	OR
116.275	014	Chloroethane	EPA 8260 D	OR
116.275	015	Chloroform	EPA 8260 D	OR
116.275	016	Chloromethane (Methyl Chloride)	EPA 8260 D	OR
116.275	017	Dibromomethane	EPA 8260 D	OR
116.275	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D	OR
116.275	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D	OR
116.275	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D	OR
116.275	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D	OR
116.275	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D	OR

116.275	023	Ethylbenzene	EPA 8260 D	OR
116.275	024	Hexachlorobutadiene	EPA 8260 D	OR
116.275	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D	OR
116.275	026	Methylene Chloride (Dichloromethane)	EPA 8260 D	OR
116.275	027	Naphthalene	EPA 8260 D	OR
116.275	029	N-propylbenzene	EPA 8260 D	OR
116.275	030	Styrene	EPA 8260 D	OR
116.275	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D	OR
116.275	032	Toluene	EPA 8260 D	OR
116.275	033	Trichloroethylene (Trichloroethene)	EPA 8260 D	OR
116.275	034	Trichlorofluoromethane	EPA 8260 D	OR
116.275	035	Vinyl Chloride	EPA 8260 D	OR
116.275	036	m+p-Xylene	EPA 8260 D	OR
116.275	037	o-Xylene	EPA 8260 D	OR
116.275	040	1,1-Dichloroethane	EPA 8260 D	OR
116.275	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D	OR
116.275	042	1,1,1-Trichloroethane	EPA 8260 D	OR
116.275	043	1,1,1,2-Tetrachloroethane	EPA 8260 D	OR
116.275	044	1,1,2,2-Tetrachloroethane	EPA 8260 D	OR
116.275	045	1,1,2-Trichloroethane	EPA 8260 D	OR
116.275	046	1,2-Dichlorobenzene	EPA 8260 D	OR
116.275	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D	OR
116.275	048	1,2-Dibromoethane (EDB)	EPA 8260 D	OR
116.275	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D	OR
116.275	050	1,2-Dichloropropane	EPA 8260 D	OR
116.275	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D	OR
116.275	052	1,2,4-Trichlorobenzene	EPA 8260 D	OR
116.275	053	1,3-Dichlorobenzene	EPA 8260 D	OR
116.275	054	1,4-Dichlorobenzene	EPA 8260 D	OR
116.275	055	2-Chloroethyl vinyl Ether	EPA 8260 D	OR
116.275	056	4-Chlorotoluene	EPA 8260 D	OR
116.275	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D	OR
116.275	059	Diisopropyl ether (DIPE)	EPA 8260 D	OR
116.275	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 D	OR

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.010	001	Diesel Range Organics (DRO)	EPA 8015 B	OR
117.110	000	Extractable Organics	EPA 8270 C	OR
117.210	000	Organochlorine Pesticides	EPA 8081 A	OR
117.220	000	PCBs	EPA 8082	OR
117.235	002	Diesel Range Organics (DRO)	EPA 8015 B	OR
117.325	001	Aldrin	EPA 8081 B	OR
117.325	002	alpha-BHC	EPA 8081 B	OR

117.325	003	beta-BHC	EPA 8081 B	OR
117.325	004	delta-BHC	EPA 8081 B	OR
117.325	005	gamma-BHC (Lindane)	EPA 8081 B	OR
117.325	006	Chlordane (total)	EPA 8081 B	OR
117.325	008	4,4'-DDD	EPA 8081 B	OR
117.325	009	4,4'-DDE	EPA 8081 B	OR
117.325	010	4,4'-DDT	EPA 8081 B	OR
117.325	011	Dieldrin	EPA 8081 B	OR
117.325	012	Endosulfan I	EPA 8081 B	OR
117.325	013	Endosulfan II	EPA 8081 B	OR
117.325	014	Endosulfan Sulfate	EPA 8081 B	OR
117.325	015	Endrin	EPA 8081 B	OR
117.325	016	Endrin Aldehyde	EPA 8081 B	OR
117.325	017	Endrin Ketone	EPA 8081 B	OR
117.325	018	Heptachlor	EPA 8081 B	OR
117.325	019	Heptachlor Epoxide	EPA 8081 B	OR
117.325	020	Methoxychlor	EPA 8081 B	OR
117.325	021	Toxaphene	EPA 8081 B	OR
117.445	001	Acenaphthene	EPA 8270 E	OR
117.445	002	Acenaphthylene	EPA 8270 E	OR
117.445	003	Aniline	EPA 8270 E	OR
117.445	004	Anthracene	EPA 8270 E	OR
117.445	005	Benzidine	EPA 8270 E	OR
117.445	006	Benzoic Acid	EPA 8270 E	OR
117.445	007	Benzo(a)anthracene	EPA 8270 E	OR
117.445	008	Benzo(b)fluoranthene	EPA 8270 E	OR
117.445	009	Benzo(k)fluoranthene	EPA 8270 E	OR
117.445	010	Benzo(g,h,i)perylene	EPA 8270 E	OR
117.445	011	Benzo(a)pyrene	EPA 8270 E	OR
117.445	012	Benzyl Alcohol	EPA 8270 E	OR
117.445	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	OR
117.445	014	Bis(2-chloroethyl) Ether	EPA 8270 E	OR
117.445	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	OR
117.445	016	Butyl Benzyl Phthalate	EPA 8270 E	OR
117.445	017	Chrysene	EPA 8270 E	OR
117.445	018	Dibenz(a,h)anthracene	EPA 8270 E	OR
117.445	019	Dibenzofuran	EPA 8270 E	OR
117.445	020	Di-n-butyl Phthalate	EPA 8270 E	OR
117.445	021	Diethyl Phthalate	EPA 8270 E	OR
117.445	022	Dimethyl Phthalate	EPA 8270 E	OR
117.445	023	Di-n-octyl Phthalate	EPA 8270 E	OR
117.445	024	Fluoranthene	EPA 8270 E	OR

117.445	025	Fluorene	EPA 8270 E	OR
117.445	026	Naphthalene	EPA 8270 E	OR
117.445	027	Nitrobenzene	EPA 8270 E	OR
117.445	029	Pentachlorophenol	EPA 8270 E	OR
117.445	031	1,2-Dichlorobenzene	EPA 8270 E	OR
117.445	032	1,3-Dichlorobenzene	EPA 8270 E	OR
117.445	033	1,4-Dichlorobenzene	EPA 8270 E	OR
117.445	034	2-Chloronaphthalene	EPA 8270 E	OR
117.445	035	2-Chlorophenol	EPA 8270 E	OR
117.445	036	2,4-Dichlorophenol	EPA 8270 E	OR
117.445	037	2,4-Dimethylphenol	EPA 8270 E	OR
117.445	038	2,4-Dinitrophenol	EPA 8270 E	OR
117.445	039	2,4-Dinitrotoluene	EPA 8270 E	OR
117.445	040	2,6-Dichlorophenol	EPA 8270 E	OR
117.445	041	2,6-Dinitrotoluene	EPA 8270 E	OR
117.445	042	2-Nitroaniline	EPA 8270 E	OR
117.445	043	2-Nitrophenol	EPA 8270 E	OR
117.445	044	3-Nitroaniline	EPA 8270 E	OR
117.445	045	3,3'-Dichlorobenzidine	EPA 8270 E	OR
117.445	046	4-Chloroaniline	EPA 8270 E	OR
117.445	047	4-Chloro-3-methylphenol	EPA 8270 E	OR
117.445	048	4-Bromophenyl Phenyl Ether	EPA 8270 E	OR
117.445	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E	OR
117.445	050	4-Nitroaniline	EPA 8270 E	OR
117.445	088	N-nitrosodimethylamine (NDMA)	EPA 8270 E	OR
117.445	089	N-nitrosodiphenylamine	EPA 8270 E	OR
117.445	090	N-nitroso-di-n-propylamine (NDPA)	EPA 8270 E	OR
117.445	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 E	OR
117.445	092	Isophorone	EPA 8270 E	OR
117.445	093	2-Methylnaphthalene	EPA 8270 E	OR
117.445	094	Phenanthrene	EPA 8270 E	OR

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.020	001	Aluminum	EPA 6010 D	OR
130.020	002	Antimony	EPA 6010 D	OR
130.020	003	Arsenic	EPA 6010 D	OR
130.020	004	Barium	EPA 6010 D	OR
130.020	005	Beryllium	EPA 6010 D	OR
130.020	006	Boron	EPA 6010 D	OR
130.020	007	Cadmium	EPA 6010 D	OR
130.020	008	Calcium	EPA 6010 D	OR
130.020	009	Chromium	EPA 6010 D	OR
130.020	010	Cobalt	EPA 6010 D	OR

130.020	011	Copper	EPA 6010 D	OR
130.020	012	Iron	EPA 6010 D	OR
130.020	013	Lead	EPA 6010 D	OR
130.020	014	Magnesium	EPA 6010 D	OR
130.020	015	Manganese	EPA 6010 D	OR
130.020	016	Molybdenum	EPA 6010 D	OR
130.020	017	Nickel	EPA 6010 D	OR
130.020	018	Potassium	EPA 6010 D	OR
130.020	019	Selenium	EPA 6010 D	OR
130.020	020	Silver	EPA 6010 D	OR
130.020	021	Sodium	EPA 6010 D	OR
130.020	022	Strontium	EPA 6010 D	OR
130.020	023	Thallium	EPA 6010 D	OR
130.020	024	Tin	EPA 6010 D	OR
130.020	025	Titanium	EPA 6010 D	OR
130.020	026	Vanadium	EPA 6010 D	OR
130.020	027	Zinc	EPA 6010 D	OR
130.040	001	Aluminum	EPA 6020 B	OR
130.040	002	Antimony	EPA 6020 B	OR
130.040	003	Arsenic	EPA 6020 B	OR
130.040	004	Barium	EPA 6020 B	OR
130.040	005	Beryllium	EPA 6020 B	OR
130.040	006	Cadmium	EPA 6020 B	OR
130.040	008	Chromium	EPA 6020 B	OR
130.040	009	Cobalt	EPA 6020 B	OR
130.040	010	Copper	EPA 6020 B	OR
130.040	011	Iron	EPA 6020 B	OR
130.040	012	Lead	EPA 6020 B	OR
130.040	014	Manganese	EPA 6020 B	OR
130.040	015	Mercury	EPA 6020 B	OR
130.040	016	Nickel	EPA 6020 B	OR
130.040	018	Selenium	EPA 6020 B	OR
130.040	019	Silver	EPA 6020 B	OR
130.040	021	Thallium	EPA 6020 B	OR
130.040	022	Vanadium	EPA 6020 B	OR
130.040	023	Zinc	EPA 6020 B	OR
130.040	024	Molybdenum	EPA 6020 B	OR
130.250	001	Mercury	EPA 7470 A	OR
130.440	001	Cyanide, Total	EPA 9012 B	OR
130.440	002	Cyanide, Amenable	EPA 9012 B	OR
130.490	001	Organic Carbon-Total (TOC)	EPA 9060 A	OR

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.120	001	Corrosivity - pH Determination	EPA 9040 C	OR

Field of Accreditation: 132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.061	001	Gasoline Range Organics (GRO)	EPA 8260 B	OR
132.061	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8260 B	OR
132.070	001	Benzene	EPA 8260 D	OR
132.070	002	Bromobenzene	EPA 8260 D	OR
132.070	003	Bromochloromethane	EPA 8260 D	OR
132.070	004	Bromodichloromethane	EPA 8260 D	OR
132.070	005	Bromoform	EPA 8260 D	OR
132.070	006	Bromomethane (Methyl Bromide)	EPA 8260 D	OR
132.070	007	n-Butylbenzene	EPA 8260 D	OR
132.070	008	sec-Butylbenzene	EPA 8260 D	OR
132.070	009	tert-Butylbenzene	EPA 8260 D	OR
132.070	010	Carbon Disulfide	EPA 8260 D	OR
132.070	011	Carbon Tetrachloride	EPA 8260 D	OR
132.070	012	Chlorobenzene	EPA 8260 D	OR
132.070	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D	OR
132.070	014	Chloroethane	EPA 8260 D	OR
132.070	015	Chloroform	EPA 8260 D	OR
132.070	016	Chloromethane (Methyl Chloride)	EPA 8260 D	OR
132.070	017	Dibromomethane	EPA 8260 D	OR
132.070	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D	OR
132.070	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D	OR
132.070	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D	OR
132.070	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D	OR
132.070	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D	OR
132.070	023	Ethylbenzene	EPA 8260 D	OR
132.070	024	Hexachlorobutadiene	EPA 8260 D	OR
132.070	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D	OR
132.070	026	Methylene Chloride (Dichloromethane)	EPA 8260 D	OR
132.070	027	Naphthalene	EPA 8260 D	OR
132.070	029	N-propylbenzene	EPA 8260 D	OR
132.070	030	Styrene	EPA 8260 D	OR
132.070	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D	OR
132.070	032	Toluene	EPA 8260 D	OR
132.070	033	Trichloroethylene (Trichloroethene)	EPA 8260 D	OR
132.070	034	Trichlorofluoromethane	EPA 8260 D	OR
132.070	035	Vinyl Chloride	EPA 8260 D	OR
132.070	036	m+p-Xylene	EPA 8260 D	OR
132.070	037	o-Xylene	EPA 8260 D	OR
132.070	040	1,1-Dichloroethane	EPA 8260 D	OR
132.070	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D	OR

132.070	042	1,1,1-Trichloroethane	EPA 8260 D	OR
132.070	043	1,1,1,2-Tetrachloroethane	EPA 8260 D	OR
132.070	044	1,1,2,2-Tetrachloroethane	EPA 8260 D	OR
132.070	045	1,1,2-Trichloroethane	EPA 8260 D	OR
132.070	046	1,2-Dichlorobenzene	EPA 8260 D	OR
132.070	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D	OR
132.070	048	1,2-Dibromoethane (EDB)	EPA 8260 D	OR
132.070	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D	OR
132.070	050	1,2-Dichloropropane	EPA 8260 D	OR
132.070	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D	OR
132.070	052	1,2,4-Trichlorobenzene	EPA 8260 D	OR
132.070	053	1,3-Dichlorobenzene	EPA 8260 D	OR
132.070	054	1,4-Dichlorobenzene	EPA 8260 D	OR
132.070	055	2-Chloroethyl vinyl Ether	EPA 8260 D	OR
132.070	056	4-Chlorotoluene	EPA 8260 D	OR
132.070	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D	OR
132.070	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 D	OR
132.070	059	Diisopropyl ether (DIPE)	EPA 8260 D	OR
132.070	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 D	OR
132.070	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 D	OR

Field of Accreditation: 133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B	OR
133.110	002	alpha-BHC	EPA 8081 B	OR
133.110	003	beta-BHC	EPA 8081 B	OR
133.110	004	delta-BHC	EPA 8081 B	OR
133.110	005	gamma-BHC (Lindane)	EPA 8081 B	OR
133.110	006	Chlordane	EPA 8081 B	OR
133.110	014	Endosulfan Sulfate	EPA 8081 B	OR
133.110	015	Endrin	EPA 8081 B	OR
133.110	016	Endrin Aldehyde	EPA 8081 B	OR
133.110	021	Toxaphene	EPA 8081 B	OR
133.130	001	Aroclor 1016	EPA 8082 A	OR
133.130	002	Aroclor 1221	EPA 8082 A	OR
133.130	003	Aroclor 1232	EPA 8082 A	OR
133.130	004	Aroclor 1242	EPA 8082 A	OR
133.130	005	Aroclor 1248	EPA 8082 A	OR
133.130	006	Aroclor 1254	EPA 8082 A	OR
133.130	007	Aroclor 1260	EPA 8082 A	OR
133.240	001	Acenaphthene	EPA 8270 E	OR
133.240	002	Acenaphthylene	EPA 8270 E	OR
133.240	003	Aniline	EPA 8270 E	OR
133.240	004	Anthracene	EPA 8270 E	OR

133.240	005	Benzidine	EPA 8270 E	OR
133.240	006	Benzoic Acid	EPA 8270 E	OR
133.240	007	Benzo(a)anthracene	EPA 8270 E	OR
133.240	008	Benzo(b)fluoranthene	EPA 8270 E	OR
133.240	009	Benzo(k)fluoranthene	EPA 8270 E	OR
133.240	010	Benzo(g,h,i)perylene	EPA 8270 E	OR
133.240	011	Benzo(a)pyrene	EPA 8270 E	OR
133.240	012	Benzyl Alcohol	EPA 8270 E	OR
133.240	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	OR
133.240	014	Bis(2-chloroethyl) Ether	EPA 8270 E	OR
133.240	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	OR
133.240	016	Butyl Benzyl Phthalate	EPA 8270 E	OR
133.240	017	Chrysene	EPA 8270 E	OR
133.240	018	Dibenz(a,h)anthracene	EPA 8270 E	OR
133.240	019	Dibenzofuran	EPA 8270 E	OR
133.240	020	Di-n-butyl Phthalate	EPA 8270 E	OR
133.240	021	Diethyl Phthalate	EPA 8270 E	OR
133.240	022	Dimethyl Phthalate	EPA 8270 E	OR
133.240	023	Di-n-octyl Phthalate	EPA 8270 E	OR
133.240	024	Fluoranthene	EPA 8270 E	OR
133.240	025	Fluorene	EPA 8270 E	OR
133.240	026	Naphthalene	EPA 8270 E	OR
133.240	027	Nitrobenzene	EPA 8270 E	OR
133.240	029	Pentachlorophenol	EPA 8270 E	OR
133.240	031	1,2-Dichlorobenzene	EPA 8270 E	OR
133.240	032	1,3-Dichlorobenzene	EPA 8270 E	OR
133.240	033	1,4-Dichlorobenzene	EPA 8270 E	OR
133.240	034	2-Chloronaphthalene	EPA 8270 E	OR
133.240	035	2-Chlorophenol	EPA 8270 E	OR
133.240	036	2,4-Dichlorophenol	EPA 8270 E	OR
133.240	037	2,4-Dimethylphenol	EPA 8270 E	OR
133.240	038	2,4-Dinitrophenol	EPA 8270 E	OR
133.240	039	2,4-Dinitrotoluene	EPA 8270 E	OR
133.240	041	2,6-Dinitrotoluene	EPA 8270 E	OR
133.240	042	2-Nitroaniline	EPA 8270 E	OR
133.240	043	2-Nitrophenol	EPA 8270 E	OR
133.240	044	3-Nitroaniline	EPA 8270 E	OR
133.240	045	3,3'-Dichlorobenzidine	EPA 8270 E	OR
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133.240	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 E	OR
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Quality Assurance Manual for Environmental Analytical Services

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The NELAC Institute (TNI)
Management and Technical Requirements for Laboratories Performing Environmental Analysis
TNI Standard (EL-V1-2016-Rev 2.1) Effective December 6, 2016

1) INTRODUCTION, SCOPE, AND APPLICABILITY
- 1.1) Introduction and Compliance References
- 1.2) Terms and Definitions
- 1.3) Scope / Fields of Testing
- 1.4) Quality Manual Review Process

2) MANAGEMENT REQUIREMENTS
- 2.1) Overview
- 2.2) Roles and Responsibilities
- 2.3) Business Continuity and Contingency Plans

3) PERSONNEL
- 3.1) Overview
- 3.2) Education and Experience Requirements for Technical Personnel
- 3.3) Training
  - 3.3.1) Initial Demonstration of Capability (IDOC)
  - 3.3.2) Continuing Demonstration of Capability (CDOC)
- 3.4) Ethics and Data Integrity Training

4) ACCOMODATIONS AND ENVIRONMENTAL CONDITIONS
- 4.1) Overview
- 4.2) Environment
- 4.3) Work Areas
- 4.4) Responding to Emergencies
- 4.5) Building Security

5) QUALITY SYSTEM
- 5.1) Quality Policy Statement
- 5.2) Ethics and Data Integrity
- 5.3) Quality System Documentation
- 5.4) Quality Control (QC) Objectives for the Measurement of Data
- 5.5) Criteria for Quality Indicators
- 5.6) Statistical Quality Control
  - 5.6.1) Quality Control Charts

5.7) Quality System Metrics
5.8) Management of Change
6) DOCUMENT CONTROL
6.1) Overview
6.2) Document Approval and Issuance
6.3) Procedures for Document Control
6.4) Obsolete Documents
7) SERVICE TO THE CLIENT
7.1) Overview
7.2) Project Review
7.2.1) Project Specific Quality Planning
7.3) Balancing Laboratory Capacity and Workload
7.4) Project Contracts / Records
7.5) Special Services
7.6) Client Communication
7.7) Reporting
7.8) Client Feedback and Surveys
7.9) Client Confidentiality
8) SUBCONTRACTING
8.1) Overview
8.2) Qualifying and Monitoring Subcontractors
8.3) Oversight and Reporting
8.4) Contingency Planning
9) PURCHASING SERVICES AND SUPPLIES
9.1) Overview
9.2) Glassware
9.3) Purchasing
9.3.1) Receiving
9.3.2) Specifications
9.3.3) Storage
9.4) Purchase of Equipment / Instruments / Software
9.5) Service
9.6) Suppliers
10) COMPLAINTS
10.1) Overview
10.2) Complaint Processing
11) CONTROL AND NONCONFORMING WORK
11.1) Overview
11.2) Responsibilities and Authorities
11.3) Evaluation of Significance and Actions Taken
11.4) Method Suspension / Restriction (Stop Work Procedures)
12) CORRECTIVE ACTION
12.1) Overview
12.2) General Processes
12.3) Corrective Action Process Steps
12.4) Technical Data Corrective Actions
12.5) Corrections to Data / Records
13) PREVENTIVE ACTION / IMPROVEMENT
14) CONTROL OF RECORDS
14.1) Overview
14.2) Technical and Analytical Records
14.3) Laboratory Support Activities
14.4) Records Management, Storage and Disposal
15) AUDITS
15.1) Internal Audits
15.2) External Audits
15.3) Audit Findings
16) Management Reviews
16.1) Quality Metrics Report
16.2) Annual Management Review
17) TEST METHODS AND METHOD VALIDATION

Uncontrolled document

17.1) Overview
17.2) Standard Operating Procedures (SOPs)
17.3) Laboratory Methods
17.4) Selection of Methods
17.4.1) Sources of Methods
17.4.2) Demonstration of Capability
17.4.3) Initial Demonstration of Capability (IDOC) Procedure
17.5) Method Detection Limit (MDL) / Limits of Detection (LOD)
17.6) Limit of Quantitation
17.7) Retention Time Windows
17.8) Evaluation of Selectivity
17.9) Estimation of Uncertainty of Measurement
17.10) Sample Reanalysis Guidelines
17.11) Control of Data
17.11.1) Computer and Electronic Data Related Requirements
17.11.2) Data Reduction
17.11.3) Logbook / Worksheet Use Guidelines
17.11.4) Review / Verification Procedures
17.11.5) Manual Integrations
18) INSTRUMENTS, EQUIPMENT, AND CALIBRATION
18.1) Overview
18.2) Instrument / Equipment Maintenance
18.3) Support Equipment
18.3.1) Weights and Balances
18.3.2) pH, Conductivity, and Turbidity Meters
18.3.3) Temperature Measuring Devices
18.3.4) Refrigerators, Freezer, Water Baths, Ovens, and Incubators
18.3.5) Autopipettors, Dilutors, and Syringes
18.4) Instrument Calibration
18.4.1) Calibration Standards
18.4.2) Calibration Verification
19) MEASUREMENT TRACEABILITY
19.1) Overview
19.2) Reference Weights and Thermometers
19.3) Reference Standards, Materials, and Reagents
20) SAMPLING
20.1) Overview
20.2) Sampling Containers
21) SAMPLE HANDLING
21.1) Chain of Custody (COC)
21.2) Sampling Containers, Preservation Requirements, Holding Times
21.3) Sample Receipt
21.4) Sample Acceptance Policy
21.5) Sample Storage
21.6) Hazardous Samples and Foreign Soils
21.7) Sample Shipping
21.8) Sample Disposal
22) ASSURING THE QUALITY OF TEST RESULTS
22.1) Overview
22.2) Controls
22.3) Negative Controls
22.4) Positive Controls
22.5) Acceptance Criteria (Quality Control Limits)
22.5) Marginal Exceedance
23) REPORTING RESULTS
23.1) Overview
23.2) Test Reports
23.3) Reporting Level or Report Type
23.4) Electronic Data Deliverable (EDD)
23.5) Amendments to Test Reports
23.5.1) Policy on Data Omissions or Reporting Limit Increases

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23.5.2) Multiple Reports
24) APPENDICES
24.1) References

1) INTRODUCTION, SCOPE, AND APPLICABILITY

1.1) Introduction and Compliance References

A. Eurofins Calscience Quality Assurance Manual (QAM) is a document prepared to define the overall policies, organization objectives and functional responsibilities for maintaining the laboratory's QA Program. Governing SOPs are in place within the organization to ensure the proper execution of this QA Manual. This manual is required reading for all personnel. Supporting SOPs are assigned reading for relevant personnel.

B. The laboratory is a team of people who work together to serve the health and environmental needs of society through science and technology. We offer comprehensive expertise in environmental laboratory applications and client relations with a focus on quality.

C. As such, this QAM has been prepared to assure compliance with the applicable versions of The NELAC Institute (TNI) Standard; ISO/IEC Guide 17025; and the Department of Defense (DoD)/Department of Energy (DOE) Quality Systems Manual (QSM). Policies and procedures referenced within this manual are compliant with the Eurofins Environment Testing (EET) National Business Line Service Center (NBLSC) procedures; Eurofins Calscience; and the associated accreditation and certification programs held by the laboratory to support environmental work.

1.2) Terms and Definitions

A. A Quality Management Program is a system designed to ensure that data produced by the laboratory conforms to the standards set by state and/or federal regulations. The program functions at the local management level through company goals, from guidance at the executive management level, and at the analytical level through Standard Operating Procedures (SOPs) and quality control. Our program is designed to minimize systematic error, encourage constructive, documented problem solving, and provide a framework for continuous improvement within the organization to better serve our clients.

B. Specific terms and acronyms used in the laboratory are defined in the corresponding procedures, identified in the analysis reports, and/or addressed in the referenced regulatory/method documents. Definitions are referenced in Calscience QAM *Appendix 1 -- Definitions*.

1.3) Scope / Fields of Testing

A. The laboratory analyzes a broad range of environmental and industrial samples. Sample matrices include, but are not limited to air, effluent water, groundwater, hazardous waste, sludge and soils. The QA Program contains specific procedures and methods to test samples of differing matrices for chemical and physical parameters. The Program also contains guidelines on maintaining documentation of analytical processes, reviewing results, servicing clients and tracking samples through the laboratory. The technical and service requirements of all analytical requests are thoroughly evaluated before commitments are made to accept the work. Measurements are made using published reference methods or methods developed and validated by the laboratory.

B. The methods covered by this manual include the most frequently requested methodologies needed to provide analytical services in the United States and its territories; and Canada. The specific list of test methods used by the laboratory can be found in TALS. Our areas of expertise include:

Standard Services	Specialty Services
A. Volatiles B. Semivolatiles C. Metals D. Pesticides/PCBs/Herbicides	A. Perchlorate B. 1,4-Dioxane C. PCB Congeners D. Explosives

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E. Petroleum Hydrocarbons F. Waste Characterization G. Non-Potable Water Testing H. Soil and Surface Water Testing I. Vapor and Air Analysis J. Sediment and Tissue Testing K. Other	E. Alkyl PAHs, Alkanes, Biomarkers F. Organic Acids G. Aldehydes H. Other

C. **Note:** All current certificates and scopes of accreditation are available on the Eurofins' website at https://www.eurofinsus.com/environment-testing/resources/certifications/.

D. The approach of this manual is to define the minimum level of quality assurance and quality control necessary to meet these requirements. All methods performed by the laboratory shall meet these criteria as appropriate. In some instances, quality assurance project plans (QAPPs), project specific data quality objectives (DQOs) or local regulations may require criteria other than those contained in this manual. In these cases, the laboratory will abide by the requested criteria following review and acceptance of the requirements by the Business Unit Manager (BUMA) and the Quality Assurance (QA) Manager. In some cases, QAPPs and DQOs may specify less stringent requirements. The Laboratory BUMA and the QA Manager must determine if it is in the lab's best interest to follow the less stringent requirements.

1.4) Quality Manual Review Process

A. The template on which this manual is based is reviewed annually by the NBLSC Quality Assurance leadership team. NBLSC QA will assure that the template complies with Section 1.1.

B. This manual itself is reviewed annually by senior laboratory management to assure that it reflects current practices and meets the requirements of the laboratory's clients and regulators. Occasionally, the manual may need to be revised in order to meet new or changing regulations and operations. The QA Manager (or designee) will review the changes in the normal course of business and incorporate changes into revised sections of the document. All updates will be reviewed by the designated senior laboratory management staff. The laboratory updates and approves such changes in accordance with our *Document Control* processes.

2) MANAGEMENT REQUIREMENTS

2.1) Overview

A. The laboratory is an independent business unit within the Eurofins Environment Testing group of companies. The laboratory's operational and support staff have the day-to-day independent operational authority under the direction of the Business Unit Manager (BUMA). The laboratory's quality system is managed under the oversight of the QA Manager with the BUMA. The laboratory management staff includes the operations manager, department managers and group leaders. The organizational chart of the management staff is included as Appendix 3. Individual department staff lists are maintained in the laboratory's internal records.

2.2) Roles and Responsibilities

A. **Business Unit Manager**

1. The BUMA is responsible for the overall quality, safety, financial, technical, human resource and service performance of the BU and reports to their Business Unit or Scope President. The BUMA is also responsible for any service centers connected with their BU that perform analytical tests, such as short holding time analyses. The BUMA provides the resources necessary to implement and maintain an effective and comprehensive Quality Assurance and Data Integrity Program.

2. Specific responsibilities include, but are not limited to:

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a. Designates one or more technical managers for the appropriate fields of testing. If the Technical Manager is unavailable for a period of time exceeding 15 consecutive calendar days, the BUMA must designate another staff member meeting the qualifications of the Technical Manager to temporarily perform this function. If the absence exceeds 35 calendar days, the primary accrediting body must be notified in writing.

b. Ensures that all analysts and supervisors have the appropriate education and training to properly carry out the duties assigned to them and ensures that this training has been documented. Works with Eurofins Environment Testing Human Resources for hiring of new personnel.

c. Ensures that personnel are free from any commercial, financial and other undue pressures which might adversely affect the quality of their work.

d. Ensures Eurofins human resource policies are adhered to and maintained.

e. Ensures that sufficient numbers of qualified personnel are employed to supervise and perform the work of the laboratory. Assesses laboratory capacity and workload.

f. Ensures that appropriate corrective actions are taken to address analyses identified as requiring such actions by internal and external performance or procedural audits. Procedures that do not meet the standards set forth in the QA Manual or laboratory SOPs may be temporarily suspended by the BUMA.

g. Reviews and approves, or delegates the responsibility for review and approval, for all SOPs prior to their implementation and ensures all approved SOPs are implemented and adhered to.

h. Pursues and maintains appropriate laboratory certification and contract approvals. Supports ISO 17025 requirements.

i. Ensures client specific reporting and quality control requirements are met.

j. Contributes to the continuous improvement of the laboratory operations.

k. Maintains an awareness of technical developments and regulatory requirements.

l. Leads the management team, consisting of the QA Manager, the Technical Manager(s), and the Operations Manager as direct reports.

B. **Quality Assurance Manager**

1. The QA Manager has responsibility and authority to ensure the continuous implementation of the quality system for the BU. The QA Manager is also responsible for any service centers connected with their BU that perform analytical tests, such as short holding time analyses.

2. The QA Manager reports directly to the BUMA. This position is able to evaluate data objectively and perform assessments without outside (e.g., managerial) influence. The National Business Line Service Center (NBLSC) QA team and procedures may be used as a resource in dealing with regulatory requirements, certifications and other quality assurance related items.

3. The QA Manager directs the activities of the QA staff to accomplish specific responsibilities, which include, but are not limited to:

   a. Serves as the focal point for QA/QC in the laboratory.

   b. Have functions independent from laboratory operations for which he/she has quality assurance oversight.

   c. Have documented training and/or experience in QA/QC procedures and the laboratory’s Quality System.

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d. Have a general knowledge of the analytical test methods for which data audit/review is performed (and/or having the means of getting this information when needed).

e. Arrange for or conducting internal audits on quality systems and the technical operation Notifying laboratory management of deficiencies in the quality system and ensuring corrective action is taken. Procedures that do not meet the standards set forth in the QA Manual or laboratory SOPs shall be investigated following procedures outlined in Section 12 and if deemed necessary may be temporarily suspended during the investigation.

f. Maintaining and updating the QA Manual.

g. Monitoring and evaluating laboratory certifications; scheduling proficiency testing samples.

h. Monitoring and communicating regulatory changes that may affect the laboratory to management.

i. Training and advising the laboratory staff on quality assurance/quality control procedures that are pertinent to their daily activities.

j. The laboratory QA Manager will maintain records of all ethics-related training, including the type and proof of attendance.

k. Maintain, improve, and evaluate the corrective action database and the corrective and preventive action systems.

l. Objectively monitor standards of performance in quality control and quality assurance without outside (e.g., managerial) influence.

m. Coordinating of document control of SOPs, MDLs, control limits, and miscellaneous forms and information.

n. Performing technical data audits and method audits to ensure consistency and compliance with regulatory requirements.

o. Review of external audit reports and data validation requests.

p. Follow-up with audits to ensure client QAPP requirements are met.

q. Establishment of reporting schedule and preparation of various quality system reports for the BUMA, clients and/or NBLSC QA.

r. Development of suggestions and recommendations to improve quality systems.

s. Research of current state and federal requirements and guidelines.

t. Participate in the vendor and supplier approval process, including subcontractors.

u. Leads the QA team to enable communication and distribution of duties and responsibilities.

v. Communication with the relevant regulatory bodies when there are management or facility changes that impact the laboratory.

w. Ensuring communication & monitoring standards of performance to ensure that systems are in place to produce the level of quality as defined in this document.

x. Evaluation of the thoroughness and effectiveness of training.

y. Compliance with ISO 17025.

z. Compliance with the DoD/DOE QSM (where applicable).

C. **Department Managers**

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1. The Department Manager(s) report(s) directly to the BUMA. He/she is accountable for all analyses and analysts under their experienced supervision and for compliance with the ISO 17025:2017 and TNI Standard. The scope of responsibility ranges from the new-hire process and existing technology through the ongoing training and development programs for existing analysts and new instrumentation.

2. Specific responsibilities include, but are not limited to:

   a. Exercises day-to-day supervision of laboratory operations for the appropriate field of accreditation and reporting of results. Coordinating, writing, and reviewing preparation of all test methods, i. e., SOPs, with regard to quality, integrity, regulatory and optimum and efficient production techniques, and subsequent analyst training and interpretation of the SOPs for implementation and unusual project samples. He/she insures that the SOPs are properly managed and adhered to at the bench. He/she develops standard costing of SOPs to include supplies, labor, overhead, and capacity (design vs. demonstrated versus first-run yield) utilization.

   b. Reviewing and approving client project proposals, with input from the QA Manager and in accordance with an established procedure for the review of requests and contracts. This procedure addresses the adequate definition of methods to be used for analysis and any limitations, the laboratory's capability and resources, the client's expectations. Differences are resolved before the contract is signed and work begins. A system documenting any significant changes is maintained, as well as pertinent discussions with the client regarding their requirements or the results of the analyses during the performance of the contract. All work subcontracted by the laboratory must be approved by the client. Any deviations from the contract must be disclosed to the client. Once the work has begun, any amendments to the contract must be discussed with the client and so documented.

   c. Monitoring the validity of the analyses performed and data generated in the laboratory. This activity begins with reviewing and supporting all new business contracts, insuring data quality, analyzing internal and external nonconformances to identify root cause issues and implementing the resulting corrective and preventive actions, facilitating the data review process (training, development, and accountability at the bench), and providing technical and troubleshooting expertise on routine and unusual or complex problems.

   d. Providing training and development programs to applicable laboratory staff as new hires and, subsequently, on a scheduled basis. Training includes instruction on calculations, instrumentation management to include troubleshooting and preventive maintenance.

   e. Enhancing efficiency and improving quality through technical advances and improved LIMS utilization. Capital forecasting and instrument life cycle planning for second generation methods and instruments as well as asset inventory management.

   f. Coordinating sample management from "cradle to grave," insuring that no time is lost in locating samples.

   g. Scheduling all QA/QC-related requirements for compliance, e.g., MDLs, etc.

   h. Captains department personnel to communicate quality, technical, personnel, and instrumental issues for a consistent team approach.

   i. Coordinates audit responses with the QA Manager.

   j. Compliance with ISO 17025.

   k. Compliance with the DoD/DOE QSM (where applicable).

D. **Operations Manager**

1. The Operations Manager manages and directs the analytical production sections of the laboratory. He/She reports directly to the BUMA. He/She assists the Technical Manager in determining the most

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efficient instrument utilization.

2. More specifically, he/she:

   a. Evaluates the level of internal/external nonconformances for all departments.

   b. Continuously evaluates production capacity and improves capacity utilization.

   c. Continuously evaluates turnaround time and addresses any problems that may hinder meeting the required and committed turnaround time from the various departments.

   d. Develops and improves the training of all analysts in cooperation with the Technical Manager and QA Manager and in compliance with regulatory requirements.

   e. Works with the technical department management and staff to ensure that scheduled instrument maintenance is completed.

   f. Is responsible for efficient utilization of supplies.

   g. Constantly monitors and modifies the processing of samples through the departments.

   h. Fully supports the quality system and, if called upon in the absence of the QA Manager, serves as his/her substitute in the interim.

E. **Project Manager (PM)**

1. The members of the laboratory Client Services/Project Management Group are responsible for organizing and managing client projects. Clients are assigned a project manager who serves as their primary contact at the laboratory. It is the PM's responsibility to act as the client advocate by communicating client requirements to laboratory personnel and ensuring that clients provide complete information needed by the laboratory to meet those requirements – including all verbal communications.

2. With the overall goal of total client satisfaction, the functions of this position are outlined below:

   a. Scheduling sample submissions, sample container orders and sample pick-up via the laboratory courier service.

   b. Confirming certification status.

   c. Coordinating and communicating turnaround time (TAT) requirements for high priority samples/projects.

   d. Answering common technical questions, facilitating problem resolution and coordinating technical details with the laboratory staff.

   e. Ensuring that client specifications, when known, are met by communicating project and quality assurance requirements to the laboratory.

   f. Coordinating subcontract laboratory services and logistics when needed.

   g. Notifying the supervisors of incoming projects and sample delivery schedules.

   h. Accountable to clients for communicating sample status reports or results prior to receipt of the final report.

   i. Monitor the status of all data package projects in-house to ensure timely and accurate delivery of reports.

   j. Inform clients of data package-related problems and resolve service issues.

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F. **Group Leaders**

1. Group Leaders report to the Operations Manager. Each one is responsible to:

   a. Ensure that staff in their department adheres to applicable SOPs and the QA Manual. They perform scheduled SOP and QA Manual review to determine if staff and processes are in compliance and if new, modified, and optimized measures are feasible and should be added to these documents.

   b. With regard to staff, participates in the selection, training (as documented in Section 3.3), development of performance objectives and standards of performance, appraisal (measurement of objectives), scheduling, counseling, discipline, and motivation of the staff and documents these activities in accordance with systems developed by the QA and Personnel Departments. They evaluate staffing sufficiency and overtime needs. Training consists of familiarization with SOP, QC, Safety, and computer systems.

   c. Encourage the development of staff to become cross-trained in various methods, processes, and/or operate multiple instruments efficiently while performing maintenance and documentation, self-supervise, and function as a department team.

   d. In conjunction with the Technical Manager, Operations Manager, and/or QA Manager, provide guidance to staff in resolving problems encountered during performance of their duties. Each is responsible for ensuring 100% of the data review and documentation, nonconformance issues, the timely and accurate completion of performance testing (PT) samples and MDLs, for the department.

   e. Ensure all logbooks are maintained, current, and properly labeled or archived.

   f. Ensure that preventive maintenance is performed on instrumentation as detailed in the QA Manual or SOPs and is responsible for developing and implementing a system for preventive maintenance, troubleshooting, and repairing or arranging for repair of instruments.

   g. Maintain adequate and valid inventory of reagents, standards, spare parts, and other relevant resources required to perform daily analysis.

   h. Achieve optimum turnaround time on analyses and compliance with holding times.

   i. Conduct efficiency and cost control evaluations on an ongoing basis to determine optimization of labor, supplies, overtime, first-run yield, capacity (designed vs. demonstrated), second- and third-generation production techniques/instruments, and long-term needs for budgetary planning.

   j. Develop, implement, and enhance calibration programs.

   k. Provide written responses to external and internal audit issues.

G. **Laboratory Analysts / Technicians**

1. Laboratory analysts/technicians are responsible for conducting analyses and performing all tasks assigned to them by the group leader or supervisor.

2. The responsibilities of the analysts are listed below:

   a. Perform analyses by adhering to analytical and quality control protocols prescribed by current SOPs, this QA Manual, and project-specific plans honestly, accurately, timely, safely, and in the most cost-effective manner.

   b. As applicable to their assigned tasks, document standard, reagent, and sample preparation, instrument calibration and maintenance, data calculations, sample matrix effects, and any observed nonconformance on worklists, benchsheets, lab notebooks and/or the LIMS.

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c. Report all nonconformance situations, instrument problems, matrix problems and QC failures, which might affect the reliability of the data, to their supervisor or member of QA staff.

d. Perform 100% review of the data generated prior to submitting for secondary level review.

e. Suggest method improvements to their supervisor or member of QA staff. These improvements, if method compliant and approved, will be incorporated. Ideas for the optimum performance of their assigned area are encouraged.

f. Work cohesively as a team in their department to achieve the goals of accurate results, data quality, optimum turnaround time, cost effectiveness, cleanliness, complete documentation, and personal knowledge of environmental analysis.

2.3) Business Continuity and Contingency Plans

A. Various policies and practices are in place to address continuity of business and contingency plans to ensure continued operations or minimal disruption in operations should unplanned events (natural disasters, unexpected management changes, etc.) occur. Deputies are identified for all key management personnel. Deputies would temporarily fill a role if the primary is unavailable for more than 15 consecutive calendar days. The deputies must meet the same qualifications as the primary person should they be required to take on the responsibilities. The QA Manager communicates to the relevant regulatory authorities when there are management or facility changes that impact the laboratory. Changes in the technical director must be communicated within a period of time and in the manner dictated by each regulatory authority.

B. The following table defines who assumes the responsibilities of key personnel in their absence:

Key Personnel	Deputy
Michael DeCavallas Business Unit Manager	Elizabeth Winger President/Scope Leader
Terri Garcia Quality Assurance Manager	Jose Estrada Tiempos Quality Assurance Specialist
Ryan Parish Operations Manager	Michael DeCavallas Business Unit Manager
Terri Garcia Technical Manager	Ryan Perish Operations Manager
Jeanie Kang SVOC Department Manager	Ryan Parish Operations Manager
Sylvie Doan VOC Department Manager	Ryan Parish Operations Manager
Stephen Nowak EHS Manager	Roger Hoover EHS Coordinator
William Mitzel Sales Director	Sean Leffler Business Development Manager
Virendra Patel Customer Service Manager - Operations	Lori Thompson Customer Service Manager
Lori Thompson Customer Service Manager	Virendra Patel Customer Service Manager - Operations
Cynthia Jih Office Manager	Ashlie Soto Administrative Specialist

3) PERSONNEL

3.1) Overview

A. The laboratory’s management believes that its highly qualified and professional staff is the single most important aspect in assuring a high level of data quality and service and achieves the goals of competence, impartiality and consistent operation of the laboratory. The staff consists of professionals

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and support personnel. The laboratory employs sufficient personnel with the necessary education, training, technical knowledge and experience for their assigned responsibilities.

B. All personnel must demonstrate competence in the areas where they have responsibility. Any staff that is undergoing training shall have appropriate supervision until they have demonstrated their ability to independently perform their job functions. Staff shall be qualified for their tasks based on appropriate education, training, experience and/or demonstrated skills as required.

C. All personnel are responsible for complying with all QA/QC requirements that pertain to the laboratory and their area of responsibility. Each staff member must have a combination of experience and education to adequately demonstrate a specific knowledge of their particular area of responsibility. Technical staff must also have a general knowledge of lab operations, test methods, QA/QC procedures and records management.

D. Laboratory management is responsible for formulating goals for staff with respect to education, training, and skills and for ensuring that the laboratory has a policy and procedures for identifying training needs and providing training of personnel. The training shall be relevant to the present and anticipated responsibilities of the laboratory staff.

E. The laboratory only uses personnel that are employed by or under contract to, the laboratory. Contracted personnel, when used, must meet competency standards of the laboratory and work in accordance to the laboratory's quality system.

3.2) Education and Experience Requirements for Technical Personnel

A. The laboratory makes every effort to hire analytical staff that possesses a college degree (AA, BA, BS) in an applied science with some chemistry in the curriculum. Selection of qualified candidates for laboratory employment begins with documentation of the minimum levels of education, training, and experience needed to perform the prescribed tasks.

3.3) Training

A. The laboratory is committed to furthering the professional and technical development of employees at all levels. Orientation to the laboratory's policies and procedures, in-house method training, and employee attendance at outside training courses and conferences all contribute toward employee proficiency.

B. Eurofins trainings are achieved through a combination of in-person presentations, recorded/electronic presentations/courses managed through the Eurofins Learning Centre (ELC) platform, supervised on the job training, and SOP reading. All training is documented with employee acknowledgement of completion.

C. New hire orientation and training begins the first week of employment. These initial sessions include overviews of the business, quality system policies and procedures, ethics and data integrity, resources, health and safety, and introduction of their job specific tasks.

D. Comprehensive Environmental Health and Safety training and review of the *EHS Manual* must be completed prior to performance of work in the laboratories.

E. Formal *Ethics and Data Integrity* and, where applicable, *Manual Integration* trainings are completed within the first 60 days of employment and include reading the associated policies and completing the assigned courses and presentations, in person and/or on-line.

F. Initial Demonstration of Capability (IDOC) must be completed and approved prior to independent performance of analytical method testing. See Section 3.3.1.

G. The following occur annually:

1. *Ethics and Data Integrity Refresher* training - all employees.

2. *Manual Integration Training* - applicable employees.

3. Ongoing Demonstration of Capability (ODOC) - technical staff - see Section 3.3.2

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H. The laboratory maintains records of relevant authorization/competence, education, professional qualifications, training, skills and experience of technical personnel, as well as the date that approval/authorization was given. These records are kept on file at the laboratory.

I. The training of technical staff is kept up to date by:

1. Each employee must have documentation in their training file that they have read, understood and agreed to follow the most recent version of the laboratory QA Manual and SOPs in their area of responsibility. This documentation is updated as SOPs are updated.

2. Documentation from any training courses or workshops on specific equipment, analytical techniques or other relevant topics.

3. Documentation of proficiency.

4. An Ethics Agreement signed by each staff member (renewed each year) and evidence of annual ethics training.

5. A Confidentiality Agreement signed by each staff member signed at the time of employment.

6. Human Resources maintains documentation and attestation forms on employment status and records; benefit programs; timekeeping/payroll; and employee conduct (e.g., ethics violations). This information is maintained in the employee's secured personnel file.

3.3.1) Initial Demonstration of Capability (IDOC)

A. An individual must successfully perform an IDOC prior to independently analyzing and reporting client samples, and any time there is a change in instrument type, method, or any time that a method has not been performed by the analyst in a twelve (12) month period.

B. If the method or regulation does not specify an IDOC, it is the responsibility of the laboratory to document in their SOP what other approaches to the IDOC can be used.

C. The laboratory SOP No. *27925* details the following:

1. The preparation and analysis of 4 laboratory control samples (LCS), prepared at 1 to 4 times the limit of quantitation (LOQ).

2. The evaluation criteria.

3. Actions to be taken for IDOC failure.

3.3.2) Continuing Demonstration of Capability (CDOC)

A. The CDOC procedure is detailed in the laboratory SOP. This process must be completed annually for each employee for the tests that they are performing. If the method has not been performed by the analyst in a twelve (12) month period, an IDOC shall be performed.

B. This on-going demonstration may be one of the following:

1. Acceptable performance of a blind sample (single blind to the analyst) or successful analysis of a blind performance sample on a similar method using the same technology (e.g., GC/MS volatiles by purge and trap for Methods 524.2, 624 or 5030/8260).

2. Another IDOC

3. At least four (4) consecutive laboratory control samples with acceptable levels of precision and accuracy.

4. For methods that do not lend themselves to spiking - documented process of observing the analyst performing the process and/or comparison of results between two analysts with documented

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evaluation of the precision.

3.4) Ethics and Data Integrity Training

A. The laboratory's Ethics and Data Integrity Program is discussed in Section 5.2. Employees are trained as to the legal and environmental repercussions that result from data misrepresentation. Key topics covered in the presentation include:

1. Organizational mission and its relationship to the critical need for honesty and full disclosure in all analytical reporting and business practices.
2. *Ethics and Data Integrity Policy* and the Eurofins Ethics Statement.
3. Consequences for infractions including potential for immediate termination, debarment, or criminal prosecution.
4. How and when to report ethical/data integrity issues.
5. Confidential reporting.
6. Record keeping.
7. Discussion regarding data integrity procedures.
8. Specific examples of breaches of ethical behavior (e.g. peak shaving, altering data or computer clocks, improper macros, etc., accepting/offering kickbacks, illegal accounting practices, unfair competition/collusion).
9. Internal monitoring, investigations, and data recalls.
10. Importance of proper written narration / data qualification by the analyst and project manager with respect to those cases where the data may still be of use to the client but have some method or project deficiencies.

B. Additionally, an anonymous third party run hotline is available to all employees as a means of reporting ethics and/or data integrity issues or concerns.

1. Lighthouse Services hotline at www.lighthouse-services.com/eurofinsus.
2. Via e-mail reports@lighthouse-services.com (include company name).
3. Or call 855-910-0005 (Spanish speaking 800-216-1288).

4) ACCOMODATIONS AND ENVIRONMENTAL CONDITIONS

4.1) Overview

A. The laboratory is a secure laboratory facility with controlled access and designed to accommodate an efficient workflow and to provide a safe and comfortable work environment for employees. All visitors sign in and are escorted by laboratory personnel. Access is controlled by various measures.

B. The laboratory is equipped with structural safety features. Each employee is familiar with the location, use, and capabilities of general and specialized safety features associated with their workplace. The laboratory provides and requires the use of protective equipment including safety glasses, protective clothing, gloves, etc., OSHA and other regulatory agency guidelines regarding required amounts of bench and fume hood space, lighting, ventilation (temperature and humidity controlled), access, and safety equipment are met or exceeded.

C. Traffic flow through sample preparation and analysis areas is minimized to reduce the likelihood of contamination. Adequate floor space and bench top area is provided to allow unencumbered sample preparation and analysis space. Sufficient space is also provided for storage of reagents and media,

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glassware, and portable equipment. Ample space is also provided for refrigerated sample storage before analysis and archival storage of samples after analysis. Laboratory HVAC and deionized water systems are designed to minimize potential trace contaminants.

D. The laboratory is separated into specific areas for sample receiving, sample preparation, volatile organic sample analysis, non-volatile organic sample analysis, inorganic sample analysis, and administrative functions.

4.2) Environment

A. Laboratory accommodation, test areas, energy sources, and lighting are adequate to facilitate proper performance of tests. The facility is equipped with heating, ventilation, and air conditioning (HVAC) systems appropriate to the needs of environmental testing performed at this laboratory.

B. The environment in which these activities are undertaken does not invalidate the results or adversely affect the required accuracy of any measurements.

C. The laboratory provides for the effective monitoring, control and recording of environmental conditions that may affect the results of environmental tests as required by the relevant specifications, methods, and procedures. Such environmental conditions include temperature. When temperature changes to a point where it may adversely affect test results, analytical testing will be discontinued until the temperature is returned to the required level.

D. Environmental conditions of the facility housing the computer network and LIMS are regulated to protect against raw data loss.

E. When the laboratory performs laboratory activities at sites or facilities outside its permanent control, it shall ensure that the requirements related to facilities and environmental conditions of this document are met.

F. Specific requirements for facility and environmental conditions, as well as periodic monitoring of conditions, are given in the NDLSC Document *NDSC-US-EHS-QP46060 Environmental Health & Safety Manual* plus each laboratory's Facility Addendum.

4.3) Work Areas

A. There is effective separation between neighboring areas when the activities therein are incompatible with each other. For example, volatile organic chemical handling areas, including sample preparation and waste disposal, and volatile organic chemical analysis area.

B. Access to and use of all areas affecting the quality of analytical testing is defined and controlled by secure access to the laboratory building as described in the Building Security section of this manual.

C. Adequate measures are taken to ensure good housekeeping in the laboratory and to ensure that any contamination does not adversely affect data quality. These measures include regular cleaning to control dirt and dust within the laboratory. Work areas are available to ensure an unencumbered work area. Work areas include:

1. Access and entryways to the laboratory
2. Sample receipt areas
3. Sample storage areas
4. Chemical and waste storage areas
5. Data handling and storage areas
6. Sample processing areas
7. Sample analysis areas

4.4) Responding to Emergencies

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A. Employees are trained in the procedures to respond to all emergencies that might occur in the workplace. Employees have been trained in the location and proper operation of all emergency equipment, evacuation routes and designated assembly areas for all areas where they work.

B. Refer to the *NDSC-US-EHS-QP46060 EH&S Manual* and the laboratory's local EH&S addendum for complete details. The document provides direction for situations where normal operations of the laboratory are not possible (e.g., electrical failures, heating/air conditioning failures, fire/building evacuation, computer failures, hazardous material spills, injury to employees, pandemic flu, disruption of phone service, etc.).

C. In the event that the building or information technology (IT) systems would be severely challenged, a designated disaster recovery team, which includes Facility Management, Safety, Executive Management, IT, QA and other applicable personnel, depending on the scope of the disaster, would assemble at a designated area to assess the situation and formulate a plan.

4.5) Building Security

A. The laboratory is considered a secure facility. All outside doors, except the main lobby entrance and sample receiving area, are locked during normal business hours to prevent unauthorized entry. Employees are issued a building access key card to access the facility.

B. All visitors to the facility must sign in and out in a visitor's logbook that is located in the lobby. A visitor is defined as any person who visits the laboratory who is not an employee of the laboratory. Both visitors and vendors must review and sign specific EH&S forms; and are escorted by laboratory personnel at all times, or the location of the visitor is noted in the visitor's logbook.

5) QUALITY SYSTEM

5.1) Quality Policy Statement

A. The Quality Policy statement gives employees clear requirements for the production of analytical data. As an organization, all personnel are committed to high quality professional practice, testing and data, and service to our clients.

1. Calscience is committed to providing its customers with environmental data that is reliable, defensible, and of known and documented quality. We continually strive to meet our customers' requirements and exceed their expectations.

2. This Quality Assurance Manual and related documentation describes the policies and procedures used to meet that commitment. The Manual is designed to meet the standards used in the NELAP, the State of California SWRCB ELAP, and other government and customer requirements. Laboratory management is committed to the quality improvement processes described in these standards and to providing the resources to ensure laboratory personnel can honor that commitment.

3. Laboratory personnel whose responsibilities include any aspect of testing activities are required to familiarize themselves with all of the quality documentation associated with their job function and to implement the policies and procedures described in that documentation into all of their work in the laboratory. Laboratory personnel acknowledge this responsibility on annual review of the Quality Assurance Manual by acknowledging they have read, understood and agree to act accordingly.

4. Management reviews this Quality Policy and the objectives listed below during the annual Management Review. The signatures of management personnel on this Quality Assurance Manual indicate their concurrence and support of this Policy.

5.2) Ethics and Data Integrity

A. The Eurofins Environment Testing group of companies is committed to ensuring the integrity of its data and meeting the quality needs of its clients. The laboratory operates our Ethics and Data Integrity program under the guidance of Eurofins Key Guidance Documents (KGD) and the Eurofins *NBLSC Ethics and Data Integrity Policy.*

B. The elements of the Ethics and Data Integrity Program include:

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1. *Ethics and Data Integrity Policy* and Eurofins Ethics and Quality Policy Statements.
2. A Training Program.
3. Self-governance through disciplinary action for violations.
4. A confidential mechanism for anonymously reporting alleged misconduct (see Section 4.2 of this manual) and a process for conducting internal investigations of all alleged misconduct.
5. Procedures and guidance for recalling data if necessary.
6. Effective external and internal monitoring system that includes procedures for internal audits (SOP No. *18249*).
7. Produce results, which are accurate and include QA/QC information that is method compliant and/or meets client pre-defined Data Quality Objectives (DQOs).
8. Present services in a confidential, honest and forthright manner.
9. Provide employees with guidelines and an understanding of the Ethical and Quality Standards of our Industry.
10. Provide procedures and guidance to ensure the impartiality and confidentiality of all data and customer information.
11. Operate our facilities in a manner that protects the environment and the health and safety of employees and the public.
12. Obey all pertinent federal, state and local laws and regulations and encourage other members of our industry to do the same.
13. Educate clients as to the extent and kinds of services available.
14. Assert competency only for work for which adequate personnel and equipment are available and for which adequate preparation has been made.
15. Promote the status of environmental laboratories, their employees, and the value of services rendered by them.

5.3) Quality System Documentation

A. The BU's quality system is defined and communicated through a variety of documents. There is a hierarchy of documents within Eurofins and for the local BU.

B. The top EET level documents are the NBLSC policies and procedures. These are written, approved, and released by the NBLSC QA team with input from NBLSC IT and EHS staff, where applicable. These documents provide procedures that can be used as guidance or a template for establishing local procedures or may be used directly as the local BU SOP by assigning the local staff to train on the NBLSC document. This level of document is written to address Environment US regulatory processes and requirements (i.e. ISO17025, TNI, DOE/DoD). Any individual state agency requirements are addressed locally.

C. The local BU defines its quality system through its own policies and procedures which must at a minimum meet the guidance set forth in the NBLSC SOPs. The BU documents are established using the following structure/hierarchy:

1. Quality Manual
2. Laboratory Operational SOPs and policies.
    a. Those that apply to the BU as a whole.

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b. Those that apply to specific areas of the BU.

3. Laboratory Analytical SOPs - define method specific processes to be followed in the laboratory tests.

4. Forms and Instruction Sheets - e.g., checklists, preformatted bench sheets, job aids

D. All of the documents described here are controlled with defined versioning, review, and approval processes. The BU management and QA staff have the responsibility and authority to operate in compliance with regulatory requirements of the jurisdiction in which the work is performed.

5.4) Quality Control (QC) Objectives for the Measurement of Data

A. Quality Assurance (QA) is responsible for developing planned activities whose purpose is to provide assurance to all levels of management that a quality program is in place within the laboratory, and that it is functioning in an effective manner that is consistent with the requirements of NELAP, ISO 17025, DoD, and any other regulatory agencies (i.e., states) in which the laboratory maintains accreditation.

B. Quality Control (QC) is generally understood to be limited to the analyses of samples and to be synonymous with the term “analytical quality control”. QC refers to the routine application of statistically based procedures to evaluate and control the accuracy of results from analytical measurements. The QC program includes procedures for estimating and controlling precision and bias and for determining reporting limits.

C. Request for Proposals (RFPs) and Quality Assurance Project Plans (QAPP) provide a mechanism for the client and the laboratory to discuss the data quality objectives in order to ensure that analytical services closely correspond to client needs. In order to ensure the ability of the laboratory to meet the Data Quality Objectives (DQOs) specified in the QAPP, clients are advised to allow time for the laboratory to review the QAPP before being finalized. The client is responsible for developing the QAPP; however, the laboratory will provide support to the client for developing the sections of the QAPP that concern laboratory activities.

5.5) Criteria for Quality Indicators

A. The laboratory maintains tables, housed in LIMS, that summarize the precision and accuracy acceptability limits for performed analyses. This summary includes an effective date, is updated each time new limits are generated, and are managed by the laboratory’s QA department. Unless otherwise noted, limits within these tables are laboratory generated. Some acceptability limits are derived from US EPA methods or other referenced methods. Where US EPA method limits are not prescriptive, the laboratory has developed limits from evaluation of data from similar matrices. Criteria for development of control limits is contained in *Internal Quality Control Checks* (SOP No. *33613*).

5.6) Statistical Quality Control

A. Statistically-derived precision and accuracy limits are required by selected methods (such as SW-846) and programs. The laboratory routinely utilizes statistically-derived limits to evaluate method performance and determine when corrective action is appropriate. The analysts use the current limits entered into LIMS. If a method defines the QC limits, the method limits are used.

B. If a method requires the generation of historical limits, the lab develops such limits from recent data in the QC database of the LIMS following the guidelines described in Section 22. All calculations and limits are documented and dated when approved and effective. On occasion, a client requests contract-specified limits for a specific project.

C. Current QC limits are entered and maintained in the LIMS analyte database. As sample results and the related QC are entered into LIMS, the sample QC values are compared with the limits in LIMS to determine if they are within the acceptable range. The analyst then evaluates if the sample needs to be reanalyzed or re-extracted/reanalyzed or if a comment should be added to the report explaining the reason for the QC outlier.

5.6.1) Quality Control Charts

A. QC Charting is available in LIMS for evaluation at any point by technical and/or QA staff. A LIMS program, QC Trending, applies a modified version of the "Western Electric Company Rules for Control Charts (WECO)" in an automatic scan of entered analytical data for Method Blanks, Laboratory Control

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Sample and Matrix Spike Recoveries, and Continuing Calibration Verifications. The system allows daily monitoring of trending to allow quick intervention by the chemist or group leader prior to an analytical process becoming out of control. Notification emails are sent each morning.

5.7) Quality System Metrics

A. In addition to the QC parameters discussed above, the entire Quality System is evaluated on a monthly basis through the use of specific metrics (refer to Section 16). These metrics are used to assess risk and to drive continuous improvement in the laboratory's Quality System. The metrics are reviewed by the BUMA and the QA Manager and shared with other management staff.

5.8) Management of Change

A. The Management of Change process is designed to manage significant events and changes that occur within the laboratory. Through these procedures, the potential risks inherent with a new event or change are identified and evaluated. The risks are minimized or eliminated through pre-planning and the development of preventive measures.

B. The types of changes covered under this system include (but is not limited to): Laboratory Relocation, Facility Changes, Major Accreditation Changes, Implementation of Method Updates or Program Changes (e.g., MUR, client QAPPs, Regulatory Updates), Addition or Deletion to Laboratory Capabilities or Instrumentation, Key Personnel Changes, Laboratory Information Management System (LIMS) changes.

6) DOCUMENT CONTROL

6.1) Overview

A. The QA Department is responsible for the control of documents used in the laboratory to ensure that the approved current document revision is in circulation and obsolete documents are archived (original signed copy) and any obsolete hardcopies (other than the signed original) are destroyed. The laboratory's document control procedure is defined in SOP No. *18405*.

B. The following documents, at a minimum, must be controlled:

1. Laboratory Quality Assurance (QA) Manual
2. Laboratory Policies
3. Laboratory Standard Operating Procedures (SOP)
4. Work Instructions, Forms, Tables, and Matrices
5. NBLSC Documents

C. The NBLSC documents are considered "controlled" when they are accessed as the electronic file on the documents site. Printed copies are considered uncontrolled unless the laboratory physically distributes them as controlled documents.

D. The laboratory QA Department also maintains a listing of various references and document sources integral to the operation of the laboratory. This includes reference methods and regulations. Instrument manuals (hard or electronic copies) are also maintained by the laboratory.

E. The laboratory maintains control of records for raw analytical data and supporting records such as audit reports and responses, logbooks, standard logs, training files, MDL studies, Proficiency Testing (PT) studies, certifications and related correspondence, and corrective action reports. Raw analytical data consists of bound logbooks, instrument printouts, any other notes, magnetic media, electronic data, and final reports.

6.2) Document Approval and Issuance

A. The pertinent elements of the document control system includes a unique document number, title, pagination, the total number of pages of the item or an 'end of document' indicator, the effective date,

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expiration date, and revision number. The QA personnel are responsible for the maintenance of this system.

B. Controlled documents are authorized by the QA Department. In order to develop a new document, a responsible manager submits a draft to the QA Department for suggestions and approval before use. Upon approval, QA personnel add the identifying version information to the document and retains that document as the official document on file. That document is then provided to all applicable operational units. Controlled documents are identified as such and records of their distribution are kept by the QA Department. Document control may be achieved by either electronic or hardcopy distribution.

C. The QA Department maintains a list of the official versions of controlled documents.

D. Quality System Policies and Procedures will be reviewed at a minimum of every two years and revised as appropriate. Changes to documents occur when a procedural change warrants.

6.3) Procedures for Document Control

A. For creation of or changes to SOPs and the QA manual, refer to laboratory SOP No. *18076*, *Document Preparation, Review, and Revision*.

B. Uncontrolled copies must not be used within the laboratory. Controlled documents are marked as such, and posted to D4. Controlled distribution is achieved electronically. Controlled hardcopies must be obtained through the QA Department. Previous revisions and back-up data are stored on D4 by the QA department. Details of the numbering system, required format, and controlled distribution of documents are described in laboratory SOP No. *18405*. Editable copies are stored on a restricted access drive or accessed by designated personnel in D4.

C. Forms, worksheets, work instructions, and information are organized by department by QA. Controlled electronic versions are distributed through the intranet or on D4 and hard copies can be printed out as needed. Editable copies are accessed by designated personnel in D4. All forms used in the laboratory are tracked in the controlled documents database which can be accessed by the QA department and the IT group. The procedure for the care of these documents is in laboratory SOP No. *18405*.

6.4) Obsolete Documents

A. All invalid or obsolete documents are removed, or otherwise prevented from unintended use. The laboratory has specific procedures as described above to accomplish this. In general, obsolete documents are collected from employees according to distribution lists and are marked obsolete on the cover or destroyed. At least one copy of the obsolete document is archived according to SOP No. *18405*.

B. All documents reside with the D4 document management system. Only the current version of a document is accessible by the general user. Once a revision is made to a document, the prior version is automatically marked as "Invalid" and redirects the user to the current version.

C. If a document is no longer needed at all and is made "Obsolete" it is "deleted" from the current documents but archived within the system and automatically marked as such.

D. All "obsolete" and prior versions of documents can be accessed by designated personnel under the advanced search function within the program.

7) SERVICE TO THE CLIENT

7.1) Overview

A. The laboratory has established procedures for the review of work requests and contracts, oral or written. The procedures include evaluation of the laboratory's capability and resources to meet the contract's requirements within the requested time period. All requirements, including the methods to be used, must be adequately defined, documented and understood. For many environmental sampling and analysis programs, testing design is site or program specific and does not necessarily fit into a standard laboratory service or product. It is the laboratory's intent to provide both standard and customized environmental laboratory services to our clients.

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B. A thorough review of technical and QC requirements contained in contracts is performed to ensure project success. The appropriateness of requested methods, and the laboratory's capability to perform them must be established. Projects, proposals, and contracts are reviewed for adequately defined requirements and the laboratory's capability to meet those requirements. Alternate test methods that are capable of meeting the clients' requirements may be proposed by the laboratory. A review of the laboratory's capability to analyze non-routine analytes is also part of this review process.

C. All projects, proposals and contracts are reviewed for the client's requirements in terms of analyte lists, test methodology requested, sensitivity (detection and reporting levels), accuracy, and precision requirements (% Recovery and RPD). The reviewer ensures that the laboratory's test methods are suitable to achieve these requirements and that the laboratory holds the appropriate certifications and approvals to perform the work. The laboratory and any potential subcontract laboratories must be certified, as required, for all proposed tests.

D. Electronic or hard copy deliverable requirements are evaluated against the laboratory's capacity for production of the documentation.

E. If the laboratory cannot provide all services but intends to subcontract such services, whether to another Eurofins business unit operating on the same LIMS or to an outside firm, this will be documented and discussed with the client prior to contract approval. (Refer to Section 8 for Subcontracting Procedures.)

F. The laboratory informs the client of the results of the review if it indicates any potential conflict, deficiency, lack of accreditation, or inability of the laboratory to complete the work satisfactorily. Any discrepancy between the client's requirements and the laboratory's capability to meet those requirements is resolved in writing before acceptance of the contract. It is necessary that the contract be acceptable to both the laboratory and the client. Amendments initiated by the client and/or Eurofins Calscience are documented in writing.

G. All contracts, QAPPs, Sampling and Analysis Plans (SAPs), contract amendments, and documented communications become part of the project record.

H. The same review process used for the initial review of the project documents is repeated when there are amendments to the original document(s) by the client, and the participating personnel are informed of the changes.

7.2) Project Review

A. Appropriate personnel will review the work request at each stage of evaluation.

B. For routine projects and other simple tasks, a review by the Project Manager (PM) is considered adequate. The PM confirms that the laboratory has any required certifications, that it can meet the clients' data quality and reporting requirements and that the lab has the capacity to meet the clients turn around needs. It is recommended that, where there is a sales person assigned to the account, an attempt should be made to contact that sales person to inform them of the incoming samples.

C. For new, complex or large projects, the proposed contract is given to the Client Relationship Manager or Proposal Team, who will decide which lab will receive the work based on the scope of work and other requirements, including certification, testing methodology, and available capacity to perform the work. The contract review process is outlined below and supplemented by the *Contract Questionnaire Form 45183*.

D. This review encompasses all facets of the operation. The scope of work is distributed to the appropriate personnel, as needed based on scope of contract, to evaluate all of the requirements shown above (not necessarily in the order below):

1. Contract Administrator

2. Laboratory Project Manager (Pm)

3. BUMA

4. Laboratory Directors and/or Department Managers

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5. Account Executive

6. QA Manager

7. Laboratory Environmental Health and Safety Manager

E. The QA Manager performs an overall review to identify any quality systems concerns. Department Managers review the sections of the documents applicable to their assigned areas of the laboratory to identify any project specific requirements to be communicated to their staff and or any concerns with meeting the project requirements. Project specific requirements may be added as notes in the LIMS as part of the project set up. This is managed by the PM with input from the reviews.

F. The BUMA/Laboratory Director reviews the formal laboratory quote and makes the final acceptance for their facility. The Sales Director, Contract Administrator, Account Executive or Proposal Coordinator then submits the final proposal to the client.

G. In the event that one of the above personnel is not available to review the contract, his or her back-up will fulfill the review requirements.

7.2.1) Project Specific Quality Planning

A. Communication of contract specific technical and QC criteria is an essential activity in ensuring the success of site specific testing programs. To achieve this goal, a PM is assigned to each client. It is the PM's responsibility to ensure that project-specific technical and QC requirements are effectively evaluated and communicated to the laboratory personnel before and during the project. QA department involvement may be needed to assist in the evaluation of custom QC requirements.

B. PMs are the primary client contact and they ensure resources are available to meet project requirements, they coordinate opportunities and work with laboratory management and supervisory staff to ensure available resources are sufficient to perform work for the client's project.

C. Prior to work on a new project, the dissemination of project information and/or project opening meetings may occur to discuss schedules and unique aspects of the project. Items to be discussed may include the project technical profile, turnaround times, holding times, methods, analyte lists, reporting limits, deliverables, sample hazards, or other special requirements. The PM introduces new project information to maximize production and client satisfaction, while maintaining quality. Project notes may be associated with each sample batch as requirements notifications upon sample receipt and during analytical processing.

D. Any change that may occur within an active project is agreed upon between the client/regulatory agency and the PM/laboratory. These changes (e.g., use of a non-standard method or modification of a method) and approvals must be documented prior to implementation. Documentation pertains to any document (e.g., letter, e-mail, variance, contract addendum), which has been signed by both parties.

E. Such changes are also communicated to the laboratory through method comments in TALS. The laboratory staff is then introduced to the modified requirements via the PM or the QA Specialist. After the modification is implemented into the laboratory process, documentation of the modification is made in the case narrative of the data report(s).

7.3) Balancing Laboratory Capacity and Workload

A. Evaluating laboratory capacity to perform specific projects is the responsibility of the BUMA, Laboratory Directors and Department Managers, and the Client Services manager. Many analysts are cross-trained to perform a variety of tests, and there is redundant equipment available in case of malfunctions. This minimizes the need to evaluate small and medium size projects against capacity available to complete them. Large and complex projects are reviewed against capacity estimates before bids are submitted to ensure that the client's analysis schedule can be met. Regularly scheduled meetings are held between laboratory management, PMs, Client Services and QA personnel to review progress with current projects, as well as special requirements of new work scheduled for the laboratory. Laboratory capacity and backlog is tracked on a continuous basis using information from the Laboratory Information Management System (LIMS) including turnaround time, and work in-house.

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7.4) Project Contracts / Records

A. The Administration Department maintains copies of all locally signed contracts. National Sales Teams is responsible for those large corporately agreements.

B. Appropriate records are maintained for every contract or work request. All stages of the contract review process are documented and include records of any significant changes.

C. The contract will be distributed to and maintained by the appropriate sales/marketing personnel and the Account Executive. Records are maintained of pertinent discussions with a client relating to the client's requirements or the results of the work during the period of execution of the contract.

7.5) Special Services

A. The laboratory cooperates with clients and their representatives to monitor the laboratory's performance in relation to work performed for the client. It is the laboratory's goal to meet all client requirements in addition to statutory and regulatory requirements. The laboratory has procedures to ensure confidentiality to clients.

B. The laboratory's standard procedures for reporting data are described in Section 23. Special services are also available and provided upon request. These services include:

1. Reasonable access for our clients or their representatives to the relevant areas of the laboratory for the witnessing of tests performed for the client.

2. Assisting client-specified third party data validators as specified in the client's contract.

3. Supplemental information pertaining to the analysis of their samples. Note: An additional charge may apply for additional data/information that was not requested prior to the time of sample analysis or previously agreed upon.

7.6) Client Communication

A. PMs are the primary communication link with the clients. They shall inform their clients of any delays in project completion as well as any nonconformances in either sample receipt or sample analysis. Project management will maintain ongoing client communication throughout the entire client project.

B. QA is available to discuss any technical questions or concerns the client may have.

7.7) Reporting

A. The laboratory works with our clients to produce any special communication reports required by the contract.

7.8) Client Feedback and Surveys

A. The laboratory assesses both positive and negative client feedback and tracks the business's Net Promoter Score (NPS). The results are used to improve overall laboratory quality and client service. The NPS measures the customer experience from a specific business unit on a scale of 0 - 10. The results of that range are put into three categories: detractors (0-6), passives (7, 8) and promoters (9, 10). To calculate the Net Promoter Score, the # of detractors is subtracted from the # of promoters to get the score which will be on a scale of -100 to 100.

B. Surveys are sent, using an electronic interface, every 2 weeks to only those that received a report in the 2 weeks prior. This allows us to gather more real-time data. Responses by the laboratory management and/or PM to detractors is required. It is also required to be tracked within the system.

C. When a compliant is received, we determine, to the best of our ability, the extent of the issue and what data is in question. The person receiving the complaint documents this information and promptly forwards it to the appropriate management personnel where the work in question was performed. If a data reporting error is discovered, the final report and/or data must be regenerated with the correct value(s).

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D. The QA Manager is responsible for entering client concerns into D4. While an individual issue may not warrant a formal investigation, QA monitors these concerns for potential trends and will initiate an Investigation when a trend is evident. In other cases, based on the severity of the issue or upon client request, a formal Investigation is initiated for a single concern. Formal Investigation is used to document the situation and determine root cause(s) and corrective action(s).

7.9) Client Confidentiality

A. The laboratory ensures the highest standards of quality and integrity of the data and services provided to our clients.

B. The laboratory is responsible for maintaining in confidence all client information obtained or created. In situations involving the transmission of environmental test results by telephone, facsimile or other electronic means, client confidentiality must be maintained.

C. The laboratory will not intentionally divulge to any person (other than the client or any other person designated by the client in writing) any information regarding the services provided by the laboratory or any information disclosed to the laboratory by the client. Furthermore, information known to be potentially endangering to national security or an entity's proprietary rights will not be released.

D. Information about the client obtained from sources other than the client (e.g., complainant, regulator) shall be confidential between client and the laboratory. The source of this information shall be confidential to the laboratory and shall not be shared with the client, unless agreed by the source.

E. **Note:** This shall not apply to the extent that the information is required to be disclosed by the laboratory under the compulsion of legal process. The laboratory will, to the extent feasible, provide reasonable notice to the client before disclosing the information.

F. **Note:** Authorized representatives of an accrediting authority are permitted to make copies of any analyses or records relevant to the accreditation process, and copies may be removed from the laboratory for purposes of assessment.

8) SUBCONTRACTING

8.1) Overview

A. The laboratory may subcontract tests to other laboratories outside of Eurofins if the requested testing is not routinely performed in our laboratory. To a lesser extent, samples may need to be subcontracted to an overflow laboratory to ensure hold times and/or turn-around-times (TAT) are met.

B. Testing is only subcontracted with the client’s knowledge and approval. Calscience must notify the client in writing when any of their requested analyses will be subcontracted to another lab. Client approval must be obtained in writing before samples are shipped.

C. Subcontract laboratories are selected based on their qualifications and accreditations. Only an appropriately accredited laboratory will be used. The client may also have a list of laboratories to be used for subcontracting. In these cases, the evaluation of the subcontract laboratory is made by the client.

D. Data obtained from subcontract laboratories is clearly marked as such when reported by the laboratory. The data from non-Eurofins laboratories or from Eurofins laboratories not using the “TALS LIMS” are submitted to the client in the format obtained from the subcontractor.

E. For the purpose of this quality manual, the phrase subcontract laboratory refers to a laboratory external to the Eurofins Environment Testing laboratories. The phrase “work share” refers to internal transfers of samples between the Eurofins Environment Testing laboratories.

F. When contracting with our clients, the laboratory makes commitments regarding the services to be performed and the data quality for the results to be generated. When the need arises to outsource testing for our clients because project scope, changes in laboratory capabilities, capacity, or unforeseen circumstances, we must be assured that the subcontractors or work sharing laboratories understand the

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requirements and will meet the same commitments we have made to the client. Refer to the NBLSC Subcontracting SOP No. *NDSC-US-SUB-SOP44936*.

G. When outsourcing analytical services, the laboratory will assure, to the extent necessary, that the subcontract or work sharing laboratory maintains a program consistent with the requirements of this document, the requirements specified in TNI/ISO 17025 and/or the client's Quality Assurance Project Plan (QAPP). All QC guidelines specific to the client's analytical program are transmitted to the subcontractor and agreed upon before sending the samples to the subcontract facility. Additionally, work requiring accreditation will be placed with an appropriately accredited laboratory. The laboratory performing the subcontracted work will be identified in the final report, as will non-TNI accredited work where required.

H. PMs or other responsible Client Service members, for the Export Lab (i.e., Eurofins Calscience, that transfers samples to another laboratory) are responsible for obtaining client approval prior to subcontracting any samples. The laboratory will advise the client of a subcontract arrangement in writing and when possible, approval from the client shall be obtained and retained in the project folder. Standard Eurofins Calscience Terms & Conditions include the flexibility to subcontract samples within the Eurofins Environment Testing Laboratories. Therefore, additional advance notification to clients for intra-laboratory subcontracting is not necessary unless specifically required by a client contract.

I. **Note:** In addition to the client, some regulating agencies (e.g., USDA) or contracts (e.g., DoD and DOE projects) require notification prior to placing such work.

8.2) Qualifying and Monitoring Subcontractors

A. Whenever a PM or Account Executive (AE) becomes aware of a client requirement or laboratory need where samples must be outsourced to another laboratory, the other laboratory(s) shall be selected based on the following:

1. Subcontractors specified by the client:

    a. In these circumstances, the client assumes responsibility for the quality of the data generated from the use of a subcontractor.

2. Subcontractors reviewed by Eurofins Calscience:

    1. Firms which have been reviewed by the company and are known to meet standards for accreditations (e.g., State, TNI and DoD/DOE).

    2. Technical specifications.

    3. Legal and financial information.

B. A listing of subcontractors is available in D4 *PM-LI70655*.

C. All Eurofins Environment Testing America laboratories are pre-qualified for work sharing provided they hold the appropriate accreditations and can adhere to the project/program requirements. Client approval is not necessary unless specifically required by the contract. In these cases, the client must provide acknowledgement that the samples can be sent to that facility (an e-mail is sufficient documentation or if acknowledgement is verbal, the date, time, and name of person providing acknowledgement must be documented). The originating laboratory is responsible for communicating all technical, quality, and deliverable requirements as well as other contract needs.

1. When the potential subcontract laboratory has not been previously approved, Account Executives or PMs may nominate a laboratory as a subcontractor based on need. The decision to nominate a laboratory must be approved by the Sales Director or BUMA and requests that the QA Manager or PM begin the process of approving the subcontract laboratory. Refer to the D4 NBLSC document Subcontracting SOP No. *NDSC-US-SUB-SOP44936* for process details.

2. Once the appropriate accreditation and legal information is received by the laboratory, it is evaluated for acceptability and forwarded to the NBLSC Quality Information Manager (QIM) for review. After the NBLSC QIM reviews the documents for completeness, the subcontract agreement is forwarded to the

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BU's Scope President for formal signature and contracting with the laboratory. The approved company will be added to the approved subcontractor list on the intranet site, and the finance group is concurrently notified. A copy of the signed subcontract agreement is forwarded to the subcontractor.

3. The client will assume responsibility for the quality of the data generated from the use of a subcontractor they have requested the lab to use. The qualified subcontractors on the intranet site are known to meet minimal standards. Eurofins Calscience does not certify laboratories. Eurofins list of subcontractors can only be recommended to the extent that we would use them.

8.3) Oversight and Reporting

A. The status and performance of qualified subcontractors will be monitored by local BUs and includes an annual evaluation survey conducted by the NBLSC-QIM. Any problems identified will be brought to the attention of local BU management, the legal department and the finance department.

1. Complaints shall be investigated. Documentation of the complaint, investigation, and corrective action will be maintained in the subcontractor's file on the intranet site. Complaints are posted using the corrective action mechanism employed at each laboratory.

2. Information shall be updated on the intranet when new information is received from the subcontracted laboratories.

3. Subcontractors in good standing will be retained on the intranet listing. Client Service personnel will notify all Eurofins Environmental Testing laboratories, NBLSC-QA, the legal department and finance department if any laboratory requires removal from the intranet site. This notification will be posted on the intranet site and e-mailed to all Client Service Personnel, Laboratory Directors, QA Managers, and Sales Personnel.

B. Prior to initially sending samples to the subcontracted laboratory, the PM confirms their certification status to determine if it's current and scope inclusive. The information is documented within the project records.

C. The laboratory's certifications can be viewed on the company's website at https://www.eurofinsus.com/environment-testing/resources/certifications/.

1. All subcontracted samples must be accompanied by a Eurofins Calscience Chain of Custody (COC). A copy of the original COC sent by the client must be available in LIMS for all samples work shared within Eurofins Calscience. Client COCs are only forwarded to external subcontractors when samples are shipped directly from the project site to the subcontractor lab. Under routine circumstances, to maintain client confidentiality, original client COCs are not provided to external subcontractors.

2. Through communication with the subcontracted laboratory, the PM monitors the status of the subcontracted analyses, facilitates successful execution of the work, and ensures the timeliness and completeness of the analytical report.

3. All accredited and non-accredited work must be identified in the subcontractor's report.

4. Reports submitted from subcontractor laboratories are not altered and are included in their original form in the final project report. This clearly identifies the data as being produced by a subcontractor facility. If subcontract laboratory data is incorporated into the laboratory's EDD (i.e., imported), the report must explicitly indicate which lab produced the data for which methods and samples.

5. **Note:** The results submitted by a Eurofins Calscience work sharing laboratory may be transferred electronically and the results reported by the Eurofins Calscience work sharing lab are identified on the final report. The report must explicitly indicate which lab produced the data for which methods and samples. The final report must include a copy of the completed COC for all work sharing reports.

8.4) Contingency Planning

A. The full qualification of a subcontractor may be waived to meet emergency needs. This decision and justification must be documented in the project files, and the 'Purchase Order Terms And Conditions For

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Subcontracted Laboratory Services' must be sent with the samples and COC.

B. In the event this provision is utilized, the laboratory (e.g., PM) will be required to verify and document the applicable accreditations of the subcontractor. All other quality and accreditation requirements will still be applicable, but the subcontractor need not have signed a subcontract agreement with Eurofins Calscience at this time.

C. The use of any emergency subcontractor will require the PM to complete a New Supplier Information Request Form in order to process payment to the subcontractor and add them to LIMS. This form requires the user to define the subcontractor's category/s of testing and the reason for testing.

9) PURCHASING SERVICES AND SUPPLIES

9.1) Overview

A. Supplier Evaluation

1. Procedures are in place to evaluate vendors who supply us with: new equipment, instrumentation, computerized systems and computer software; commercially purchased glassware, including sample bottleware, reagents, chemicals, solvents, gases, media, and standards; and contracted and subcontracted services.

2. The laboratory strives to ensure that our suppliers continually improve their quality systems and we reserve the right to purchase from suppliers of our choice in order to best fulfill the needs of our clients and our business. When directed by a client to purchase from a specific supplier, we will do so. In this instance it is the client's responsibility to "qualify" the specified supplier. We attempt to purchase from businesses that we have an established purchase history or have previously acquired information regarding the supplier's quality programs.

3. An approved vendor list is maintained by the laboratory for critical consumables (reagents and standards), and PT services.

4. Evaluations are not required for computer operating systems, utilities, toolsets, or systems software. They also are not required for any off-the-shelf configurable software package that has an extensive market performance history (e.g., Microsoft Word, Excel, Access).

B. Procurement

1. It is the responsibility of management personnel within each department to ensure that the appropriate supplies are available and/or ordered with sufficient lead-time to perform analytical testing or to provide support to the testing areas. The individual technical departments have trained personnel who enter the supply order into the company's purchasing system. The selection of these products is based on technical input at the analyst level and authorized by technical departmental management. The Purchasing Department maintains an ordering system in which purchase requisitions are managed. Common laboratory items (e.g., beakers, flasks, reagents) are ordered directly through the purchasing system. Purchase orders over a specified dollar amount require approval from the appropriate member(s) of the Executive Management Group before an order can be placed.

2. Upon receipt of an order, the recipient checks the order to ensure that all items were received as specified. Products that have specific storage requirements are taken to the technical area upon receipt. It is the technical area's responsibility to ensure that the product is stored in the appropriate manner. Any checks on the quality of the materials received for use in a specific test are the responsibility of the laboratory using them. This is based upon the experience of the laboratory with the usability of the product. Generally, each test has controls in place to ensure that test results are not adversely affected by the materials.

9.2) Glassware

A. Glassware used for volumetric measurements must be Class A or verified for accuracy according to laboratory procedure. Pyrex (or equivalent) glass should be used where possible.

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9.3) Purchasing

A. Chemical reagents, solvents, glassware, and general supplies are ordered as needed to maintain sufficient quantities on hand. Materials used in the analytical process must be of a known quality. The wide variety of materials and reagents available makes it advisable to specify recommendations for the name, brand, and grade of materials to be used in any determination. This information is contained in the analytical method SOP.

9.3.1) Receiving

A. It is the responsibility of the purchasing manager to receive the shipment. It is the responsibility of the analyst who ordered the materials to document the date materials were received. Once the ordered reagents or materials are received, the analyst compares the information on the label or packaging to the original order to ensure that the purchase meets the quality level specified. This is documented through the addition of the received date and initials to the information present on the daily order log.

B. The purchasing manager verifies the lot numbers as received solvents and acids against the pre-approval lists. If a received material is listed as unapproved, or is not listed, it is sequestered and returned to the vendor. Alternatively, the laboratory may test the material for the intended use.

C. Materials may not be released for use in the laboratory until they have been inspected, verified as suitable for use, and the inspection/verification has been documented.

D. Safety Data Sheets (SDSs) are available online through a link on the Eurofins EET-Net Sharepoint site at: https://testamerica365.sharepoint.com/sites/EETAIntranet/SitePages/Environment,-Health-and-Safety.aspx

E. Anyone may review these for relevant information on the safe handling and emergency precautions of on-site chemicals.

9.3.2) Specifications

A. Methods used in the laboratory specify the grade of reagent that must be used in the procedure. If the quality of the reagent is not specified, analytical reagent grade will be used. It is the responsibility of the analyst to check the procedure carefully for the suitability of grade of reagent.

B. Chemicals are assigned expiration from the manufacturer's expiration date and must not be used past any expiration period noted in a method SOP. If expiration dates are not provided, the laboratory may contact the manufacturer to determine an expiration date. The laboratory assumes a five year expiration date on inorganic dry chemicals and solvents unless noted otherwise by the manufacturer or by the reference source method.

C. Chemicals/solvents should not be used past the manufacturer's or SOP expiration date unless verified as outlined below.

1. An expiration date cannot be extended if the dry chemical/solvent is discolored or appears otherwise physically degraded. In this case, the dry chemical/solvent must be discarded.

2. Expiration dates can be extended if the dry chemical/solvent is found to be satisfactory based on acceptable performance of quality control samples (Continuing Calibration Verification (CCV), Blanks, Laboratory Control Sample (LCS), etc.).

3. If the dry chemical/solvent is used for the preparation of standards, the expiration dates can be extended 6 months if the dry chemical/solvent is compared to an unexpired independent source in performing the method and the performance of the dry chemical/solvent is found to be satisfactory. The comparison must show that the dry chemical/solvent meets CCV limits. The comparison studies are maintained on-file and available for review.

D. Wherever possible, standards must be traceable to national or international standards of measurement or to national or international reference materials. Records to that effect are available to the user.

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E. Compressed gases in use are checked for pressure and secure positioning daily. To prevent a tank from going to dryness, or introducing potential impurities, the pressure should be closely watched as it decreases to approximately 15% of the original reading, at which point it should be replaced. The quality of the gases must meet method or manufacturer specification or be of a grade that does not cause any analytical interference.

F. Water used in the preparation of samples, standards or reagents must have a specific conductivity of less than 1-µmho/cm (or specific resistivity of greater than 1.0 megohm-cm) at 25°C. The specific conductivity is checked and recorded daily. If the water's specific conductivity is greater than the specified limit, the Facility Manager and appropriate Technical Managers must be notified immediately in order to notify all departments, decide on cessation (based on intended use) of activities, and make arrangements for correction.

G. Purchased bottleware used for sampling must be certified clean and the certificates must be maintained.

9.3.3) Storage

A. Reagent and chemical storage is important from the aspects of both integrity and safety. Light-sensitive reagents may be stored in brown glass containers. Storage conditions are per the NBLSC Environmental Health & Safety Manual, Document No. *NDSC-US-EHS-QP46060*, the local laboratory EH&S manual addendum and method SOPs or manufacturer instructions.

9.4) Purchase of Equipment / Instruments / Software

A. When a new piece of equipment is needed, either for additional capacity or for replacing inoperable equipment, the analyst or supervisor makes a supply request to the Operations Manager or BUMA. A decision is made as to which piece of equipment can best satisfy the requirements. The appropriate written requests are completed.

B. Upon receipt of a new or used piece of equipment, an identification name is assigned and added to the equipment list. IT must also be notified so that they can synchronize the instrument for back-ups. Its capability is assessed to determine if it is adequate or not for the specific application. For instruments, a calibration curve is generated, followed by MDLs, Demonstration of Capabilities (DOCs), and other relevant criteria (refer to Section 18). For software, its operation must be deemed reliable and evidence of instrument verification must be retained by the IT Department or QA Department. Software certificates supplied by the vendors are filed with the LIMS Administrator. The manufacturer's operation manual is retained by local IT.

9.5) Service

A. Service to analytical instruments (except analytical balances) is performed on an as needed basis. Routine preventative maintenance is discussed in Section 18.2. The need for service is determined by analysts and/or Technical Managers. The service providers that perform the services are approved by the Technical Manager.

B. Analytical balances are serviced and calibrated annually. The calibration and maintenance services are performed on-site, and the balances are returned to use immediately following successful calibration. Calibration certificates are filed for reference. If the calibration was unsuccessful, the balance is immediately removed from service and segregated pending either further maintenance or disposal.

C. Calibration services for support equipment such as the balances, thermometers, weight sets, autopipettors, etc., are obtained from vendors with current and valid ISO 17025 accreditation for calibration of the specific piece of equipment. Prior to utilizing the vendor's services, the vendor's accreditation status is verified. Once the equipment has been calibrated, the calibration certificates are reviewed by the QA department, and documentation of the review is filed with the calibration certificates. The equipment is then returned to service in the laboratory.

9.6) Suppliers

A. Eurofins adds vendors as options for use in the Purchasing program through a competitive proposal / bid process, strategic business alliances or negotiated vendor partnerships (contracts).

B. The level of control used in the selection process is dependent on the anticipated spending amount and the potential impact on the laboratory's business. Vendors that provide test and measuring equipment,

Uncontrolled document

solvents, standards, certified containers, instrument related service contracts or subcontract laboratory services shall be subject to more rigorous controls than vendors that provide off-the-shelf items of defined quality that meet the end use requirements.

C. Evaluation of suppliers is accomplished by ensuring the supplier ships the product or material ordered and that the material is of the appropriate quality. Calscience has an in house purchasing agent who evaluates our supply room inventory to ensure it remains stocked, places orders, and follows receipt of orders to ensure shipments are received and are accurate.

D. Proficiency testing providers and suppliers of certified reference materials must have appropriate ISO accreditation.

10) COMPLAINTS

10.1) Overview

A. The laboratory considers an effective client complaint handling process to be of significant business and strategic value. Listening to and documenting client concerns captures client knowledge that enables our operations to continually improve processes and client satisfaction. An effective client complaint handling process also provides assurance to the data user that the laboratory will stand behind its data, service obligations, and products.

B. A client complaint is any expression of dissatisfaction with any aspect of our business services (e.g., communications, responsiveness, data, reports, invoicing and other functions) expressed by any party, whether received verbally or in written form. Client inquiries, complaints, or noted discrepancies are documented, communicated to management, and addressed promptly and thoroughly. These must also be communicated to QA for trending and/or formal investigation.

C. The laboratory has procedures for addressing complaints with the goal of providing satisfactory resolution in a timely and professional manner.

D. The nature of the complaint is identified, documented and investigated, and an appropriate action is determined and taken. In cases where a client complaint indicates that an established policy or procedure was not followed, the QA Department must evaluate whether a special audit must be conducted to assist in resolving the issue. A written confirmation or letter to the client, outlining the issue and response taken is recommended as part of the overall action taken. This may be handled by the PM following-up with the client on the resolution. If a client requires a letter detailing the investigation and actions, the letter is written by QA.

E. The process of complaint resolution and documentation utilizes the procedures outlined in Section 12, Corrective Actions.

10.2) Complaint Processing

A. An employee that receives a complaint initiates the complaint resolution process by first documenting the complaint in an Internal Nonconformance Memo (NCM) in TALS as outlined in Section 12.

B. Complaints fall into two categories: correctable and non-correctable. An example of a correctable complaint would be one where a report re-issue would resolve the complaint. An example of a non-correctable complaint would be one where a client complains that their data was repeatedly late. Non-correctable complaints should be reviewed for preventive action measures to reduce the likelihood of future occurrence and mitigation of client impact.

C. The general steps in the complaint handling process are:

1. Receiving and documenting complaints.

2. Acknowledging receipt of complaint, whenever possible.

3. Complaint investigation and service recovery.

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4. Process improvement.

D. Complaints need to be communicated to QA to allow for initiation of investigations and for trending purposes. Full root cause investigation with corrective actions are required when requested by the client, for issues that involve a change to a reported analytical result, and where an adverse trend in the type of issue has been seen. These investigations must be documented in the corrective action database.

E. The laboratory shall inform the initiator of the complaint of the results of the investigation and the corrective action(s) taken, if any.

11) CONTROL AND NONCONFORMING WORK

11.1) Overview

A. When data discrepancies are discovered or deviations and departures from laboratory SOPs, policies and/or client requests have occurred, corrective action is taken immediately. First, the laboratory evaluates the significance of the nonconforming work. Then, a corrective action plan is initiated based on the outcome of the evaluation. If it is determined that the nonconforming work is an isolated incident, the plan could be as simple as adding a qualifier to the final results and/or making a notation in the case narrative. If it is determined that the nonconforming work is a systematic or improper practices issue, the corrective action plan could include a more in depth investigation and a possible suspension of an analytical method. In all cases, the actions taken are documented using the laboratory's corrective action system (refer to Section 12).

B. Due to the frequently unique nature of environmental samples, sometimes departures from documented policies and procedures are needed. These situations are documented in the corrective action database as Planned Deviations. When an analyst encounters such a situation, the problem is presented to the supervisor for resolution. The supervisor may elect to discuss it with the Technical Manager or have a representative contact the client to decide on a logical course of action. Once an approach is agreed upon, the analyst documents it using the laboratory's corrective action system described in Section 12. This information can then be supplied to the client in the form of a case narrative with the report.

C. Project Management may encounter situations where a client may request that a special procedure be applied to a sample that is not standard laboratory practice. Based on a technical evaluation, the laboratory may accept or opt to reject the request based on technical or ethical merit. An example might be the request to filter a sample before analysis of a test where filtering is not part of the method preparation. The laboratory would not have validated the method with this step as part of the sample preparation. Such a request would need to be approved by the Technical Manager and QA Manager, documented and included in the project folder. Deviations must also be noted on the final report with a narrative that the filtering of the sample during preparation is not in compliance with the analytical method requirements and the reason.

11.2) Responsibilities and Authorities

A. Under certain circumstances, the BUMA, Department Manager, or a member of the QA team may authorize departures from documented procedures or policies. The departures may be a result of procedural changes due to the nature of the sample; a one-time procedure for a client; QC failures with insufficient sample to reanalyze, etc. In most cases, the client will be informed of the departure prior to the reporting of the data. Any departures must be well documented using the laboratory's corrective action procedures. This information may also be documented in logbooks and/or data review checklists as appropriate. Any associated data must be referenced in a case narrative and/or flagged with an appropriate data qualifier.

B. Any misrepresentation or possible misrepresentation of analytical data discovered by any laboratory staff member must be reported to the laboratory Senior Management within 24-hours. The Senior Management staff is comprised of the BUMA, the QA Manager, the Department Managers, and the Operations Manager. The reporting of issues involving alleged violations of the company's *Ethics and Data Integrity Policy* or *Manual Integration* procedures must be conveyed to an ECO (e.g., the VP-QA/EHS) and the laboratory's Quality Director within 24 hours of discovery.

C. Whether an inaccurate analytical result was reported due to calculation or quantitation errors, data entry errors, improper practices, or failure to follow SOPs, the data must be evaluated to determine the

Uncontrolled Document

possible effect and include full root cause investigation and corrective action(s).

D. All laboratory personnel are responsible for taking appropriate action when nonconforming work is identified. BUMA, QA Manager, ECOs, VP-QA/EHS, and the Quality Directors have the authority and responsibility to halt work, withhold final reports, or suspend an analysis for due cause as well as authorize the resumption of work once the investigation has been completed, root cause(s) determined and corrective action(s) implemented.

11.3) Evaluation of Significance and Actions Taken

A. For each nonconforming issue reported, an evaluation of its significance and the level of management involvement needed is made. This includes reviewing its effect on the final data, whether or not it is an isolated or a systematic issue, potential for recurrence and actions for prevention, and how it relates to any special client or program requirements.

B. The laboratory has a policy and procedures that must be implemented when any aspect of its testing work, or the results of this work do not confirm to its own procedures or the agreed requirements of the customer. The policy of the laboratory is that nonconforming work must be addressed as defined below so that the needs of the customer are met. Examples of places non-confirming work could occur include customer complaints, quality control, instrument calibration, checking of consumable materials, staff observations or supervision, test report checking, management reviews, and internal or external audits.

C. The responsibilities and for the management of nonconforming work include all laboratory personnel responsible for taking appropriate action when nonconforming work is identified, including notification of the BUMA if needed. All personnel may stop work when nonconforming work is identified, but the Group Leader, Operations Manager, BUMA, QA Representative, or QA Manager must be notified of a stoppage as soon as is feasible. The BUMA, QA Manager, Operations Manager are authorized to recall work or withhold analytical reports if necessary.

D. An evaluation of the significance of the nonconforming work is made. Exceptions are first evaluated by the analyst or other personnel performing the work and their Group Leader. Correction is taken immediately, together with any decision about the acceptability of the nonconforming work. "Corrections" are things done to continue working, report the data, and fix the immediate problem. Note that this is different than corrective action, which is described in Section 12.

E. Where necessary, the customer is notified and work is recalled. The responsibility for authorizing the resumption of work is given by the BUMA in consultation with the QA manager following the review of root cause(s) and corrective action.

F. Where the evaluation indicates that the nonconforming work could recur or that there is doubt about the compliance of the laboratory's operations with its own policies and procedures, the corrective action procedures given in Section 12.3 shall be promptly followed.

11.4) Method Suspension / Restriction (Stop Work Procedures)

A. In some cases, it may be necessary to suspend/restrict the use of a method or target analyte which constitutes significant risk and/or liability to the laboratory. Suspension/restriction procedures can be initiated by designated persons as noted in Section 11.2.

B. Prior to suspension/restriction, confidentiality will be respected, and the problem with the required corrective and preventative action(s) will be stated in writing and presented to the BUMA.

C. The BUMA shall arrange for the appropriate personnel to meet with the QA Manager as needed. This meeting shall be held to confirm that there is a problem, that suspension/restriction of the method is required and will be concluded with a discussion of the steps necessary to bring the method/target or test fully back on line. In some cases, that may not be necessary if all appropriate personnel have already agreed there is a problem and there is agreement on the steps needed to bring the method, target or test fully back on line. The QA Manager will initiate a corrective action report as described in Section 12 if one has not already been started. A copy of any meeting notes and agreed upon steps should be e-mailed by the laboratory to their Business Unit President and the VP-QA/EHS. This e-mail serves as notification of the incident.

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D. After suspension/restriction, the laboratory will hold all reports to clients pending review. No faxing, mailing, or distributing through electronic means may occur. The report must not be posted for viewing on the internet. It is the responsibility of the BUMA to hold all reporting and to notify all relevant laboratory personnel regarding the suspension/restriction (e.g., Project Management, Log-in, etc.). Clients, generally, will NOT be notified at this time. Analysis may proceed in some instances depending on the nonconformance issue.

E. Within 72 hours, the QA Manager will determine if the issue has been addressed and compliance is now met and reports can be released, OR determine the plan of action with timeline to bring work into compliance, and release work. A team, with all principals involved (e.g., BUMA, QA Manager) can devise a start-up plan to cover all steps from client notification through compliance and release of reports. Project Management, Client Services Managers, and Sales and must be notified if clients must be notified or if the suspension/restriction affects the laboratory's ability to accept work.

F. The QA Manager must approve resumption of work or elimination of any restrictions after the investigation is complete with root cause(s) determined and corrective action(s) implemented.

12) CORRECTIVE ACTION

12.1) Overview

A. A major component of the laboratory's QA Program is the problem investigation and feedback mechanism designed to keep the laboratory staff informed on quality related issues and to provide insight to problem resolution. When nonconforming work or departures from policies and procedures in the quality system or technical operations are identified, the corrective action procedure provides a systematic approach to assess the issues, restore the laboratory's system integrity, and prevent reoccurrence.

B. The laboratory employs two systems to manage nonconformances. Issues suspected of being systematic in nature and for which full investigation with root cause analysis and a formal Corrective Action Report (CAR) required are documented in the laboratory's CAR database. Routine batch nonconformances, events that are understood to be isolated in nature, are documented using the LIMS nonconformance memo (NCM) system.

12.2) General Processes

A. Problems within the quality system or within analytical operations may be discovered in a variety of ways, such as QC sample failures, internal or external audits, proficiency testing (PT) performance, client complaints, staff observation, etc.

B. The purpose of a corrective action system is to:

1. Identify nonconformance events and assign responsibility for investigating.
2. Resolve nonconformance events and assign responsibility for any required corrective action.
3. Identify systematic problems before they become serious.
4. Identify and track client complaints and provide resolution.

C. Nonconformance Memos (NCMs) are used to document the following types of corrections / corrective actions:

1. Deviations from an established procedure or SOP.
2. QC outside of limits.
3. Isolated reporting / calculation errors.
4. Client complaints (minor, isolated issues).

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5. Discrepancies in materials / goods received vs manufacturer packing slips (documentation other than NCMs in LIMS are also acceptable).

D. Investigations and Corrective Actions Documented in the CAR Database

1. Internal and external audit findings.
2. Failed or unacceptable PT results.
3. Identified poor process or method performance trends.
4. Systematic reporting / calculation errors.
5. Analytical Result Changes.
6. Data recall investigations.
7. Questionable trends that are found in the review of NCMs.
8. Client complaints (major issues; client requested full investigation).
9. Excessive revised reports.

E. The CAR database is used to document background information, assigned tasks with the responsible staff, timelines, results of corrective action investigations and root cause analysis, details of the planned corrective action(s), and follow-up.

12.3) Corrective Action Process Steps

A. Any employee in the company can initiate a corrective action. There are four main components to a corrective action process once an issue has been identified: Cause Analysis, Selection and Implementation of Corrective Actions (both short and long term), Monitoring of the Corrective Actions, and Follow-up.

B. Cause Analysis

1. Upon discovery of a nonconformance event, the event must be defined and documented. An entry into the CAR system must be initiated, someone is assigned to investigate the issue and the event is investigated for cause.
2. The cause analysis step is the key to the process as a long term corrective action cannot be determined until the cause is determined.
3. If the cause is not readily obvious, the BUMA, Department Manager, Operations Manager, QA Manager, or QA Specialist is consulted.

C. Selection and Implementation of Corrective Actions

1. Where corrective action is needed, the laboratory shall identify potential corrective actions. The action(s), most likely to eliminate the problem and prevent recurrence, are selected and implemented. Responsibility for implementation is assigned.
2. Corrective actions shall be to a degree appropriate to the magnitude of the problem identified through the cause analysis.
3. Whatever corrective action is determined to be appropriate, the laboratory shall document and assign the appropriate laboratory personnel to implement the changes. The CAR record is used for this documentation.

D. Root Cause Analysis

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1. Root Cause Analysis is a class of problem solving (investigative) methods aimed at identifying the basic or causal factor(s) that underlie variation in performance or the occurrence of a significant failure. The root cause may be buried under seemingly innocuous events, many steps preceding the perceived failure. At first glance, the immediate response is typically directed at a symptom and not the cause. Typically, root cause analysis would be best with three or more incidents to triangulate a weakness.

2. Systematically analyze and document the root causes of the more significant problems that are reported. Identify, track, and implement the corrective actions required to reduce the likelihood of recurrence of significant incidents. Trend the root cause data from these incidents to identify root causes that, when corrected, can lead to dramatic improvements in performance by eliminating entire classes of problems.

3. Identify the one event associated with problem and ask why this event occurred. Brainstorm the root causes of failures; for example, by asking why events occurred or conditions existed; and then why the cause occurred consecutive times until you get to the root cause. For each of these sub events or causes, ask why it occurred. Repeat the process for the other events associated with the incident.

4. Root cause analysis does not mean the investigation is over. Look at technique or other systems outside the normal indicators. Often creative thinking will find root causes that ordinarily would be missed and continue to plague the laboratory or operation.

E. Monitoring of the Corrective Actions

1. The Department Manager and QA are responsible to ensure that the corrective action taken was effective.

2. Ineffective actions are documented and re-evaluated by QA until acceptable resolution is achieved. Department Managers or Group Leaders are accountable to QA to ensure final acceptable resolution is achieved and documented appropriately.

3. The QA Manager and Specialists review monthly NCM and CAR records for trends. Highlights are included in the monthly quality metrics report (refer to Section 16). If a significant trend develops that adversely affects quality, an audit of the area is performed and corrective action implemented.

4. Any out-of-control situations that are not addressed acceptably at the laboratory level may be reported to the NBLSC Quality Director by the QA Manager, indicating the nature of the out-of-control situation and problems encountered in solving the situation.

F. Follow-up Audits

1. Follow-up audits may be initiated by the QA Manager and shall be performed as soon as possible when the identification of a nonconformance casts doubt on the laboratory's compliance with its own policies and procedures, or on its compliance with state or federal requirements.

2. These audits often follow the implementation of the corrective actions to verify effectiveness. An additional audit would only be necessary when a critical issue or risk to business is discovered.

12.4) Technical Data Corrective Actions

A. In addition to providing acceptance criteria and specific protocols for technical corrective actions in the method SOPs, the laboratory has general procedures to be followed to determine when departures from the documented policies, procedures, and quality control have occurred (refer to Section 11). The documentation of these procedures is through the use of an NCM or record in the CAR system.

B. For specific criteria and corrective actions, refer to the analytical methods or specific method SOPs. The laboratory may also maintain controlled Work Instructions or Forms detailing these items. These procedures also detail the actions to be taken and by whom, for method and/or QC departures and nonconformances.

C. To the extent possible, samples shall be reported only if all quality control measures are acceptable. If the deficiency does not impair the method or program (e.g., drinking water) compliance of the results,

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data will be reported with an appropriate data qualifier and/or the deficiency will be noted in the case narrative. Where sample results may be impaired, the PM is notified by an NCM and appropriate corrective action (e.g., reanalysis, resampling) is taken and documented.

12.5) Corrections to Data / Records

A. When mistakes occur in records, each mistake shall be crossed-out with a single line, [not obliterated (e.g. no white-out, erasure, write-overs, scribble out)], and the correct value entered alongside. All such corrections shall be initialed (or signed) and dated by the person making the correction.

B. This same process applies to adding additional information to a record. All additions made later than the initial must also be initialed (or signed) and dated. When corrections are due to reasons other than obvious transcription errors, the reason for the corrections (or additions) shall also be documented. In the case of records stored electronically, the original uncorrected file must be maintained intact and a second corrected file is created.

13) PREVENTIVE ACTION / IMPROVEMENT

A. The laboratory's preventive action programs minimize or eliminate potential causes of nonconformance to the quality system. This preventive action process is a proactive and continuous process of improvement that can be initiated through feedback from clients, employees, business providers, and affiliates. The QA Department has the overall responsibility to ensure that the preventive action process is in place and that relevant information on actions is submitted for management review.

B. Dedicating resources to an effective preventive action system emphasizes the laboratory's commitment to its Quality Systems. It is beneficial to identify and address negative trends before they develop into complaints, problems and corrective actions. Additionally, the laboratory continually strives to improve customer service and client satisfaction through continuous improvements to laboratory systems.

C. Opportunities for improvement may be discovered through any or all of the following:

1. Review of the monthly Quality Metrics Report.
2. Trending NCMs.
3. Review of control charts and QC results.
4. Trending proficiency testing (PT) results.
5. Performance of management system reviews.
6. Trending client complaints.
7. Review of processing operations.
8. Staff observations.

D. The Monthly QA Metrics Report shows performance indicators in all areas of the laboratory and quality system. These areas include revised reports, corrective actions, audit findings, internal auditing and data authenticity audits, client complaints, PT samples, holding time violations, SOPs, ethics training, etc. The metrics report is reviewed monthly by the laboratory management, NBLSC QA Team, Local and NBLSC Management. These metrics are used in evaluating the management and quality system performance on an ongoing basis and provide a tool for identifying risk and areas for improvement.

E. Items identified as continuous improvement opportunities to the management system may be issued as goals from the annual management systems review, recommendations from internal audits, Lessons Learned, or as management or NBLSC level initiatives.

F. The laboratory's corrective action process is integral to implementation of preventive actions. A critical piece of the corrective action process is the implementation of actions to prevent further occurrence of a noncompliance event. Historical review of corrective action and nonconformances provides a valuable mechanism for identifying preventive action opportunities.

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G. The following elements are part of a preventative action/process improvement system:

1. Identification of an opportunity for preventive action or process improvement.
2. Process for the preventive action or improvement.
3. Define the measurements of the effectiveness of the process once undertaken.
4. Execution of the preventive action or improvement.
5. Evaluation of the plan using the defined measurements.
6. Verification of the effectiveness of the preventive action or improvement.
7. Close-Out by documenting any permanent changes to the Quality System as a result of the Preventive Action or Process Improvement.

H. Documentation of Preventive Action/Process Improvement is incorporated into the monthly QA reports, corrective action process, and management review.

I. Any preventive actions/process improvement undertaken or attempted shall be taken into account during the Annual *Management Systems Review* (Section 16). A highly detailed report is not required; however, a summary of successes and failures within the preventive action program is sufficient to provide management with a measurement for evaluation.

14) CONTROL OF RECORDS

A. The laboratory maintains a records management system appropriate to its needs and that complies with applicable standards or regulations as required. The system produces unequivocal, accurate records that document all laboratory activities. The laboratory retains all original observations, calculations and derived data, calibration records and a copy of the analytical report for a minimum of five years after it has been issued. Exceptions for programs with longer retention requirements are discussed in Section 14.2.

14.1) Overview

A. The laboratory has established procedures for identification, collection, indexing, access, filing, storage, maintenance and disposal of quality and technical records. Quality records are maintained by the QA department in a database, D4, which is backed up as part of the regular laboratory backup. Records are of two types; either electronic or hard copy paper formats depending on whether the record is computer or hand generated (some records may be in both formats).

B. All records are stored and retained in such a way that they are secure and readily retrievable at the laboratory facility or at an offsite storage location that provides a suitable environment to prevent damage or deterioration and to prevent loss at the laboratory. All records shall be protected against fire, theft, loss, environmental deterioration, and vermin. In the case of electronic records, electronic or magnetic sources, storage media are protected from deterioration caused by magnetic fields and/or electronic deterioration.

C. Access to the data is limited to laboratory and company employees and is documented with an access log. Records are archived off-site, stored in a secure location where a record is maintained of any entry into the storage facility. Retention of records are maintained on-site at the laboratory for at least 1 year. It is kept on a secondary server until disk space is needing to be freed up, which usually takes two or three years before we need to do a purge. That same data on the local lab server is backed up nightly by our backup system at the Datacenter. Records are maintained for a minimum of five years unless otherwise specified by a client or regulatory requirement.

D. For raw data and project records, record retention shall be calculated from the date the project report is issued. For other records, such as NBLSC Documents, QA, or Administrative Records, the retention time is calculated from the date the record is formally retired.

E. The laboratory has procedures to protect and back-up records stored electronically and to prevent unauthorized access to or amendment of these records. All analytical data is maintained in secure

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electronic format and, in limited cases, hard copy bound logbooks.

F. The record keeping system allows for historical reconstruction of all laboratory activities that produced the analytical data, as well as rapid recovery of historical data. (Records stored off site are, for the most part, immediately accessible. If requested in a queried format, within 2 days of a request for such records). The history of the sample from when the laboratory took possession of the samples must be readily understood through the documentation. This shall include inter-laboratory transfers of samples and/or extracts.

1. The records include the identity of personnel involved in sampling, sample receipt, preparation, or testing. All analytical work contains the initials (at least) of the personnel involved. The laboratory's copy of the COC is stored by Sample Control after scanning. The chain of custody would indicate the name of the sampler and any sampling provided with the work order.

2. All information relating to the laboratory facilities' equipment, analytical test methods, and related laboratory activities, such as sample receipt, sample preparation, or data verification and documented.

3. The record keeping system facilitates the retrieval of all working files and archived records for inspection and verification purposes (e.g., set format for naming electronic files, set format for what is included with a given analytical data set. Instrument data is stored sequentially by instrument. A given day's analyses are maintained in the order of the analysis. Run logs are maintained for each instrument or method; a copy of each day's run log or instrument sequence is stored with the data to aid in re-constructing an analytical sequence. Where an analysis is performed without an instrument, bound logbooks or bench sheets are used to record and file data. Standard and reagent information is recorded into LIMS for each method as required.

4. Changes to electronic records in LIMS or instrument data are recorded in audit trails.

5. The reason for a signature or initials on a document is clearly indicated in the records such as "sampled by," "prepared by", "reviewed by", or "analyzed by".

6. All generated data except those that are generated by automated data collection systems, are recorded directly, promptly and legibly in permanent dark ink.

7. Hard copy data may be scanned into PDF format for record storage as long as the scanning process can be verified in order to ensure that no data is lost and the data files and storage media must be tested to verify the laboratory's ability to retrieve the information prior to the destruction of the hard copy that was scanned.

14.2) Technical and Analytical Records

A. The laboratory retains records of original observations, derived data and sufficient information to establish an audit trail, calibration records, staff records and a copy of each analytical report issued, for a minimum of five years unless otherwise specified by a client or regulatory requirement. The records for each analysis shall contain sufficient information to enable the analysis to be repeated under conditions as close as possible to the original. The records shall include the identity of laboratory personnel responsible for the sampling, performance of each analysis and reviewing results.

B. Observations, data and calculations are recorded real-time and are identifiable to the specific task. Changes to electronic records in LIMS or instrument data are recorded in audit trails.

C. The essential information to be associated with analysis, such as instrument printouts, computer data files, analytical notebooks, and run logs, include:

1. Laboratory sample ID code

2. Date of analysis, time of analysis is also required if the holding time is seventy-two (72) hours or less, or when time critical steps are included in the analysis (e.g., drying times, incubations, etc.), instrumental analyses have the date and time of analysis recorded as part of their general operations.

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3. Instrumentation identification and instrument operating conditions/parameters - operating conditions/parameters are typically recorded in instrument maintenance logs where available.
4. Analysis type
5. Analyst's or operator's initials/signature
6. Sample preparation including cleanup, separation protocols, ID codes, volumes, weights, instrument printouts, meter readings, calculations, reagents
7. Test results
8. Standard and reagent origin, receipt, preparation, and use
9. Calibration criteria, frequency and acceptance criteria
10. Data and statistical calculations, review, confirmation, interpretation, assessment and reporting conventions
11. Quality control protocols and assessment
12. Electronic data security, software documentation and verification, software and hardware audits, backups, and records of any changes to automated data entries.
13. Method performance criteria including expected quality control requirements. These are indicated both in LIMS and on specific analytical report formats.

D. All logbooks used during receipt, preparation, storage, analysis, and reporting of samples or monitoring of support equipment shall undergo a periodic, documented supervisory or peer review.

14.3) Laboratory Support Activities

A. In addition to documenting all the above-mentioned activities, the following are retained QA records and project records (previous discussions in this section relate where and how these data are stored):

1. All original raw data, whether hard copy or electronic, for calibrations, samples and quality control measures, including analysts’ work sheets and data output records (chromatograms and other instrument response readout records).
2. Copies of final reports.
3. Archives SOPs.
4. Correspondence relating to laboratory activities for a specific project.
5. All corrective action reports, audits and audit responses.
6. Proficiency test results and raw data.
7. Results of data review, verification, and data checking procedures.

B. Records of all procedures to which a sample is subjected while in the possession of the laboratory are maintained. These include, but are not limited to, records pertaining to:

1. Sample preservation including appropriateness of sample container and compliance with holding time requirement.
2. Sample identification, receipt, acceptance, or rejection and login.
3. Sample storage and tracking including shipping receipts, sample transmittal / COC forms.

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4. Procedures for the receipt and retention of samples, including all provisions necessary to protect the integrity of samples.

14.4) Records Management, Storage and Disposal

A. All records (including those pertaining to test equipment), certificates and reports are safely stored, held secure and in confidence to the client. Certification related records are available upon request.

B. All information necessary for the historical reconstruction of data is maintained by the laboratory. Records that are stored only on electronic media must be supported by the hardware and software necessary for their retrieval. Records that are generated by personal computers are operated only on the company VPN and records are stored and backed up on the same system as though they were on-site.

C. The laboratory has a record management system (a.k.a., *document control*) for control of instrument logbooks. Standards are maintained in LIMS and/or TALS – no logbooks are used to record that data. Records are considered archived when noted as such in the records management system (a.k.a., *document control*).

1. Transfer of Ownership - In the event that the laboratory transfers ownership or goes out of business, the laboratory shall ensure that the records are maintained or transferred according to client's instructions. Upon ownership transfer, record retention requirements shall be addressed in the ownership transfer agreement and the responsibility for maintaining archives is clearly established. In addition, in cases of bankruptcy, appropriate regulatory and state legal requirements concerning laboratory records must be followed. In the event of the closure of the laboratory, all records will revert to the control of NBLSC. Should the entire company cease to exist, as much notice as possible will be given to clients and the accrediting bodies who have worked with the laboratory during the previous 5 years of such action.

2. Records Disposal - Records are removed from the archive and destroyed after 5 years unless otherwise specified by a client or regulatory requirement. On a project specific or program basis, clients may need to be notified prior to record destruction. Records are destroyed in a manner that ensures their confidentiality such as shredding, mutilation or incineration. Electronic copies of records are destroyed by erasure so no records can be read.

15) AUDITS

15.1) Internal Audits

A. *Internal audits* are performed to verify that laboratory operations comply with the requirements of the laboratory's quality system and with the external quality programs under which the laboratory operates. Audits are planned and organized by the QA staff. Personnel conducting the audits should be independent of the area being evaluated. Auditors will have sufficient authority, access to work areas, and organizational freedom necessary to observe all activities affecting quality and to report the assessments to laboratory management and, when requested, to NBLSC Management.

B. Audits are conducted and documented as described in the:

1. *Annual Management Systems Internal Audit* - An annual management systems audit is required to ensure compliance to relevant items from a checklist that incorporates items from the TNI Standard that include the management system, quality systems, and quality assurance requirements.

2. *Test Method Internal Audits* - These audits assess the methods performed. Reported results are compared to raw data to verify the authenticity of results. The validity of calibrations, QC results, run logs, records of manual integrations, and calculations are checked. Where possible, electronic audit miner programs are used to identify unusual manipulations of the data deserving closer scrutiny. The analyst's technique is reviewed as well as their ability to follow the SOP as written.

3. *Operational System Audits* - These audits apply to areas of the laboratory that are not necessarily test methods such as Sample Receiving, Sample Splitting, LIMS, etc.

4. Special Audit - Focused audits conducted on an as needed basis, generally as a follow up to specific issues such as client complaints, corrective actions, PT results, data audits, system audits, method

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validation audits, regulatory audits or suspected ethical improprieties. Special audits are focused on a specific issue.

5. Performance Testing - The laboratory participates semi-annually in performance audits conducted through the analysis of PT samples provided by a third party. Some non-TNI labs do not require semi-annual PTs including Arizona and California. The laboratory participates in the following types of PT studies: Nonpotable Water, Soil, and Air. It is policy that PT samples be treated as typical samples in the production process. Full root cause investigations for unacceptable PT results are required. Any PT that receives an Unacceptable result must be reported to CA ELAP and two out of three Unacceptable results in immediate loss of accreditation. A seven-day waiting period followed by an Acceptable score and an Amendment application to restore accreditation.

15.2) External Audits

A. External audits are performed when certifying agencies or clients conduct inspections (either on-site or remote) or submit performance testing samples to the laboratory for analysis. It is Eurofins policy to cooperate fully with regulatory authorities and clients. The laboratory makes every effort to provide the auditors with access to personnel, documentation, and assistance. Laboratory supervisors are responsible for providing corrective actions to the QA Manager who coordinates the response. Audit responses are due in the time allotted by the client or agency performing the audit.

B. The laboratory cooperates with clients and their representatives to monitor the laboratory's performance in relation to work performed for the client. The client may only view data and systems related directly to the client's work. All efforts are made to keep other client information confidential.

C. During audits, auditors may come into possession of information claimed as Confidential Business Information (CBI). A business confidentiality claim is defined as "a claim or allegation that business information is entitled to confidential treatment for reasons of business confidentiality or a request for a determination that such information is entitled to such treatment." When information is claimed as business confidential, the laboratory must place on (or attach to) the information at the time it is submitted to the auditor, a cover sheet, stamped or typed legend or other suitable form of notice, employing language such as "trade secret", "proprietary" or "company confidential". Confidential portions of documents otherwise non-confidential must be clearly identified. CBI may be purged of references to client identity by the responsible laboratory official at the time of removal from the laboratory. However, sample identifiers may not be obscured from the information. Additional information regarding CBI can be found in the TNI Standard.

15.3) Audit Findings

A. Audit findings, deviations, or however named are documented using the corrective action process and database (see Section 12). The laboratory's corrective action documentation must include the investigation, root cause(s), actions(s) with timelines and supporting documentation of proof of completion. The responses to the agency or client may include action plans that could not be completed prior to the response due date. In these instances, a targeted completion date must be set and agreed to by operations management and the QA Manager.

B. Developing and implementing corrective actions to findings is the responsibility of the department manager where the finding originated. Findings that are not corrected by specified due dates are reported monthly to management in the monthly quality metrics report.

C. If any audit finding casts doubt on the effectiveness of the operations or on the correctness or validity of the laboratory's test results, the laboratory shall take timely corrective action, and shall notify clients in writing if the investigations show that the laboratory results have been affected. Once corrective action is implemented, a follow-up evaluation is scheduled to ensure that the problem has been corrected.

D. Clients must be notified promptly in writing of any event such as the identification of defective measuring or test equipment that casts doubt on the validity of results given in any test report or amendment to a test report. The investigation must begin within 24 hours of confirmation of the problem and all efforts are made to notify the client within two weeks after the completion of the investigation.

16) Management Reviews

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16.1) Quality Metrics Report

A. The QA Department is responsible for preparing a comprehensive monthly quality metrics report to Management to keep them apprised of current quality system related issues. This report fosters communication, review, and refinement of the quality system to evaluate the suitability of policies and procedures to meet both regulatory and laboratory quality objectives.

B. The NBLSC QA team compiles information from all of the Eurofins Environment Testing laboratories monthly quality metrics reports for the Executive Management team. This report includes, but is not limited to, notable information and concerns regarding the laboratory's quality system programs, overall concerns across the laboratories, information regarding new regulations that may affect the Eurofins businesses.

16.2) Annual Management Review

A. The BU management team (BUMA, Scope Leader, Department Managers, Sales Direct, QA Manager) conducts a review annually of its quality and management systems to ensure its continuing suitability and effectiveness in meeting client and regulatory requirements and to introduce any necessary changes or improvements. It will also provide a platform for defining goals, objectives and action items that feed into the laboratory planning system.

B. Details on the review process and agenda topics to be addressed are covered in SOP No. *39508*. The review uses information generated during the preceding year.

C. Significant issues from the following documentation are compiled by the QA Manager and reviewed with the BUMA prior to the review meeting:

1. Matters arising from the previous annual review
2. Prior Monthly QA Reports issues
3. Laboratory QA Metrics
4. Review of report reissue requests
5. Review of client feedback and complaints
6. Issues arising from any prior management or staff meetings
7. Minutes from prior senior lab management meetings. Issues that may be raised from these meetings include:
    a. Adequacy of staff, equipment and facility resources
    b. Adequacy of policies and procedures
    c. Future plans for resources and testing capability and capacity
8. The annual internal double blind PT program sample performance (if performed)
9. Compliance to the *Ethics and Data Integrity Policy*. Including any evidence/incidents of inappropriate actions or vulnerabilities related to Data Integrity.
10. Evaluation of overall risk, including risks to impartiality, confidentiality, reporting statements of conformity and nonconforming work.

D. The meeting is held. A report is generated by the QA Manager and management. The report is distributed to the President of the Business Unit, Business Unit Manager, and other management attendees. The report includes, but is not limited to:

1. The date of the review and the names and titles of participants.

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2. A reference to the existing data quality related documents and topics that were reviewed.

3. Quality system or operational changes or improvements that will be made as a result of the review [e.g., an implementation schedule including assigned responsibilities for the changes (Action Table)]

17) TEST METHODS AND METHOD VALIDATION

17.1) Overview

A. The laboratory uses methods that are appropriate to meet our clients' requirements and that are within the scope of the laboratory's capabilities. These include sampling, handling, transport, storage and preparation of samples, and, where appropriate, an estimation of the measurement of uncertainty as well as statistical techniques for analysis of environmental data.

B. Instructions are available in the laboratory for the operation of equipment as well as for the handling and preparation of samples. All instructions, Standard Operating Procedures (SOPs), reference methods and manuals relevant to the working of the laboratory are readily available to all staff. Deviations from published methods are documented (with justification) in the laboratory's approved SOPs. SOPs are submitted to clients for review at their request. Significant deviations from published methods require client approval and regulatory approval where applicable.

17.2) Standard Operating Procedures (SOPs)

A. The laboratory maintains SOPs that accurately reflect all laboratory activities. The method SOPs are derived from the most recently promulgated/approved, published methods and are specifically adapted to the laboratory facility. Modifications or clarifications to published methods are clearly noted in the SOPs. All SOPs are controlled in the laboratory.

1. All SOPs contain a revision number, effective date, and appropriate approval signatures. Controlled copies are available to all staff.

2. Procedures for writing an SOP are addressed in SOP No. *18076*.

3. SOPs are reviewed at a minimum of every 2 years and where necessary, revised to ensure continuing suitability and compliance with applicable requirements.

17.3) Laboratory Methods

A. For each test method, the laboratory shall have available the published referenced method as well as the laboratory developed SOP.

B. Technical SOPs are maintained to described a specific test method. Non-technical SOPs are maintained to describe functions and processes not related to a specific test method.

17.4) Selection of Methods

A. Since numerous methods and analytical techniques are available, continued communication between the client and laboratory is imperative to assure the correct methods are utilized. Once client methodology requirements are established, this and other pertinent information is summarized by the PM or Business Development Manager. These mechanisms ensure that the proper analytical methods are applied when the samples arrive for log-in. For non-routine analytical services (e.g., special matrices, non-routine compound lists), the method of choice is selected based on client needs and available technology. The methods selected should be capable of measuring the specific parameter of interest, in the concentration range of interest, and with the required precision and accuracy.

17.4.1) Sources of Methods

A. Routine analytical services are performed using standard EPA-approved methodology. In some cases, modification of standard approved methods may be necessary to provide accurate analyses of particularly complex matrices. When the use of specific methods for sample analysis is mandated through project or regulatory requirements, only those methods shall be used.

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B. When clients do not specify the method to be used or methods are not required, the methods used will be clearly validated and documented in an SOP and available to clients and/or the end user of the data.

C. The laboratory reviews updated versions to all the aforementioned references for adaptation based upon capabilities, instrumentation, etc., and implements them as appropriate. As such, the laboratory strives to perform only the latest versions of each approved method as regulations allow or require.

D. Other reference procedures for non-routine analyses may include methods established by specific states (e.g., Underground Storage Tank methods), ASTM or equipment manufacturers. Sample type, source, and the governing regulatory agency requiring the analysis will determine the method utilized.

E. Other reference procedures for non-routine analyses may include methods established by specific states (e.g., Underground Storage Tank methods), ASTM or equipment manufacturers. Sample type, source, and the governing regulatory agency requiring the analysis will determine the method utilized.

F. The laboratory shall inform the client when a method proposed by the client may be inappropriate or out of date. After the client has been informed, and they wish to proceed contrary to the laboratory's recommendation, it will be documented.

G. Client Supplied, Laboratory Developed, and/or Non-Standard Methods

1. Most client-supplied method requirements involve achieving specific quality control criteria, limits of quantitation (LOQ), and/or method detection limits (MDL) using standard EPA methods. These requirements are communicated to the appropriate technical groups prior to the project start up. Each technical group evaluates the scope of work and the requirements to ensure the criteria can be met using the standard EPA method. The data is monitored to ensure the criteria are met throughout the project. The PM notifies the client if there is a more appropriate method available or if the client's criteria cannot be achieved on a certain sample matrix (i.e., due to matrix or dilutions).

H. Procedural Deviations

1. Analysts are required to follow a documented method for all tests performed; and any deviations from analytical methods must be documented, approved, and justified in an appropriate and consistent manner. We classify method deviations as either being a planned deviation or an unplanned deviation. In general, the following information is captured to document both types of situations:

   a. Description of the situation

   b. Reason or justification for the deviation

   c. Relevance the deviation has on the testing

   d. Signature/date of analyst performing the test

   e. Signature/date of QA and laboratory management approving the deviation

   f. Signature/date of client approval, if necessary

2. Deviations to written procedures are documented in raw data records and the corrective action system. Both types of documentation require management and QA review and approval.

17.4.2) Demonstration of Capability

A. Before the laboratory may institute a new method and begin reporting results, the laboratory shall confirm that it can properly perform the method. In general, this demonstration does not test the performance of the method in real world samples, but in an applicable and available clean matrix sample. If the method is for the testing of analytes that are not conducive to spiking, demonstration of capability may be performed on quality control samples.

B. A demonstration of capability (DOC) SOP No. *27925* is performed whenever there is a change in instrument type (e.g., new instrumentation), matrix, method or personnel (e.g., analyst has not

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performed the test within the last 12 months).

C. **Note:** The laboratory shall have a DOC for all analytes included in the methods that the laboratory performs, and proficiency DOCs for each analyst shall include all analytes that the laboratory routinely performs. Addition of non-routine analytes does not require new DOCs for all analysts if those analysts are already qualified for routine analytes tested using identical chemistry and instrument conditions.

D. The initial demonstration of capability must be thoroughly documented and approved by the Department Manager or Group Leader and QA Manager prior to independently analyzing client samples. All associated documentation must be retained in accordance with the laboratory's archiving procedures.

E. The laboratory must have an approved SOP, demonstrate satisfactory performance, and conduct an MDL study (when applicable). There may be other requirements as stated within the published method or regulations (e.g., retention time window study).

17.4.3) Initial Demonstration of Capability (IDOC) Procedure

A. The analyte(s) shall be diluted in a volume of clean matrix sufficient to prepare four aliquots at the concentration specified by a method or the laboratory SOP.

1. At least four aliquots shall be prepared (including any applicable clean-up procedures) and analyzed according to the test method (either concurrently or over a period of days).

2. Using all of the results, calculate the mean recovery in the appropriate reporting units and the standard deviations for each parameter of interest.

3. When it is not possible to determine the mean and standard deviations, such as for presence, absence and logarithmic values, the laboratory will assess performance against criteria described in the Method SOP.

4. Compare the information obtained above to the corresponding acceptance criteria for precision and accuracy in the test method (if applicable) or in laboratory generated acceptance criteria (LCS or interim criteria) if there is no mandatory criteria established. If any one of the parameters do not meet the acceptance criteria, the performance is unacceptable for that parameter. For Arizona IDOCs, all four iterations must pass the acceptance criteria.

5. When one or more of the tested parameters fail at least one of the acceptance criteria, the analyst must proceed according to either option listed below:

   a. Locate and correct the source of the problem and repeat the test for all parameters of interest beginning with step 3 above.

   b. Beginning with step 3 above, repeat the test for all parameters that failed to meet criteria. Repeated failure, however, will confirm a general problem with the measurement system. If this occurs, locate and correct the source of the problem and repeat the test for all compounds of interest beginning with step 1 above.

B. **Note:** Results of successive LCS analyses can be used to fulfill the DOC requirement.

C. Methods on line prior to the effective date of this Section shall be updated to the procedures outlined above as new analysts perform their demonstrations of capability. A copy of the new record will replace that which was used for documentation in the past. At a minimum, the precision and accuracy of four mid-level laboratory control samples must have been compared to the laboratory's quality control acceptance limits.

17.5) Method Detection Limit (MDL) / Limits of Detection (LOD)

A. Details of the laboratory's procedure for conducting MDL studies are given in SOP No. *33615*.

B. The MDL is the minimum measured quantity of a substance that can be reported with 99% confidence that the concentration is distinguishable from method blank results, consistent with 40CFR Part 136 Appendix B, August, 2017. The MDL is equivalent to the TNI LOD or DL, and is also equivalent to the

Uncontrolled document

DoD/DOE Quality Systems Manual (QSM) DL. The working or final MDL is the higher of the MDL value determined from spikes (MDLs) and the MDL value determined from blanks (MDLb).

C. An initial MDL study shall be performed during the method validation process and when the method is altered in a way that can reasonably be expected to change its sensitivity. Ongoing data are collected during each quarter in which samples are being analyzed. If it is found during the reevaluation of detection limit results that more than 5% of the spiked samples do not return positive numeric results that meet all method qualitative identification criteria, then then spiking level shall be increased and the initial MDL study will be repeated at the new spiking concentration.

D. At least once every 13 months the MDLs and MDLb are recalculated and reevaluated using data collected during the preceding period.

17.6) Limit of Quantitation

A. The LOQ shall be at a concentration equivalent to the lowest calibration standard concentration, with the exception of methods using a single-point calibration, and shall be greater than the MDL. The LOQ is verified by preparing and analyzing spikes at concentrations 1-2 times the selected LOQ, employing the complete analytical process.

B. When the laboratory establishes a quantitation limit, it must be initially verified by the analysis of a low level standard or QC sample at 1-2 times the reporting limit or by a DL check samples at or below the LOQ. The LOQ is verified annually thereafter. The annual requirement is waived for methods that have an annually verified MDL. The laboratory will comply with any regulatory requirements.

C. DoD Requirements for LOQ are described in Section 10 of SOP No. *33615*.

17.7) Retention Time Windows

A. Most organic analyses and some inorganic analyses use chromatography techniques for qualitative and quantitative determinations. For every chromatography analysis or as specified in the reference method, each analyte will have a specific time of elution from the column to the detector. This is known as the analyte's retention time. The variance in the expected time of elution is defined as the retention time window. As the key to analyte identification in chromatography, retention time windows must be established on every column for every analyte used for that method. These records are kept on-file and available for review at the instrument.

17.8) Evaluation of Selectivity

A. The laboratory evaluates selectivity by following the checks within the applicable analytical methods, which include mass spectral tuning, second column confirmation, ICP interelement interference checks, chromatography retention time windows, sample blanks, spectrochemical, atomic absorption or fluorescence profiles, co-precipitation evaluations, specific electrode response factors, etc.

17.9) Estimation of Uncertainty of Measurement

A. Uncertainty is "a parameter associated with the result of a measurement, that characterizes the dispersion of the values that could reasonably be attributed to the measurand" (as defined by the International Vocabulary of Basic and General Terms in Metrology, ISO Geneva, 1993, ISBN 92-67-10175-1). Knowledge of the uncertainty of a measurement provides additional confidence in a result's validity. Its value accounts for all the factors which could possibly affect the result, such as adequacy of analyte definition, sampling, matrix effects and interferences, climatic conditions, variances in weights, volumes, and standards, analytical procedure, and random variation. Some national accreditation organizations require the use of an "expanded uncertainty" defined as the range within which the value of the measurand is believed to lie within at least a 95% confidence level with the coverage factor k=2.

1. Uncertainty is not error. Error is a single value (i.e., the difference between the true result and the measured result). On environmental samples, the true result is never known. The measurement is the sum of the unknown true value and the unknown error. Unknown error is a combination of systematic error, or bias, and random error. Bias varies predictably, constantly, and independently from the number of measurements. Random error is unpredictable, assumed to be Gaussian in distribution, and reducible by increasing the number of measurements.

2. The minimum uncertainty associated with results generated by the laboratory can be determined by using the Laboratory Control Sample (LCS) accuracy range for a given analyte. The LCS limits are

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used to assess the performance of the measurement system since they take into consideration all of the laboratory variables associated with a given test over time (except for variability associated with the sampling and the variability due to matrix effects). The percent recovery of the LCS is compared either to the method-required LCS accuracy limits or to the statistical, historical, in-house LCS accuracy limits.

3. To calculate the uncertainty for the specific result reported, multiply the result by the decimal of the lower end of the LCS range percent value for the lower end of the uncertainty range, and multiply the result by the decimal of the upper end of the LCS range percent value for the upper end of the uncertainty range. These calculated values represent uncertainties at approximately the 99% confidence level with a coverage factor of k = 3. As an example, for a reported result of 1.0 mg/L with an LCS recovery range of 50 to 150%, the estimated uncertainty in the result would be 1.0 +/- 0.5 mg/L.

17.10) Sample Reanalysis Guidelines

A. Because there is a certain level of uncertainty with any analytical measurement, a sample reanalysis may result in either a higher or lower value from an initial sample analysis. There are also variables that may be present (e.g., sample homogeneity, analyte precipitation over time, etc.) that may affect the results of a reanalysis. Based on the above comments, the laboratory will reanalyze samples at a client's request with the caveats listed below. Client specific Contractual Terms & Conditions for reanalysis protocols may supersede the following items.

B. Homogenous samples: If a reanalysis agrees with the original result to within the RPD limits for MS/MSD or Duplicate analyses, or within +/- 1 reporting limit for samples

1. If the reanalysis does not agree (as defined above) with the original result, then the laboratory will investigate the discrepancy and reanalyze the sample a third time for confirmation, if sufficient sample is available.

2. Any potential charges related to reanalysis are discussed in the contract terms and conditions or discussed at the time of the request. The client will typically be charged for reanalysis unless it is determined that the laboratory was in error.

3. Due to the potential for increased variability, reanalysis may not be applicable to Non-homogenous, Encore, and Sodium Bisulfate preserved samples. See the Area Supervisor or Laboratory Director if unsure.

17.11) Control of Data

A. The laboratory has policies and procedures in place to ensure the authenticity, integrity, and accuracy of the analytical data generated by the laboratory.

17.11.1) Computer and Electronic Data Related Requirements

A. The three basic objectives of our computer security procedures and policies are shown below. The laboratory is currently using the Eurofins Laboratory Information Management System (LIMS), which has been highly customized to meet the needs of the laboratory.

1. Maintain the Database Integrity - Assurance that data is reliable and accurate from acquisition through data verification (review) procedures, password-protecting access, anti-virus protection, data change requirements, as well as an internal LIMS permissions procedure.

a. LIMS Database Integrity is achieved through data input validation, internal user controls, documentation of system failures and corrective actions taken, and data change requirements.

b. Spreadsheets and other software developed in-house must be verified with documentation through hand calculations prior to use. Cells containing calculations must be lock-protected and controlled.

c. Instrument hardware and software adjustments are safeguarded through maintenance logs, audit trails, and controlled access.

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2. Ensure Information Availability - Protection against loss of information or service is ensured through scheduled back-ups, stable file server network architecture, secure storage of media, line filter, Uninterruptible Power Supply (UPS), and maintaining older versions of software as revisions are implemented.

3. Maintain Confidentiality - Ensure data confidentiality through physical access controls such as password protection or website access approval when electronically transmitting data.

17.11.2) Data Reduction

A. The complexity of the data reduction depends on the analytical method and the number of discrete operations involved (e.g., extractions, dilutions, instrument readings and concentrations). The analyst calculates the final results from the raw data or uses appropriate computer programs to assist in the calculation of final reportable values.

B. For manual data entry of laboratory-produced data, e.g., Wet Chemistry, the data is reduced by the analyst and then verified by the secondary reviewer in LIMS. The batch data are signed by both the analyst and secondary reviewer to confirm the accuracy of the manual entry(s). For manual data entry of sample collection data, the data is reduced by the sample collected, entered by a secondary staff member and then verified by the reviewer in LIMS. The batch data are signed by both the secondary staff member and reviewer to confirm the accuracy of the manual entry(s).

C. Manual integration of peaks will be documented and reviewed and the raw data will be flagged by the instrument software.

D. Analytical results are reduced to appropriate concentration units specified by the analytical method, taking into account factors such as dilution, sample weight or volume, etc. Blank correction will be applied only when required by the method or per manufacturer's indication; otherwise, it should not be performed. Calculations are independently verified by appropriate laboratory staff. Calculations and data reduction steps for various methods are summarized in the respective analytical SOPs or program requirements.

1. In general, concentration results are reported in milligrams per liter (mg/L) or micrograms per liter (µg/L) for liquids and milligrams per kilogram (mg/kg) or micrograms per kilogram (µg/kg) for solids. For values greater than 10,000 mg/L, results can be reported in percent, i.e., 10,000 mg/L = 1%. Units are defined in each laboratory SOP.

2. For those methods that do not have an instrument printout or an instrumental output compatible with the LIMS, the raw results and dilution factors are entered directly into LIMS by the analyst or secondary staff member for field parameters, and the software calculates the final result for the analytical report. LIMS has a formatter for significant figure criterion for each analyte.

3. All raw data must be retained in the worklist folder, computer file, and/or runlog. All criteria pertinent to the method must be recorded. The documentation is recorded at the time observations or calculations are made and must be signed or initialed/dated (month/day/year). It must be easily identifiable who performed which tasks if multiple people were involved.

4. In reporting, the analyst or the instrument output records the raw data result using values of known certainty plus one uncertain digit. If final calculations are performed external to LIMS, the results should be entered in LIMS with at least three significant figures. In general, results are reported to 2 significant figures on the final report.

5. The laboratory strives to import data directly from instruments or calculation spreadsheets to ensure that the reported data are free from transcription and calculation errors. For those analyses with an instrumental output compatible with the LIMS, the raw results and dilution factors are transferred into LIMS, electronically after reviewing the quantitation report, and removing unrequested or poor spectrally-matched compounds. The analyst prints a copy of what has been entered to check for errors. This printout and the instrument's printout of calibrations, concentrations, retention times, chromatograms, and mass spectra, if applicable, are retained with the data file. The data file is stored in a folder on the instrument computer and the file is backed up to the server that evening.

17.11.3) Logbook / Worksheet Use Guidelines

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A. Logbooks and worksheets are filled out in 'real time' and have enough information on them to trace the events of the applicable analysis/task.

1. Corrections are made following the procedures outlined in Section 12.

2. Logbooks are controlled by the QA department. A record is maintained of all logbooks in the lab.

3. Unused portions of pages must be "Z"d out, signed, and dated.

4. Worksheets are created with the approval of QA. QA controls all worksheets following the laboratory's document control procedures.

17.11.4) Review / Verification Procedures

A. Review of data is performed by primarily by analysts that perform the process step or analytical activity or designated data reviewers such as Group Leaders, senior analysts, local data package staff, and off-site data reviewers. This process ensures that reported data are free from calculation and transcription errors and that QC parameters have been reviewed and evaluated before data is reported. The laboratory also has an SOP discussing manual integrations to ensure the authenticity of the data *NCSC-ETHC-TRN-FRM56342* and there are group-directed trainings in Eurofins Learning Centre that are required. The general review concepts are discussed below.

1. Log-In Review - The data review process starts at the sample receipt stage. Sample control personnel review chain-of-custody forms and project instructions from the project management group. This is the basis of the sample information and analytical instructions entered into the LIMS. The log-in instructions are reviewed by the personnel entering the information, and a second level review is conducted by the project management staff.

2. First Level Data Review - The next level of data review occurs with the analysts. As data are generated, analysts review their work to ensure that the results meet project and SOP requirements. First level reviews include inspection of all raw data (e.g., instrument output for continuous analyzers, chromatograms, spectra, and manual integrations), evaluation of calibration/calibration verification data in the day's analytical run, evaluation of QC data, and reliability of sample results. The analyst transfers data into LIMS, data qualifiers are added as needed. A Data Review Checker (DRC) is utilized as a tool to automate review of select method requirements. All first level reviews are documented.

3. Second Level Data Review - All analytical data are subject to review by a second qualified analyst or supervisor. Second level reviews include inspection of all raw data (e.g., instrument output, chromatograms, and spectra) including 100% of data associated with any changes made by the primary analyst, such as manual integrations or reassignment of peaks to different analytes, or elimination of false negative analytes. The second review also includes evaluation of initial calibration/calibration verification data in the analytical run, evaluation of QC data, reliability of sample results, qualifiers and NCM narratives. Manual calculations are checked in second level review. A Data Review Checker (DRC) is utilized as a tool to automate review of select method requirements. All second level reviews are documented.

4. Issues that deem further review include the following:

   a. QC data that are outside the specified control limits for accuracy and precision.

   b. Reviewed sample that data does not match with reported results.

   c. Unusual detection limit changes.

   d. Samples with unusually high results.

   e. Samples exceeding a known regulatory limit.

   f. Raw data indicating some type of contamination or poor technique.

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g. Inconsistent peak integration

h. Transcription errors.

i. Results outside of calibration range.

5. Unacceptable analytical results may require reanalysis of the samples.

6. The results are then entered or directly transferred into LIMS and a pdf is generated for the client.

7. As a final review prior to the release, some reports may undergo review by the Project Manager for appropriateness and completeness. Other reports continue onto auto reporting.

8. Projects that require a data package may be subject to a tertiary data review for transcription errors and acceptable quality control requirements.

17.11.5) Manual Integrations

A. Computerized data systems provide the analyst with the ability to reintegrate raw instrument data in order to optimize the interpretation of the data. Though manual integration of data is an invaluable tool for resolving variations in instrument performance and some sample matrix problems, when used improperly, this technique would make unacceptable data appear to meet quality control acceptance limits. Improper reintegration may lead to legally indefensible data, a poor reputation, or possible laboratory decertification. Because guidelines for reintegration of data are not provided in the methods and most methods were written prior to widespread implementation of computerized data systems, the laboratory trains all analytical staff on proper manual integration techniques in accordance with NBLSC Document No. *NDSC-ETHC-SOP43862 - Manual Integrations*.

18) INSTRUMENTS, EQUIPMENT, AND CALIBRATION

18.1) Overview

A. Instrumentation is purchased on the basis of accuracy, dependability, efficiency and sensitivity. Each laboratory is furnished with all items of sampling, preparation, analytical testing and measurement equipment necessary to correctly perform the tests for which the laboratory has capabilities. Each piece of equipment is capable of achieving the required accuracy and complies with specifications relevant to the method being performed. Before being placed into use, the equipment (including sampling equipment) is calibrated and checked to establish that it meets its intended specification. The calibration routines for analytical instruments establish the range of quantitation. Calibration procedures are specified in laboratory SOPs. Equipment is only operated by authorized and trained personnel. Manufacturer’s instructions for equipment use hard copies and electronic copies are archived by the local IT group. Electronic copies are readily accessible to all appropriate laboratory personnel as well as the Operations Manager.

18.2) Instrument / Equipment Maintenance

A. The laboratory follows a well-defined maintenance program to ensure proper equipment operation and to prevent the failure of laboratory equipment or instrumentation during use. This program of preventive maintenance helps to avoid delays due to instrument failure.

B. Routine preventive maintenance procedures and frequency, such as cleaning and replacements, should be performed according to the procedures outlined in the manufacturer's manual. Qualified personnel must also perform maintenance when there is evidence of degradation of peak resolution, a shift in the calibration curve, loss of sensitivity, or failure to continually meet one of the quality control criteria.

C. Scheduled routine maintenance is defined in each method SOP. It is the responsibility of each department manager or Group Leader to ensure that instrument maintenance logs are kept for all equipment in his/her department. Preventative maintenance procedures are recorded in instrument maintenance logbooks.

D. Instrument maintenance logbooks are controlled and are used to document instrument problems, instrument repair and maintenance activities. Maintenance logbooks shall be kept for all major pieces of equipment. Instrument maintenance logbooks may also be used to specify instrument parameters.

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1. Documentation must include all major maintenance activities such as contracted preventive maintenance and service, and in-house activities such as the replacement of electrical components, lamps, tubing, valves, columns, detectors, cleaning and adjustments.

2. Each entry in the instrument logbook includes the analyst's initials, the date, a detailed description of the problem (or maintenance needed/scheduled), a detailed explanation of the solution or maintenance performed, and a verification that the equipment is functioning properly (state what was used to determine a return to control. e.g. CCV run on 'date' was acceptable, or instrument recalibrated on 'date' with acceptable verification, etc.) must also be documented in the instrument records.

3. When maintenance or repair is performed by an outside agency, service receipts detailing the service performed must be kept on file.

E. If an instrument requires repair, gives suspect results, or otherwise is shown to be defective or outside of specified limits it shall be taken out of operation and tagged as out-of-service or otherwise isolated until such a time as the repairs have been made and the instrument can be demonstrated as operational by calibration and/or verification or other test to demonstrate acceptable performance. The laboratory shall examine the effect of this defect on previous analyses.

F. At a minimum, if an instrument is sent out for service or transferred to another facility, it must be recalibrated and the laboratory MDL verified (using and MDLv) prior to returning to lab operations.

18.3) Support Equipment

A. SOP No. *33458* and SOP No. *17517* apply to all devices that may not be the actual test instrument, but are necessary to support laboratory operations. These include but are not limited to: balances, ovens, refrigerators, freezers, field sampling devices, temperature measuring devices, thermal/pressure sample preparation devices and volumetric dispensing devices if quantitative results are dependent on their accuracy, as in standard preparation and dispensing or dilution into a specified volume. All raw data records associated with the support equipment are retained to document instrument performance.

18.3.1) Weights and Balances

A. The accuracy of the balances used in the laboratory is checked every working day, before use. All balances are placed on stable counter tops.

B. Each balance is checked prior to initial serviceable use with at least two certified ASTM type 1 weights spanning its range of use (weights that have been calibrated to ASTM type 1 weights may also be used for daily verification). ASTM type 1 weights used only for calibration of other weights (and no other purpose) are inspected for corrosion, damage or nicks at least annually and if no damage is observed, they are calibrated at least every 5 years by an outside calibration laboratory. Any weights (including ASTM Type 1) used for daily balance checks or other purposes are recalibrated/recertified annually to NIST standards (this may be done internally if laboratory maintains "calibration only" ASTM type 1 weights).

C. All balances are serviced annually by a qualified service representative, who supplies the laboratory with a certificate that identifies traceability of the calibration to the NIST standards.

D. All of this information is recorded in logs, and the recalibration/recertification certificates are kept on file.

18.3.2) pH, Conductivity, and Turbidity Meters

A. The pH meters used in the laboratory are accurate to + 0.1 pH units, and have a scale readability of at least 0.05 pH units. The meters automatically compensate for the temperature, and are calibrated with at least two working range buffer solutions on working day prior to use.

B. Conductivity meters used in the laboratory are capable for measuring conductivity with an error not exceeding 1% or one umhos/cm, whichever is greater. The meters are also calibrated on working day prior to use with a known standard.

C. Turbidity meters are also calibrated on each working day prior to use.

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D. All of this information is documented in logs.

E. Consult *pH*, *Conductivity*, and *Turbidity* SOPs for further information.

18.3.3) Temperature Measuring Devices

A. All liquid in glass thermometers are calibrated on an annual basis with a NIST-traceable reference thermometer.

1. If the temperature measuring device is used over a range of 10°C or less, then a single point verification within the range of use is acceptable.

2. If the temperature measuring device is used over a range of greater than 10°C, then the verification must bracket the range of use.

B. IR thermometers, digital probes and thermocouples are calibrated quarterly. IR Thermometers should be calibrated over the full range of use, including ambient, iced (4°C) and frozen (0°C to -5°C), per the Drinking Water Manual.

C. The NIST thermometer is recalibrated every five years by an approved outside service and the provided certificate of traceability is kept on file. The NIST thermometer has increments of 1 degree and has ranges applicable to method and certification requirements. The NIST traceable thermometer is used for no other purpose than to calibrate other thermometers.

D. All of this information is documented in logbooks. Monitoring method-specific temperatures, including incubators, heating blocks, water baths, and ovens, is documented in method-specific logbooks. More information on this subject can be found in the SOP No. *17517*.

18.3.4) Refrigerators, Freezer, Water Baths, Ovens, and Incubators

A. The temperatures of all refrigerators and freezers used for sample and standard storage are monitored 7 days a week. Ovens and water baths are monitored on days of use. All of this equipment has a unique identification number, and is assigned a thermometer for monitoring.

B. Sample storage refrigerator temperatures are kept between > 0ºC and < 6 ºC. Specific temperature settings/ranges for other refrigerators, ovens and water baths can be found in method specific SOPs.

C. All of this information is documented in Daily Temperature Logbooks and method-specific logbooks and discussed in SOP No. *17517*.

18.3.5) Autopipettors, Dilutors, and Syringes

A. Mechanical volumetric dispensing devices are given unique identification numbers and the delivery volumes are verified gravimetrically, at a minimum, on a quarterly basis.

B. For those dispensers that are not used for critical volume measurements, a label shall be applied to the device stating that it is not calibrated. Any device not regularly verified cannot be used for any quantitative measurements.

18.4) Instrument Calibration

A. Calibration of analytical instrumentation is essential to the production of quality data. Strict calibration procedures are followed for each method. These procedures are designed to determine and document the method detection limits, the working range of the analytical instrumentation and any fluctuations that may occur from day today.

B. Sufficient raw data records are retained to allow an outside party to reconstruct all facets of the initial calibration. Records contain, but are not limited to, the following: calibration date, method, instrument, analyst(s) initials or signatures, analysis date, analytes, concentration, response, and type of calibration (Avg RF, curve, or other calculations that may be used to reduce instrument responses to concentration.)

C. Sample results must be quantitated from the initial calibration and may not be quantitated from any continuing instrument calibration verification unless otherwise required by regulation, method or program.

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D. If the initial calibration results are outside of the acceptance criteria, corrective action is performed and any affected samples are reanalyzed if possible. If the reanalysis is not possible, any data associated with an unacceptable initial calibration will be reported with appropriate data qualifiers. Recalibration is performed as needed, per method, or at least annually.

18.4.1) Calibration Standards

A. Calibration standards are prepared using the procedures indicated in the Reagents and Standards section of the determinative method SOP.

B. Standards for instrument calibration are obtained from a variety of sources. All standards are traceable to national or international standards of measurement, or to national or international standard reference materials.

C. The lowest concentration calibration standard that is analyzed during an initial calibration must be at or below the stated reporting limit for the method based on the final volume of extract (or sample).

D. The other concentrations define the working range of the instrument/method or correspond to the expected range of concentrations found in actual samples that are also within the working range of the instrument/method. Results of samples not bracketed by initial instrument calibration standards (within calibration range to at least the same number of significant figures used to report the data) must be reported as having less certainty, e.g., defined qualifiers or flags (additional information may be included in the case narrative). The exceptions to these rules; ICP and ICPMS methods, which define the working range with periodic linear dynamic range studies, rather than through the range of concentrations of daily calibration standards.

E. All initial calibrations are verified with a standard obtained from a second source and traceable to a national standard, when available (or vendor certified different lot if a second source is not available). For unique situations, such as air analysis where no other source or lot is available, a standard made by a different analyst at a different time or a different preparation would be considered a second source. This verification occurs immediately after the calibration curve has been analyzed, and before the analysis of any samples.

18.4.2) Calibration Verification

A. The calibration relationship established during the initial calibration must be verified initially and at least daily as specified in the laboratory method SOPs in accordance with the referenced analytical methods and in the TNI Standard. The process of calibration verification applies to both external standard and internal standard calibration techniques, as well as to linear and non-linear calibration models. Initial calibration verification (ICV) is with a standard source secondary (second source standard) to the calibration standards, but continuing calibration verifications (CCV) may use the same source standards as the calibration curve.

1. **Note:** The process of calibration verification referred to here is fundamentally different from the approach called "calibration" in some methods. As described in those methods, the calibration factors or response factors calculated during calibration are used to update the calibration factors or response factors used for sample quantitation. This approach, while employed in other EPA programs, amounts to a daily single-point calibration.

B. All target analytes and surrogates, including those reported as non-detects, must be included in periodic calibration verifications for purposes of retention time confirmation and to demonstrate that calibration verification criteria are being met.

C. All samples must be bracketed by periodic analyses of standards that meet the QC acceptance criteria (e.g., calibration and retention time). The frequency is found in the determinative methods or SOPs.

1. **Note:** If an internal standard calibration is being used then bracketing calibration verification standards may not be required, only daily verifications are needed. The results from these verification standards must meet the calibration verification criteria and the retention time criteria (if applicable).

D. Generally, the calibrations must be verified by an ICV analyzed immediately following initial calibration and before sample analysis. The ICV may be used as the first bracketing CCV, if criteria for both are

Uncontrolled Document

met.

E. A continuing instrument calibration verification (CCV) is generally analyzed at the beginning of each 12-hour analytical shift during which samples are analyzed. The 12-hour analytical shift begins with the injection of the calibration verification standard (or the MS tuning standard in MS methods). The shift ends after the completion of the analysis of the last sample, QC, or standard that can be injected within 12-hours of the beginning of the shift. For methods that have quantitation by external calibration models, a CCV is analyzed at the end of each analytical sequence. Some methods have more frequent CCV requirements. Most inorganic methods require the CCV to be analyzed after every 10 samples or injections, including matrix or batch QC samples.

F. If the results of a CCV are outside the established acceptance criteria and analysis of a second consecutive (and immediate) CCV fails to produce results within acceptance criteria, corrective action shall be performed. Once corrective actions have been completed and documented, the laboratory shall demonstrate acceptable instrument / method performance by analyzing two consecutive CCVs, or a new initial instrument calibration shall be performed.

G. Calibration verification for calibrations involves the calculation of the percent drift or the percent difference of the instrument response between the initial calibration and each subsequent analysis of the verification standard. (These calculations are available in the laboratory method SOPs.) Verification standards are evaluated based on the % Difference from the average CF or RF of the initial calibration or based on % Drift or % Recovery if a linear or quadratic curve is used.

H. Regardless of whether a linear or non-linear calibration model is used, if initial verification criterion is not met, then no sample analyses may take place until the calibration has been verified or a new initial calibration is performed that meets the specifications listed in the method SOPs. If the calibration cannot be verified after the analysis of a single verification standard, then adjust the instrument operating conditions and/or perform instrument maintenance, and analyze another aliquot of the verification standard. If the calibration cannot be verified with the second standard, then a new initial calibration is performed.

I. Sample analyses and reporting of data may not occur or continue until the analytical system is calibrated or calibration verified. However, data associated with an unacceptable calibration verification may be fully useable reported based upon discussion and approval of the client under the following special conditions:

   1. When the acceptance criteria for the CCV are exceeded high (i.e., high bias) and the associated samples within the batch are non-detects, then those non-detects may be reported with case narrative comment explaining the high bias. Otherwise the samples affected by the unacceptable CCV shall be re-analyzed after a new calibration curve has been established, evaluated and accepted.

   2. When the acceptance criteria for the CCV are exceeded low (i.e., low bias), those sample results may be reported if they exceed a maximum regulatory limit/decision level. Otherwise the samples affected by the unacceptable CCV shall be re-analyzed after a new calibration curve has been established, evaluated and accepted. Alternatively, a reporting limit standard may be analyzed to demonstrate that the laboratory can still support non-detects at their reporting limit.

J. Samples reported by the 2 conditions identified above will be appropriately flagged.

19) MEASUREMENT TRACEABILITY

19.1) Overview

A. Traceability of measurements shall be assured using a system of documentation, calibration, and analysis of reference standards. Laboratory equipment that are peripheral to analysis and whose calibration is not necessarily documented in a test method analysis or by analysis of a reference standard shall be subject to ongoing certifications of accuracy. At a minimum, these must include procedures for checking specifications of ancillary equipment. Wherever possible, subsidiary or peripheral equipment is checked against standard equipment or standards that are traceable to national or international standards.

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B. With the exception of Class A Glassware, quarterly accuracy checks are performed for mechanical volumetric devices used to measure critical volumes. Calscience also checks glass microliter syringes for accuracy on a semiannual basis. Class A Glassware should be routinely inspected for chips and acid etching. If the Class A glassware is suspect, the accuracy of the glassware will be assessed prior to use.

19.2) Reference Weights and Thermometers

A. Reference standards of measurement shall be used for calibration only and for no other purpose, unless it can be shown that their performance as reference standards would not be invalidated.

B. For reference weights and thermometers, the laboratory requires that all calibrations be conducted by a calibration laboratory accredited under ISO/IEC 17025. A calibration certificate for these reference weights and thermometers is kept on file at the laboratory.

19.3) Reference Standards, Materials, and Reagents

A. Reference standards/materials/reagents, where commercially available, are traceable to certified reference materials. Commercially prepared reference standards, to the extent available, are purchased from vendors that are accredited under ISO 17034. All reference standards from commercial vendors shall be accompanied with a certificate that includes at least the following information:

1. Manufacturer
2. Analytes or parameters calibrated
3. Identification or lot number
4. Concentration with associated uncertainties
5. Purity

B. If a standard cannot be purchased from a vendor that supplies a Certificate of Analysis, the purity of the standard is documented by analysis. The receipt of all reference standards must be documented. Reference standards are labeled with a unique identification number and expiration date. All documentation received with the reference standard is retained as a QC record and references the identification number.

C. All reference, primary and working standards/materials, whether commercially purchased or laboratory prepared, must be checked regularly to ensure that the variability of the standard or material from the true value does not exceed method requirements. The accuracy of calibration standards is checked by comparison with a standard from a second source. In cases where a second standard manufacturer is not available, a vendor certified different lot is acceptable for use as a second source. For unique situations, such as air analysis where no other source or lot is available, a standard made by a different analyst would be considered a second source. The appropriate Quality Control (QC) criteria for specific standards are defined in laboratory SOPs.

D. All standards and materials must be stored and handled according to method or manufacturer's requirements in order to prevent contamination or deterioration.

E. Standards and reference materials shall not be used after their expiration dates unless their reliability is verified by the laboratory and their continued use through the extended expiration period is approved by the QA Manager.

F. Records are maintained electronically for standard and reference material preparation. These records show the traceability to purchased stocks or neat compounds. These records also include method of preparation, date of preparation, expiration date and preparer's name or PUID. Preparation procedures are provided in the Method SOPs.

G. All standards, reagents, and reference materials must be clearly labeled with a minimum of the following information:

1. Expiration Date (include prep date for reagents)

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2. Identification number
3. Date opened

H. Label with the following when container size allows, if not, ensure the information is in the associated LIMS/logbook record:

1. Description (if different from manufacturer's label or if it was prepared in the laboratory)
2. Storage Conditions
3. Concentration (if applicable)
4. Preparer name/ID

I. Special Health/Safety warnings must also be available to the analyst. This information is found in the associated SDS.

20) SAMPLING

20.1) Overview

A. The laboratory provides sampling services. Sampling procedures are described in SOP No. *46239*, Wastewater Sampling.

20.2) Sampling Containers

A. The laboratory offers clean sampling containers for use by clients. These containers are obtained from ESS, a reputable container manufacturer that meets EPA specifications as required. Certificates of cleanliness for bottles and preservatives are maintained by the supplier and available to the laboratory on-line or by request.

B. Preservatives are provided to the client in pre-cleaned sampling containers. In some cases, containers may be prepared by the laboratory. At a minimum, the preservatives are:

1. Hydrochloric Acid: Instra-Analyzed or equivalent
2. Methanol: Purge and Trap grade
3. Nitric Acid: ACS grade or equivalent.
4. Sodium Bisulfate: ACS grade or equivalent.
5. Sodium Hydroxide: ACS grade or equivalent.
6. Sulfuric Acid: Instra-Analyzed or equivalent.

21) SAMPLE HANDLING

21.1) Chain of Custody (COC)

A. The COC form is the documented history of any sample and is initiated when bottles are sent to the field, or at the time of sampling. This form is completed by the sampling personnel and accompanies the samples to the laboratory where it is received and stored under the laboratory’s custody. The purpose of the COC form is to provide a legal record of the handling of samples from the time of collection until they are received at the laboratory. It also serves as the primary documented request for analyses from the client to the laboratory. The COC form may serve as the purchase order specifying the requested analytical services when no other contractual agreement is in effect.

B. Field COC Documentation

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1. The information the sampler needs to provide at the time of sampling on the container label includes:
    a. Sample identification
    b. Date and time of collection
    c. Preservative (laboratory-provided containers will have this information)
2. During the sampling process, the COC form is completed and must be legible. This form includes information such as:
    a. Client name, address, phone number, and fax number (if available)
    b. Project name, and/or number
    c. The sample identification
    d. Date, time, and location of sampling
    e. Sample collector's name
    f. The matrix description
    g. The container description
    h. The total number of each type of container
    i. Preservatives used
    j. Analysis requested
    k. Requested turnaround time (TAT)
    l. Any special instructions
    m. Purchase Order number or billing information (e.g. quote number) if available
    n. The date and time that each person received or relinquished the sample(s), including their signed name.
3. The client relinquishes the samples in writing on the COC form, or through the Eurofins eCOC electronic transfer program, to the sample control personnel at the laboratory or to a laboratory courier. The laboratory personnel document the receipt date and time on the COC.
4. When clients send the samples through a common carrier (e.g., Fed-Ex, UPS), the COC relinquished date/time is completed by the client. Samples are documented as received by the laboratory with the date and time of receipt of the shipment from the common carrier.
5. **Note:** Independent couriers are not required to sign the COC form.

C. Legal / Evidentiary COC

1. If samples are identified for legal/evidentiary purposes on the COC, login will complete the custody seal, retain the shipping record with the COC, and initiate an internal COC for laboratory use by analysts and a sample disposal record.

21.2) Sampling Containers, Preservation Requirements, Holding Times

A. The sampling container type, preservation, and holding time criteria specified in the laboratory SOPs are derived from the source documents for the methods. If method required holding times or preservation requirements are not met, the reports will be qualified using a flag, footnote and/or case narrative comment.

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B. The date and time of sampling documented on the COC form establishes the day and time zero. As a general rule, when the maximum allowable holding time is expressed in days (e.g., 14 days, 28 days), the holding time is based on calendar day measured. Holding times expressed in hours (e.g., 6 hours, 24 hours, etc.) are measured from date and time zero. Holding times for analysis include any necessary reanalysis.

C. Tests designated in the method or regulation as to be performed "As soon as possible" or "ASAP" is indicative of a parameter that should be analyzed within 15 minutes of collection. Therefore, these are typically tests that are performed in the field. When the analysis is performed in the laboratory, the data will be qualified as outside the holding time.

21.3) Sample Receipt

A. Samples are received at the laboratory by designated sample receiving personnel and a unique laboratory job identification number is assigned. Each sample container shall be assigned a unique sample identification number that is cross-referenced to the client identification number such that traceability of test samples is unambiguous and documented. Each sample container is affixed with a durable sample identification label. Sample acceptance, receipt, tracking and storage procedures are detailed in the laboratory's *SC-SOP39452 Sample Receipt and Login Procedures*.

B. When samples arrive at the laboratory, sample receiving personnel inspect the coolers and samples. The integrity of each sample must be determined by comparing sample labels with the COC and by visual checks of the container for possible damage. Any nonconformance, irregularity, or compromised sample receipt must be documented on the receipt checklist and brought to the immediate attention of the client. The COC, shipping documents, documentation of any nonconformance, irregularity, or compromised sample receipt, record of client contact, and resulting instructions become part of the project record.

C. Sample Receiving personnel document preservation of non-volatile liquid samples after the samples have been entered into the LIMS and before they are released to the laboratory for testing or placed into storage.

21.4) Sample Acceptance Policy

A. The laboratory has a written sample acceptance policy that clearly outlines the circumstances under which samples shall be accepted or rejected. This policy is outlined in the SOP noted above in Section 21.2.

B. After inspecting the samples, the sample receiving personnel sign and date the COC form, make any necessary notes of the samples' conditions and store them in appropriate refrigerators or storage locations.

C. Any deviations from these checks that question the suitability of the sample for analysis, or incomplete documentation as to the tests required will be resolved by consultation with the client. If the sample acceptance policy criteria are not met, the laboratory shall either:

1. Retain all correspondence and/or records of communications with the client regarding the disposition of rejected samples, or

2. Fully document any decision to proceed with sample analysis that does not meet sample acceptance criteria.

D. Once sample acceptance is verified, the samples are logged into LIMS.

21.5) Sample Storage

A. In order to avoid deterioration, contamination or damage to a sample during storage and handling, from the time of receipt until all analyses are complete, samples are stored in refrigerators, freezers or protected locations suitable for the sample matrix. In addition, samples to be analyzed for volatile

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organic parameters are stored in separate refrigerators designated for volatile organic parameters only. Samples are never to be stored with reagents, standards or materials that may create contamination.

B. To ensure the integrity of the samples during storage, refrigerator blanks are maintained in the volatile sample refrigerators and analyzed every two weeks.

C. Access to the laboratory is controlled such that sample storage need not be locked at all times unless a project specifically requires it. Samples are accessibly to laboratory personnel only. Visitors to the laboratory are prohibited from entering the storage and laboratory areas unless accompanies by an employee of Eurofins Calscience.

21.6) Hazardous Samples and Foreign Soils

A. All samples should be treated as hazardous until clearly noted otherwise. To minimize exposure to personnel and to avoid potential accidents, foreign soil samples are stored in a designated area and have a Foreign Soil sticker attached as described in SOP No. *17778*, *Handling and Disposal of Foreign Soil Samples*. Hazardous samples are designated for hazardous waste only. For any sample that is known to be hazardous at the time of receipt, or if after completion of analysis the result exceeds the acceptable regulatory levels, a Hazardous Sample Notice must be completed by the analyst. This form may be completed by Sample Control, Project Managers, or analysts and must be attached to the report.

B. The sample itself is clearly marked with a red stamp, stamped on the sample label reading "HAZARDOUS" and placed in a colored and/or marked bag to easily identify the sample. The date, log number, lab sample number, and the result or brief description of the hazard are all written on the Hazardous Sample Notice. A copy of the form must be included with the original COC and Work Order and the original must be given to the Sample Control Custodian.

C. Analysts will notify Sample Control of any sample determined to be hazardous after completion of analysis by completing a Hazardous Sample Notice. All hazardous samples are either returned to the client or disposed of appropriately through a hazardous waste disposal firm that lab-packs all hazardous samples and removed them from the laboratory. Foreign soil samples are sent out for incineration by Veolia.

21.7) Sample Shipping

A. Reference SOP No. *39452*, Section 11, Inter-Laboratory Sampling

1. In the event that the laboratory needs to ship samples, the samples are placed in a cooler with enough ice to ensure the samples remain just above freezing and at or below 6°C during transit. The samples are carefully surrounded by packing material to avoid breakage (yet maintain appropriate temperature). A trip blank is enclosed for those samples requiring water/solid volatile organic analyses and a temperature blank. The chain-of-custody form is signed by the sample control technician and attached to the shipping paperwork. A custody seal is placed is required.

2. Samples are generally shipped overnight express. All personnel involved with shipping and receiving samples must be trained to maintain the proper chain-of-custody documentation and to keep the samples intact and on ice. The laboratory's Environmental, Health and Safety Manual contains additional shipping requirements.

3. **Note:** If the sample will be sent outside of California, refer to the Shipping Requirements section of the SOP No. *17778*, *Handling and Disposal of Foreign Soil Samples*, for further requirements.

21.8) Sample Disposal

A. Samples should be retained for a minimum of 30 days after the project report is sent, however, provisions may be made for earlier disposal of samples once the holding time is exceeded. Some samples are required to be help for longer periods based on regulatory or client requirements. The laboratory must follow the longer sample retention requirements where required by regulation or client agreement.

B. Several possibilities for sample disposal exist: the sample may be consumed completely during analysis, the sample may be returned to the customer or location of sampling for disposal, or the sample may be

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disposed of in accordance with the laboratory's waste disposal procedures SOP No. *38183*, *Disposal of Laboratory Wastes and Samples*. All procedures in the laboratory's *Environmental Health and Safety Manual* are followed during disposal. Unused portions of samples found or suspected to be hazardous according to state or federal guidelines may be returned to the client upon completion of the analytical work or disposed of in the relevant hazardous waste stream.

C. If a sample is part of a known litigation, the affected legal authority, sample data user, and/or submitter of the sample must participate in the decision about the sample's disposal.

D. All documentation and correspondence concerning the disposal decision process must be kept on file. Pertinent information includes the date of disposal, nature of disposal (such as sample depletion, hazardous waste facility disposal, return to client), names of individuals who conducted the arrangements and physically completed the task. The laboratory will remove or deface sample labels prior to disposal unless this is accomplished through the disposal method (e.g., samples are incinerated).

22) ASSURING THE QUALITY OF TEST RESULTS

22.1) Overview

A. In order to assure our clients of the validity of their data, the laboratory continuously evaluates the quality of the analytical process. The analytical process is controlled not only by instrument calibration, but also by routine process quality control requirements. These quality control checks are performed as required by the method and/or regulations to assess precision and accuracy. Quality control samples are to be treated in the exact same manner as the associated field samples being tested (e.g. filtering of samples requires the QC to also be filtered). In addition to the routine process quality control samples, Proficiency Testing (PT) Samples are analyzed to help ensure laboratory performance.

22.2) Controls

A. Samples are arranged into discreet manageable groups referred to as batches. Typically a batch consists of a maximum 20 field samples and the associated preparation and/or analytical quality control (QC) samples. Control samples are added to each batch to monitor method performance and are processed through the entire procedure with field samples.

22.3) Negative Controls

Control Type	Details
Method Blank (MB)	To assess preparation and analysis for possible contamination during the preparation and processing steps.
	The specific frequency of use for method blanks during the analytical sequence is defined in the specific standard operating procedure for each analysis. Generally it is 1 for each batch of samples; not to exceed 20 environmental samples.
	The method blank is prepared from a clean matrix similar to that of the associated samples that is free from target analytes (e.g., Reagent water, Ottawa sand, glass beads, etc.) and is processed along with and under the same conditions as the associated samples.
	The method blank goes through all of the steps of the process (including as necessary: filtration, clean-ups, etc.).
	Reanalyze or qualify associated sample results when the concentration of a targeted analyte in the blank is at or above the reporting limit as established by the method or by regulation, AND is greater than 1/10 of the amount measured in the sample.
Calibration Blanks	Prepared and analyzed along with calibration standards where applicable. They are prepared using the same reagents that are used to prepare the standards. In some analyses the calibration blank may be included in the calibration curve.
Instrument Blanks	Blank reagents or reagent water that may be processed during an analytical sequence in order to assess contamination in the analytical system. In general, instrument blanks are used to differentiate between contamination caused by the analytical system and that caused by the sample handling or sample prep process. Instrument blanks may also be

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	inserted throughout the analytical sequence to minimize the effect of carryover from samples with high analyte content.
Trip Blank (TB)[1]	TBs are required to be submitted by the client with each shipment of samples requiring aqueous and solid volatiles analyses (or as specified in the client's project plan). Additionally, trip blanks may be prepared and analyzed for volatile analysis of air samples, when required by the client. A trip blank may be purchased (certified clean) or is prepared by the laboratory by filling a clean container with pure deionized water that has been purged to remove any volatile compounds. Appropriate preservatives are also added to the container. The trip blank is sent with the bottle order and is intended to reflect the environment that the containers are subjected to throughout shipping and handling and help identify possible sources if contamination is found. The field sampler returns the trip blank in the cooler with the field samples.
Field Blanks (FB)[1]	FBs are sometimes used for specific projects by the field samplers. A field blank prepared in the field by filling a clean container with pure reagent water and appropriate preservative, if any, for the specific sampling activity being undertaken. (EPA OSWER)
Equipment Blanks (EB)[1]	EBs are also sometimes created in the field for specific projects. An equipment blank is a sample of analyte-free media which has been used to rinse common sampling equipment to check effectiveness of decontamination procedures. (TNI)
Holding Blanks	Also referred to as refrigerator, storage, or freezer blanks, are used to monitor the sample storage units for volatile organic compounds during the storage of VOA samples in the laboratory.

[1] - When known, these field QC samples should not be selected for matrix QC as it does not provide information on the behavior of the target compounds in the field samples. Usually, the client sample ID will provide information to identify the field blanks with labels such as "FB", "EB", or "TB."

22.4) Positive Controls

A. Control samples are analyzed with each batch of samples to evaluate data based upon:

1. Method Performance - Laboratory Control Sample (LCS) or Laboratory Fortified Blank (LFB) - which includes both the preparation and analysis steps. The LCS measures the accuracy of the method in a blank matrix and assesses method performance independent of potential field sample matrix effects in a laboratory batch.

2. Matrix Effects - Matrix Spike (MS) or Sample Duplicate (MSD, DUP) - which includes both the preparation and analysis steps. The matrix QC evaluates field sampling accuracy, precision, representativeness, interferences, and the effect of the matrix on the method performed.

B. Each regulatory program and each method within those programs specify the control samples that are prepared and/or analyzed with a specific batch.

C. Complete details on additional method control samples are listed in each analytical SOP.

22.5) Acceptance Criteria (Quality Control Limits)

As mandated by the test method and/or regulation, each individual analyte in the QC is evaluated against the control limits published in the test method. Where there are no established acceptance criteria, the laboratory calculates in-house control limits with the use of control charts or, in some cases, utilizes client project specific control limits. When this occurs, the regulatory or project limits will supersede the laboratory's in-house limits.

A. **Note:** For methods, analytes and matrices with very limited data (e.g., unusual matrices not analyzed often), interim limits are established using available data or by analogy to similar methods or matrices.

B. Once control limits have been established, they are verified, reviewed, and updated if necessary on an annual basis unless the method requires more frequent updating. Control limits are established per method regardless of the number of instruments utilized.

C. SOP No. *33613*, *Internal Quality Control Checks*

1. Laboratory generated % Recovery acceptance (control) limits are generally established by taking ± 3 Standard Deviations (99% confidence level) from the average recovery of a minimum of 20-30 data

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points (more points are preferred).

2. Regardless of the calculated limit, the limit should be no tighter than the Calibration Verification (ICV/CCV). (Unless the analytical method specifies a tighter limit).

3. In-house limits cannot be any wider than those mandated in a regulated analytical method. Client or contract required control limits are evaluated against the laboratory's statistically derived control limits to determine if the data quality objectives (DQOs) can be achieved. If laboratory control limits are not consistent with DQOs, then alternatives must be considered, such as method improvements or use of an alternate analytical method.

4. The lowest acceptable recovery limit will be 10% (the analyte must be detectable and identifiable).

5. See SOP No. *33613* for other acceptable ranges.

D. A **LCS** that is within the acceptance criteria establishes that the analytical system is in control and is used to validate the process. Samples that are analyzed with an LCS with recoveries outside of the acceptance limits may be determined as out of control and should be reanalyzed if possible. If reanalysis is not possible, then the results for all affected analytes for samples within the same batch must be qualified when reported. The internal corrective action process (see Section 10) is also initiated if an LCS exceeds the acceptance limits. Sample results may be qualified and reported without reanalysis if:

1. The analyte results are below the reporting limit and the LCS is above the upper control limit.

2. If the analytical results are above the relevant regulatory limit and the LCS is below the lower control limit.

E. If the **MS/MSDs** do not meet acceptance limits, the MS/MSD and the associated spiked sample is reported with a qualifier for those analytes that do not meet limits. If obvious preparation errors are suspected, or if requested by the client, unacceptable MS/MSDs are reprocessed and reanalyzed to prove matrix interference.

F. If a **surrogate** standard falls outside the acceptance limits, and if there is not obvious chromatographic matrix interference, reanalyze the sample to confirm a possible matrix effect. If the recoveries confirm or there was obvious chromatographic interference, results are reported from the original analysis and a qualifier is added. If the reanalysis meets surrogate recovery criteria, the second run is reported (or both are reported if requested by the client).

22.5) Marginal Exceedance

A. Marginal exceedances (ME) are recovery values between 3 SD and 4 SD from the mean recovery limit.

B. Marginal exceedances must be random. If the same analyte exceeds the LCS control limit repeatedly, it is an indication of a systematic problem. The source of the error must be located and corrective action taken. Though marginal exceedance may be allowed, the data must still be qualified to indicate it is outside of the normal limits.

C. For TNI and DoD/DOE work, there are an allowable number of Marginal Exceedances.

1. **Note:** Some methods/regulations may not allow the use of ME.

Number of Analytes	Number of Marginal Exceedances Allowed
< 11 analytes	0 marginal exceedances are allowed.
11-30 analytes	1 marginal exceedance is allowed.
31-50 analytes	2 marginal exceedances are allowed.
51-70 analytes	3 marginal exceedances are allowed.
71-90 analytes	4 marginal exceedances are allowed.
> 90 analytes	5 marginal exceedances are allowed.

D. See SOP No. *33613*, *Internal Quality Control Checks*, Section 12.1.

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23) REPORTING RESULTS

23.1) Overview

A. The results of each test are reported accurately, clearly, unambiguously, and objectively in accordance with State and Federal regulations as well as client requirements. Analytical results are issued in a format that is intended to satisfy customer and laboratory accreditation requirements as well as provide the end user with the information needed to properly evaluate the results. Where there is conflict between client requests and laboratory ethics or regulatory requirements, the laboratory's ethical and legal requirements are paramount, and the laboratory will work with the client during project set up to develop an acceptable solution.

B. A variety of report formats are available to meet specific needs.

23.2) Test Reports

A. At a minimum, the standard laboratory report shall contain the following information:

1. A report title (e.g., Analytical Report).
2. The cover page shall include the laboratory name, address and telephone number.
3. A unique identification of the report (e.g., Eurofins Calscience Job ID #) and on each page an identification in order to ensure the page is recognized as part of the report and a clear identification of the end.
    a. **Note:** Page numbers of report are represented as page # of ##. Where the first number is the page number and the second is the total number of pages.
4. A copy of the chain of custody (COC), including Subcontract and/or Workshare COCs.
5. The name and address of client and a project name/number, if applicable.
6. Client project manager or other contact.
7. Description and unambiguous identification of the tested sample(s) including the client identification code.
8. Date of receipt of sample, date and time of collection, date(s) of test preparation and performance, and time of preparation or analysis if the required holding time for either activity is less than or equal to 72 hours.
9. Release Date, or date of revision (when applicable).
10. Method used (EPA ###, Standard Methods ####, etc.).
11. Reporting limit.
12. Method detection limits (if requested)
13. Definition of Data qualifiers and reporting acronyms.
14. Sample results.
15. Batch QC data.
16. Condition of samples at receipt including temperature.
17. A statement to the effect that the results relate only to the items tested and the sample as received by the laboratory, except when information is provided by the client. When data is provided by the

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client there shall be a clear identification of it, and a disclaimer shall be put in the report when the client supplied data can affect the validity of the test.

18. A statement that the report shall not be reproduced except in full, without prior express written approval by the laboratory.

19. A signature and title of the person(s) accepting responsibility for the content of the report and date of release. Authorized signatories are designated Project Managers.

20. A narrative to the report that explains any noncompliant data and (where applicable) action(s) taken (e.g. repreparation, reanalysis).

21. When soil samples are analyzed, a specific identification as to whether soils are reported on a "wet weight" or "dry weight" basis.

22. Laboratory certification number for the state of origin of the sample, if applicable.

23. If only part of the report is provided to the client (client requests some results before all of it is complete), it must be clearly indicated on the report (e.g., partial report). A complete report must be sent once all of the work has been completed.

24. Any subcontracted analysis results are provided as an attachment of the subcontract laboratory's report. All subcontract or workshare testing is clearly identified on the report as to which laboratory performed which analysis.

25. A Certification Summary Report, where required, will document that, unless otherwise noted, all analytes tested and reported by the laboratory were covered by the noted certifications.

23.3) Reporting Level or Report Type

A. The type and format of the Analysis report is designed to accommodate each type of environmental test carried out and to minimize the possibility of misunderstanding or misuse of the data. The laboratory offers four levels of quality control reporting. Each level, in addition to its own specific requirements, contains all the information provided in the preceding level.

B. The packages provide the following information:

1. Level 2 is a basic sample results report noting any data qualification and QC summary information.

2. Level 3 contains all the information supplied in Level 2, but presented on the CLP-like summary forms, and relevant calibration information. No raw data is provided.

3. Level 4 is the same as Level 3 with the addition of all raw supporting data.

C. Various formatter options are available with the report types. These are designed to meet program and/or client specific requirements. The formatters define such parameters as reporting to the MDL/DL vs LOQ/RL, flags and qualifier types (e.g., DoD, state specific). The laboratory also offers reports in an electronic data deliverable (EDD) formats.

23.4) Electronic Data Deliverable (EDD)

A. A variety of EDDs are available. EDD formats include, but are not limited to, Environmental Restoration Information Management Systems (ERPIMS), Staged Electronic Data Deliverable (SEDD), Environmental Quality Information System (EQuIS), Electronic Deliverable Format (EDF), Excel and custom files, etc.

23.5) Amendments to Test Reports

A. Corrections, additions, or deletions to final issued reports are only made when justification arises through supplemental documentation. Investigation into any laboratory caused data change is documented using the laboratory's corrective action system.

B. Copies of all Final versions of a report are maintained in LIMS. Any revisions are identified with a revision # in the file name and on the report cover page. The date that the version was generated is also identified on the cover page.

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C. Further detail on the revision is provided in the report narrative. This detail includes the date of the original report and the reason for the revision. Example explanatory text is, *"The report being provided is a revision of the original report sent on 5/4/2022. The report (revision 1) is being revised due to correction to QC data for method ####."*

23.5.1) Policy on Data Omissions or Reporting Limit Increases

A. Eurofins policy is simply to not omit previously reported results (including data qualifiers) or to not raise reporting limits and report sample results as ND.

B. This policy has the following exceptions:

1. Laboratory error.
2. Sample identification is unclear (discrepancy between COC and sample labels).
3. An incorrect analysis (not analyte) was requested (e.g., COC lists 8315 but client wanted 8310); documented request for the change is required.
4. Incorrect limits reported based on regulatory requirements.
5. The requested change has absolutely *no possible* impact on the interpretation of the analytical results and there is *no possibility* of the chage being interpreted as misrepresentation by anyone inside or outside of our company.

23.5.2) Multiple Reports

A. The laboratory does not issue multiple reports for the sample work order where there is different information on each report.

24) APPENDICES

A. Appendix 1 -- Definitions
B. Appendix 2 -- Organizational Chart

24.1) References

A. The QAM has been prepared to be consistent with the requirements of the following documents:

1. ANSI/ASQC, E4-1994, "Specifications and Guidelines for Quality Management Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995, or most recent version).
2. "EPA Requirements for Quality Management Programs" (QA/R-2) (EPA/240/B-01/002, May 31, 2006).
3. EPA 600/4-88/039, *Methods for the Determination of Organic Compounds in Drinking Water*, EPA, Revised July 1991.
4. EPA 600/R-95/131, *Methods for the Determination of Organic Compounds in Drinking Water*, Supplement III, EPA, August 1995.
5. EPA 600/4-79-019, *Handbook for Analytical Quality Control in Water and Wastewater Laboratories*, EPA, March 1979.
6. *Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)*, current editions.
7. *U.S. Department of Defense (DoD)/Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories*, current version.
8. Federal Register, 40 CFR Parts 136, 141, 172, 173, 178, 179 and 261.

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9. *Statement of Work for Inorganics & Organics Analysis, SOM and ISM*, current versions, USEPA Contract Laboratory Program Multi-media, Multi-concentration.

10. APHA, *Standard Methods for the Examination of Water and Wastewater*, current edition.

11. Toxic Substances Control Act (TSCA).

End of document

Version	Approval	Revision information
10	22.FEB.2022	Add Business Unit Manager and Laboratory Director as document approvers.
10.1	24.AUG.2023	Change section 5.6 to refer to the Reagents and Standards SOP.
11	04.SEP.2024	Entire document change to NBLSC template to include DoD requirements.

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Quality Assurance Manual for Environmental Analytical Services

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The NELAC Institute (TNI)
Management and Technical Requirements for Laboratories Performing Environmental Analysis
TNI Standard (EL-V1-2016-Rev 2.1) Effective December 6, 2016

1) INTRODUCTION, SCOPE, AND APPLICABILITY
- 1.1) Introduction and Compliance References
- 1.2) Terms and Definitions
- 1.3) Scope / Fields of Testing
- 1.4) Quality Manual Review Process

2) MANAGEMENT REQUIREMENTS
- 2.1) Overview
- 2.2) Roles and Responsibilities
- 2.3) Business Continuity and Contingency Plans

3) PERSONNEL
- 3.1) Overview
- 3.2) Education and Experience Requirements for Technical Personnel
- 3.3) Training
  - 3.3.1) Initial Demonstration of Capability (IDOC)
  - 3.3.2) Continuing Demonstration of Capability (CDOC)
- 3.4) Ethics and Data Integrity Training

4) ACCOMODATIONS AND ENVIRONMENTAL CONDITIONS
- 4.1) Overview
- 4.2) Environment
- 4.3) Work Areas
- 4.4) Responding to Emergencies
- 4.5) Building Security

5) QUALITY SYSTEM
- 5.1) Quality Policy Statement
- 5.2) Ethics and Data Integrity
- 5.3) Quality System Documentation
- 5.4) Quality Control (QC) Objectives for the Measurement of Data
- 5.5) Criteria for Quality Indicators
- 5.6) Statistical Quality Control
  - 5.6.1) Quality Control Charts
- 5.7) Quality System Metrics
- 5.8) Management of Change

6) DOCUMENT CONTROL

Quality Assurance Manual for Environmental Analytical Services

- 6.1) Overview
- 6.2) Document Approval and Issuance
- 6.3) Procedures for Document Control
- 6.4) Obsolete Documents

7) SERVICE TO THE CLIENT
- 7.1) Overview
- 7.2) Project Review
  - 7.2.1) Project Specific Quality Planning
- 7.3) Balancing Laboratory Capacity and Workload
- 7.4) Project Contracts / Records
- 7.5) Special Services
- 7.6) Client Communication
- 7.7) Reporting
- 7.8) Client Feedback and Surveys
- 7.9) Client Confidentiality

8) SUBCONTRACTING
- 8.1) Overview
- 8.2) Qualifying and Monitoring Subcontractors
- 8.3) Oversight and Reporting
- 8.4) Contingency Planning

9) PURCHASING SERVICES AND SUPPLIES
- 9.1) Overview
- 9.2) Glassware
- 9.3) Purchasing
  - 9.3.1) Receiving
  - 9.3.2) Specifications
  - 9.3.3) Storage
- 9.4) Purchase of Equipment / Instruments / Software
- 9.5) Service
- 9.6) Suppliers

10) COMPLAINTS
- 10.1) Overview
- 10.2) Complaint Processing

11) CONTROL AND NONCONFORMING WORK
- 11.1) Overview
- 11.2) Responsibilities and Authorities
- 11.3) Evaluation of Significance and Actions Taken
- 11.4) Method Suspension / Restriction (Stop Work Procedures)

12) CORRECTIVE ACTION
- 12.1) Overview
- 12.2) General Processes
- 12.3) Corrective Action Process Steps
- 12.4) Technical Data Corrective Actions
- 12.5) Corrections to Data / Records

13) PREVENTIVE ACTION / IMPROVEMENT

14) CONTROL OF RECORDS
- 14.1) Overview
- 14.2) Technical and Analytical Records
- 14.3) Laboratory Support Activities
- 14.4) Records Management, Storage and Disposal

15) AUDITS
- 15.1) Internal Audits

Quality Assurance Manual for Environmental Analytical Services

15.2) External Audits
15.3) Audit Findings
16) Management Reviews
16.1) Quality Metrics Report
16.2) Annual Management Review
17) TEST METHODS AND METHOD VALIDATION
17.1) Overview
17.2) Standard Operating Procedures (SOPs)
17.3) Laboratory Methods
17.4) Selection of Methods
17.4.1) Sources of Methods
17.4.2) Demonstration of Capability
17.4.3) Initial Demonstration of Capability (IDOC) Procedure
17.5) Method Detection Limit (MDL) / Limits of Detection (LOD)
17.6) Limit of Quantitation
17.7) Retention Time Windows
17.8) Evaluation of Selectivity
17.9) Estimation of Uncertainty of Measurement
17.10) Sample Reanalysis Guidelines
17.11) Control of Data
17.11.1) Computer and Electronic Data Related Requirements
17.11.2) Data Reduction
17.11.3) Logbook / Worksheet Use Guidelines
17.11.4) Review / Verification Procedures
17.11.5) Manual Integrations
18) INSTRUMENTS, EQUIPMENT, AND CALIBRATION
18.1) Overview
18.2) Instrument / Equipment Maintenance
18.3) Support Equipment
18.3.1) Weights and Balances
18.3.2) pH, Conductivity, and Turbidity Meters
18.3.3) Temperature Measuring Devices
18.3.4) Refrigerators, Freezer, Water Baths, Ovens, and Incubators
18.3.5) Autopipettors, Dilutors, and Syringes
18.4) Instrument Calibration
18.4.1) Calibration Standards
18.4.2) Calibration Verification
19) MEASUREMENT TRACEABILITY
19.1) Overview
19.2) Reference Weights and Thermometers
19.3) Reference Standards, Materials, and Reagents
20) SAMPLING
20.1) Overview
20.2) Sampling Containers
21) SAMPLE HANDLING
21.1) Chain of Custody (COC)
21.2) Sampling Containers, Preservation Requirements, Holding Times
21.3) Sample Receipt
21.4) Sample Acceptance Policy
21.5) Sample Storage
21.6) Hazardous Samples and Foreign Soils
21.7) Sample Shipping

Quality Assurance Manual for Environmental Analytical Services

21.8) Sample Disposal
22) ASSURING THE QUALITY OF TEST RESULTS
22.1) Overview
22.2) Controls
22.3) Negative Controls
22.4) Positive Controls
22.5) Acceptance Criteria (Quality Control Limits)
22.5) Marginal Exceedance
23) REPORTING RESULTS
23.1) Overview
23.2) Test Reports
23.3) Reporting Level or Report Type
23.4) Electronic Data Deliverable (EDD)
23.5) Amendments to Test Reports
23.5.1) Policy on Data Omissions or Reporting Limit Increases
23.5.2) Multiple Reports
24) APPENDICES
24.1) References

1) INTRODUCTION, SCOPE, AND APPLICABILITY

1.1) Introduction and Compliance References

A. Eurofins Calscience Quality Assurance Manual (QAM) is a document prepared to define the overall policies, organization objectives and functional responsibilities for maintaining the laboratory's QA Program. Governing SOPs are in place within the organization to ensure the proper execution of this QA Manual. This manual is required reading for all personnel. Supporting SOPs are assigned reading for relevant personnel.

B. The laboratory is a team of people who work together to serve the health and environmental needs of society through science and technology. We offer comprehensive expertise in environmental laboratory applications and client relations with a focus on quality.

C. As such, this QAM has been prepared to assure compliance with the applicable versions of The NELAC Institute (TNI) Standard; ISO/IEC Guide 17025; and the Department of Defense (DoD)/Department of Energy (DOE) Quality Systems Manual (QSM). Policies and procedures referenced within this manual are compliant with the Eurofins Environment Testing (EET) National Business Line Service Center (NBLSC) procedures; Eurofins Calscience; and the associated accreditation and certification programs held by the laboratory to support environmental work.

1.2) Terms and Definitions

A. A Quality Management Program is a system designed to ensure that data produced by the laboratory conforms to the standards set by state and/or federal regulations. The program functions at the local management level through company goals, from guidance at the executive management level, and at the analytical level through Standard Operating Procedures (SOPs) and quality control. Our program is designed to minimize systematic error, encourage constructive, documented problem solving, and provide a framework for continuous improvement within the organization to better serve our clients.

B. Specific terms and acronyms used in the laboratory are defined in the corresponding procedures, identified in the analysis reports, and/or addressed in the referenced

regulatory/method documents. Definitions are referenced in Calscience QAM *Appendix 1 -- Definitions*.

1.3) Scope / Fields of Testing

A. The laboratory analyzes a broad range of environmental and industrial samples. Sample matrices include, but are not limited to air, effluent water, groundwater, hazardous waste, sludge and soils. The QA Program contains specific procedures and methods to test samples of differing matrices for chemical and physical parameters. The Program also contains guidelines on maintaining documentation of analytical processes, reviewing results, servicing clients and tracking samples through the laboratory. The technical and service requirements of all analytical requests are thoroughly evaluated before commitments are made to accept the work. Measurements are made using published reference methods or methods developed and validated by the laboratory.

B. The methods covered by this manual include the most frequently requested methodologies needed to provide analytical services in the United States and its territories; and Canada. The specific list of test methods used by the laboratory can be found in TALS. Our areas of expertise include:

Standard Services	Specialty Services
A. Volatiles	A. Perchlorate
B. Semivolatiles	B. 1,4-Dioxane
C. Metals	C. PCB Congeners
D. Pesticides/PCBs/Herbicides	D. Explosives
E. Petroleum Hydrocarbons	E. Alkyl PAHs, Alkanes, Biomarkers
F. Waste Characterization	F. Organic Acids
G. Non-Potable Water Testing	G. Aldehydes
H. Soil and Surface Water Testing	H. Other
I. Vapor and Air Analysis	
J. Sediment and Tissue Testing	
K. Other	

C. **Note:** All current certificates and scopes of accreditation are available on the Eurofins' website at https://www.eurofinsus.com/environment-testing/resources/certifications/.

D. The approach of this manual is to define the minimum level of quality assurance and quality control necessary to meet these requirements. All methods performed by the laboratory shall meet these criteria as appropriate. In some instances, quality assurance project plans (QAPPs), project specific data quality objectives (DQOs) or local regulations may require criteria other than those contained in this manual. In these cases, the laboratory will abide by the requested criteria following review and acceptance of the requirements by the Business Unit Manager

(BUMA) and the Quality Assurance (QA) Manager. In some cases, QAPPs and DQOs may specify less stringent requirements. The Laboratory BUMA and the QA Manager must determine if it is in the lab's best interest to follow the less stringent requirements.

1.4) Quality Manual Review Process

A. The template on which this manual is based is reviewed annually by the NBLSC Quality Assurance leadership team. NBLSC QA will assure that the template complies with Section 1.1.

B. This manual itself is reviewed annually by senior laboratory management to assure that it reflects current practices and meets the requirements of the laboratory's clients and regulators. Occasionally, the manual may need to be revised in order to meet new or changing regulations and operations. The QA Manager (or designee) will review the changes in the normal course of business and incorporate changes into revised sections of the document. All updates will be reviewed by the designated senior laboratory management staff. The laboratory updates and approves such changes in accordance with our *Document Control* processes.

2) MANAGEMENT REQUIREMENTS

2.1) Overview

A. The laboratory is an independent business unit within the Eurofins Environment Testing group of companies. The laboratory's operational and support staff have the day-to-day independent operational authority under the direction of the Business Unit Manager (BUMA). The laboratory's quality system is managed under the oversight of the QA Manager with the BUMA. The laboratory management staff includes the operations manager, department managers and group leaders. The organizational chart of the management staff is included as Appendix 3. Individual department staff lists are maintained in the laboratory's internal records.

2.2) Roles and Responsibilities

A. **Business Unit Manager**

1. The BUMA is responsible for the overall quality, safety, financial, technical, human resource and service performance of the BU and reports to their Business Unit or Scope President. The BUMA is also responsible for any service centers connected with their BU that perform analytical tests, such as short holding time analyses. The BUMA provides the resources necessary to implement and maintain an effective and comprehensive Quality Assurance and Data Integrity Program.

2. Specific responsibilities include, but are not limited to:

   a. Designates one or more technical managers for the appropriate fields of testing. If the Technical Manager is unavailable for a period of time exceeding 15 consecutive calendar days, the BUMA must designate another staff member meeting the qualifications of the Technical Manager to temporarily perform this function. If the absence exceeds 35 calendar days, the primary accrediting body must be notified in writing.

   b. Ensures that all analysts and supervisors have the appropriate education and training to properly carry out the duties assigned to them and ensures that this training has been documented. Works with Eurofins Environment Testing Human Resources for hiring of new personnel.

c. Ensures that personnel are free from any commercial, financial and other undue pressures which might adversely affect the quality of their work.

d. Ensures Eurofins human resource policies are adhered to and maintained.

e. Ensures that sufficient numbers of qualified personnel are employed to supervise and perform the work of the laboratory. Assesses laboratory capacity and workload.

f. Ensures that appropriate corrective actions are taken to address analyses identified as requiring such actions by internal and external performance or procedural audits. Procedures that do not meet the standards set forth in the QA Manual or laboratory SOPs may be temporarily suspended by the BUMA.

g. Reviews and approves, or delegates the responsibility for review and approval, for all SOPs prior to their implementation and ensures all approved SOPs are implemented and adhered to.

h. Pursues and maintains appropriate laboratory certification and contract approvals. Supports ISO 17025 requirements.

i. Ensures client specific reporting and quality control requirements are met.

j. Contributes to the continuous improvement of the laboratory operations.

k. Maintains an awareness of technical developments and regulatory requirements.

l. Leads the management team, consisting of the QA Manager/Technical Manager, and the Operations Manager as direct reports.

B. **Quality Assurance Manager/Technical Manager**

1. The QA Manager has responsibility and authority to ensure the continuous implementation of the quality system for the BU. The QA Manager is also responsible for any service centers connected with their BU that perform analytical tests, such as short holding time analyses.

   a. The QA/Technical Manager maintains close contact with the Sacramento satellite location that operates under the same quality manual and quality systems as the Main Lab. We have multiple modes of communication including phone, email, Teams IM, and Teams meetings.

2. The QA Manager reports directly to the BUMA. This position is able to evaluate data objectively and perform assessments without outside (e.g., managerial) influence. The National Business Line Service Center (NBLSC) QA team and procedures may be used as a resource in dealing with regulatory requirements, certifications and other quality assurance related items.

3. The QA Manager directs the activities of the QA staff to accomplish specific responsibilities, which include, but are not limited to:

   a. Serves as the focal point for QA/QC in the laboratory.

b. Have functions independent from laboratory operations for which he/she has quality assurance oversight.

c. Have documented training and/or experience in QA/QC procedures and the laboratory's Quality System.

d. Have a general knowledge of the analytical test methods for which data audit/review is performed (and/or having the means of getting this information when needed).

e. Arrange for or conducting internal audits on quality systems and the technical operation Notifying laboratory management of deficiencies in the quality system and ensuring corrective action is taken. Procedures that do not meet the standards set forth in the QA Manual or laboratory SOPs shall be investigated following procedures outlined in Section 12 and if deemed necessary may be temporarily suspended during the investigation.

f. Maintaining and updating the QA Manual.

g. Monitoring and evaluating laboratory certifications; scheduling proficiency testing samples.

h. Monitoring and communicating regulatory changes that may affect the laboratory to management.

i. Training and advising the laboratory staff on quality assurance/quality control procedures that are pertinent to their daily activities.

j. The laboratory QA Manager will maintain records of all ethics-related training, including the type and proof of attendance.

k. Maintain, improve, and evaluate the corrective action database and the corrective and preventive action systems.

l. Objectively monitor standards of performance in quality control and quality assurance without outside (e.g., managerial) influence.

m. Coordinating of document control of SOPs, MDLs, control limits, and miscellaneous forms and information.

n. Performing technical data audits and method audits to ensure consistency and compliance with regulatory requirements.

o. Review of external audit reports and data validation requests.

p. Follow-up with audits to ensure client QAPP requirements are met.

q. Establishment of reporting schedule and preparation of various quality system reports for the BUMA, clients and/or NBLSC QA.

r. Development of suggestions and recommendations to improve quality systems.

s. Research of current state and federal requirements and guidelines.

t. Participate in the vendor and supplier approval process, including subcontractors.

u. Leads the QA team to enable communication and distribution of duties and responsibilities.

v. Communication with the relevant regulatory bodies when there are management or facility changes that impact the laboratory.

w. Ensuring communication & monitoring standards of performance to ensure that systems are in place to produce the level of quality as defined in this document.

x. Evaluation of the thoroughness and effectiveness of training.

y. Compliance with ISO 17025.

z. Compliance with the DoD/DOE QSM (where applicable).

C. **Department Managers**

1. The Department Manager(s) report(s) directly to the BUMA. He/she is accountable for all analyses and analysts under their experienced supervision and for compliance with the ISO 17025:2017 and TNI Standard. The scope of responsibility ranges from the new-hire process and existing technology through the ongoing training and development programs for existing analysts and new instrumentation.

2. Specific responsibilities include, but are not limited to:

   a. Exercises day-to-day supervision of laboratory operations for the appropriate field of accreditation and reporting of results. Coordinating, writing, and reviewing preparation of all test methods, i. e., SOPs, with regard to quality, integrity, regulatory and optimum and efficient production techniques, and subsequent analyst training and interpretation of the SOPs for implementation and unusual project samples. He/she insures that the SOPs are properly managed and adhered to at the bench. He/she develops standard costing of SOPs to include supplies, labor, overhead, and capacity (design vs. demonstrated versus first-run yield) utilization.

   b. Reviewing and approving client project proposals, with input from the QA Manager and in accordance with an established procedure for the review of requests and contracts. This procedure addresses the adequate definition of methods to be used for analysis and any limitations, the laboratory's capability and resources, the client's expectations. Differences are resolved before the contract is signed and work begins. A system documenting any significant changes is maintained, as well as pertinent discussions with the client regarding their requirements or the results of the analyses during the performance of the contract. All work subcontracted by the laboratory must be approved by the client. Any deviations from the contract must be disclosed to the client. Once the work has begun, any amendments to the contract must be discussed with the client and so documented.

   c. Monitoring the validity of the analyses performed and data generated in the laboratory. This activity begins with reviewing and supporting all new business contracts, insuring data quality, analyzing internal and external nonconformances to identify root cause issues and implementing the resulting corrective and preventive actions, facilitating the

data review process (training, development, and accountability at the bench), and providing technical and troubleshooting expertise on routine and unusual or complex problems.

d. Providing training and development programs to applicable laboratory staff as new hires and, subsequently, on a scheduled basis. Training includes instruction on calculations, instrumentation management to include troubleshooting and preventive maintenance.

e. Enhancing efficiency and improving quality through technical advances and improved LIMS utilization. Capital forecasting and instrument life cycle planning for second generation methods and instruments as well as asset inventory management.

f. Coordinating sample management from "cradle to grave," insuring that no time is lost in locating samples.

g. Scheduling all QA/QC-related requirements for compliance, e.g., MDLs, etc.

h. Captains department personnel to communicate quality, technical, personnel, and instrumental issues for a consistent team approach.

i. Coordinates audit responses with the QA Manager.

j. Compliance with ISO 17025.

k. Compliance with the DoD/DOE QSM (where applicable).

D. **Operations Manager**

1. The Operations Manager manages and directs the analytical production sections of the laboratory. They report directly to the BUMA. They assist the QA Manager/Technical Manager in determining the most efficient instrument utilization.

2. More specifically, they:

a. Evaluates the level of internal/external nonconformances for all departments.

b. Continuously evaluates production capacity and improves capacity utilization.

c. Continuously evaluates turnaround time and addresses any problems that may hinder meeting the required and committed turnaround time from the various departments.

d. Develops and improves the training of all analysts in cooperation with the QA Manager/Technical Manager and in compliance with regulatory requirements.

e. Works with the technical department management and staff to ensure that scheduled instrument maintenance is completed.

f. Is responsible for efficient utilization of supplies.

g. Constantly monitors and modifies the processing of samples through the departments.

h. Fully supports the quality system and, if called upon in the absence of the QA Manager, serves as their substitute in the interim.

E. **Project Manager (PM)**

1. The members of the laboratory Client Services/Project Management Group are responsible for organizing and managing client projects. Clients are assigned a project manager who serves as their primary contact at the laboratory. It is the PM's responsibility to act as the client advocate by communicating client requirements to laboratory personnel and ensuring that clients provide complete information needed by the laboratory to meet those requirements – including all verbal communications.

2. With the overall goal of total client satisfaction, the functions of this position are outlined below:

   a. Scheduling sample submissions, sample container orders and sample pick-up via the laboratory courier service.

   b. Confirming certification status.

   c. Coordinating and communicating turnaround time (TAT) requirements for high priority samples/projects.

   d. Answering common technical questions, facilitating problem resolution and coordinating technical details with the laboratory staff.

   e. Ensuring that client specifications, when known, are met by communicating project and quality assurance requirements to the laboratory.

   f. Coordinating subcontract laboratory services and logistics when needed.

   g. Notifying the supervisors of incoming projects and sample delivery schedules.

   h. Accountable to clients for communicating sample status reports or results prior to receipt of the final report.

   i. Monitor the status of all data package projects in-house to ensure timely and accurate delivery of reports.

   j. Inform clients of data package-related problems and resolve service issues.

F. **Group Leaders**

1. Group Leaders report to the Operations Manager. Each one is responsible to:

   a. Ensure that staff in their department adheres to applicable SOPs and the QA Manual. They perform scheduled SOP and QA Manual review to determine if staff and processes are in compliance and if new, modified, and optimized measures are feasible and should be added to these documents.

   b. With regard to staff, participates in the selection, training (as documented in Section 3.3), development of performance objectives and standards of performance, appraisal

(measurement of objectives), scheduling, counseling, discipline, and motivation of the staff and documents these activities in accordance with systems developed by the QA and Personnel Departments. They evaluate staffing sufficiency and overtime needs. Training consists of familiarization with SOP, QC, Safety, and computer systems.

c. Encourage the development of staff to become cross-trained in various methods, processes, and/or operate multiple instruments efficiently while performing maintenance and documentation, self-supervise, and function as a department team.

d. In conjunction with the Technical Manager, Operations Manager, and/or QA Manager, provide guidance to staff in resolving problems encountered during performance of their duties. Each is responsible for ensuring 100% of the data review and documentation, nonconformance issues, the timely and accurate completion of performance testing (PT) samples and MDLs, for the department.

e. Ensure all logbooks are maintained, current, and properly labeled or archived.

f. Ensure that preventive maintenance is performed on instrumentation as detailed in the QA Manual or SOPs and is responsible for developing and implementing a system for preventive maintenance, troubleshooting, and repairing or arranging for repair of instruments.

g. Maintain adequate and valid inventory of reagents, standards, spare parts, and other relevant resources required to perform daily analysis.

h. Achieve optimum turnaround time on analyses and compliance with holding times.

i. Conduct efficiency and cost control evaluations on an ongoing basis to determine optimization of labor, supplies, overtime, first-run yield, capacity (designed vs. demonstrated), second- and third-generation production techniques/instruments, and long-term needs for budgetary planning.

j. Develop, implement, and enhance calibration programs.

k. Provide written responses to external and internal audit issues.

G. **Laboratory Analysts / Technicians**

1. Laboratory analysts/technicians are responsible for conducting analyses and performing all tasks assigned to them by the group leader or supervisor.

2. The responsibilities of the analysts are listed below:

a. Perform analyses by adhering to analytical and quality control protocols prescribed by current SOPs, this QA Manual, and project-specific plans honestly, accurately, timely, safely, and in the most cost-effective manner.

b. As applicable to their assigned tasks, document standard, reagent, and sample preparation, instrument calibration and maintenance, data calculations, sample matrix effects, and any observed nonconformance on worklists, benchsheets, lab notebooks and/or the LIMS.

c. Report all nonconformance situations, instrument problems, matrix problems and QC failures, which might affect the reliability of the data, to their supervisor or member of QA staff.

d. Perform 100% review of the data generated prior to submitting for secondary level review.

e. Suggest method improvements to their supervisor or member of QA staff. These improvements, if method compliant and approved, will be incorporated. Ideas for the optimum performance of their assigned area are encouraged.

f. Work cohesively as a team in their department to achieve the goals of accurate results, data quality, optimum turnaround time, cost effectiveness, cleanliness, complete documentation, and personal knowledge of environmental analysis.

2.3) Business Continuity and Contingency Plans

A. Various policies and practices are in place to address continuity of business and contingency plans to ensure continued operations or minimal disruption in operations should unplanned events (natural disasters, unexpected management changes, etc.) occur. Deputies are identified for all key management personnel. Deputies would temporarily fill a role if the primary is unavailable for more than 15 consecutive calendar days. The deputies must meet the same qualifications as the primary person should they be required to take on the responsibilities. The QA Manager communicates to the relevant regulatory authorities when there are management or facility changes that impact the laboratory. Changes in the technical director must be communicated within a period of time and in the manner dictated by each regulatory authority.

B. The following table defines who assumes the responsibilities of key personnel in their absence and their assigned PUIDs:

Key Personnel	Deputy
Michael DeCavallas (AG8X) President/Scope Leader	Elizabeth Winger (UEW1) Senior Vice President- Southwest
Terri Garcia (A297) Quality Assurance Manager	Jose Estrada Tiempos (AGB7) Quality Assurance Specialist
Ryan Parish (W6EU) Organics Operations Director	Sameena Hussain (WG8D) Inorganics Operations Director
Sameena Hussain (WG8D) Inorganics Operations Director	Ryan Parish (W6EU) Organics Operations Director
Terri Garcia (A297) Technical Manager	Ryan Parish (W6EU) Organics Operations Director
Jeanie Kang (UJ3K) SVOC Department Manager	Ryan Parish (W6EU) Organics Operations Director
Sylvie Doan (USQD) VOC Department Manager	Ryan Parish (W6EU) Organics Operations Directorr
Stephen Nowak (USTN) EHS Manager	Roger Hoover (Q6ZU) EHS Coordinator
Michael DeCavallas(AG8X) Interim Sales Director	Sean Leffler (DVN8) Business Development Manager

Quality Assurance Manual for Environmental Analytical Services

Virendra Patel (UVP1) Customer Service Manager - Operations	Lori Thompson (OE4W) Customer Service Manager
Lori Thompson (OE4W) Customer Service Manager	Virendra Patel (UVP1) Customer Service Manager - Operations
Cynthia Jih (UCYC) Office Manager	Ashlie Soto (Z9XI) Administrative Specialist

3) PERSONNEL

3.1) Overview

A. The laboratory's management believes that its highly qualified and professional staff is the single most important aspect in assuring a high level of data quality and service and achieves the goals of competence, impartiality and consistent operation of the laboratory. The staff consists of professionals and support personnel. The laboratory employs sufficient personnel with the necessary education, training, technical knowledge and experience for their assigned responsibilities.

B. All personnel must demonstrate competence in the areas where they have responsibility. Any staff that is undergoing training shall have appropriate supervision until they have demonstrated their ability to independently perform their job functions. Staff shall be qualified for their tasks based on appropriate education, training, experience and/or demonstrated skills as required.

C. All personnel are responsible for complying with all QA/QC requirements that pertain to the laboratory and their area of responsibility. Each staff member must have a combination of experience and education to adequately demonstrate a specific knowledge of their particular area of responsibility. Technical staff must also have a general knowledge of lab operations, test methods, QA/QC procedures and records management.

D. Laboratory management is responsible for formulating goals for staff with respect to education, training, and skills and for ensuring that the laboratory has a policy and procedures for identifying training needs and providing training of personnel. The training shall be relevant to the present and anticipated responsibilities of the laboratory staff.

E. The laboratory only uses personnel that are employed by or under contract to, the laboratory. Contracted personnel, when used, must meet competency standards of the laboratory and work in accordance to the laboratory's quality system.

3.2) Education and Experience Requirements for Technical Personnel

A. The laboratory makes every effort to hire analytical staff that possesses a college degree (AA, BA, BS) in an applied science with some chemistry in the curriculum. Selection of qualified candidates for laboratory employment begins with documentation of the minimum levels of education, training, and experience needed to perform the prescribed tasks.

3.3) Training

A. The laboratory is committed to furthering the professional and technical development of employees at all levels. Orientation to the laboratory's policies and procedures, in-house method training, and employee attendance at outside training courses and conferences all contribute toward employee proficiency.

Quality Assurance Manual for Environmental Analytical Services

B. Eurofins trainings are achieved through a combination of in-person presentations, recorded/electronic presentations/courses managed through the Eurofins Learning Centre (ELC) platform, supervised on the job training, and SOP reading. All training is documented with employee acknowledgement of completion.

C. New hire orientation and training begins the first week of employment. These initial sessions include overviews of the business, quality system policies and procedures, ethics and data integrity, resources, health and safety, and introduction of their job specific tasks.

D. Comprehensive Environmental Health and Safety training and review of the *EHS Manual* must be completed prior to performance of work in the laboratories.

E. Formal *Ethics and Data Integrity* and, where applicable, *Manual Integration* trainings are completed within the first 60 days of employment and include reading the associated policies and completing the assigned courses and presentations, in person and/or on-line.

F. Initial Demonstration of Capability (IDOC) must be completed and approved prior to independent performance of analytical method testing. See Section 3.3.1.

G. The following occur annually:

1. *Ethics and Data Integrity Refresher* training - all employees.
2. *Manual Integration Training* - applicable employees.
3. Ongoing Demonstration of Capability (ODOC) - technical staff - see Section 3.3.2

H. The laboratory maintains records of relevant authorization/competence, education, professional qualifications, training, skills and experience of technical personnel, as well as the date that approval/authorization was given. These records are kept on file at the laboratory.

I. The training of technical staff is kept up to date by:

1. Each employee must have documentation in their training file that they have read, understood and agreed to follow the most recent version of the laboratory QA Manual and SOPs in their area of responsibility. This documentation is updated as SOPs are updated.
2. Documentation from any training courses or workshops on specific equipment, analytical techniques or other relevant topics.
3. Documentation of proficiency.
4. An Ethics Agreement signed by each staff member (renewed each year) and evidence of annual ethics training.
5. A Confidentiality Agreement signed by each staff member signed at the time of employment.
6. Human Resources maintains documentation and attestation forms on employment status and records; benefit programs; timekeeping/payroll; and employee conduct (e.g., ethics violations). This information is maintained in the employee's secured personnel file.

3.3.1) Initial Demonstration of Capability (IDOC)

A. An individual must successfully perform an IDOC prior to independently analyzing and reporting client samples, and any time there is a change in instrument type, method, or any time that a method has not been performed by the analyst in a twelve (12) month period.

B. If the method or regulation does not specify an IDOC, it is the responsibility of the laboratory to document in their SOP what other approaches to the IDOC can be used.

C. The laboratory SOP No. *27925* details the following:

1. The preparation and analysis of 4 laboratory control samples (LCS), prepared at 1 to 4 times the limit of quantitation (LOQ).

2. The evaluation criteria.

3. Actions to be taken for IDOC failure.

3.3.2) Continuing Demonstration of Capability (CDOC)

A. The CDOC procedure is detailed in the laboratory SOP. This process must be completed annually for each employee for the tests that they are performing. If the method has not been performed by the analyst in a twelve (12) month period, an IDOC shall be performed.

B. This on-going demonstration may be one of the following:

1. Acceptable performance of a blind sample (single blind to the analyst) or successful analysis of a blind performance sample on a similar method using the same technology (e.g., GC/MS volatiles by purge and trap for Methods 524.2, 624 or 5030/8260).

2. Another IDOC

3. At least four (4) consecutive laboratory control samples with acceptable levels of precision and accuracy.

4. For methods that do not lend themselves to spiking - documented process of observing the analyst performing the process and/or comparison of results between two analysts with documented evaluation of the precision.

3.4) Ethics and Data Integrity Training

A. The laboratory's Ethics and Data Integrity Program is discussed in Section 5.2. Employees are trained as to the legal and environmental repercussions that result from data misrepresentation. Key topics covered in the presentation include:

1. Organizational mission and its relationship to the critical need for honesty and full disclosure in all analytical reporting and business practices.

2. *Ethics and Data Integrity Policy* and the Eurofins Ethics Statement.

3. Consequences for infractions including potential for immediate termination, debarment, or criminal prosecution.

4. How and when to report ethical/data integrity issues.

5. Confidential reporting.

6. Record keeping.

7. Discussion regarding data integrity procedures.

8. Specific examples of breaches of ethical behavior (e.g. peak shaving, altering data or computer clocks, improper macros, etc., accepting/offering kickbacks, illegal accounting practices, unfair competition/collusion).

9. Internal monitoring, investigations, and data recalls.

10. Importance of proper written narration / data qualification by the analyst and project manager with respect to those cases where the data may still be of use to the client but have some method or project deficiencies.

B. Additionally, an anonymous third party run hotline is available to all employees as a means of reporting ethics and/or data integrity issues or concerns.

1. Lighthouse Services hotline at www.lighthouse-services.com/eurofinsus.

2. Via e-mail reports@lighthouse-services.com (include company name).

3. Or call 855-910-0005 (Spanish speaking 800-216-1288).

4) ACCOMODATIONS AND ENVIRONMENTAL CONDITIONS

4.1) Overview

A. The laboratory is a secure laboratory facility with controlled access and designed to accommodate an efficient workflow and to provide a safe and comfortable work environment for employees. All visitors sign in and are escorted by laboratory personnel. Access is controlled by various measures.

B. The laboratory is equipped with structural safety features. Each employee is familiar with the location, use, and capabilities of general and specialized safety features associated with their workplace. The laboratory provides and requires the use of protective equipment including safety glasses, protective clothing, gloves, etc., OSHA and other regulatory agency guidelines regarding required amounts of bench and fume hood space, lighting, ventilation (temperature and humidity controlled), access, and safety equipment are met or exceeded.

C. Traffic flow through sample preparation and analysis areas is minimized to reduce the likelihood of contamination. Adequate floor space and bench top area is provided to allow unencumbered sample preparation and analysis space. Sufficient space is also provided for storage of reagents and media, glassware, and portable equipment. Ample space is also provided for refrigerated sample storage before analysis and archival storage of samples after analysis. Laboratory HVAC and deionized water systems are designed to minimize potential trace contaminants.

D. The laboratory is separated into specific areas for sample receiving, sample preparation, volatile organic sample analysis, non-volatile organic sample analysis, inorganic sample analysis, and administrative functions.

4.2) Environment

A. Laboratory accommodation, test areas, energy sources, and lighting are adequate to facilitate proper performance of tests. The facility is equipped with heating, ventilation, and air conditioning (HVAC) systems appropriate to the needs of environmental testing performed at this laboratory.

B. The environment in which these activities are undertaken does not invalidate the results or adversely affect the required accuracy of any measurements.

C. The laboratory provides for the effective monitoring, control and recording of environmental conditions that may affect the results of environmental tests as required by the relevant specifications, methods, and procedures. Such environmental conditions include temperature. When temperature changes to a point where it may adversely affect test results, analytical testing will be discontinued until the temperature is returned to the required level.

D. Environmental conditions of the facility housing the computer network and LIMS are regulated to protect against raw data loss.

E. When the laboratory performs laboratory activities at sites or facilities outside its permanent control, it shall ensure that the requirements related to facilities and environmental conditions of this document are met.

F. Specific requirements for facility and environmental conditions, as well as periodic monitoring of conditions, are given in the NDLSC Document *NDSC-US-EHS-QP46060 Environmental Health & Safety Manual* plus each laboratory's Facility Addendum.

4.3) Work Areas

A. There is effective separation between neighboring areas when the activities therein are incompatible with each other. For example, volatile organic chemical handling areas, including sample preparation and waste disposal, and volatile organic chemical analysis area.

B. Access to and use of all areas affecting the quality of analytical testing is defined and controlled by secure access to the laboratory building as described in the Building Security section of this manual.

C. Adequate measures are taken to ensure good housekeeping in the laboratory and to ensure that any contamination does not adversely affect data quality. These measures include regular cleaning to control dirt and dust within the laboratory. Work areas are available to ensure an unencumbered work area. Work areas include:

1. Access and entryways to the laboratory
2. Sample receipt areas
3. Sample storage areas
4. Chemical and waste storage areas

5. Data handling and storage areas

6. Sample processing areas

7. Sample analysis areas

4.4) Responding to Emergencies

A. Employees are trained in the procedures to respond to all emergencies that might occur in the workplace. Employees have been trained in the location and proper operation of all emergency equipment, evacuation routes and designated assembly areas for all areas where they work.

B. Refer to the *NDSC-US-EHS-QP46060 EH&S Manual* and the laboratory's local EH&S addendum for complete details. The document provides direction for situations where normal operations of the laboratory are not possible (e.g., electrical failures, heating/air conditioning failures, fire/building evacuation, computer failures, hazardous material spills, injury to employees, pandemic flu, disruption of phone service, etc.).

C. In the event that the building or information technology (IT) systems would be severely challenged, a designated disaster recovery team, which includes Facility Management, Safety, Executive Management, IT, QA and other applicable personnel, depending on the scope of the disaster, would assemble at a designated area to assess the situation and formulate a plan.

4.5) Building Security

A. The laboratory is considered a secure facility. All outside doors, except the main lobby entrance and sample receiving area, are locked during normal business hours to prevent unauthorized entry. Employees are issued a building access key card to access the facility.

B. All visitors to the facility must sign in and out in a visitor's logbook that is located in the lobby. A visitor is defined as any person who visits the laboratory who is not an employee of the laboratory. Both visitors and vendors must review and sign specific EH&S forms; and are escorted by laboratory personnel at all times, or the location of the visitor is noted in the visitor's logbook.

5) QUALITY SYSTEM

5.1) Quality Policy Statement

A. The Quality Policy statement gives employees clear requirements for the production of analytical data. As an organization, all personnel are committed to high quality professional practice, testing and data, and service to our clients.

1. Calscience is committed to providing its customers with environmental data that is reliable, defensible, and of known and documented quality. We continually strive to meet our customers' requirements and exceed their expectations.

2. This Quality Assurance Manual and related documentation describes the policies and procedures used to meet that commitment. The Manual is designed to meet the standards used in the NELAP, the State of California SWRCB ELAP, and other government and customer requirements. Laboratory management is committed to the quality improvement processes described in these standards and to providing the resources to ensure laboratory personnel can honor that commitment.

3. Laboratory personnel whose responsibilities include any aspect of testing activities are required to familiarize themselves with all of the quality documentation associated with their job function and to implement the policies and procedures described in that documentation into all of their work in the laboratory. Laboratory personnel acknowledge this responsibility on annual review of the Quality Assurance Manual by acknowledging they have read, understood and agree to act accordingly.

4. Management reviews this Quality Policy and the objectives listed below during the annual Management Review. The signatures of management personnel on this Quality Assurance Manual indicate their concurrence and support of this Policy.

5.2) Ethics and Data Integrity

A. The Eurofins Environment Testing group of companies is committed to ensuring the integrity of its data and meeting the quality needs of its clients. The laboratory operates our Ethics and Data Integrity program under the guidance of Eurofins Key Guidance Documents (KGD) and the Eurofins *NBLSC Ethics and Data Integrity Policy.*

B. The elements of the Ethics and Data Integrity Program include:

1. *Ethics and Data Integrity Policy* and Eurofins Ethics and Quality Policy Statements.

2. A Training Program.

3. Self-governance through disciplinary action for violations.

4. A confidential mechanism for anonymously reporting alleged misconduct (see Section 4.2 of this manual) and a process for conducting internal investigations of all alleged misconduct.

5. Procedures and guidance for recalling data if necessary.

6. Effective external and internal monitoring system that includes procedures for internal audits (SOP No. *18249*).

7. Produce results, which are accurate and include QA/QC information that is method compliant and/or meets client pre-defined Data Quality Objectives (DQOs).

8. Present services in a confidential, honest and forthright manner.

9. Provide employees with guidelines and an understanding of the Ethical and Quality Standards of our Industry.

10. Provide procedures and guidance to ensure the impartiality and confidentiality of all data and customer information.

11. Operate our facilities in a manner that protects the environment and the health and safety of employees and the public.

12. Obey all pertinent federal, state and local laws and regulations and encourage other members of our industry to do the same.

13. Educate clients as to the extent and kinds of services available.

14. Assert competency only for work for which adequate personnel and equipment are available and for which adequate preparation has been made.

15. Promote the status of environmental laboratories, their employees, and the value of services rendered by them.

5.3) Quality System Documentation

A. The BU's quality system is defined and communicated through a variety of documents. There is a hierarchy of documents within Eurofins and for the local BU.

B. The top EET level documents are the NBLSC policies and procedures. These are written, approved, and released by the NBLSC QA team with input from NBLSC IT and EHS staff, where applicable. These documents provide procedures that can be used as guidance or a template for establishing local procedures or may be used directly as the local BU SOP by assigning the local staff to train on the NBLSC document. This level of document is written to address Environment US regulatory processes and requirements (i.e. ISO17025, TNI, DOE/DoD). Any individual state agency requirements are addressed locally.

C. The local BU defines its quality system through its own policies and procedures which must at a minimum meet the guidance set forth in the NBLSC SOPs. The BU documents are established using the following structure/hierarchy:

1. Quality Manual

2. Laboratory Operational SOPs and policies.

   a. Those that apply to the BU as a whole.

   b. Those that apply to specific areas of the BU.

3. Laboratory Analytical SOPs - define method specific processes to be followed in the laboratory tests.

4. Forms and Instruction Sheets - e.g., checklists, preformatted bench sheets, job aids

D. All of the documents described here are controlled with defined versioning, review, and approval processes. The BU management and QA staff have the responsibility and authority to operate in compliance with regulatory requirements of the jurisdiction in which the work is performed.

5.4) Quality Control (QC) Objectives for the Measurement of Data

A. Quality Assurance (QA) is responsible for developing planned activities whose purpose is to provide assurance to all levels of management that a quality program is in place within the laboratory, and that it is functioning in an effective manner that is consistent with the requirements of NELAP, ISO 17025, DoD, and any other regulatory agencies (i.e., states) in which the laboratory maintains accreditation.

B. Quality Control (QC) is generally understood to be limited to the analyses of samples and to be synonymous with the term “analytical quality control”. QC refers to the routine application of statistically based procedures to evaluate and control the accuracy of results from analytical

measurements. The QC program includes procedures for estimating and controlling precision and bias and for determining reporting limits.

C. Request for Proposals (RFPs) and Quality Assurance Project Plans (QAPP) provide a mechanism for the client and the laboratory to discuss the data quality objectives in order to ensure that analytical services closely correspond to client needs. In order to ensure the ability of the laboratory to meet the Data Quality Objectives (DQOs) specified in the QAPP, clients are advised to allow time for the laboratory to review the QAPP before being finalized. The client is responsible for developing the QAPP; however, the laboratory will provide support to the client for developing the sections of the QAPP that concern laboratory activities.

5.5) Criteria for Quality Indicators

A. The laboratory maintains tables, housed in LIMS, that summarize the precision and accuracy acceptability limits for performed analyses. This summary includes an effective date, is updated each time new limits are generated, and are managed by the laboratory's QA department. Unless otherwise noted, limits within these tables are laboratory generated. Some acceptability limits are derived from US EPA methods or other referenced methods. Where US EPA method limits are not prescriptive, the laboratory has developed limits from evaluation of data from similar matrices. Criteria for development of control limits is contained in *Internal Quality Control Checks* (SOP No. *33613*).

5.6) Statistical Quality Control

A. Statistically-derived precision and accuracy limits are required by selected methods (such as SW-846) and programs. The laboratory routinely utilizes statistically-derived limits to evaluate method performance and determine when corrective action is appropriate. The analysts use the current limits entered into LIMS. If a method defines the QC limits, the method limits are used.

B. If a method requires the generation of historical limits, the lab develops such limits from recent data in the QC database of the LIMS following the guidelines described in Section 22. All calculations and limits are documented and dated when approved and effective. On occasion, a client requests contract-specified limits for a specific project.

C. Current QC limits are entered and maintained in the LIMS analyte database. As sample results and the related QC are entered into LIMS, the sample QC values are compared with the limits in LIMS to determine if they are within the acceptable range. The analyst then evaluates if the sample needs to be reanalyzed or re-extracted/reanalyzed or if a comment should be added to the report explaining the reason for the QC outlier.

5.6.1) Quality Control Charts

A. QC Charting is available in LIMS for evaluation at any point by technical and/or QA staff. A LIMS program, QC Trending, applies a modified version of the "Western Electric Company Rules for Control Charts (WECO)" in an automatic scan of entered analytical data for Method Blanks, Laboratory Control Sample and Matrix Spike Recoveries, and Continuing Calibration Verifications. The system allows daily monitoring of trending to allow quick intervention by the chemist or group leader prior to an analytical process becoming out of control. Notification emails are sent each morning.

5.7) Quality System Metrics

A. In addition to the QC parameters discussed above, the entire Quality System is evaluated on a monthly basis through the use of specific metrics (refer to Section 16). These metrics are used

to assess risk and to drive continuous improvement in the laboratory's Quality System. The metrics are reviewed by the BUMA and the QA Manager and shared with other management staff.

5.8) Management of Change

A. The Management of Change process is designed to manage significant events and changes that occur within the laboratory. Through these procedures, the potential risks inherent with a new event or change are identified and evaluated. The risks are minimized or eliminated through pre-planning and the development of preventive measures.

B. The types of changes covered under this system include (but is not limited to): Laboratory Relocation, Facility Changes, Major Accreditation Changes, Implementation of Method Updates or Program Changes (e.g., MUR, client QAPPs, Regulatory Updates), Addition or Deletion to Laboratory Capabilities or Instrumentation, Key Personnel Changes, Laboratory Information Management System (LIMS) changes.

6) DOCUMENT CONTROL

6.1) Overview

A. The QA Department is responsible for the control of documents used in the laboratory to ensure that the approved current document revision is in circulation and obsolete documents are archived (original signed copy) and any obsolete hardcopies (other than the signed original) are destroyed. The laboratory's document control procedure is defined in SOP No. *18405*.

B. The following documents, at a minimum, must be controlled:

1. Laboratory Quality Assurance (QA) Manual
2. Laboratory Policies
3. Laboratory Standard Operating Procedures (SOP)
4. Work Instructions, Forms, Tables, and Matrices
5. NBLSC Documents

C. The NBLSC documents are considered "controlled" when they are accessed as the electronic file on the documents site. Printed copies are considered uncontrolled unless the laboratory physically distributes them as controlled documents.

D. The laboratory QA Department also maintains a listing of various references and document sources integral to the operation of the laboratory. This includes reference methods and regulations. Instrument manuals (hard or electronic copies) are also maintained by the laboratory.

E. The laboratory maintains control of records for raw analytical data and supporting records such as audit reports and responses, logbooks, standard logs, training files, MDL studies, Proficiency Testing (PT) studies, certifications and related correspondence, and corrective action reports. Raw analytical data consists of bound logbooks, instrument printouts, any other notes, magnetic media, electronic data, and final reports.

Quality Assurance Manual for Environmental Analytical Services

6.2) Document Approval and Issuance

A. The pertinent elements of the document control system includes a unique document number, title, pagination, the total number of pages of the item or an 'end of document' indicator, the effective date, expiration date, and revision number. The QA personnel are responsible for the maintenance of this system.

B. Controlled documents are authorized by the QA Department. In order to develop a new document, a responsible manager submits a draft to the QA Department for suggestions and approval before use. Upon approval, QA personnel add the identifying version information to the document and retains that document as the official document on file. That document is then provided to all applicable operational units. Controlled documents are identified as such and records of their distribution are kept by the QA Department. Document control may be achieved by either electronic or hardcopy distribution.

C. The QA Department maintains a list of the official versions of controlled documents.

D. Quality System Policies and Procedures will be reviewed annually and revised as appropriate. Changes to documents occur when a procedural change warrants.

6.3) Procedures for Document Control

A. For creation of or changes to SOPs and the QA manual, refer to laboratory SOP No. *18076*, *Document Preparation, Review, and Revision*.

B. Uncontrolled copies must not be used within the laboratory. Controlled documents are marked as such, and posted to D4. Controlled distribution is achieved electronically. Controlled hardcopies must be obtained through the QA Department. Previous revisions and back-up data are stored on D4 by the QA department. Details of the numbering system, required format, and controlled distribution of documents are described in laboratory SOP No. *18405*. Editable copies are stored on a restricted access drive or accessed by designated personnel in D4.

C. Forms, worksheets, work instructions, and information are organized by department by QA. Controlled electronic versions are distributed through the intranet or on D4 and hard copies can be printed out as needed. Editable copies are accessed by designated personnel in D4. All forms used in the laboratory are tracked in the controlled documents database which can be accessed by the QA department and the IT group. The procedure for the care of these documents is in laboratory SOP No. *18405*.

6.4) Obsolete Documents

A. All invalid or obsolete documents are removed, or otherwise prevented from unintended use. The laboratory has specific procedures as described above to accomplish this. In general, obsolete documents are collected from employees according to distribution lists and are marked obsolete on the cover or destroyed. At least one copy of the obsolete document is archived according to SOP No. *18405*.

B. All documents reside with the D4 document management system. Only the current version of a document is accessible by the general user. Once a revision is made to a document, the prior version is automatically marked as "Invalid" and redirects the user to the current version.

C. If a document is no longer needed at all and is made "Obsolete" it is "deleted" from the current documents but archived within the system and automatically marked as such.

D. All "obsolete" and prior versions of documents can be accessed by designated personnel under the advanced search function within the program.

7) SERVICE TO THE CLIENT

7.1) Overview

A. The laboratory has established procedures for the review of work requests and contracts, oral or written. The procedures include evaluation of the laboratory's capability and resources to meet the contract's requirements within the requested time period. All requirements, including the methods to be used, must be adequately defined, documented and understood. For many environmental sampling and analysis programs, testing design is site or program specific and does not necessarily fit into a standard laboratory service or product. It is the laboratory's intent to provide both standard and customized environmental laboratory services to our clients.

B. A thorough review of technical and QC requirements contained in contracts is performed to ensure project success. The appropriateness of requested methods, and the laboratory's capability to perform them must be established. Projects, proposals, and contracts are reviewed for adequately defined requirements and the laboratory's capability to meet those requirements. Alternate test methods that are capable of meeting the clients' requirements may be proposed by the laboratory. A review of the laboratory's capability to analyze non-routine analytes is also part of this review process.

C. All projects, proposals and contracts are reviewed for the client's requirements in terms of analyte lists, test methodology requested, sensitivity (detection and reporting levels), accuracy, and precision requirements (% Recovery and RPD). The reviewer ensures that the laboratory's test methods are suitable to achieve these requirements and that the laboratory holds the appropriate certifications and approvals to perform the work. The laboratory and any potential subcontract laboratories must be certified, as required, for all proposed tests.

D. Electronic or hard copy deliverable requirements are evaluated against the laboratory's capacity for production of the documentation.

E. If the laboratory cannot provide all services but intends to subcontract such services, whether to another Eurofins business unit operating on the same LIMS or to an outside firm, this will be documented and discussed with the client prior to contract approval. (Refer to Section 8 for Subcontracting Procedures.)

F. The laboratory informs the client of the results of the review if it indicates any potential conflict, deficiency, lack of accreditation, or inability of the laboratory to complete the work satisfactorily. Any discrepancy between the client's requirements and the laboratory's capability to meet those requirements is resolved in writing before acceptance of the contract. It is necessary that the contract be acceptable to both the laboratory and the client. Amendments initiated by the client and/or Eurofins Calscience are documented in writing.

G. All contracts, QAPPs, Sampling and Analysis Plans (SAPs), contract amendments, and documented communications become part of the project record.

H. The same review process used for the initial review of the project documents is repeated when there are amendments to the original document(s) by the client, and the participating

personnel are informed of the changes.

7.2) Project Review

A. Appropriate personnel will review the work request at each stage of evaluation.

B. For routine projects and other simple tasks, a review by the Project Manager (PM) is considered adequate. The PM confirms that the laboratory has any required certifications, that it can meet the clients' data quality and reporting requirements and that the lab has the capacity to meet the clients turn around needs. It is recommended that, where there is a sales person assigned to the account, an attempt should be made to contact that sales person to inform them of the incoming samples.

C. For new, complex or large projects, the proposed contract is given to the Client Relationship Manager or Proposal Team, who will decide which lab will receive the work based on the scope of work and other requirements, including certification, testing methodology, and available capacity to perform the work. The contract review process is outlined below and supplemented by the *Contract Questionnaire Form 45183*.

D. This review encompasses all facets of the operation. The scope of work is distributed to the appropriate personnel, as needed based on scope of contract, to evaluate all of the requirements shown above (not necessarily in the order below):

1. Contract Administrator
2. Laboratory Project Manager (Pm)
3. BUMA
4. Laboratory Directors and/or Department Managers
5. Account Executive
6. QA Manager
7. Laboratory Environmental Health and Safety Manager

E. The QA Manager performs an overall review to identify any quality systems concerns. Department Managers review the sections of the documents applicable to their assigned areas of the laboratory to identify any project specific requirements to be communicated to their staff and or any concerns with meeting the project requirements. Project specific requirements may be added as notes in the LIMS as part of the project set up. This is managed by the PM with input from the reviews.

F. The BUMA/Laboratory Director reviews the formal laboratory quote and makes the final acceptance for their facility. The Sales Director, Contract Administrator, Account Executive or Proposal Coordinator then submits the final proposal to the client.

G. In the event that one of the above personnel is not available to review the contract, his or her back-up will fulfill the review requirements.

7.2.1) Project Specific Quality Planning

A. Communication of contract specific technical and QC criteria is an essential activity in ensuring the success of site specific testing programs. To achieve this goal, a PM is assigned to each client. It is the PM's responsibility to ensure that project-specific technical and QC requirements are effectively evaluated and communicated to the laboratory personnel before and during the project. QA department involvement may be needed to assist in the evaluation of custom QC requirements.

B. PMs are the primary client contact and they ensure resources are available to meet project requirements, they coordinate opportunities and work with laboratory management and supervisory staff to ensure available resources are sufficient to perform work for the client's project.

C. Prior to work on a new project, the dissemination of project information and/or project opening meetings may occur to discuss schedules and unique aspects of the project. Items to be discussed may include the project technical profile, turnaround times, holding times, methods, analyte lists, reporting limits, deliverables, sample hazards, or other special requirements. The PM introduces new project information to maximize production and client satisfaction, while maintaining quality. Project notes may be associated with each sample batch as requirements notifications upon sample receipt and during analytical processing.

D. Any change that may occur within an active project is agreed upon between the client/regulatory agency and the PM/laboratory. These changes (e.g., use of a non-standard method or modification of a method) and approvals must be documented prior to implementation. Documentation pertains to any document (e.g., letter, e-mail, variance, contract addendum), which has been signed by both parties.

E. Such changes are also communicated to the laboratory through method comments in TALS. The laboratory staff is then introduced to the modified requirements via the PM or the QA Specialist. After the modification is implemented into the laboratory process, documentation of the modification is made in the case narrative of the data report(s).

7.3) Balancing Laboratory Capacity and Workload

A. Evaluating laboratory capacity to perform specific projects is the responsibility of the BUMA, Laboratory Directors and Department Managers, and the Client Services manager. Many analysts are cross-trained to perform a variety of tests, and there is redundant equipment available in case of malfunctions. This minimizes the need to evaluate small and medium size projects against capacity available to complete them. Large and complex projects are reviewed against capacity estimates before bids are submitted to ensure that the client's analysis schedule can be met. Regularly scheduled meetings are held between laboratory management, PMs, Client Services and QA personnel to review progress with current projects, as well as special requirements of new work scheduled for the laboratory. Laboratory capacity and backlog is tracked on a continuous basis using information from the Laboratory Information Management System (LIMS) including turnaround time, and work in-house.

7.4) Project Contracts / Records

A. The Administration Department maintains copies of all locally signed contracts. National Sales Teams is responsible for those large corporately agreements.

B. Appropriate records are maintained for every contract or work request. All stages of the contract review process are documented and include records of any significant changes.

C. The contract will be distributed to and maintained by the appropriate sales/marketing personnel and the Account Executive. Records are maintained of pertinent discussions with a client relating to the client's requirements or the results of the work during the period of execution of the contract.

7.5) Special Services

A. The laboratory cooperates with clients and their representatives to monitor the laboratory's performance in relation to work performed for the client. It is the laboratory's goal to meet all client requirements in addition to statutory and regulatory requirements. The laboratory has procedures to ensure confidentiality to clients.

B. The laboratory's standard procedures for reporting data are described in Section 23. Special services are also available and provided upon request. These services include:

1. Reasonable access for our clients or their representatives to the relevant areas of the laboratory for the witnessing of tests performed for the client.

2. Assisting client-specified third party data validators as specified in the client's contract.

3. Supplemental information pertaining to the analysis of their samples. Note: An additional charge may apply for additional data/information that was not requested prior to the time of sample analysis or previously agreed upon.

7.6) Client Communication

A. PMs are the primary communication link with the clients. They shall inform their clients of any delays in project completion as well as any nonconformances in either sample receipt or sample analysis. Project management will maintain ongoing client communication throughout the entire client project.

B. QA is available to discuss any technical questions or concerns the client may have.

7.7) Reporting

A. The laboratory works with our clients to produce any special communication reports required by the contract.

7.8) Client Feedback and Surveys

A. The laboratory assesses both positive and negative client feedback and tracks the business's Net Promoter Score (NPS). The results are used to improve overall laboratory quality and client service. The NPS measures the customer experience from a specific business unit on a scale of 0 - 10. The results of that range are put into three categories: detractors (0-6), passives (7, 8) and promoters (9, 10). To calculate the Net Promoter Score, the # of detractors is subtracted from the # of promoters to get the score which will be on a scale of -100 to 100.

B. Surveys are sent, using an electronic interface, every 2 weeks to only those that received a report in the 2 weeks prior. This allows us to gather more real-time data. Responses by the laboratory management and/or PM to detractors is required. It is also required to be tracked within the system.

C. When a compliant is received, we determine, to the best of our ability, the extent of the issue and what data is in question. The person receiving the complaint documents this information and promptly forwards it to the appropriate management personnel where the work in question

was performed. If a data reporting error is discovered, the final report and/or data must be regenerated with the correct value(s).

D. The QA Manager is responsible for entering client concerns into D4. While an individual issue may not warrant a formal investigation, QA monitors these concerns for potential trends and will initiate an Investigation when a trend is evident. In other cases, based on the severity of the issue or upon client request, a formal Investigation is initiated for a single concern. Formal Investigation is used to document the situation and determine root cause(s) and corrective action(s).

7.9) Client Confidentiality

A. The laboratory ensures the highest standards of quality and integrity of the data and services provided to our clients.

B. The laboratory is responsible for maintaining in confidence all client information obtained or created. In situations involving the transmission of environmental test results by telephone, facsimile or other electronic means, client confidentiality must be maintained.

C. The laboratory will not intentionally divulge to any person (other than the client or any other person designated by the client in writing) any information regarding the services provided by the laboratory or any information disclosed to the laboratory by the client. Furthermore, information known to be potentially endangering to national security or an entity's proprietary rights will not be released.

D. Information about the client obtained from sources other than the client (e.g., complainant, regulator) shall be confidential between client and the laboratory. The source of this information shall be confidential to the laboratory and shall not be shared with the client, unless agreed by the source.

E. **Note:** This shall not apply to the extent that the information is required to be disclosed by the laboratory under the compulsion of legal process. The laboratory will, to the extent feasible, provide reasonable notice to the client before disclosing the information.

F. **Note:** Authorized representatives of an accrediting authority are permitted to make copies of any analyses or records relevant to the accreditation process, and copies may be removed from the laboratory for purposes of assessment.

8) SUBCONTRACTING

8.1) Overview

A. The laboratory may subcontract tests to other laboratories outside of Eurofins if the requested testing is not routinely performed in our laboratory. To a lesser extent, samples may need to be subcontracted to an overflow laboratory to ensure hold times and/or turn-around-times (TAT) are met.

B. Testing is only subcontracted with the client’s knowledge and approval. Calscience must notify the client in writing when any of their requested analyses will be subcontracted to another lab. Client approval must be obtained in writing before samples are shipped.

C. Subcontract laboratories are selected based on their qualifications and accreditations. Only an appropriately accredited laboratory will be used. The client may also have a list of laboratories

to be used for subcontracting. In these cases, the evaluation of the subcontract laboratory is made by the client.

D. Data obtained from subcontract laboratories is clearly marked as such when reported by the laboratory. The data from non-Eurofins laboratories or from Eurofins laboratories not using the "TALS LIMS" are submitted to the client in the format obtained from the subcontractor.

E. For the purpose of this quality manual, the phrase subcontract laboratory refers to a laboratory external to the Eurofins Environment Testing laboratories. The phrase "work share" refers to internal transfers of samples between the Eurofins Environment Testing laboratories.

F. When contracting with our clients, the laboratory makes commitments regarding the services to be performed and the data quality for the results to be generated. When the need arises to outsource testing for our clients because project scope, changes in laboratory capabilities, capacity, or unforeseen circumstances, we must be assured that the subcontractors or work sharing laboratories understand the requirements and will meet the same commitments we have made to the client. Refer to the NBLSC Subcontracting SOP No. *NDSC-US-SUB-SOP44936*.

G. When outsourcing analytical services, the laboratory will assure, to the extent necessary, that the subcontract or work sharing laboratory maintains a program consistent with the requirements of this document, the requirements specified in TNI/ISO 17025 and/or the client's Quality Assurance Project Plan (QAPP). All QC guidelines specific to the client's analytical program are transmitted to the subcontractor and agreed upon before sending the samples to the subcontract facility. Additionally, work requiring accreditation will be placed with an appropriately accredited laboratory. The laboratory performing the subcontracted work will be identified in the final report, as will non-TNI accredited work where required.

H. PMs or other responsible Client Service members, for the Export Lab (i.e., Eurofins Calscience, that transfers samples to another laboratory) are responsible for obtaining client approval prior to subcontracting any samples. The laboratory will advise the client of a subcontract arrangement in writing and when possible, approval from the client shall be obtained and retained in the project folder. Standard Eurofins Calscience Terms & Conditions include the flexibility to subcontract samples within the Eurofins Environment Testing Laboratories. Therefore, additional advance notification to clients for intra-laboratory subcontracting is not necessary unless specifically required by a client contract.

I. **Note:** In addition to the client, some regulating agencies (e.g., USDA) or contracts (e.g., DoD and DOE projects) require notification prior to placing such work.

8.2) Qualifying and Monitoring Subcontractors

A. Whenever a PM or Account Executive (AE) becomes aware of a client requirement or laboratory need where samples must be outsourced to another laboratory, the other laboratory(s) shall be selected based on the following:

1. Subcontractors specified by the client:

   a. In these circumstances, the client assumes responsibility for the quality of the data generated from the use of a subcontractor.

2. Subcontractors reviewed by Eurofins Calscience:

1. Firms which have been reviewed by the company and are known to meet standards for accreditations (e.g., State, TNI and DoD/DOE).

2. Technical specifications.

3. Legal and financial information.

B. A listing of subcontractors is available in D4 *PM-LI70655*.

C. All Eurofins Environment Testing America laboratories are pre-qualified for work sharing provided they hold the appropriate accreditations and can adhere to the project/program requirements. Client approval is not necessary unless specifically required by the contract. In these cases, the client must provide acknowledgement that the samples can be sent to that facility (an e-mail is sufficient documentation or if acknowledgement is verbal, the date, time, and name of person providing acknowledgement must be documented). The originating laboratory is responsible for communicating all technical, quality, and deliverable requirements as well as other contract needs.

1. When the potential subcontract laboratory has not been previously approved, Account Executives or PMs may nominate a laboratory as a subcontractor based on need. The decision to nominate a laboratory must be approved by the Sales Director or BUMA and requests that the QA Manager or PM begin the process of approving the subcontract laboratory. Refer to the D4 NBLSC document Subcontracting SOP No. *NDSC-US-SUB-SOP44936* for process details.

2. Once the appropriate accreditation and legal information is received by the laboratory, it is evaluated for acceptability and forwarded to the NBLSC Quality Information Manager (QIM) for review. After the NBLSC QIM reviews the documents for completeness, the subcontract agreement is forwarded to the BU's Scope President for formal signature and contracting with the laboratory. The approved company will be added to the approved subcontractor list on the intranet site, and the finance group is concurrently notified. A copy of the signed subcontract agreement is forwarded to the subcontractor.

3. The client will assume responsibility for the quality of the data generated from the use of a subcontractor they have requested the lab to use. The qualified subcontractors on the intranet site are known to meet minimal standards. Eurofins Calscience does not certify laboratories. Eurofins list of subcontractors can only be recommended to the extent that we would use them.

8.3) Oversight and Reporting

A. The status and performance of qualified subcontractors will be monitored by local BUs and includes an annual evaluation survey conducted by the NBLSC-QIM. Any problems identified will be brought to the attention of local BU management, the legal department and the finance department.

1. Complaints shall be investigated. Documentation of the complaint, investigation, and corrective action will be maintained in the subcontractor's file on the intranet site. Complaints are posted using the corrective action mechanism employed at each laboratory.

2. Information shall be updated on the intranet when new information is received from the subcontracted laboratories.

3. Subcontractors in good standing will be retained on the intranet listing. Client Service personnel will notify all Eurofins Environmental Testing laboratories, NBLSC-QA, the legal department and finance department if any laboratory requires removal from the intranet site. This notification will be posted on the intranet site and e-mailed to all Client Service Personnel, Laboratory Directors, QA Managers, and Sales Personnel.

B. Prior to initially sending samples to the subcontracted laboratory, the PM confirms their certification status to determine if it's current and scope inclusive. The information is documented within the project records.

C. The laboratory's certifications can be viewed on the company's website at https://www.eurofinsus.com/environment-testing/resources/certifications/.

1. All subcontracted samples must be accompanied by a Eurofins Calscience Chain of Custody (COC). A copy of the original COC sent by the client must be available in LIMS for all samples work shared within Eurofins Calscience. Client COCs are only forwarded to external subcontractors when samples are shipped directly from the project site to the subcontractor lab. Under routine circumstances, to maintain client confidentiality, original client COCs are not provided to external subcontractors.

2. Through communication with the subcontracted laboratory, the PM monitors the status of the subcontracted analyses, facilitates successful execution of the work, and ensures the timeliness and completeness of the analytical report.

3. All accredited and non-accredited work must be identified in the subcontractor's report.

4. Reports submitted from subcontractor laboratories are not altered and are included in their original form in the final project report. This clearly identifies the data as being produced by a subcontractor facility. If subcontract laboratory data is incorporated into the laboratory's EDD (i.e., imported), the report must explicitly indicate which lab produced the data for which methods and samples.

5. **Note:** The results submitted by a Eurofins Calscience work sharing laboratory may be transferred electronically and the results reported by the Eurofins Calscience work sharing lab are identified on the final report. The report must explicitly indicate which lab produced the data for which methods and samples. The final report must include a copy of the completed COC for all work sharing reports.

8.4) Contingency Planning

A. The full qualification of a subcontractor may be waived to meet emergency needs. This decision and justification must be documented in the project files, and the 'Purchase Order Terms And Conditions For Subcontracted Laboratory Services' must be sent with the samples and COC.

B. In the event this provision is utilized, the laboratory (e.g., PM) will be required to verify and document the applicable accreditations of the subcontractor. All other quality and accreditation requirements will still be applicable, but the subcontractor need not have signed a subcontract agreement with Eurofins Calscience at this time.

C. The use of any emergency subcontractor will require the PM to complete a New Supplier Information Request Form in order to process payment to the subcontractor and add them to

LIMS. This form requires the user to define the subcontractor's category/s of testing and the reason for testing.

9) PURCHASING SERVICES AND SUPPLIES

9.1) Overview

A. Supplier Evaluation

1. Procedures are in place to evaluate vendors who supply us with: new equipment, instrumentation, computerized systems and computer software; commercially purchased glassware, including sample bottleware, reagents, chemicals, solvents, gases, media, and standards; and contracted and subcontracted services.

2. The laboratory strives to ensure that our suppliers continually improve their quality systems and we reserve the right to purchase from suppliers of our choice in order to best fulfill the needs of our clients and our business. When directed by a client to purchase from a specific supplier, we will do so. In this instance it is the client's responsibility to "qualify" the specified supplier. We attempt to purchase from businesses that we have an established purchase history or have previously acquired information regarding the supplier's quality programs.

3. An approved vendor list is maintained by the laboratory for critical consumables (reagents and standards), and PT services.

4. Evaluations are not required for computer operating systems, utilities, toolsets, or systems software. They also are not required for any off-the-shelf configurable software package that has an extensive market performance history (e.g., Microsoft Word, Excel, Access).

B. Procurement

1. It is the responsibility of management personnel within each department to ensure that the appropriate supplies are available and/or ordered with sufficient lead-time to perform analytical testing or to provide support to the testing areas. The individual technical departments have trained personnel who enter the supply order into the company's purchasing system. The selection of these products is based on technical input at the analyst level and authorized by technical departmental management. The Purchasing Department maintains an ordering system in which purchase requisitions are managed. Common laboratory items (e.g., beakers, flasks, reagents) are ordered directly through the purchasing system. Purchase orders over a specified dollar amount require approval from the appropriate member(s) of the Executive Management Group before an order can be placed.

2. Upon receipt of an order, the recipient checks the order to ensure that all items were received as specified. Products that have specific storage requirements are taken to the technical area upon receipt. It is the technical area's responsibility to ensure that the product is stored in the appropriate manner. Any checks on the quality of the materials received for use in a specific test are the responsibility of the laboratory using them. This is based upon the experience of the laboratory with the usability of the product. Generally, each test has controls in place to ensure that test results are not adversely affected by the materials.

Quality Assurance Manual for Environmental Analytical Services

9.2) Glassware

A. Glassware used for volumetric measurements must be Class A or verified for accuracy according to laboratory procedure. Pyrex (or equivalent) glass should be used where possible.

9.3) Purchasing

A. Chemical reagents, solvents, glassware, and general supplies are ordered as needed to maintain sufficient quantities on hand. Materials used in the analytical process must be of a known quality. The wide variety of materials and reagents available makes it advisable to specify recommendations for the name, brand, and grade of materials to be used in any determination. This information is contained in the analytical method SOP.

9.3.1) Receiving

A. It is the responsibility of the purchasing manager to receive the shipment. It is the responsibility of the analyst who ordered the materials to document the date materials were received. Once the ordered reagents or materials are received, the analyst compares the information on the label or packaging to the original order to ensure that the purchase meets the quality level specified. This is documented through the addition of the received date and initials to the information present on the daily order log.

B. The purchasing manager verifies the lot numbers as received solvents and acids against the pre-approval lists. If a received material is listed as unapproved, or is not listed, it is sequestered and returned to the vendor. Alternatively, the laboratory may test the material for the intended use.

C. Materials may not be released for use in the laboratory until they have been inspected, verified as suitable for use, and the inspection/verification has been documented.

D. Safety Data Sheets (SDSs) are available online through a link on the Eurofins EET-Net Sharepoint site at: https://testamerica365.sharepoint.com/sites/EETAIntranet/SitePages/Environment,-Health-and-Safety.aspx

E. Anyone may review these for relevant information on the safe handling and emergency precautions of on-site chemicals.

9.3.2) Specifications

A. Methods used in the laboratory specify the grade of reagent that must be used in the procedure. If the quality of the reagent is not specified, analytical reagent grade will be used. It is the responsibility of the analyst to check the procedure carefully for the suitability of grade of reagent.

B. Chemicals are assigned expiration from the manufacturer's expiration date and must not be used past any expiration period noted in a method SOP. If expiration dates are not provided, the laboratory may contact the manufacturer to determine an expiration date. The laboratory assumes a five year expiration date on inorganic dry chemicals and solvents unless noted otherwise by the manufacturer or by the reference source method.

C. Chemicals/solvents should not be used past the manufacturer's or SOP expiration date unless verified as outlined below.

1. An expiration date cannot be extended if the dry chemical/solvent is discolored or appears otherwise physically degraded. In this case, the dry chemical/solvent must be discarded.

2. Expiration dates can be extended if the dry chemical/solvent is found to be satisfactory based on acceptable performance of quality control samples (Continuing Calibration Verification (CCV), Blanks, Laboratory Control Sample (LCS), etc.).

3. If the dry chemical/solvent is used for the preparation of standards, the expiration dates can be extended 6 months if the dry chemical/solvent is compared to an unexpired independent source in performing the method and the performance of the dry chemical/solvent is found to be satisfactory. The comparison must show that the dry chemical/solvent meets CCV limits. The comparison studies are maintained on-file and available for review.

D. Wherever possible, standards must be traceable to national or international standards of measurement or to national or international reference materials. Records to that effect are available to the user.

E. Compressed gases in use are checked for pressure and secure positioning daily. To prevent a tank from going to dryness, or introducing potential impurities, the pressure should be closely watched as it decreases to approximately 15% of the original reading, at which point it should be replaced. The quality of the gases must meet method or manufacturer specification or be of a grade that does not cause any analytical interference.

F. Water used in the preparation of samples, standards or reagents must have a specific conductivity of less than 1-µmho/cm (or specific resistivity of greater than 1.0 megohm-cm) at 25°C. The specific conductivity is checked and recorded daily. If the water's specific conductivity is greater than the specified limit, the Facility Manager and appropriate Technical Managers must be notified immediately in order to notify all departments, decide on cessation (based on intended use) of activities, and make arrangements for correction.

G. Purchased bottleware used for sampling must be certified clean and the certificates must be maintained.

9.3.3) Storage

A. Reagent and chemical storage is important from the aspects of both integrity and safety. Light-sensitive reagents may be stored in brown glass containers. Storage conditions are per the NBLSC Environmental Health & Safety Manual, Document No. *NDSC-US-EHS-QP46060*, the local laboratory EH&S manual addendum and method SOPs or manufacturer instructions.

9.4) Purchase of Equipment / Instruments / Software

A. When a new piece of equipment is needed, either for additional capacity or for replacing inoperable equipment, the analyst or supervisor makes a supply request to the Operations Manager or BUMA. A decision is made as to which piece of equipment can best satisfy the requirements. The appropriate written requests are completed.

B. Upon receipt of a new or used piece of equipment, an identification name is assigned and added to the equipment list. IT must also be notified so that they can synchronize the instrument for back-ups. Its capability is assessed to determine if it is adequate or not for the specific application. For instruments, a calibration curve is generated, followed by MDLs, Demonstration of Capabilities (DOCs), and other relevant criteria (refer to Section 18). For software, its operation must be deemed reliable and evidence of instrument verification must

be retained by the IT Department or QA Department. Software certificates supplied by the vendors are filed with the LIMS Administrator. The manufacturer's operation manual is retained by local IT.

9.5) Service

A. Service to analytical instruments (except analytical balances) is performed on an as needed basis. Routine preventative maintenance is discussed in Section 18.2. The need for service is determined by analysts and/or Technical Managers. The service providers that perform the services are approved by the Technical Manager.

B. Analytical balances are serviced and calibrated annually. The calibration and maintenance services are performed on-site, and the balances are returned to use immediately following successful calibration. Calibration certificates are filed for reference. If the calibration was unsuccessful, the balance is immediately removed from service and segregated pending either further maintenance or disposal.

C. Calibration services for support equipment such as the balances, thermometers, weight sets, autopipettors, etc., are obtained from vendors with current and valid ISO 17025 accreditation for calibration of the specific piece of equipment. Prior to utilizing the vendor's services, the vendor's accreditation status is verified. Once the equipment has been calibrated, the calibration certificates are reviewed by the QA department, and documentation of the review is filed with the calibration certificates. The equipment is then returned to service in the laboratory.

9.6) Suppliers

A. Eurofins adds vendors as options for use in the Purchasing program through a competitive proposal / bid process, strategic business alliances or negotiated vendor partnerships (contracts).

B. The level of control used in the selection process is dependent on the anticipated spending amount and the potential impact on the laboratory's business. Vendors that provide test and measuring equipment, solvents, standards, certified containers, instrument related service contracts or subcontract laboratory services shall be subject to more rigorous controls than vendors that provide off-the-shelf items of defined quality that meet the end use requirements.

C. Evaluation of suppliers is accomplished by ensuring the supplier ships the product or material ordered and that the material is of the appropriate quality. Calscience has an in house purchasing agent who evaluates our supply room inventory to ensure it remains stocked, places orders, and follows receipt of orders to ensure shipments are received and are accurate.

D. Proficiency testing providers and suppliers of certified reference materials must have appropriate ISO accreditation.

10) COMPLAINTS

10.1) Overview

A. The laboratory considers an effective client complaint handling process to be of significant business and strategic value. Listening to and documenting client concerns captures client knowledge that enables our operations to continually improve processes and client satisfaction.

An effective client complaint handling process also provides assurance to the data user that the laboratory will stand behind its data, service obligations, and products.

B. A client complaint is any expression of dissatisfaction with any aspect of our business services (e.g., communications, responsiveness, data, reports, invoicing and other functions) expressed by any party, whether received verbally or in written form. Client inquiries, complaints, or noted discrepancies are documented, communicated to management, and addressed promptly and thoroughly. These must also be communicated to QA for trending and/or formal investigation.

C. The laboratory has procedures for addressing complaints with the goal of providing satisfactory resolution in a timely and professional manner.

D. The nature of the complaint is identified, documented and investigated, and an appropriate action is determined and taken. In cases where a client complaint indicates that an established policy or procedure was not followed, the QA Department must evaluate whether a special audit must be conducted to assist in resolving the issue. A written confirmation or letter to the client, outlining the issue and response taken is recommended as part of the overall action taken. This may be handled by the PM following-up with the client on the resolution. If a client requires a letter detailing the investigation and actions, the letter is written by QA.

E. The process of complaint resolution and documentation utilizes the procedures outlined in Section 12, Corrective Actions.

10.2) Complaint Processing

A. An employee that receives a complaint initiates the complaint resolution process by first documenting the complaint in an Internal Nonconformance Memo (NCM) in TALS as outlined in Section 12.

B. Complaints fall into two categories: correctable and non-correctable. An example of a correctable complaint would be one where a report re-issue would resolve the complaint. An example of a non-correctable complaint would be one where a client complains that their data was repeatedly late. Non-correctable complaints should be reviewed for preventive action measures to reduce the likelihood of future occurrence and mitigation of client impact.

C. The general steps in the complaint handling process are:

1. Receiving and documenting complaints.

2. Acknowledging receipt of complaint, whenever possible.

3. Complaint investigation and service recovery.

4. Process improvement.

D. Complaints need to be communicated to QA to allow for initiation of investigations and for trending purposes. Full root cause investigation with corrective actions are required when requested by the client, for issues that involve a change to a reported analytical result, and where an adverse trend in the type of issue has been seen. These investigations must be documented in the corrective action database.

E. The laboratory shall inform the initiator of the complaint of the results of the investigation and the corrective action(s) taken, if any.

Quality Assurance Manual for Environmental Analytical Services

11) CONTROL AND NONCONFORMING WORK

11.1) Overview

A. When data discrepancies are discovered or deviations and departures from laboratory SOPs, policies and/or client requests have occurred, corrective action is taken immediately. First, the laboratory evaluates the significance of the nonconforming work. Then, a corrective action plan is initiated based on the outcome of the evaluation. If it is determined that the nonconforming work is an isolated incident, the plan could be as simple as adding a qualifier to the final results and/or making a notation in the case narrative. If it is determined that the nonconforming work is a systematic or improper practices issue, the corrective action plan could include a more in depth investigation and a possible suspension of an analytical method. In all cases, the actions taken are documented using the laboratory's corrective action system (refer to Section 12).

B. Due to the frequently unique nature of environmental samples, sometimes departures from documented policies and procedures are needed. These situations are documented in the corrective action database as Planned Deviations. When an analyst encounters such a situation, the problem is presented to the supervisor for resolution. The supervisor may elect to discuss it with the Technical Manager or have a representative contact the client to decide on a logical course of action. Once an approach is agreed upon, the analyst documents it using the laboratory's corrective action system described in Section 12. This information can then be supplied to the client in the form of a case narrative with the report.

C. Project Management may encounter situations where a client may request that a special procedure be applied to a sample that is not standard laboratory practice. Based on a technical evaluation, the laboratory may accept or opt to reject the request based on technical or ethical merit. An example might be the request to filter a sample before analysis of a test where filtering is not part of the method preparation. The laboratory would not have validated the method with this step as part of the sample preparation. Such a request would need to be approved by the Technical Manager and QA Manager, documented and included in the project folder. Deviations must also be noted on the final report with a narrative that the filtering of the sample during preparation is not in compliance with the analytical method requirements and the reason.

11.2) Responsibilities and Authorities

A. Under certain circumstances, the BUMA, Department Manager, or a member of the QA team may authorize departures from documented procedures or policies. The departures may be a result of procedural changes due to the nature of the sample; a one-time procedure for a client; QC failures with insufficient sample to reanalyze, etc. In most cases, the client will be informed of the departure prior to the reporting of the data. Any departures must be well documented using the laboratory's corrective action procedures. This information may also be documented in logbooks and/or data review checklists as appropriate. Any associated data must be referenced in a case narrative and/or flagged with an appropriate data qualifier.

B. Any misrepresentation or possible misrepresentation of analytical data discovered by any laboratory staff member must be reported to the laboratory Senior Management within 24-hours. The Senior Management staff is comprised of the BUMA, the QA Manager, the Department Managers, and the Operations Manager. The reporting of issues involving alleged violations of the company's *Ethics and Data Integrity Policy* or *Manual Integration* procedures must be conveyed to an ECO (e.g., the VP-QA/EHS) and the laboratory's Quality Director within 24 hours of discovery.

C. Whether an inaccurate analytical result was reported due to calculation or quantitation errors, data entry errors, improper practices, or failure to follow SOPs, the data must be evaluated to determine the possible effect and include full root cause investigation and corrective action(s).

D. All laboratory personnel are responsible for taking appropriate action when nonconforming work is identified. BUMA, QA Manager, ECOs, VP-QA/EHS, and the Quality Directors have the authority and responsibility to halt work, withhold final reports, or suspend an analysis for due cause as well as authorize the resumption of work once the investigation has been completed, root cause(s) determined and corrective action(s) implemented.

11.3) Evaluation of Significance and Actions Taken

A. For each nonconforming issue reported, an evaluation of its significance and the level of management involvement needed is made. This includes reviewing its effect on the final data, whether or not it is an isolated or a systematic issue, potential for recurrence and actions for prevention, and how it relates to any special client or program requirements.

B. The laboratory has a policy and procedures that must be implemented when any aspect of its testing work, or the results of this work do not confirm to its own procedures or the agreed requirements of the customer. The policy of the laboratory is that nonconforming work must be addressed as defined below so that the needs of the customer are met. Examples of places non-confirming work could occur include customer complaints, quality control, instrument calibration, checking of consumable materials, staff observations or supervision, test report checking, management reviews, and internal or external audits.

C. The responsibilities and for the management of nonconforming work include all laboratory personnel responsible for taking appropriate action when nonconforming work is identified, including notification of the BUMA if needed. All personnel may stop work when nonconforming work is identified, but the Group Leader, Operations Manager, BUMA, QA Representative, or QA Manager must be notified of a stoppage as soon as is feasible. The BUMA, QA Manager, Operations Manager are authorized to recall work or withhold analytical reports if necessary.

D. An evaluation of the significance of the nonconforming work is made. Exceptions are first evaluated by the analyst or other personnel performing the work and their Group Leader. Correction is taken immediately, together with any decision about the acceptability of the nonconforming work. "Corrections" are things done to continue working, report the data, and fix the immediate problem. Note that this is different than corrective action, which is described in Section 12.

E. Where necessary, the customer is notified and work is recalled. The responsibility for authorizing the resumption of work is given by the BUMA in consultation with the QA manager following the review of root cause(s) and corrective action.

F. Where the evaluation indicates that the nonconforming work could recur or that there is doubt about the compliance of the laboratory's operations with its own policies and procedures, the corrective action procedures given in Section 12.3 shall be promptly followed.

11.4) Method Suspension / Restriction (Stop Work Procedures)

A. In some cases, it may be necessary to suspend/restrict the use of a method or target analyte which constitutes significant risk and/or liability to the laboratory. Suspension/restriction

procedures can be initiated by designated persons as noted in Section 11.2.

B. Prior to suspension/restriction, confidentiality will be respected, and the problem with the required corrective and preventative action(s) will be stated in writing and presented to the BUMA.

C. The BUMA shall arrange for the appropriate personnel to meet with the QA Manager as needed. This meeting shall be held to confirm that there is a problem, that suspension/restriction of the method is required and will be concluded with a discussion of the steps necessary to bring the method/target or test fully back on line. In some cases, that may not be necessary if all appropriate personnel have already agreed there is a problem and there is agreement on the steps needed to bring the method, target or test fully back on line. The QA Manager will initiate a corrective action report as described in Section 12 if one has not already been started. A copy of any meeting notes and agreed upon steps should be e-mailed by the laboratory to their Business Unit President and the VP-QA/EHS. This e-mail serves as notification of the incident.

D. After suspension/restriction, the laboratory will hold all reports to clients pending review. No faxing, mailing, or distributing through electronic means may occur. The report must not be posted for viewing on the internet. It is the responsibility of the BUMA to hold all reporting and to notify all relevant laboratory personnel regarding the suspension/restriction (e.g., Project Management, Log-in, etc.). Clients, generally, will NOT be notified at this time. Analysis may proceed in some instances depending on the nonconformance issue.

E. Within 72 hours, the QA Manager will determine if the issue has been addressed and compliance is now met and reports can be released, OR determine the plan of action with timeline to bring work into compliance, and release work. A team, with all principals involved (e.g., BUMA, QA Manager) can devise a start-up plan to cover all steps from client notification through compliance and release of reports. Project Management, Client Services Managers, and Sales and must be notified if clients must be notified or if the suspension/restriction affects the laboratory’s ability to accept work.

F. The QA Manager must approve resumption of work or elimination of any restrictions after the investigation is complete with root cause(s) determined and corrective action(s) implemented.

12) CORRECTIVE ACTION

12.1) Overview

A. A major component of the laboratory’s QA Program is the problem investigation and feedback mechanism designed to keep the laboratory staff informed on quality related issues and to provide insight to problem resolution. When nonconforming work or departures from policies and procedures in the quality system or technical operations are identified, the corrective action procedure provides a systematic approach to assess the issues, restore the laboratory’s system integrity, and prevent reoccurrence.

B. The laboratory employs two systems to manage nonconformances. Issues suspected of being systematic in nature and for which full investigation with root cause analysis and a formal Corrective Action Report (CAR) required are documented in the laboratory's CAR database. Routine batch nonconformances, events that are understood to be isolated in nature, are documented using the LIMS nonconformance memo (NCM) system.

Quality Assurance Manual for Environmental Analytical Services

12.2) General Processes

A. Problems within the quality system or within analytical operations may be discovered in a variety of ways, such as QC sample failures, internal or external audits, proficiency testing (PT) performance, client complaints, staff observation, etc.

B. The purpose of a corrective action system is to:

1. Identify nonconformance events and assign responsibility for investigating.
2. Resolve nonconformance events and assign responsibility for any required corrective action.
3. Identify systematic problems before they become serious.
4. Identify and track client complaints and provide resolution.

C. Nonconformance Memos (NCMs) are used to document the following types of corrections / corrective actions:

1. Deviations from an established procedure or SOP.
2. QC outside of limits.
3. Isolated reporting / calculation errors.
4. Client complaints (minor, isolated issues).
5. Discrepancies in materials / goods received vs manufacturer packing slips (documentation other than NCMs in LIMS are also acceptable).

D. Investigations and Corrective Actions Documented in the CAR Database

1. Internal and external audit findings.
2. Failed or unacceptable PT results.
3. Identified poor process or method performance trends.
4. Systematic reporting / calculation errors.
5. Analytical Result Changes.
6. Data recall investigations.
7. Questionable trends that are found in the review of NCMs.
8. Client complaints (major issues; client requested full investigation).
9. Excessive revised reports.

E. The CAR database is used to document background information, assigned tasks with the responsible staff, timelines, results of corrective action investigations and root cause analysis,

details of the planned corrective action(s), and follow-up.

12.3) Corrective Action Process Steps

A. Any employee in the company can initiate a corrective action. There are four main components to a corrective action process once an issue has been identified: Cause Analysis, Selection and Implementation of Corrective Actions (both short and long term), Monitoring of the Corrective Actions, and Follow-up.

B. Cause Analysis

1. Upon discovery of a nonconformance event, the event must be defined and documented. An entry into the CAR system must be initiated, someone is assigned to investigate the issue and the event is investigated for cause.

2. The cause analysis step is the key to the process as a long term corrective action cannot be determined until the cause is determined.

3. If the cause is not readily obvious, the BUMA, Department Manager, Operations Manager, QA Manager, or QA Specialist is consulted.

C. Selection and Implementation of Corrective Actions

1. Where corrective action is needed, the laboratory shall identify potential corrective actions. The action(s), most likely to eliminate the problem and prevent recurrence, are selected and implemented. Responsibility for implementation is assigned.

2. Corrective actions shall be to a degree appropriate to the magnitude of the problem identified through the cause analysis.

3. Whatever corrective action is determined to be appropriate, the laboratory shall document and assign the appropriate laboratory personnel to implement the changes. The CAR record is used for this documentation.

D. Root Cause Analysis

1. Root Cause Analysis is a class of problem solving (investigative) methods aimed at identifying the basic or causal factor(s) that underlie variation in performance or the occurrence of a significant failure. The root cause may be buried under seemingly innocuous events, many steps preceding the perceived failure. At first glance, the immediate response is typically directed at a symptom and not the cause. Typically, root cause analysis would be best with three or more incidents to triangulate a weakness.

2. Systematically analyze and document the root causes of the more significant problems that are reported. Identify, track, and implement the corrective actions required to reduce the likelihood of recurrence of significant incidents. Trend the root cause data from these incidents to identify root causes that, when corrected, can lead to dramatic improvements in performance by eliminating entire classes of problems.

3. Identify the one event associated with problem and ask why this event occurred. Brainstorm the root causes of failures; for example, by asking why events occurred or conditions existed; and then why the cause occurred consecutive times until you get to the root cause.

For each of these sub events or causes, ask why it occurred. Repeat the process for the other events associated with the incident.

4. Root cause analysis does not mean the investigation is over. Look at technique or other systems outside the normal indicators. Often creative thinking will find root causes that ordinarily would be missed and continue to plague the laboratory or operation.

E. Monitoring of the Corrective Actions

1. The Department Manager and QA are responsible to ensure that the corrective action taken was effective.

2. Ineffective actions are documented and re-evaluated by QA until acceptable resolution is achieved. Department Managers or Group Leaders are accountable to QA to ensure final acceptable resolution is achieved and documented appropriately.

3. The QA Manager and Specialists review monthly NCM and CAR records for trends. Highlights are included in the monthly quality metrics report (refer to Section 16). If a significant trend develops that adversely affects quality, an audit of the area is performed and corrective action implemented.

4. Any out-of-control situations that are not addressed acceptably at the laboratory level may be reported to the NBLSC Quality Director by the QA Manager, indicating the nature of the out-of-control situation and problems encountered in solving the situation.

F. Follow-up Audits

1. Follow-up audits may be initiated by the QA Manager and shall be performed as soon as possible when the identification of a nonconformance casts doubt on the laboratory's compliance with its own policies and procedures, or on its compliance with state or federal requirements.

2. These audits often follow the implementation of the corrective actions to verify effectiveness. An additional audit would only be necessary when a critical issue or risk to business is discovered.

12.4) Technical Data Corrective Actions

A. In addition to providing acceptance criteria and specific protocols for technical corrective actions in the method SOPs, the laboratory has general procedures to be followed to determine when departures from the documented policies, procedures, and quality control have occurred (refer to Section 11). The documentation of these procedures is through the use of an NCM or record in the CAR system.

B. For specific criteria and corrective actions, refer to the analytical methods or specific method SOPs. The laboratory may also maintain controlled Work Instructions or Forms detailing these items. These procedures also detail the actions to be taken and by whom, for method and/or QC departures and nonconformances.

C. To the extent possible, samples shall be reported only if all quality control measures are acceptable. If the deficiency does not impair the method or program (e.g., drinking water) compliance of the results, data will be reported with an appropriate data qualifier and/or the deficiency will be noted in the case narrative. Where sample results may be impaired, the PM is

notified by an NCM and appropriate corrective action (e.g., reanalysis, resampling) is taken and documented.

12.5) Corrections to Data / Records

A. When mistakes occur in records, each mistake shall be crossed-out with a single line, [not obliterated (e.g. no white-out, erasure, write-overs, scribble out)], and the correct value entered alongside. All such corrections shall be initialed (or signed) and dated by the person making the correction.

B. This same process applies to adding additional information to a record. All additions made later than the initial must also be initialed (or signed) and dated. When corrections are due to reasons other than obvious transcription errors, the reason for the corrections (or additions) shall also be documented. In the case of records stored electronically, the original uncorrected file must be maintained intact and a second corrected file is created.

13) PREVENTIVE ACTION / IMPROVEMENT

A. The laboratory's preventive action programs minimize or eliminate potential causes of nonconformance to the quality system. This preventive action process is a proactive and continuous process of improvement that can be initiated through feedback from clients, employees, business providers, and affiliates. The QA Department has the overall responsibility to ensure that the preventive action process is in place and that relevant information on actions is submitted for management review.

B. Dedicating resources to an effective preventive action system emphasizes the laboratory's commitment to its Quality Systems. It is beneficial to identify and address negative trends before they develop into complaints, problems and corrective actions. Additionally, the laboratory continually strives to improve customer service and client satisfaction through continuous improvements to laboratory systems.

C. Opportunities for improvement may be discovered through any or all of the following:

1. Review of the monthly Quality Metrics Report.
2. Trending NCMs.
3. Review of control charts and QC results.
4. Trending proficiency testing (PT) results.
5. Performance of management system reviews.
6. Trending client complaints.
7. Review of processing operations.
8. Staff observations.

D. The Monthly QA Metrics Report shows performance indicators in all areas of the laboratory and quality system. These areas include revised reports, corrective actions, audit findings, internal auditing and data authenticity audits, client complaints, PT samples, holding time violations, SOPs, ethics training, etc. The metrics report is reviewed monthly by the laboratory management, NBLSC QA Team, Local and NBLSC Management. These metrics are used in

evaluating the management and quality system performance on an ongoing basis and provide a tool for identifying risk and areas for improvement.

E. Items identified as continuous improvement opportunities to the management system may be issued as goals from the annual management systems review, recommendations from internal audits, Lessons Learned, or as management or NBLSC level initiatives.

F. The laboratory's corrective action process is integral to implementation of preventive actions. A critical piece of the corrective action process is the implementation of actions to prevent further occurrence of a noncompliance event. Historical review of corrective action and nonconformances provides a valuable mechanism for identifying preventive action opportunities.

G. The following elements are part of a preventative action/process improvement system:

1. Identification of an opportunity for preventive action or process improvement.
2. Process for the preventive action or improvement.
3. Define the measurements of the effectiveness of the process once undertaken.
4. Execution of the preventive action or improvement.
5. Evaluation of the plan using the defined measurements.
6. Verification of the effectiveness of the preventive action or improvement.
7. Close-Out by documenting any permanent changes to the Quality System as a result of the Preventive Action or Process Improvement.

H. Documentation of Preventive Action/Process Improvement is incorporated into the monthly QA reports, corrective action process, and management review.

I. Any preventive actions/process improvement undertaken or attempted shall be taken into account during the Annual *Management Systems Review* (Section 16). A highly detailed report is not required; however, a summary of successes and failures within the preventive action program is sufficient to provide management with a measurement for evaluation.

14) CONTROL OF RECORDS

A. The laboratory maintains a records management system appropriate to its needs and that complies with applicable standards or regulations as required. The system produces unequivocal, accurate records that document all laboratory activities. The laboratory retains all original observations, calculations and derived data, calibration records and a copy of the analytical report for a minimum of five years after it has been issued. Exceptions for programs with longer retention requirements are discussed in Section 14.2.

14.1) Overview

A. The laboratory has established procedures for identification, collection, indexing, access, filing, storage, maintenance and disposal of quality and technical records. Quality records are maintained by the QA department in a database, D4, which is backed up as part of the regular laboratory backup. Records are of two types; either electronic or hard copy paper formats

depending on whether the record is computer or hand generated (some records may be in both formats).

B. All records are stored and retained in such a way that they are secure and readily retrievable at the laboratory facility or at an offsite storage location that provides a suitable environment to prevent damage or deterioration and to prevent loss at the laboratory. All records shall be protected against fire, theft, loss, environmental deterioration, and vermin. In the case of electronic records, electronic or magnetic sources, storage media are protected from deterioration caused by magnetic fields and/or electronic deterioration.

C. Access to the data is limited to laboratory and company employees and is documented with an access log. Records are archived off-site, stored in a secure location where a record is maintained of any entry into the storage facility. Retention of records are maintained on-site at the laboratory for at least 1 year. It is kept on a secondary server until disk space is needing to be freed up, which usually takes two or three years before we need to do a purge. That same data on the local lab server is backed up nightly by our backup system at the Datacenter. Records are maintained for a minimum of five years unless otherwise specified by a client or regulatory requirement.

D. For raw data and project records, record retention shall be calculated from the date the project report is issued. For other records, such as NBLSC Documents, QA, or Administrative Records, the retention time is calculated from the date the record is formally retired.

E. The laboratory has procedures to protect and back-up records stored electronically and to prevent unauthorized access to or amendment of these records. All analytical data is maintained in secure electronic format and, in limited cases, hard copy bound logbooks.

F. The record keeping system allows for historical reconstruction of all laboratory activities that produced the analytical data, as well as rapid recovery of historical data. (Records stored off site are, for the most part, immediately accessible. If requested in a queried format, within 2 days of a request for such records). The history of the sample from when the laboratory took possession of the samples must be readily understood through the documentation. This shall include inter-laboratory transfers of samples and/or extracts.

1. The records include the identity of personnel involved in sampling, sample receipt, preparation, or testing. All analytical work contains the initials (at least) of the personnel involved. The laboratory’s copy of the COC is stored by Sample Control after scanning. The chain of custody would indicate the name of the sampler and any sampling provided with the work order.

2. All information relating to the laboratory facilities' equipment, analytical test methods, and related laboratory activities, such as sample receipt, sample preparation, or data verification and documented.

3. The record keeping system facilitates the retrieval of all working files and archived records for inspection and verification purposes (e.g., set format for naming electronic files, set format for what is included with a given analytical data set. Instrument data is stored sequentially by instrument. A given day’s analyses are maintained in the order of the analysis. Run logs are maintained for each instrument or method; a copy of each day’s run log or instrument sequence is stored with the data to aid in re-constructing an analytical sequence. Where an analysis is performed without an instrument, bound logbooks or bench

sheets are used to record and file data. Standard and reagent information is recorded into LIMS for each method as required.

4. Changes to electronic records in LIMS or instrument data are recorded in audit trails.

5. The reason for a signature or initials on a document is clearly indicated in the records such as "sampled by," "prepared by", "reviewed by", or "analyzed by".

6. All generated data except those that are generated by automated data collection systems, are recorded directly, promptly and legibly in permanent dark ink.

7. Hard copy data may be scanned into PDF format for record storage as long as the scanning process can be verified in order to ensure that no data is lost and the data files and storage media must be tested to verify the laboratory's ability to retrieve the information prior to the destruction of the hard copy that was scanned.

14.2) Technical and Analytical Records

A. The laboratory retains records of original observations, derived data and sufficient information to establish an audit trail, calibration records, staff records and a copy of each analytical report issued, for a minimum of five years unless otherwise specified by a client or regulatory requirement. The records for each analysis shall contain sufficient information to enable the analysis to be repeated under conditions as close as possible to the original. The records shall include the identity of laboratory personnel responsible for the sampling, performance of each analysis and reviewing results.

B. Observations, data and calculations are recorded real-time and are identifiable to the specific task. Changes to electronic records in LIMS or instrument data are recorded in audit trails.

C. The essential information to be associated with analysis, such as instrument printouts, computer data files, analytical notebooks, and run logs, include:

1. Laboratory sample ID code

2. Date of analysis, time of analysis is also required if the holding time is seventy-two (72) hours or less, or when time critical steps are included in the analysis (e.g., drying times, incubations, etc.), instrumental analyses have the date and time of analysis recorded as part of their general operations.

3. Instrumentation identification and instrument operating conditions/parameters - operating conditions/parameters are typically recorded in instrument maintenance logs where available.

4. Analysis type

5. Analyst's or operator's initials/signature

6. Sample preparation including cleanup, separation protocols, ID codes, volumes, weights, instrument printouts, meter readings, calculations, reagents

7. Test results

8. Standard and reagent origin, receipt, preparation, and use

9. Calibration criteria, frequency and acceptance criteria

10. Data and statistical calculations, review, confirmation, interpretation, assessment and reporting conventions

11. Quality control protocols and assessment

12. Electronic data security, software documentation and verification, software and hardware audits, backups, and records of any changes to automated data entries.

13. Method performance criteria including expected quality control requirements. These are indicated both in LIMS and on specific analytical report formats.

D. All logbooks used during receipt, preparation, storage, analysis, and reporting of samples or monitoring of support equipment shall undergo a periodic, documented supervisory or peer review.

14.3) Laboratory Support Activities

A. In addition to documenting all the above-mentioned activities, the following are retained QA records and project records (previous discussions in this section relate where and how these data are stored):

1. All original raw data, whether hard copy or electronic, for calibrations, samples and quality control measures, including analysts' work sheets and data output records (chromatograms and other instrument response readout records).

2. Copies of final reports.

3. Archives SOPs.

4. Correspondence relating to laboratory activities for a specific project.

5. All corrective action reports, audits and audit responses.

6. Proficiency test results and raw data.

7. Results of data review, verification, and data checking procedures.

B. Records of all procedures to which a sample is subjected while in the possession of the laboratory are maintained. These include, but are not limited to, records pertaining to:

1. Sample preservation including appropriateness of sample container and compliance with holding time requirement.

2. Sample identification, receipt, acceptance, or rejection and login.

3. Sample storage and tracking including shipping receipts, sample transmittal / COC forms.

4. Procedures for the receipt and retention of samples, including all provisions necessary to protect the integrity of samples.

14.4) Records Management, Storage and Disposal

A. All records (including those pertaining to test equipment), certificates and reports are safely stored, held secure and in confidence to the client. Certification related records are available upon request.

B. All information necessary for the historical reconstruction of data is maintained by the laboratory. Records that are stored only on electronic media must be supported by the hardware and software necessary for their retrieval. Records that are generated by personal computers are operated only on the company VPN and records are stored and backed up on the same system as though they were on-site.

C. The laboratory has a record management system (a.k.a., *document control*) for control of instrument logbooks. Standards are maintained in LIMS and/or TALS – no logbooks are used to record that data. Records are considered archived when noted as such in the records management system (a.k.a., *document control*).

1. Transfer of Ownership - In the event that the laboratory transfers ownership or goes out of business, the laboratory shall ensure that the records are maintained or transferred according to client's instructions. Upon ownership transfer, record retention requirements shall be addressed in the ownership transfer agreement and the responsibility for maintaining archives is clearly established. In addition, in cases of bankruptcy, appropriate regulatory and state legal requirements concerning laboratory records must be followed. In the event of the closure of the laboratory, all records will revert to the control of NBLSC. Should the entire company cease to exist, as much notice as possible will be given to clients and the accrediting bodies who have worked with the laboratory during the previous 5 years of such action.

2. Records Disposal - Records are removed from the archive and destroyed after 5 years unless otherwise specified by a client or regulatory requirement. On a project specific or program basis, clients may need to be notified prior to record destruction. Records are destroyed in a manner that ensures their confidentiality such as shredding, mutilation or incineration. Electronic copies of records are destroyed by erasure so no records can be read.

15) AUDITS

15.1) Internal Audits

A. *Internal audits* are performed to verify that laboratory operations comply with the requirements of the laboratory's quality system and with the external quality programs under which the laboratory operates. Audits are planned and organized by the QA staff. Personnel conducting the audits should be independent of the area being evaluated. Auditors will have sufficient authority, access to work areas, and organizational freedom necessary to observe all activities affecting quality and to report the assessments to laboratory management and, when requested, to NBLSC Management.

B. Audits are conducted and documented as described in the:

1. *Annual Management Systems Internal Audit* - An annual management systems audit is required to ensure compliance to relevant items from a checklist that incorporates items from the TNI Standard that include the management system, quality systems, and quality assurance requirements.

2. *Test Method Internal Audits* - These audits assess the methods performed. Reported results are compared to raw data to verify the authenticity of results. The validity of calibrations, QC results, run logs, records of manual integrations, and calculations are checked. Where possible, electronic audit miner programs are used to identify unusual manipulations of the data deserving closer scrutiny. The analyst's technique is reviewed as well as their ability to follow the SOP as written.

3. *Operational System Audits* - These audits apply to areas of the laboratory that are not necessarily test methods such as Sample Receiving, Sample Splitting, LIMS, etc.

4. Special Audit - Focused audits conducted on an as needed basis, generally as a follow up to specific issues such as client complaints, corrective actions, PT results, data audits, system audits, method validation audits, regulatory audits or suspected ethical improprieties. Special audits are focused on a specific issue.

5. Performance Testing - The laboratory participates semi-annually in performance audits conducted through the analysis of PT samples provided by a third party. Some non-TNI labs do not require semi-annual PTs including Arizona and California. The laboratory participates in the following types of PT studies: Nonpotable Water, Soil, and Air. It is policy that PT samples be treated as typical samples in the production process. Full root cause investigations for unacceptable PT results are required. Any PT that receives an Unacceptable result must be reported to CA ELAP and two out of three Unacceptable results in immediate loss of accreditation. A seven-day waiting period followed by an Acceptable score and an Amendment application to restore accreditation.

15.2) External Audits

A. External audits are performed when certifying agencies or clients conduct inspections (either on-site or remote) or submit performance testing samples to the laboratory for analysis. It is Eurofins policy to cooperate fully with regulatory authorities and clients. The laboratory makes every effort to provide the auditors with access to personnel, documentation, and assistance. Laboratory supervisors are responsible for providing corrective actions to the QA Manager who coordinates the response. Audit responses are due in the time allotted by the client or agency performing the audit.

B. The laboratory cooperates with clients and their representatives to monitor the laboratory's performance in relation to work performed for the client. The client may only view data and systems related directly to the client's work. All efforts are made to keep other client information confidential.

C. During audits, auditors may come into possession of information claimed as Confidential Business Information (CBI). A business confidentiality claim is defined as "a claim or allegation that business information is entitled to confidential treatment for reasons of business confidentiality or a request for a determination that such information is entitled to such treatment." When information is claimed as business confidential, the laboratory must place on (or attach to) the information at the time it is submitted to the auditor, a cover sheet, stamped or typed legend or other suitable form of notice, employing language such as "trade secret", "proprietary" or "company confidential". Confidential portions of documents otherwise non-confidential must be clearly identified. CBI may be purged of references to client identity by the responsible laboratory official at the time of removal from the laboratory. However, sample identifiers may not be obscured from the information. Additional information regarding CBI can be found in the TNI Standard.

15.3) Audit Findings

A. Audit findings, deviations, or however named are documented using the corrective action process and database (see Section 12). The laboratory's corrective action documentation must include the investigation, root cause(s), actions(s) with timelines and supporting documentation of proof of completion. The responses to the agency or client may include action plans that could not be completed prior to the response due date. In these instances, a targeted completion date must be set and agreed to by operations management and the QA Manager.

B. Developing and implementing corrective actions to findings is the responsibility of the department manager where the finding originated. Findings that are not corrected by specified due dates are reported monthly to management in the monthly quality metrics report.

C. If any audit finding casts doubt on the effectiveness of the operations or on the correctness or validity of the laboratory's test results, the laboratory shall take timely corrective action, and shall notify clients in writing if the investigations show that the laboratory results have been affected. Once corrective action is implemented, a follow-up evaluation is scheduled to ensure that the problem has been corrected.

D. Clients must be notified promptly in writing of any event such as the identification of defective measuring or test equipment that casts doubt on the validity of results given in any test report or amendment to a test report. The investigation must begin within 24 hours of confirmation of the problem and all efforts are made to notify the client within two weeks after the completion of the investigation.

16) Management Reviews

16.1) Quality Metrics Report

A. The QA Department is responsible for preparing a comprehensive monthly quality metrics report to Management to keep them apprised of current quality system related issues. This report fosters communication, review, and refinement of the quality system to evaluate the suitability of policies and procedures to meet both regulatory and laboratory quality objectives.

B. The NBLSC QA team compiles information from all of the Eurofins Environment Testing laboratories monthly quality metrics reports for the Executive Management team. This report includes, but is not limited to, notable information and concerns regarding the laboratory's quality system programs, overall concerns across the laboratories, information regarding new regulations that may affect the Eurofins businesses.

16.2) Annual Management Review

A. The BU management team (BUMA, Scope Leader, Department Managers, Sales Direct, QA Manager) conducts a review annually of its quality and management systems to ensure its continuing suitability and effectiveness in meeting client and regulatory requirements and to introduce any necessary changes or improvements. It will also provide a platform for defining goals, objectives and action items that feed into the laboratory planning system.

B. Details on the review process and agenda topics to be addressed are covered in SOP No. *39508*. The review uses information generated during the preceding year.

C. Significant issues from the following documentation are compiled by the QA Manager and reviewed with the BUMA prior to the review meeting:

1. Matters arising from the previous annual review
2. Prior Monthly QA Reports issues
3. Laboratory QA Metrics
4. Review of report reissue requests
5. Review of client feedback and complaints
6. Issues arising from any prior management or staff meetings
7. Minutes from prior senior lab management meetings. Issues that may be raised from these meetings include:
   a. Adequacy of staff, equipment and facility resources
   b. Adequacy of policies and procedures
   c. Future plans for resources and testing capability and capacity
8. The annual internal double blind PT program sample performance (if performed)
9. Compliance to the *Ethics and Data Integrity Policy*. Including any evidence/incidents of inappropriate actions or vulnerabilities related to Data Integrity.
10. Evaluation of overall risk, including risks to impartiality, confidentiality, reporting statements of conformity and nonconforming work.

D. The meeting is held. A report is generated by the QA Manager and management. The report is distributed to the President of the Business Unit, Business Unit Manager, and other management attendees. The report includes, but is not limited to:

1. The date of the review and the names and titles of participants.
2. A reference to the existing data quality related documents and topics that were reviewed.
3. Quality system or operational changes or improvements that will be made as a result of the review [e.g., an implementation schedule including assigned responsibilities for the changes (Action Table)]

17) TEST METHODS AND METHOD VALIDATION

17.1) Overview

A. The laboratory uses methods that are appropriate to meet our clients' requirements and that are within the scope of the laboratory's capabilities. These include sampling, handling, transport, storage and preparation of samples, and, where appropriate, an estimation of the measurement of uncertainty as well as statistical techniques for analysis of environmental data.

B. Instructions are available in the laboratory for the operation of equipment as well as for the handling and preparation of samples. All instructions, Standard Operating Procedures (SOPs), reference methods and manuals relevant to the working of the laboratory are readily available to all staff. Deviations from published methods are documented (with justification) in the laboratory's approved SOPs. SOPs are submitted to clients for review at their request. Significant deviations from published methods require client approval and regulatory approval where applicable.

17.2) Standard Operating Procedures (SOPs)

A. The laboratory maintains SOPs that accurately reflect all laboratory activities. The method SOPs are derived from the most recently promulgated/approved, published methods and are specifically adapted to the laboratory facility. Modifications or clarifications to published methods are clearly noted in the SOPs. All SOPs are controlled in the laboratory.

1. All SOPs contain a revision number, effective date, and appropriate approval signatures. Controlled copies are available to all staff.

2. Procedures for writing an SOP are addressed in SOP No. *18076*.

3. SOPs are reviewed at a minimum of every 2 years and where necessary, revised to ensure continuing suitability and compliance with applicable requirements.

17.3) Laboratory Methods

A. For each test method, the laboratory shall have available the published referenced method as well as the laboratory developed SOP.

B. Technical SOPs are maintained to described a specific test method. Non-technical SOPs are maintained to describe functions and processes not related to a specific test method.

17.4) Selection of Methods

A. Since numerous methods and analytical techniques are available, continued communication between the client and laboratory is imperative to assure the correct methods are utilized. Once client methodology requirements are established, this and other pertinent information is summarized by the PM or Business Development Manager. These mechanisms ensure that the proper analytical methods are applied when the samples arrive for log-in. For non-routine analytical services (e.g., special matrices, non-routine compound lists), the method of choice is selected based on client needs and available technology. The methods selected should be capable of measuring the specific parameter of interest, in the concentration range of interest, and with the required precision and accuracy.

17.4.1) Sources of Methods

A. Routine analytical services are performed using standard EPA-approved methodology. In some cases, modification of standard approved methods may be necessary to provide accurate analyses of particularly complex matrices. When the use of specific methods for sample analysis is mandated through project or regulatory requirements, only those methods shall be used.

B. When clients do not specify the method to be used or methods are not required, the methods used will be clearly validated and documented in an SOP and available to clients and/or the end user of the data.

C. The laboratory reviews updated versions to all the aforementioned references for adaptation based upon capabilities, instrumentation, etc., and implements them as appropriate. As such, the laboratory strives to perform only the latest versions of each approved method as regulations allow or require.

D. Other reference procedures for non-routine analyses may include methods established by specific states (e.g., Underground Storage Tank methods), ASTM or equipment manufacturers. Sample type, source, and the governing regulatory agency requiring the analysis will determine the method utilized.

E. Other reference procedures for non-routine analyses may include methods established by specific states (e.g., Underground Storage Tank methods), ASTM or equipment manufacturers. Sample type, source, and the governing regulatory agency requiring the analysis will determine the method utilized.

F. The laboratory shall inform the client when a method proposed by the client may be inappropriate or out of date. After the client has been informed, and they wish to proceed contrary to the laboratory's recommendation, it will be documented.

G. Client Supplied, Laboratory Developed, and/or Non-Standard Methods

1. Most client-supplied method requirements involve achieving specific quality control criteria, limits of quantitation (LOQ), and/or method detection limits (MDL) using standard EPA methods. These requirements are communicated to the appropriate technical groups prior to the project start up. Each technical group evaluates the scope of work and the requirements to ensure the criteria can be met using the standard EPA method. The data is monitored to ensure the criteria are met throughout the project. The PM notifies the client if there is a more appropriate method available or if the client's criteria cannot be achieved on a certain sample matrix (i.e., due to matrix or dilutions).

H. Procedural Deviations

1. Analysts are required to follow a documented method for all tests performed; and any deviations from analytical methods must be documented, approved, and justified in an appropriate and consistent manner. We classify method deviations as either being a planned deviation or an unplanned deviation. In general, the following information is captured to document both types of situations:

   a. Description of the situation

   b. Reason or justification for the deviation

   c. Relevance the deviation has on the testing

   d. Signature/date of analyst performing the test

   e. Signature/date of QA and laboratory management approving the deviation

   f. Signature/date of client approval, if necessary

2. Deviations to written procedures are documented in raw data records and the corrective action system. Both types of documentation require management and QA review and approval.

17.4.2) Demonstration of Capability

A. Before the laboratory may institute a new method and begin reporting results, the laboratory shall confirm that it can properly perform the method. In general, this demonstration does not test the performance of the method in real world samples, but in an applicable and available clean matrix sample. If the method is for the testing of analytes that are not conducive to spiking, demonstration of capability may be performed on quality control samples.

B. A demonstration of capability (DOC) SOP No. *27925* is performed whenever there is a change in instrument type (e.g., new instrumentation), matrix, method or personnel (e.g., analyst has not performed the test within the last 12 months).

C. **Note:** The laboratory shall have a DOC for all analytes included in the methods that the laboratory performs, and proficiency DOCs for each analyst shall include all analytes that the laboratory routinely performs. Addition of non-routine analytes does not require new DOCs for all analysts if those analysts are already qualified for routine analytes tested using identical chemistry and instrument conditions.

D. The initial demonstration of capability must be thoroughly documented and approved by the Department Manager or Group Leader and QA Manager prior to independently analyzing client samples. All associated documentation must be retained in accordance with the laboratory's archiving procedures.

E. The laboratory must have an approved SOP, demonstrate satisfactory performance, and conduct an MDL study (when applicable). There may be other requirements as stated within the published method or regulations (e.g., retention time window study).

17.4.3) Initial Demonstration of Capability (IDOC) Procedure

A. The analyte(s) shall be diluted in a volume of clean matrix sufficient to prepare four aliquots at the concentration specified by a method or the laboratory SOP.

1. At least four aliquots shall be prepared (including any applicable clean-up procedures) and analyzed according to the test method (either concurrently or over a period of days).

2. Using all of the results, calculate the mean recovery in the appropriate reporting units and the standard deviations for each parameter of interest.

3. When it is not possible to determine the mean and standard deviations, such as for presence, absence and logarithmic values, the laboratory will assess performance against criteria described in the Method SOP.

4. Compare the information obtained above to the corresponding acceptance criteria for precision and accuracy in the test method (if applicable) or in laboratory generated acceptance criteria (LCS or interim criteria) if there is no mandatory criteria established. If any one of the parameters do not meet the acceptance criteria, the performance is unacceptable for that parameter. For Arizona IDOCs, all four iterations must pass the acceptance criteria.

5. When one or more of the tested parameters fail at least one of the acceptance criteria, the analyst must proceed according to either option listed below:

   a. Locate and correct the source of the problem and repeat the test for all parameters of interest beginning with step 3 above.

   b. Beginning with step 3 above, repeat the test for all parameters that failed to meet criteria. Repeated failure, however, will confirm a general problem with the measurement system. If this occurs, locate and correct the source of the problem and repeat the test for all compounds of interest beginning with step 1 above.

B. **Note:** Results of successive LCS analyses can be used to fulfill the DOC requirement.

C. Methods on line prior to the effective date of this Section shall be updated to the procedures outlined above as new analysts perform their demonstrations of capability. A copy of the new record will replace that which was used for documentation in the past. At a minimum, the precision and accuracy of four mid-level laboratory control samples must have been compared to the laboratory's quality control acceptance limits.

17.5) Method Detection Limit (MDL) / Limits of Detection (LOD)

A. Details of the laboratory's procedure for conducting MDL studies are given in SOP No. *33615*.

B. The MDL is the minimum measured quantity of a substance that can be reported with 99% confidence that the concentration is distinguishable from method blank results, consistent with 40CFR Part 136 Appendix B, August, 2017. The MDL is equivalent to the TNI LOD or DL, and is also equivalent to the DoD/DOE Quality Systems Manual (QSM) DL. The working or final MDL is the higher of the MDL value determined from spikes (MDLs) and the MDL value determined from blanks (MDLb).

C. An initial MDL study shall be performed during the method validation process and when the method is altered in a way that can reasonably be expected to change its sensitivity. Ongoing data are collected during each quarter in which samples are being analyzed. If it is found during the reevaluation of detection limit results that more than 5% of the spiked samples do not return positive numeric results that meet all method qualitative identification criteria, then then spiking level shall be increased and the initial MDL study will be repeated at the new spiking concentration.

D. At least once every 13 months the MDLs and MDLb are recalculated and reevaluated using data collected during the preceding period.

17.6) Limit of Quantitation

A. The LOQ shall be at a concentration equivalent to the lowest calibration standard concentration, with the exception of methods using a single-point calibration, and shall be greater than the MDL. The LOQ is verified by preparing and analyzing spikes at concentrations 1-2 times the selected LOQ, employing the complete analytical process.

B. When the laboratory establishes a quantitation limit, it must be initially verified by the analysis of a low level standard or QC sample at 1-2 times the reporting limit or by a DL check samples at or below the LOQ. The LOQ is verified annually thereafter. The annual requirement is waived for methods that have an annually verified MDL. The laboratory will comply with any regulatory requirements.

C. DoD Requirements for LOQ are described in Section 10 of SOP No. *33615*.

17.7) Retention Time Windows

A. Most organic analyses and some inorganic analyses use chromatography techniques for qualitative and quantitative determinations. For every chromatography analysis or as specified in the reference method, each analyte will have a specific time of elution from the column to the detector. This is known as the analyte's retention time. The variance in the expected time of elution is defined as the retention time window. As the key to analyte identification in chromatography, retention time windows must be established on every column for every analyte used for that method. These records are kept on-file and available for review at the instrument.

17.8) Evaluation of Selectivity

A. The laboratory evaluates selectivity by following the checks within the applicable analytical methods, which include mass spectral tuning, second column confirmation, ICP interelement interference checks, chromatography retention time windows, sample blanks, spectrochemical, atomic absorption or fluorescence profiles, co-precipitation evaluations, specific electrode response factors, etc.

17.9) Estimation of Uncertainty of Measurement

A. Uncertainty is "a parameter associated with the result of a measurement, that characterizes the dispersion of the values that could reasonably be attributed to the measurand" (as defined by the International Vocabulary of Basic and General Terms in Metrology, ISO Geneva, 1993, ISBN 92-67-10175-1). Knowledge of the uncertainty of a measurement provides additional confidence in a result's validity. Its value accounts for all the factors which could possibly affect the result, such as adequacy of analyte definition, sampling, matrix effects and interferences, climatic conditions, variances in weights, volumes, and standards, analytical procedure, and random variation. Some national accreditation organizations require the use of an "expanded uncertainty" defined as the range within which the value of the measurand is believed to lie within at least a 95% confidence level with the coverage factor k=2.

1. Uncertainty is not error. Error is a single value (i.e., the difference between the true result and the measured result). On environmental samples, the true result is never known. The measurement is the sum of the unknown true value and the unknown error. Unknown error is a combination of systematic error, or bias, and random error. Bias varies predictably, constantly, and independently from the number of measurements. Random error is unpredictable, assumed to be Gaussian in distribution, and reducible by increasing the number of measurements.

2. The minimum uncertainty associated with results generated by the laboratory can be determined by using the Laboratory Control Sample (LCS) accuracy range for a given analyte. The LCS limits are used to assess the performance of the measurement system since they take into consideration all of the laboratory variables associated with a given test over time (except for variability associated with the sampling and the variability due to matrix effects). The percent recovery of the LCS is compared either to the method-required LCS accuracy limits or to the statistical, historical, in-house LCS accuracy limits.

3. To calculate the uncertainty for the specific result reported, multiply the result by the decimal of the lower end of the LCS range percent value for the lower end of the uncertainty range, and multiply the result by the decimal of the upper end of the LCS range percent value for the upper end of the uncertainty range. These calculated values represent uncertainties at approximately the 99% confidence level with a coverage factor of k = 3. As

an example, for a reported result of 1.0 mg/L with an LCS recovery range of 50 to 150%, the estimated uncertainty in the result would be 1.0 +/- 0.5 mg/L.

17.10) Sample Reanalysis Guidelines

A. Because there is a certain level of uncertainty with any analytical measurement, a sample reanalysis may result in either a higher or lower value from an initial sample analysis. There are also variables that may be present (e.g., sample homogeneity, analyte precipitation over time, etc.) that may affect the results of a reanalysis. Based on the above comments, the laboratory will reanalyze samples at a client's request with the caveats listed below. Client specific Contractual Terms & Conditions for reanalysis protocols may supersede the following items.

B. Homogenous samples: If a reanalysis agrees with the original result to within the RPD limits for MS/MSD or Duplicate analyses, or within +/- 1 reporting limit for samples

1. If the reanalysis does not agree (as defined above) with the original result, then the laboratory will investigate the discrepancy and reanalyze the sample a third time for confirmation, if sufficient sample is available.

2. Any potential charges related to reanalysis are discussed in the contract terms and conditions or discussed at the time of the request. The client will typically be charged for reanalysis unless it is determined that the laboratory was in error.

3. Due to the potential for increased variability, reanalysis may not be applicable to Non-homogenous, Encore, and Sodium Bisulfate preserved samples. See the Area Supervisor or Laboratory Director if unsure.

17.11) Control of Data

A. The laboratory has policies and procedures in place to ensure the authenticity, integrity, and accuracy of the analytical data generated by the laboratory.

17.11.1) Computer and Electronic Data Related Requirements

A. The three basic objectives of our computer security procedures and policies are shown below. The laboratory is currently using the Eurofins Laboratory Information Management System (LIMS), which has been highly customized to meet the needs of the laboratory.

1. Maintain the Database Integrity - Assurance that data is reliable and accurate from acquisition through data verification (review) procedures, password-protecting access, anti-virus protection, data change requirements, as well as an internal LIMS permissions procedure.

a. LIMS Database Integrity is achieved through data input validation, internal user controls, documentation of system failures and corrective actions taken, and data change requirements.

b. Spreadsheets and other software developed in-house must be verified with documentation through hand calculations prior to use. Cells containing calculations must be lock-protected and controlled.

c. Instrument hardware and software adjustments are safeguarded through maintenance logs, audit trails, and controlled access.

2. Ensure Information Availability - Protection against loss of information or service is ensured through scheduled back-ups, stable file server network architecture, secure storage of media, line filter, Uninterruptible Power Supply (UPS), and maintaining older versions of software as revisions are implemented.

3. Maintain Confidentiality - Ensure data confidentiality through physical access controls such as password protection or website access approval when electronically transmitting data.

17.11.2) Data Reduction

A. The complexity of the data reduction depends on the analytical method and the number of discrete operations involved (e.g., extractions, dilutions, instrument readings and concentrations). The analyst calculates the final results from the raw data or uses appropriate computer programs to assist in the calculation of final reportable values.

B. For manual data entry of laboratory-produced data, e.g., Wet Chemistry, the data is reduced by the analyst and then verified by the secondary reviewer in LIMS. The batch data are signed by both the analyst and secondary reviewer to confirm the accuracy of the manual entry(s). For manual data entry of sample collection data, the data is reduced by the sample collected, entered by a secondary staff member and then verified by the reviewer in LIMS. The batch data are signed by both the secondary staff member and reviewer to confirm the accuracy of the manual entry(s).

C. Manual integration of peaks will be documented and reviewed and the raw data will be flagged by the instrument software.

D. Analytical results are reduced to appropriate concentration units specified by the analytical method, taking into account factors such as dilution, sample weight or volume, etc. Blank correction will be applied only when required by the method or per manufacturer's indication; otherwise, it should not be performed. Calculations are independently verified by appropriate laboratory staff. Calculations and data reduction steps for various methods are summarized in the respective analytical SOPs or program requirements.

1. In general, concentration results are reported in milligrams per liter (mg/L) or micrograms per liter (µg/L) for liquids and milligrams per kilogram (mg/kg) or micrograms per kilogram (µg/kg) for solids. For values greater than 10,000 mg/L, results can be reported in percent, i.e., 10,000 mg/L = 1%. Units are defined in each laboratory SOP.

2. For those methods that do not have an instrument printout or an instrumental output compatible with the LIMS, the raw results and dilution factors are entered directly into LIMS by the analyst or secondary staff member for field parameters, and the software calculates the final result for the analytical report. LIMS has a formatter for significant figure criterion for each analyte.

3. All raw data must be retained in the worklist folder, computer file, and/or runlog. All criteria pertinent to the method must be recorded. The documentation is recorded at the time observations or calculations are made and must be signed or initialed/dated (month/day/year). It must be easily identifiable who performed which tasks if multiple people were involved.

4. In reporting, the analyst or the instrument output records the raw data result using values of known certainty plus one uncertain digit. If final calculations are performed external to

LIMS, the results should be entered in LIMS with at least three significant figures. In general, results are reported to 2 significant figures on the final report.

5. The laboratory strives to import data directly from instruments or calculation spreadsheets to ensure that the reported data are free from transcription and calculation errors. For those analyses with an instrumental output compatible with the LIMS, the raw results and dilution factors are transferred into LIMS, electronically after reviewing the quantitation report, and removing unrequested or poor spectrally-matched compounds. The analyst prints a copy of what has been entered to check for errors. This printout and the instrument's printout of calibrations, concentrations, retention times, chromatograms, and mass spectra, if applicable, are retained with the data file. The data file is stored in a folder on the instrument computer and the file is backed up to the server that evening.

17.11.3) Logbook / Worksheet Use Guidelines

A. Logbooks and worksheets are filled out in 'real time' and have enough information on them to trace the events of the applicable analysis/task.

1. Corrections are made following the procedures outlined in Section 12.

2. Logbooks are controlled by the QA department. A record is maintained of all logbooks in the lab.

3. Unused portions of pages must be "Z"d out, signed, and dated.

4. Worksheets are created with the approval of QA. QA controls all worksheets following the laboratory's document control procedures.

17.11.4) Review / Verification Procedures

A. Review of data is performed by primarily by analysts that perform the process step or analytical activity or designated data reviewers such as Group Leaders, senior analysts, local data package staff, and off-site data reviewers. This process ensures that reported data are free from calculation and transcription errors and that QC parameters have been reviewed and evaluated before data is reported. The laboratory also has an SOP discussing manual integrations to ensure the authenticity of the data *NCSC-ETHC-TRN-FRM56342* and there are group-directed trainings in Eurofins Learning Centre that are required. The general review concepts are discussed below.

1. Log-In Review - The data review process starts at the sample receipt stage. Sample control personnel review chain-of-custody forms and project instructions from the project management group. This is the basis of the sample information and analytical instructions entered into the LIMS. The log-in instructions are reviewed by the personnel entering the information, and a second level review is conducted by the project management staff.

2. First Level Data Review - The next level of data review occurs with the analysts. As data are generated, analysts review their work to ensure that the results meet project and SOP requirements. First level reviews include inspection of all raw data (e.g., instrument output for continuous analyzers, chromatograms, spectra, and manual integrations), evaluation of calibration/calibration verification data in the day's analytical run, evaluation of QC data, and reliability of sample results. The analyst transfers data into LIMS, data qualifiers are added as needed. A Data Review Checker (DRC) is utilized as a tool to automate review of select method requirements. All first level reviews are documented.

3. Second Level Data Review - All analytical data are subject to review by a second qualified analyst or supervisor. Second level reviews include inspection of all raw data (e.g., instrument output, chromatograms, and spectra) including 100% of data associated with any changes made by the primary analyst, such as manual integrations or reassignment of peaks to different analytes, or elimination of false negative analytes. The second review also includes evaluation of initial calibration/calibration verification data in the analytical run, evaluation of QC data, reliability of sample results, qualifiers and NCM narratives. Manual calculations are checked in second level review. A Data Review Checker (DRC) is utilized as a tool to automate review of select method requirements. All second level reviews are documented.

4. Issues that deem further review include the following:

   a. QC data that are outside the specified control limits for accuracy and precision.

   b. Reviewed sample that data does not match with reported results.

   c. Unusual detection limit changes.

   d. Samples with unusually high results.

   e. Samples exceeding a known regulatory limit.

   f. Raw data indicating some type of contamination or poor technique.

   g. Inconsistent peak integration

   h. Transcription errors.

   i. Results outside of calibration range.

5. Unacceptable analytical results may require reanalysis of the samples.

6. The results are then entered or directly transferred into LIMS and a pdf is generated for the client.

7. As a final review prior to the release, some reports may undergo review by the Project Manager for appropriateness and completeness. Other reports continue onto auto reporting.

8. Projects that require a data package may be subject to a tertiary data review for transcription errors and acceptable quality control requirements.

17.11.5) Manual Integrations

A. Computerized data systems provide the analyst with the ability to reintegrate raw instrument data in order to optimize the interpretation of the data. Though manual integration of data is an invaluable tool for resolving variations in instrument performance and some sample matrix problems, when used improperly, this technique would make unacceptable data appear to meet quality control acceptance limits. Improper reintegration may lead to legally indefensible data, a poor reputation, or possible laboratory decertification. Because guidelines for reintegration of data are not provided in the methods and most methods were written prior to widespread implementation of computerized data systems, the laboratory trains all analytical staff on

proper manual integration techniques in accordance with NBLSC Document No. *NDSC-ETHC-SOP43862 - Manual Integrations*.

18) INSTRUMENTS, EQUIPMENT, AND CALIBRATION

18.1) Overview

A. Instrumentation is purchased on the basis of accuracy, dependability, efficiency and sensitivity. Each laboratory is furnished with all items of sampling, preparation, analytical testing and measurement equipment necessary to correctly perform the tests for which the laboratory has capabilities. Each piece of equipment is capable of achieving the required accuracy and complies with specifications relevant to the method being performed. Before being placed into use, the equipment (including sampling equipment) is calibrated and checked to establish that it meets its intended specification. The calibration routines for analytical instruments establish the range of quantitation. Calibration procedures are specified in laboratory SOPs. Equipment is only operated by authorized and trained personnel. Manufacturer's instructions for equipment use hard copies and electronic copies are archived by the local IT group. Electronic copies are readily accessible to all appropriate laboratory personnel as well as the Operations Manager.

18.2) Instrument / Equipment Maintenance

A. The laboratory follows a well-defined maintenance program to ensure proper equipment operation and to prevent the failure of laboratory equipment or instrumentation during use. This program of preventive maintenance helps to avoid delays due to instrument failure.

B. Routine preventive maintenance procedures and frequency, such as cleaning and replacements, should be performed according to the procedures outlined in the manufacturer's manual. Qualified personnel must also perform maintenance when there is evidence of degradation of peak resolution, a shift in the calibration curve, loss of sensitivity, or failure to continually meet one of the quality control criteria.

C. Scheduled routine maintenance is defined in each method SOP. It is the responsibility of each department manager or Group Leader to ensure that instrument maintenance logs are kept for all equipment in his/her department. Preventative maintenance procedures are recorded in instrument maintenance logbooks.

D. Instrument maintenance logbooks are controlled and are used to document instrument problems, instrument repair and maintenance activities. Maintenance logbooks shall be kept for all major pieces of equipment. Instrument maintenance logbooks may also be used to specify instrument parameters.

1. Documentation must include all major maintenance activities such as contracted preventive maintenance and service, and in-house activities such as the replacement of electrical components, lamps, tubing, valves, columns, detectors, cleaning and adjustments.

2. Each entry in the instrument logbook includes the analyst's initials, the date, a detailed description of the problem (or maintenance needed/scheduled), a detailed explanation of the solution or maintenance performed, and a verification that the equipment is functioning properly (state what was used to determine a return to control. e.g. CCV run on 'date' was acceptable, or instrument recalibrated on 'date' with acceptable verification, etc.) must also be documented in the instrument records.

3. When maintenance or repair is performed by an outside agency, service receipts detailing the service performed must be kept on file.

E. If an instrument requires repair, gives suspect results, or otherwise is shown to be defective or outside of specified limits it shall be taken out of operation and tagged as out-of-service or otherwise isolated until such a time as the repairs have been made and the instrument can be demonstrated as operational by calibration and/or verification or other test to demonstrate acceptable performance. The laboratory shall examine the effect of this defect on previous analyses.

F. At a minimum, if an instrument is sent out for service or transferred to another facility, it must be recalibrated and the laboratory MDL verified (using and MDLv) prior to returning to lab operations.

18.3) Support Equipment

A. SOP No. *33458* and SOP No. *17517* apply to all devices that may not be the actual test instrument, but are necessary to support laboratory operations. These include but are not limited to: balances, ovens, refrigerators, freezers, field sampling devices, temperature measuring devices, thermal/pressure sample preparation devices and volumetric dispensing devices if quantitative results are dependent on their accuracy, as in standard preparation and dispensing or dilution into a specified volume. All raw data records associated with the support equipment are retained to document instrument performance.

18.3.1) Weights and Balances

A. The accuracy of the balances used in the laboratory is checked every working day, before use. All balances are placed on stable counter tops.

B. Each balance is checked prior to initial serviceable use with at least two certified ASTM type 1 weights spanning its range of use (weights that have been calibrated to ASTM type 1 weights may also be used for daily verification). ASTM type 1 weights used only for calibration of other weights (and no other purpose) are inspected for corrosion, damage or nicks at least annually and if no damage is observed, they are calibrated at least every 5 years by an outside calibration laboratory. Any weights (including ASTM Type 1) used for daily balance checks or other purposes are recalibrated/recertified annually to NIST standards (this may be done internally if laboratory maintains “calibration only” ASTM type 1 weights).

1. Tustin QA maintains the "calibration only" weights. All working weights are recertified by QA at the Tustin facility.

C. All balances are serviced annually by a qualified service representative, who supplies the laboratory with a certificate that identifies traceability of the calibration to the NIST standards.

D. All of this information is recorded in logs, and the recalibration/recertification certificates are kept on file.

18.3.2) pH, Conductivity, and Turbidity Meters

A. The pH meters used in the laboratory are accurate to + 0.1 pH units, and have a scale readability of at least 0.05 pH units. The meters automatically compensate for the temperature, and are calibrated with at least two working range buffer solutions on working day prior to use.

1. NIST thermometers are maintained by Tustin QA. pH probes are temperature verified at the Tustin Facility annually.

B. Conductivity meters used in the laboratory are capable for measuring conductivity with an error not exceeding 1% or one umhos/cm, whichever is greater. The meters are also calibrated on working day prior to use with a known standard.

C. Turbidity meters are also calibrated on each working day prior to use.

D. All of this information is documented in logs.

E. Consult *pH*, *Conductivity*, and *Turbidity* SOPs for further information.

18.3.3) Temperature Measuring Devices

A. All liquid in glass thermometers are calibrated on an annual basis with a NIST-traceable reference thermometer.

1. If the temperature measuring device is used over a range of 10°C or less, then a single point verification within the range of use is acceptable.

2. If the temperature measuring device is used over a range of greater than 10°C, then the verification must bracket the range of use.

B. IR thermometers, digital probes and thermocouples are calibrated quarterly. IR Thermometers should be calibrated over the full range of use, including ambient, iced (4°C) and frozen (0°C to -5°C), per the Drinking Water Manual.

C. The NIST thermometer is recalibrated every five years by an approved outside service and the provided certificate of traceability is kept on file. The NIST thermometer has increments of 1 degree and has ranges applicable to method and certification requirements. The NIST traceable thermometer is used for no other purpose than to calibrate other thermometers.

1. NIST thermometers are maintained by Tustin QA. All working thermometers are verified at the Tustin Facility.

D. All of this information is documented in logbooks. Monitoring method-specific temperatures, including incubators, heating blocks, water baths, and ovens, is documented in method-specific logbooks. More information on this subject can be found in the SOP No. *17517*.

18.3.4) Refrigerators, Freezer, Water Baths, Ovens, and Incubators

A. The temperatures of all refrigerators and freezers used for sample and standard storage are monitored 7 days a week. Ovens and water baths are monitored on days of use. All of this equipment has a unique identification number, and is assigned a thermometer for monitoring.

B. Sample storage refrigerator temperatures are kept between > 0ºC and < 6 ºC. Specific temperature settings/ranges for other refrigerators, ovens and water baths can be found in method specific SOPs.

C. All of this information is documented in Daily Temperature Logbooks and method-specific logbooks and discussed in SOP No. *17517*.

18.3.5) Autopipettors, Dilutors, and Syringes

A. Mechanical volumetric dispensing devices are given unique identification numbers and the delivery volumes are verified gravimetrically, at a minimum, on a quarterly basis.

B. For those dispensers that are not used for critical volume measurements, a label shall be applied to the device stating that it is not calibrated. Any device not regularly verified cannot be used for any quantitative measurements.

18.4) Instrument Calibration

A. Calibration of analytical instrumentation is essential to the production of quality data. Strict calibration procedures are followed for each method. These procedures are designed to determine and document the method detection limits, the working range of the analytical instrumentation and any fluctuations that may occur from day today.

B. Sufficient raw data records are retained to allow an outside party to reconstruct all facets of the initial calibration. Records contain, but are not limited to, the following: calibration date, method, instrument, analyst(s) initials or signatures, analysis date, analytes, concentration, response, and type of calibration (Avg RF, curve, or other calculations that may be used to reduce instrument responses to concentration.)

C. Sample results must be quantitated from the initial calibration and may not be quantitated from any continuing instrument calibration verification unless otherwise required by regulation, method or program.

D. If the initial calibration results are outside of the acceptance criteria, corrective action is performed and any affected samples are reanalyzed if possible. If the reanalysis is not possible, any data associated with an unacceptable initial calibration will be reported with appropriate data qualifiers. Recalibration is performed as needed, per method, or at least annually.

18.4.1) Calibration Standards

A. Calibration standards are prepared using the procedures indicated in the Reagents and Standards section of the determinative method SOP.

B. Standards for instrument calibration are obtained from a variety of sources. All standards are traceable to national or international standards of measurement, or to national or international standard reference materials.

C. The lowest concentration calibration standard that is analyzed during an initial calibration must be at or below the stated reporting limit for the method based on the final volume of extract (or sample).

D. The other concentrations define the working range of the instrument/method or correspond to the expected range of concentrations found in actual samples that are also within the working range of the instrument/method. Results of samples not bracketed by initial instrument calibration standards (within calibration range to at least the same number of significant figures used to report the data) must be reported as having less certainty, e.g., defined qualifiers or flags (additional information may be included in the case narrative). The exceptions to these rules; ICP and ICPMS methods, which define the working range with periodic linear dynamic range studies, rather than through the range of concentrations of daily calibration standards.

E. All initial calibrations are verified with a standard obtained from a second source and traceable to a national standard, when available (or vendor certified different lot if a second source is not available). For unique situations, such as air analysis where no other source or lot is available, a standard made by a different analyst at a different time or a different preparation would be

considered a second source. This verification occurs immediately after the calibration curve has been analyzed, and before the analysis of any samples.

18.4.2) Calibration Verification

A. The calibration relationship established during the initial calibration must be verified initially and at least daily as specified in the laboratory method SOPs in accordance with the referenced analytical methods and in the TNI Standard. The process of calibration verification applies to both external standard and internal standard calibration techniques, as well as to linear and non-linear calibration models. Initial calibration verification (ICV) is with a standard source secondary (second source standard) to the calibration standards, but continuing calibration verifications (CCV) may use the same source standards as the calibration curve.

   1. **Note:** The process of calibration verification referred to here is fundamentally different from the approach called "calibration" in some methods. As described in those methods, the calibration factors or response factors calculated during calibration are used to update the calibration factors or response factors used for sample quantitation. This approach, while employed in other EPA programs, amounts to a daily single-point calibration.

B. All target analytes and surrogates, including those reported as non-detects, must be included in periodic calibration verifications for purposes of retention time confirmation and to demonstrate that calibration verification criteria are being met.

C. All samples must be bracketed by periodic analyses of standards that meet the QC acceptance criteria (e.g., calibration and retention time). The frequency is found in the determinative methods or SOPs.

   1. **Note:** If an internal standard calibration is being used then bracketing calibration verification standards may not be required, only daily verifications are needed. The results from these verification standards must meet the calibration verification criteria and the retention time criteria (if applicable).

D. Generally, the calibrations must be verified by an ICV analyzed immediately following initial calibration and before sample analysis. The ICV may be used as the first bracketing CCV, if criteria for both are met.

E. A continuing instrument calibration verification (CCV) is generally analyzed at the beginning of each 12-hour analytical shift during which samples are analyzed. The 12-hour analytical shift begins with the injection of the calibration verification standard (or the MS tuning standard in MS methods). The shift ends after the completion of the analysis of the last sample, QC, or standard that can be injected within 12-hours of the beginning of the shift. For methods that have quantitation by external calibration models, a CCV is analyzed at the end of each analytical sequence. Some methods have more frequent CCV requirements. Most inorganic methods require the CCV to be analyzed after every 10 samples or injections, including matrix or batch QC samples.

F. If the results of a CCV are outside the established acceptance criteria and analysis of a second consecutive (and immediate) CCV fails to produce results within acceptance criteria, corrective action shall be performed. Once corrective actions have been completed and documented, the laboratory shall demonstrate acceptable instrument / method performance by analyzing two consecutive CCVs, or a new initial instrument calibration shall be performed.

G. Calibration verification for calibrations involves the calculation of the percent drift or the percent difference of the instrument response between the initial calibration and each subsequent analysis of the verification standard. (These calculations are available in the laboratory method SOPs.) Verification standards are evaluated based on the % Difference from the average CF or RF of the initial calibration or based on % Drift or % Recovery if a linear or quadratic curve is used.

H. Regardless of whether a linear or non-linear calibration model is used, if initial verification criterion is not met, then no sample analyses may take place until the calibration has been verified or a new initial calibration is performed that meets the specifications listed in the method SOPs. If the calibration cannot be verified after the analysis of a single verification standard, then adjust the instrument operating conditions and/or perform instrument maintenance, and analyze another aliquot of the verification standard. If the calibration cannot be verified with the second standard, then a new initial calibration is performed.

I. Sample analyses and reporting of data may not occur or continue until the analytical system is calibrated or calibration verified. However, data associated with an unacceptable calibration verification may be fully useable reported based upon discussion and approval of the client under the following special conditions:

   1. When the acceptance criteria for the CCV are exceeded high (i.e., high bias) and the associated samples within the batch are non-detects, then those non-detects may be reported with case narrative comment explaining the high bias. Otherwise the samples affected by the unacceptable CCV shall be re-analyzed after a new calibration curve has been established, evaluated and accepted.

   2. When the acceptance criteria for the CCV are exceeded low (i.e., low bias), those sample results may be reported if they exceed a maximum regulatory limit/decision level. Otherwise the samples affected by the unacceptable CCV shall be re-analyzed after a new calibration curve has been established, evaluated and accepted. Alternatively, a reporting limit standard may be analyzed to demonstrate that the laboratory can still support non-detects at their reporting limit.

J. Samples reported by the 2 conditions identified above will be appropriately flagged.

19) MEASUREMENT TRACEABILITY

19.1) Overview

A. Traceability of measurements shall be assured using a system of documentation, calibration, and analysis of reference standards. Laboratory equipment that are peripheral to analysis and whose calibration is not necessarily documented in a test method analysis or by analysis of a reference standard shall be subject to ongoing certifications of accuracy. At a minimum, these must include procedures for checking specifications of ancillary equipment. Wherever possible, subsidiary or peripheral equipment is checked against standard equipment or standards that are traceable to national or international standards.

B. With the exception of Class A Glassware, quarterly accuracy checks are performed for mechanical volumetric devices used to measure critical volumes. Calscience also checks glass microliter syringes for accuracy on a semiannual basis. Class A Glassware should be routinely

inspected for chips and acid etching. If the Class A glassware is suspect, the accuracy of the glassware will be assessed prior to use.

19.2) Reference Weights and Thermometers

A. Reference standards of measurement shall be used for calibration only and for no other purpose, unless it can be shown that their performance as reference standards would not be invalidated.

B. For reference weights and thermometers, the laboratory requires that all calibrations be conducted by a calibration laboratory accredited under ISO/IEC 17025. A calibration certificate for these reference weights and thermometers is kept on file at the laboratory.

19.3) Reference Standards, Materials, and Reagents

A. Reference standards/materials/reagents, where commercially available, are traceable to certified reference materials. Commercially prepared reference standards, to the extent available, are purchased from vendors that are accredited under ISO 17034. All reference standards from commercial vendors shall be accompanied with a certificate that includes at least the following information:

1. Manufacturer
2. Analytes or parameters calibrated
3. Identification or lot number
4. Concentration with associated uncertainties
5. Purity

B. If a standard cannot be purchased from a vendor that supplies a Certificate of Analysis, the purity of the standard is documented by analysis. The receipt of all reference standards must be documented. Reference standards are labeled with a unique identification number and expiration date. All documentation received with the reference standard is retained as a QC record and references the identification number.

C. All reference, primary and working standards/materials, whether commercially purchased or laboratory prepared, must be checked regularly to ensure that the variability of the standard or material from the true value does not exceed method requirements. The accuracy of calibration standards is checked by comparison with a standard from a second source. In cases where a second standard manufacturer is not available, a vendor certified different lot is acceptable for use as a second source. For unique situations, such as air analysis where no other source or lot is available, a standard made by a different analyst would be considered a second source. The appropriate Quality Control (QC) criteria for specific standards are defined in laboratory SOPs.

D. All standards and materials must be stored and handled according to method or manufacturer's requirements in order to prevent contamination or deterioration.

E. Standards and reference materials shall not be used after their expiration dates unless their reliability is verified by the laboratory and their continued use through the extended expiration period is approved by the QA Manager.

F. Records are maintained electronically for standard and reference material preparation. These records show the traceability to purchased stocks or neat compounds. These records also include method of preparation, date of preparation, expiration date and preparer's name or PUID. Preparation procedures are provided in the Method SOPs.

G. All standards, reagents, and reference materials must be clearly labeled with a minimum of the following information:

1. Expiration Date (include prep date for reagents)
2. Identification number
3. Date opened

H. Label with the following when container size allows, if not, ensure the information is in the associated LIMS/logbook record:

1. Description (if different from manufacturer's label or if it was prepared in the laboratory)
2. Storage Conditions
3. Concentration (if applicable)
4. Preparer name/ID

I. Special Health/Safety warnings must also be available to the analyst. This information is found in the associated SDS.

20) SAMPLING

20.1) Overview

A. The laboratory provides sampling services. Sampling procedures are described in SOP No. *46239*, Wastewater Sampling.

20.2) Sampling Containers

A. The laboratory offers clean sampling containers for use by clients. These containers are obtained from ESS, a reputable container manufacturer that meets EPA specifications as required. Certificates of cleanliness for bottles and preservatives are maintained by the supplier and available to the laboratory on-line or by request.

B. Preservatives are provided to the client in pre-cleaned sampling containers. In some cases, containers may be prepared by the laboratory. At a minimum, the preservatives are:

1. Hydrochloric Acid: Instra-Analyzed or equivalent
2. Methanol: Purge and Trap grade
3. Nitric Acid: ACS grade or equivalent.
4. Sodium Bisulfate: ACS grade or equivalent.

5. Sodium Hydroxide: ACS grade or equivalent.

6. Sulfuric Acid: Instra-Analyzed or equivalent.

21) SAMPLE HANDLING

21.1) Chain of Custody (COC)

A. The COC form is the documented history of any sample and is initiated when bottles are sent to the field, or at the time of sampling. This form is completed by the sampling personnel and accompanies the samples to the laboratory where it is received and stored under the laboratory's custody. The purpose of the COC form is to provide a legal record of the handling of samples from the time of collection until they are received at the laboratory. It also serves as the primary documented request for analyses from the client to the laboratory. The COC form may serve as the purchase order specifying the requested analytical services when no other contractual agreement is in effect.

B. Field COC Documentation

1. The information the sampler needs to provide at the time of sampling on the container label includes:

   a. Sample identification

   b. Date and time of collection

   c. Preservative (laboratory-provided containers will have this information)

2. During the sampling process, the COC form is completed and must be legible. This form includes information such as:

   a. Client name, address, phone number, and fax number (if available)

   b. Project name, and/or number

   c. The sample identification

   d. Date, time, and location of sampling

   e. Sample collector's name

   f. The matrix description

   g. The container description

   h. The total number of each type of container

   i. Preservatives used

   j. Analysis requested

   k. Requested turnaround time (TAT)

l. Any special instructions

m. Purchase Order number or billing information (e.g. quote number) if available

n. The date and time that each person received or relinquished the sample(s), including their signed name.

3. The client relinquishes the samples in writing on the COC form, or through the Eurofins eCOC electronic transfer program, to the sample control personnel at the laboratory or to a laboratory courier. The laboratory personnel document the receipt date and time on the COC.

4. When clients send the samples through a common carrier (e.g., Fed-Ex, UPS), the COC relinquished date/time is completed by the client. Samples are documented as received by the laboratory with the date and time of receipt of the shipment from the common carrier.

5. **Note:** Independent couriers are not required to sign the COC form.

C. Legal / Evidentiary COC

1. If samples are identified for legal/evidentiary purposes on the COC, login will complete the custody seal, retain the shipping record with the COC, and initiate an internal COC for laboratory use by analysts and a sample disposal record.

21.2) Sampling Containers, Preservation Requirements, Holding Times

A. The sampling container type, preservation, and holding time criteria specified in the laboratory SOPs are derived from the source documents for the methods. If method required holding times or preservation requirements are not met, the reports will be qualified using a flag, footnote and/or case narrative comment.

B. The date and time of sampling documented on the COC form establishes the day and time zero. As a general rule, when the maximum allowable holding time is expressed in days (e.g., 14 days, 28 days), the holding time is based on calendar day measured. Holding times expressed in hours (e.g., 6 hours, 24 hours, etc.) are measured from date and time zero. Holding times for analysis include any necessary reanalysis.

C. Tests designated in the method or regulation as to be performed "As soon as possible" or "ASAP" is indicative of a parameter that should be analyzed within 15 minutes of collection. Therefore, these are typically tests that are performed in the field. When the analysis is performed in the laboratory, the data will be qualified as outside the holding time.

21.3) Sample Receipt

A. Samples are received at the laboratory by designated sample receiving personnel and a unique laboratory job identification number is assigned. Each sample container shall be assigned a unique sample identification number that is cross-referenced to the client identification number such that traceability of test samples is unambiguous and documented. Each sample container is affixed with a durable sample identification label. Sample acceptance, receipt, tracking and storage procedures are detailed in the laboratory's *SC-SOP39452 Sample Receipt and Login Procedures*.

B. When samples arrive at the laboratory, sample receiving personnel inspect the coolers and samples. The integrity of each sample must be determined by comparing sample labels with the COC and by visual checks of the container for possible damage. Any nonconformance, irregularity, or compromised sample receipt must be documented on the receipt checklist and brought to the immediate attention of the client. The COC, shipping documents, documentation of any nonconformance, irregularity, or compromised sample receipt, record of client contact, and resulting instructions become part of the project record.

C. Sample Receiving personnel document preservation of non-volatile liquid samples after the samples have been entered into the LIMS and before they are released to the laboratory for testing or placed into storage.

21.4) Sample Acceptance Policy

A. The laboratory has a written sample acceptance policy that clearly outlines the circumstances under which samples shall be accepted or rejected. This policy is outlined in the SOP noted above in Section 21.2.

B. After inspecting the samples, the sample receiving personnel sign and date the COC form, make any necessary notes of the samples' conditions and store them in appropriate refrigerators or storage locations.

C. Any deviations from these checks that question the suitability of the sample for analysis, or incomplete documentation as to the tests required will be resolved by consultation with the client. If the sample acceptance policy criteria are not met, the laboratory shall either:

1. Retain all correspondence and/or records of communications with the client regarding the disposition of rejected samples, or

2. Fully document any decision to proceed with sample analysis that does not meet sample acceptance criteria.

D. Once sample acceptance is verified, the samples are logged into LIMS.

21.5) Sample Storage

A. In order to avoid deterioration, contamination or damage to a sample during storage and handling, from the time of receipt until all analyses are complete, samples are stored in refrigerators, freezers or protected locations suitable for the sample matrix. In addition, samples to be analyzed for volatile organic parameters are stored in separate refrigerators designated for volatile organic parameters only. Samples are never to be stored with reagents, standards or materials that may create contamination.

B. To ensure the integrity of the samples during storage, refrigerator blanks are maintained in the volatile sample refrigerators and analyzed every two weeks.

C. Access to the laboratory is controlled such that sample storage need not be locked at all times unless a project specifically requires it. Samples are accessibly to laboratory personnel only. Visitors to the laboratory are prohibited from entering the storage and laboratory areas unless accompanies by an employee of Eurofins Calscience.

Quality Assurance Manual for Environmental Analytical Services

21.6) Hazardous Samples and Foreign Soils

A. All samples should be treated as hazardous until clearly noted otherwise. To minimize exposure to personnel and to avoid potential accidents, foreign soil samples are stored in a designated area and have a Foreign Soil sticker attached as described in SOP No. *17778*, *Handling and Disposal of Foreign Soil Samples*. Hazardous samples are designated for hazardous waste only. For any sample that is known to be hazardous at the time of receipt, or if after completion of analysis the result exceeds the acceptable regulatory levels, a Hazardous Sample Notice must be completed by the analyst. This form may be completed by Sample Control, Project Managers, or analysts and must be attached to the report.

B. The sample itself is clearly marked with a red stamp, stamped on the sample label reading "HAZARDOUS" and placed in a colored and/or marked bag to easily identify the sample. The date, log number, lab sample number, and the result or brief description of the hazard are all written on the Hazardous Sample Notice. A copy of the form must be included with the original COC and Work Order and the original must be given to the Sample Control Custodian.

C. Analysts will notify Sample Control of any sample determined to be hazardous after completion of analysis by completing a Hazardous Sample Notice. All hazardous samples are either returned to the client or disposed of appropriately through a hazardous waste disposal firm that lab-packs all hazardous samples and removed them from the laboratory. Foreign soil samples are sent out for incineration by Veolia.

21.7) Sample Shipping

A. Reference SOP No. *39452*, Section 11, Inter-Laboratory Sampling

1. In the event that the laboratory needs to ship samples, the samples are placed in a cooler with enough ice to ensure the samples remain just above freezing and at or below 6°C during transit. The samples are carefully surrounded by packing material to avoid breakage (yet maintain appropriate temperature). A trip blank is enclosed for those samples requiring water/solid volatile organic analyses and a temperature blank. The chain-of-custody form is signed by the sample control technician and attached to the shipping paperwork. A custody seal is placed is required.

2. Samples are generally shipped overnight express. All personnel involved with shipping and receiving samples must be trained to maintain the proper chain-of-custody documentation and to keep the samples intact and on ice. The laboratory's Environmental, Health and Safety Manual contains additional shipping requirements.

3. **Note:** If the sample will be sent outside of California, refer to the Shipping Requirements section of the SOP No. *17778*, *Handling and Disposal of Foreign Soil Samples*, for further requirements.

21.8) Sample Disposal

A. Samples should be retained for a minimum of 30 days after the project report is sent, however, provisions may be made for earlier disposal of samples once the holding time is exceeded. Some samples are required to be help for longer periods based on regulatory or client requirements. The laboratory must follow the longer sample retention requirements where required by regulation or client agreement.

B. Several possibilities for sample disposal exist: the sample may be consumed completely during analysis, the sample may be returned to the customer or location of sampling for disposal, or

the sample may be disposed of in accordance with the laboratory's waste disposal procedures SOP No. *38183*, *Disposal of Laboratory Wastes and Samples*. All procedures in the laboratory's *Environmental Health and Safety Manual* are followed during disposal. Unused portions of samples found or suspected to be hazardous according to state or federal guidelines may be returned to the client upon completion of the analytical work or disposed of in the relevant hazardous waste stream.

C. If a sample is part of a known litigation, the affected legal authority, sample data user, and/or submitter of the sample must participate in the decision about the sample's disposal.

D. All documentation and correspondence concerning the disposal decision process must be kept on file. Pertinent information includes the date of disposal, nature of disposal (such as sample depletion, hazardous waste facility disposal, return to client), names of individuals who conducted the arrangements and physically completed the task. The laboratory will remove or deface sample labels prior to disposal unless this is accomplished through the disposal method (e.g., samples are incinerated).

22) ASSURING THE QUALITY OF TEST RESULTS

22.1) Overview

A. In order to assure our clients of the validity of their data, the laboratory continuously evaluates the quality of the analytical process. The analytical process is controlled not only by instrument calibration, but also by routine process quality control requirements. These quality control checks are performed as required by the method and/or regulations to assess precision and accuracy. Quality control samples are to be treated in the exact same manner as the associated field samples being tested (e.g. filtering of samples requires the QC to also be filtered). In addition to the routine process quality control samples, Proficiency Testing (PT) Samples are analyzed to help ensure laboratory performance.

22.2) Controls

A. Samples are arranged into discreet manageable groups referred to as batches. Typically a batch consists of a maximum 20 field samples and the associated preparation and/or analytical quality control (QC) samples. Control samples are added to each batch to monitor method performance and are processed through the entire procedure with field samples.

22.3) Negative Controls

Control Type	Details
Method Blank (MB)	To assess preparation and analysis for possible contamination during the preparation and processing steps.
	The specific frequency of use for method blanks during the analytical sequence is defined in the specific standard operating procedure for each analysis. Generally it is 1 for each batch of samples; not to exceed 20 environmental samples.
	The method blank is prepared from a clean matrix similar to that of the associated samples that is free from target analytes (e.g., Reagent water, Ottawa sand, glass beads, etc.) and is processed along with and under the same conditions as the associated samples.
	The method blank goes through all of the steps of the process (including as necessary: filtration, clean-ups, etc.).

	Reanalyze or qualify associated sample results when the concentration of a targeted analyte in the blank is at or above the reporting limit as established by the method or by regulation, AND is greater than 1/10 of the amount measured in the sample.
Calibration Blanks	Prepared and analyzed along with calibration standards where applicable. They are prepared using the same reagents that are used to prepare the standards. In some analyses the calibration blank may be included in the calibration curve.
Instrument Blanks	Blank reagents or reagent water that may be processed during an analytical sequence in order to assess contamination in the analytical system. In general, instrument blanks are used to differentiate between contamination caused by the analytical system and that caused by the sample handling or sample prep process. Instrument blanks may also be inserted throughout the analytical sequence to minimize the effect of carryover from samples with high analyte content.
Trip Blank (TB)[1]	TBs are required to be submitted by the client with each shipment of samples requiring aqueous and solid volatiles analyses (or as specified in the client's project plan). Additionally, trip blanks may be prepared and analyzed for volatile analysis of air samples, when required by the client. A trip blank may be purchased (certified clean) or is prepared by the laboratory by filling a clean container with pure deionized water that has been purged to remove any volatile compounds. Appropriate preservatives are also added to the container. The trip blank is sent with the bottle order and is intended to reflect the environment that the containers are subjected to throughout shipping and handling and help identify possible sources if contamination is found. The field sampler returns the trip blank in the cooler with the field samples.
Field Blanks (FB)[1]	FBs are sometimes used for specific projects by the field samplers. A field blank prepared in the field by filling a clean container with pure reagent water and appropriate preservative, if any, for the specific sampling activity being undertaken. (EPA OSWER)
Equipment Blanks (EB)[1]	EBs are also sometimes created in the field for specific projects. An equipment blank is a sample of analyte-free media which has been used to rinse common sampling equipment to check effectiveness of decontamination procedures. (TNI)
Holding Blanks	Also referred to as refrigerator, storage, or freezer blanks, are used to monitor the sample storage units for volatile organic compounds during the storage of VOA samples in the laboratory.

[1] - When known, these field QC samples should not be selected for matrix QC as it does not provide information on the behavior of the target compounds in the field samples. Usually, the client sample ID will provide information to identify the field blanks with labels such as "FB", "EB", or "TB."

22.4) Positive Controls

A. Control samples are analyzed with each batch of samples to evaluate data based upon:

1. Method Performance - Laboratory Control Sample (LCS) or Laboratory Fortified Blank (LFB) - which includes both the preparation and analysis steps. The LCS measures the accuracy of the method in a blank matrix and assesses method performance independent of potential field sample matrix effects in a laboratory batch.

2. Matrix Effects - Matrix Spike (MS) or Sample Duplicate (MSD, DUP) - which includes both the preparation and analysis steps. The matrix QC evaluates field sampling accuracy, precision, representativeness, interferences, and the effect of the matrix on the method performed.

B. Each regulatory program and each method within those programs specify the control samples that are prepared and/or analyzed with a specific batch.

C. Complete details on additional method control samples are listed in each analytical SOP.

22.5) Acceptance Criteria (Quality Control Limits)

As mandated by the test method and/or regulation, each individual analyte in the QC is evaluated against the control limits published in the test method. Where there are no established acceptance criteria, the laboratory calculates in-house control limits with the use of control charts or, in some cases, utilizes client project specific control limits. When this occurs, the regulatory or project limits will supersede the laboratory's in-house limits.

A. **Note:** For methods, analytes and matrices with very limited data (e.g., unusual matrices not analyzed often), interim limits are established using available data or by analogy to similar methods or matrices.

B. Once control limits have been established, they are verified, reviewed, and updated if necessary on an annual basis unless the method requires more frequent updating. Control limits are established per method regardless of the number of instruments utilized.

C. SOP No. *33613*, *Internal Quality Control Checks*

1. Laboratory generated % Recovery acceptance (control) limits are generally established by taking ± 3 Standard Deviations (99% confidence level) from the average recovery of a minimum of 20-30 data points (more points are preferred).

2. Regardless of the calculated limit, the limit should be no tighter than the Calibration Verification (ICV/CCV). (Unless the analytical method specifies a tighter limit).

3. In-house limits cannot be any wider than those mandated in a regulated analytical method. Client or contract required control limits are evaluated against the laboratory's statistically derived control limits to determine if the data quality objectives (DQOs) can be achieved. If laboratory control limits are not consistent with DQOs, then alternatives must be considered, such as method improvements or use of an alternate analytical method.

4. The lowest acceptable recovery limit will be 10% (the analyte must be detectable and identifiable).

5. See SOP No. *33613* for other acceptable ranges.

D. A **LCS** that is within the acceptance criteria establishes that the analytical system is in control and is used to validate the process. Samples that are analyzed with an LCS with recoveries outside of the acceptance limits may be determined as out of control and should be reanalyzed if possible. If reanalysis is not possible, then the results for all affected analytes for samples within the same batch must be qualified when reported. The internal corrective action process (see Section 10) is also initiated if an LCS exceeds the acceptance limits. Sample results may be qualified and reported without reanalysis if:

1. The analyte results are below the reporting limit and the LCS is above the upper control limit.

2. If the analytical results are above the relevant regulatory limit and the LCS is below the lower control limit.

E. If the **MS/MSDs** do not meet acceptance limits, the MS/MSD and the associated spiked sample is reported with a qualifier for those analytes that do not meet limits. If obvious preparation errors are suspected, or if requested by the client, unacceptable MS/MSDs are reprocessed and reanalyzed to prove matrix interference.

F. If a **surrogate** standard falls outside the acceptance limits, and if there is not obvious chromatographic matrix interference, reanalyze the sample to confirm a possible matrix effect. If the recoveries confirm or there was obvious chromatographic interference, results are reported from the original analysis and a qualifier is added. If the reanalysis meets surrogate recovery criteria, the second run is reported (or both are reported if requested by the client).

22.5) Marginal Exceedance

A. Marginal exceedances (ME) are recovery values between 3 SD and 4 SD from the mean recovery limit.

B. Marginal exceedances must be random. If the same analyte exceeds the LCS control limit repeatedly, it is an indication of a systematic problem. The source of the error must be located and corrective action taken. Though marginal exceedance may be allowed, the data must still be qualified to indicate it is outside of the normal limits.

C. For TNI and DoD/DOE work, there are an allowable number of Marginal Exceedances.

1. **Note:** Some methods/regulations may not allow the use of ME.

Number of Analytes	Number of Marginal Exceedances Allowed
< 11 analytes	0 marginal exceedances are allowed.
11-30 analytes	1 marginal exceedance is allowed.
31-50 analytes	2 marginal exceedances are allowed.
51-70 analytes	3 marginal exceedances are allowed.
71-90 analytes	4 marginal exceedances are allowed.
> 90 analytes	5 marginal exceedances are allowed.

D. See SOP No. *33613*, *Internal Quality Control Checks*, Section 12.1.

23) REPORTING RESULTS

23.1) Overview

A. The results of each test are reported accurately, clearly, unambiguously, and objectively in accordance with State and Federal regulations as well as client requirements. Analytical results are issued in a format that is intended to satisfy customer and laboratory accreditation requirements as well as provide the end user with the information needed to properly evaluate the results. Where there is conflict between client requests and laboratory ethics or regulatory requirements, the laboratory's ethical and legal requirements are paramount, and the laboratory will work with the client during project set up to develop an acceptable solution.

B. A variety of report formats are available to meet specific needs.

Quality Assurance Manual for Environmental Analytical Services

23.2) Test Reports

A. At a minimum, the standard laboratory report shall contain the following information:

1. A report title (e.g., Analytical Report).
2. The cover page shall include the laboratory name, address and telephone number.
3. A unique identification of the report (e.g., Eurofins Calscience Job ID #) and on each page an identification in order to ensure the page is recognized as part of the report and a clear identification of the end.
    a. **Note:** Page numbers of report are represented as page # of ##. Where the first number is the page number and the second is the total number of pages.
4. A copy of the chain of custody (COC), including Subcontract and/or Workshare COCs.
5. The name and address of client and a project name/number, if applicable.
6. Client project manager or other contact.
7. Description and unambiguous identification of the tested sample(s) including the client identification code.
8. Date of receipt of sample, date and time of collection, date(s) of test preparation and performance, and time of preparation or analysis if the required holding time for either activity is less than or equal to 72 hours.
9. Release Date, or date of revision (when applicable).
10. Method used (EPA ###, Standard Methods ####, etc.).
11. Reporting limit.
12. Method detection limits (if requested)
13. Definition of Data qualifiers and reporting acronyms.
14. Sample results.
15. Batch QC data.
16. Condition of samples at receipt including temperature.
17. A statement to the effect that the results relate only to the items tested and the sample as received by the laboratory, except when information is provided by the client. When data is provided by the client there shall be a clear identification of it, and a disclaimer shall be put in the report when the client supplied data can affect the validity of the test.
18. A statement that the report shall not be reproduced except in full, without prior express written approval by the laboratory.

19. A signature and title of the person(s) accepting responsibility for the content of the report and date of release. Authorized signatories are designated Project Managers.

20. A narrative to the report that explains any noncompliant data and (where applicable) action(s) taken (e.g. repreparation, reanalysis).

21. When soil samples are analyzed, a specific identification as to whether soils are reported on a "wet weight" or "dry weight" basis.

22. Laboratory certification number for the state of origin of the sample, if applicable.

23. If only part of the report is provided to the client (client requests some results before all of it is complete), it must be clearly indicated on the report (e.g., partial report). A complete report must be sent once all of the work has been completed.

24. Any subcontracted analysis results are provided as an attachment of the subcontract laboratory's report. All subcontract or workshare testing is clearly identified on the report as to which laboratory performed which analysis.

25. A Certification Summary Report, where required, will document that, unless otherwise noted, all analytes tested and reported by the laboratory were covered by the noted certifications.

23.3) Reporting Level or Report Type

A. The type and format of the Analysis report is designed to accommodate each type of environmental test carried out and to minimize the possibility of misunderstanding or misuse of the data. The laboratory offers four levels of quality control reporting. Each level, in addition to its own specific requirements, contains all the information provided in the preceding level.

B. The packages provide the following information:

1. Level 2 is a basic sample results report noting any data qualification and QC summary information.

2. Level 3 contains all the information supplied in Level 2, but presented on the CLP-like summary forms, and relevant calibration information. No raw data is provided.

3. Level 4 is the same as Level 3 with the addition of all raw supporting data.

C. Various formatter options are available with the report types. These are designed to meet program and/or client specific requirements. The formatters define such parameters as reporting to the MDL/DL vs LOQ/RL, flags and qualifier types (e.g., DoD, state specific). The laboratory also offers reports in an electronic data deliverable (EDD) formats.

23.4) Electronic Data Deliverable (EDD)

A. A variety of EDDs are available. EDD formats include, but are not limited to, Environmental Restoration Information Management Systems (ERPIMS), Staged Electronic Data Deliverable (SEDD), Environmental Quality Information System (EQuIS), Electronic Deliverable Format (EDF), Excel and custom files, etc.

23.5) Amendments to Test Reports

Quality Assurance Manual for Environmental Analytical Services

A. Corrections, additions, or deletions to final issued reports are only made when justification arises through supplemental documentation. Investigation into any laboratory caused data change is documented using the laboratory's corrective action system.

B. Copies of all Final versions of a report are maintained in LIMS. Any revisions are identified with a revision # in the file name and on the report cover page. The date that the version was generated is also identified on the cover page.

C. Further detail on the revision is provided in the report narrative. This detail includes the date of the original report and the reason for the revision. Example explanatory text is, *"The report being provided is a revision of the original report sent on 5/4/2022. The report (revision 1) is being revised due to correction to QC data for method ####."*

23.5.1) Policy on Data Omissions or Reporting Limit Increases

A. Eurofins policy is simply to not omit previously reported results (including data qualifiers) or to not raise reporting limits and report sample results as ND.

B. This policy has the following exceptions:

1. Laboratory error.
2. Sample identification is unclear (discrepancy between COC and sample labels).
3. An incorrect analysis (not analyte) was requested (e.g., COC lists 8315 but client wanted 8310); documented request for the change is required.
4. Incorrect limits reported based on regulatory requirements.
5. The requested change has absolutely *no possible* impact on the interpretation of the analytical results and there is *no possibility* of the chage being interpreted as misrepresentation by anyone inside or outside of our company.

23.5.2) Multiple Reports

A. The laboratory does not issue multiple reports for the sample work order where there is different information on each report.

24) APPENDICES

A. Appendix 1 -- Definitions
B. Appendix 2 -- Organizational Chart

24.1) References

A. The QAM has been prepared to be consistent with the requirements of the following documents:

1. ANSI/ASQC, E4-1994, "Specifications and Guidelines for Quality Management Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995, or most recent version).
2. "EPA Requirements for Quality Management Programs" (QA/R-2) (EPA/240/B-01/002, May 31, 2006).

3. EPA 600/4-88/039, *Methods for the Determination of Organic Compounds in Drinking Water*, EPA, Revised July 1991.
4. EPA 600/R-95/131, *Methods for the Determination of Organic Compounds in Drinking Water*, Supplement III, EPA, August 1995.
5. EPA 600/4-79-019, *Handbook for Analytical Quality Control in Water and Wastewater Laboratories*, EPA, March 1979.
6. *Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)*, current editions.
7. *U.S. Department of Defense (DoD)/Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories*, current version.
8. Federal Register, 40 CFR Parts 136, 141, 172, 173, 178, 179 and 261.
9. *Statement of Work for Inorganics & Organics Analysis, SOM and ISM*, current versions, USEPA Contract Laboratory Program Multi-media, Multi-concentration.
10. APHA, *Standard Methods for the Examination of Water and Wastewater*, current edition.
11. Toxic Substances Control Act (TSCA).

End of document

Version	Approval	Revision information
10.1	24.AUG.2023	Change section 5.6 to refer to the Reagents and Standards SOP.
11	04.SEP.2024	Entire document change to NBLSC template to include DoD requirements.
11.1	30.JUN.2025	• clarify that the QA manager is also the Technical Director • Revise key roles chart

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Aquatic Bioassay & Consulting Laboratories, Inc.

29 North Olive Street

Ventura, CA 93001

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1907**

Effective Date: **8/1/2025**

Expiration Date: **7/31/2027**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Aquatic Bioassay & Consulting Laboratories, Inc.

29 North Olive Street
Ventura, CA 93001
Phone: 8056435621

Certificate Number: 1907
Expiration Date: 7/31/2027

Field of Accreditation: 113 - Environmental Toxicity Methods

113.010	001	Fathead Minnow (P. promelas)	Polisini & Miller (CDFG 1988)
113.010	003	Rainbow trout (O. mykiss)	Polisini & Miller (CDFG 1988)
113.011	001A	Fathead Minnow (P. promelas)	EPA 2000.0, Static
113.011	001B	Fathead Minnow (P. promelas)	EPA 2000.0, Static Renewal
113.012	011A	Daphnid (C. dubia)	EPA 2002.0, Static
113.012	011B	Daphnid (C. dubia)	EPA 2002.0, Static Renewal
113.013	003A	Rainbow trout (O. mykiss)	EPA 2019.0, Static
113.013	003B	Rainbow trout (O. mykiss)	EPA 2019.0, Static Renewal
113.014	012A	Daphnids (Daphnia spp.)	EPA 2021.0, Static
113.014	012B	Daphnids (Daphnia spp.)	EPA 2021.0, Static Renewal
113.015	017A	Amphipod (Hyalella spp.)	EPA-821-R-02-012, Static
113.015	017B	Amphipod (Hyalella spp.)	EPA-821-R-02-012, Static Renewal
113.021	006A	Silverside (Menidia spp.)	EPA 2006.0, Static
113.021	006B	Silverside (Menidia spp.)	EPA 2006.0, Static Renewal
113.022	009A	Mysid (M. bahia)	EPA 2007.0, Static
113.022	009B	Mysid (M. bahia)	EPA 2007.0, Static Renewal
113.023	007A	Topsmelt (A. affinis)	EPA-821-R-02-012, Static
113.023	007B	Topsmelt (A. affinis)	EPA-821-R-02-012, Static Renewal
113.031	001	Fathead Minnow (P. promelas)	EPA 1000.0
113.032	011	Daphnid (C. dubia)	EPA 1002.0
113.033	025	Green algae (S. capricornutum)	EPA 1003.0
113.042	006	Silverside (Menidia spp.)	EPA 1006.0
113.043	009	Mysid (M. bahia)	EPA 1007.0
113.045	007	Topsmelt (A. affinis)	EPA 600/R-95/136
113.045	018	Pacific oyster (C. gigas)	EPA 600/R-95/136
113.045	019A	Sand dollar (D. excentricus)	EPA 600/R-95/136, Fertilization Test
113.045	019B	Sand dollar (D. excentricus)	EPA 600/R-95/136, Development Test
113.045	021A	Purple sea urchin (S. purpuratus)	EPA 600/R-95/136, Fertilization Test
113.045	021B	Purple sea urchin (S. purpuratus)	EPA 600/R-95/136, Development Test
113.045	022	Red abalone (H. rufescens)	EPA 600/R-95/136
113.045	023	Mussels (Mytilus spp.)	EPA 600/R-95/136
113.045	024	Giant Kelp (M. pyrifera)	EPA 600/R-95/136
113.050	013	Amphipod (H. azteca)	EPA 600/R-99/064, EPA 100.1

As of 9/2/2025 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

113.053	013	Amphipod (H. azteca)	EPA 600/R-99/064, EPA 100.4
113.060	014	Amphipod (E. estuarius)	EPA 600/R-94/025, EPA 100.4

Field of Accreditation:126 - Microbiological Methods for Ambient Water

126.102	001	Total Coliform (Enumeration)	SM 9221 B-2014
126.104	001	Fecal Coliform (Enumeration)	SM 9221 E-2014
126.118	001	Enterococci	SM 9230 D-2013 Enterolert
126.122	001	E. coli (Enumeration)	SM 9223 B-2016 Colilert 18

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Weck Laboratories, Inc.

14859 East Clark Avenue

City of Industry, CA 91745

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1132**

Effective Date: **4/1/2024**

Expiration Date: **3/31/2026**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Weck Laboratories, Inc.

14859 East Clark Avenue
City of Industry, CA 91745
Phone: 6263362139

Certificate Number: 1132
Expiration Date: 3/31/2026

Field of Accreditation: 101 - Microbiology of Drinking Water			
101.010	001	Heterotrophic Bacteria	SM 9215 B
101.010	002	Heterotrophic Bacteria	SimPlate
101.020	004	Total Coliform (Enumeration)	SM 9221 B,C
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B,E
101.020	006	E. coli (Enumeration)	SM 9221 B,F
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18
101.050	006	E. coli P/A	SM 9223 B Colilert 18
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18
101.050	009	Total Coliform P/A	SM 9223 B Colisure
101.050	010	E. coli P/A	SM 9223 B Colisure
101.140	001	Enterococci	SM 9230 B
101.170	001	Enterococci	Enterolert
Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water			
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	001	Bromide	EPA 300.0
102.030	003	Chloride	EPA 300.0
102.030	005	Fluoride	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0
102.030	007	Nitrite (as N)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.040	001	Bromide	EPA 300.1
102.040	002	Chlorite	EPA 300.1

102.040	003	Chlorate	EPA 300.1
102.040	004	Bromate	EPA 300.1
102.045	001	Perchlorate	EPA 314.0
102.047	001	Perchlorate	EPA 331.0
102.050	001	Cyanide, Total	EPA 335.4
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2
102.061	001	Nitrite (as N)	EPA 353.2
102.070	001	Phosphate,Ortho (as P)	EPA 365.1
102.086	001	Dissolved Organic Carbon (DOC)	EPA 415.3 Revision 1.2
102.086	002	Specific UV Absorbance SUVA	EPA 415.3 Revision 1.2
102.086	003	Organic Carbon-Total (TOC)	EPA 415.3 Revision 1.2
102.086	004	UV254	EPA 415.3 Revision 1.2
102.090	001	Bromate	EPA 557
102.100	001	Alkalinity	SM 2320 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.180	001	Chlorine Dioxide	SM 4500-ClO2 D-2000
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000
102.270	001	Surfactants	SM 5540 C-2000
102.280	001	UV254	SM 5910 B-2011
102.570	001	Cyanide, Free	OIA-1677, DW

Field of Accreditation:103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7
103.130	003	Barium	EPA 200.7
103.130	007	Chromium	EPA 200.7
103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	012	Nickel	EPA 200.7
103.130	015	Silver	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8

103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	017	Boron	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.140	019	Strontium	EPA 200.8
103.160	001	Mercury	EPA 245.1
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
103.311	001	Chromium VI (Hexavalent Chromium)	EPA 218.7

Field of Accreditation:104 - Volatile Organic Chemistry of Drinking Water

104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.200	001	1,1,1,2-Tetrachloroethane	EPA 524.2
104.200	002	1,1,1-Trichloroethane	EPA 524.2
104.200	003	1,1,2,2-Tetrachloroethane	EPA 524.2
104.200	004	1,1,2-Trichloroethane	EPA 524.2
104.200	005	1,1-Dichloroethane	EPA 524.2
104.200	006	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.200	007	1,2,3-Trichlorobenzene	EPA 524.2
104.200	008	1,2,4-Trichlorobenzene	EPA 524.2
104.200	009	1,2,4-Trimethylbenzene	EPA 524.2
104.200	010	1,2-Dichlorobenzene	EPA 524.2
104.200	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.200	012	1,2-Dichloropropane	EPA 524.2
104.200	013	1,3,5-Trimethylbenzene	EPA 524.2
104.200	014	1,3-Dichlorobenzene	EPA 524.2
104.200	015	1,4-Dichlorobenzene	EPA 524.2
104.200	016	2-Chlorotoluene	EPA 524.2
104.200	017	4-Chlorotoluene	EPA 524.2
104.200	018	Benzene	EPA 524.2
104.200	019	Carbon Disulfide	EPA 524.2
104.200	020	Carbon Tetrachloride	EPA 524.2
104.200	021	Chlorobenzene	EPA 524.2
104.200	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.200	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.200	024	Dichlorodifluoromethane	EPA 524.2
104.200	025	Dichloromethane (Methylene Chloride)	EPA 524.2

104.200	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.200	028	Ethylbenzene	EPA 524.2
104.200	029	Isopropylbenzene	EPA 524.2
104.200	030	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2
104.200	031	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.200	032	Naphthalene	EPA 524.2
104.200	033	n-Butylbenzene	EPA 524.2
104.200	034	N-propylbenzene	EPA 524.2
104.200	035	sec-Butylbenzene	EPA 524.2
104.200	036	Styrene	EPA 524.2
104.200	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2
104.200	038	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.200	039	tert-Butylbenzene	EPA 524.2
104.200	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.200	041	Toluene	EPA 524.2
104.200	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.200	043	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2
104.200	044	Trichloroethylene (Trichloroethene)	EPA 524.2
104.200	045	Trichlorofluoromethane	EPA 524.2
104.200	046	Trichlorotrifluoroethane	EPA 524.2
104.200	047	Vinyl Chloride	EPA 524.2
104.200	102	m+p-Xylene	EPA 524.2
104.200	103	o-Xylene	EPA 524.2
104.200	201	Bromodichloromethane	EPA 524.2
104.200	202	Bromoform	EPA 524.2
104.200	203	Chloroform	EPA 524.2
104.200	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2
104.205	301	1,2-Dibromoethane (EDB)	EPA 524.3
104.205	302	1,2-Dibromo-3-chloropropane (DBCP)	EPA 524.3
104.210	001	1,1,1,2-Tetrachloroethane	EPA 524.4
104.210	002	1,1,1-Trichloroethane	EPA 524.4
104.210	003	1,1,2,2-Tetrachloroethane	EPA 524.4
104.210	004	1,1,2-Trichloroethane	EPA 524.4
104.210	005	1,1-Dichloroethane	EPA 524.4
104.210	006	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.4
104.210	007	1,2,3-Trichlorobenzene	EPA 524.4
104.210	008	1,2,4-Trichlorobenzene	EPA 524.4
104.210	009	1,2,4-Trimethylbenzene	EPA 524.4
104.210	010	1,2-Dichlorobenzene	EPA 524.4
104.210	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.4
104.210	012	1,2-Dichloropropane	EPA 524.4
104.210	013	1,3,5-Trimethylbenzene	EPA 524.4

104.210	014	1,3-Dichlorobenzene	EPA 524.4
104.210	015	1,4-Dichlorobenzene	EPA 524.4
104.210	016	2-Chlorotoluene	EPA 524.4
104.210	017	4-Chlorotoluene	EPA 524.4
104.210	018	Benzene	EPA 524.4
104.210	019	Carbon Disulfide	EPA 524.4
104.210	020	Carbon Tetrachloride	EPA 524.4
104.210	021	Chlorobenzene	EPA 524.4
104.210	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.4
104.210	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.4
104.210	024	Dichlorodifluoromethane	EPA 524.4
104.210	025	Dichloromethane (Methylene Chloride)	EPA 524.4
104.210	026	Diisopropyl ether (DIPE)	EPA 524.4
104.210	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.4
104.210	028	Ethylbenzene	EPA 524.4
104.210	029	Isopropylbenzene	EPA 524.4
104.210	031	Methyl tert-butyl Ether (MTBE)	EPA 524.4
104.210	032	Naphthalene	EPA 524.4
104.210	033	n-Butylbenzene	EPA 524.4
104.210	034	N-propylbenzene	EPA 524.4
104.210	035	sec-Butylbenzene	EPA 524.4
104.210	036	Styrene	EPA 524.4
104.210	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.4
104.210	038	tert-Amyl Methyl Ether (TAME)	EPA 524.4
104.210	039	tert-Butylbenzene	EPA 524.4
104.210	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.4
104.210	041	Toluene	EPA 524.4
104.210	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.4
104.210	043	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.4
104.210	044	Trichloroethylene (Trichloroethene)	EPA 524.4
104.210	045	Trichlorofluoromethane	EPA 524.4
104.210	046	Trichlorotrifluoroethane	EPA 524.4
104.210	047	Vinyl Chloride	EPA 524.4
104.210	102	m+p-Xylene	EPA 524.4
104.210	103	o-Xylene	EPA 524.4
104.210	201	Bromodichloromethane	EPA 524.4
104.210	202	Bromoform	EPA 524.4
104.210	203	Chloroform	EPA 524.4
104.210	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.4

Field of Accreditation: 105 - Semi-volatile Organic Chemistry of Drinking Water

105.050	005	Chlordane (total)	EPA 508.1
105.050	010	Endrin	EPA 508.1

105.050	011	Heptachlor	EPA 508.1
105.050	012	Heptachlor Epoxide	EPA 508.1
105.050	013	Hexachlorobenzene	EPA 508.1
105.050	014	Hexachlorocyclopentadiene	EPA 508.1
105.050	015	Lindane (HCH-gamma)	EPA 508.1
105.050	016	Methoxychlor	EPA 508.1
105.050	019	Propachlor	EPA 508.1
105.050	021	PCB-1016 (Aroclor-1016)	EPA 508.1
105.050	022	PCB-1221 (Aroclor-1221)	EPA 508.1
105.050	023	PCB-1232 (Aroclor-1232)	EPA 508.1
105.050	024	PCB-1242 (Aroclor-1242)	EPA 508.1
105.050	025	PCB-1248 (Aroclor-1248)	EPA 508.1
105.050	026	PCB-1254 (Aroclor-1254)	EPA 508.1
105.050	027	PCB-1260 (Aroclor-1260)	EPA 508.1
105.050	028	PCBs as Aroclors	EPA 508.1
105.050	029	Toxaphene	EPA 508.1
105.083	001	2,4-D	EPA 515.4
105.083	002	Dinoseb	EPA 515.4
105.083	003	Pentachlorophenol	EPA 515.4
105.083	004	Picloram	EPA 515.4
105.083	005	2,4,5-TP (Silvex)	EPA 515.4
105.083	006	Dalapon	EPA 515.4
105.083	007	Bentazon	EPA 515.4
105.083	008	Dicamba	EPA 515.4
105.085	001	1,4-Dioxane	EPA 522
105.090	001	Alachlor	EPA 525.2
105.090	002	Aldrin	EPA 525.2
105.090	003	Atrazine	EPA 525.2
105.090	004	Benzo(a)pyrene	EPA 525.2
105.090	005	Butachlor	EPA 525.2
105.090	007	Dieldrin	EPA 525.2
105.090	008	Di(2-ethylhexyl) Adipate	EPA 525.2
105.090	009	Di(2-ethylhexyl) Phthalate	EPA 525.2
105.090	013	Endrin	EPA 525.2
105.090	014	Heptachlor	EPA 525.2
105.090	015	Heptachlor Epoxide	EPA 525.2
105.090	016	Hexachlorobenzene	EPA 525.2
105.090	017	Hexachlorocyclopentadiene	EPA 525.2
105.090	018	Lindane (HCH-gamma)	EPA 525.2
105.090	019	Methoxychlor	EPA 525.2
105.090	022	Molinate	EPA 525.2
105.090	023	Pentachlorophenol	EPA 525.2

105.090	025	Simazine	EPA 525.2
105.090	028	Thiobencarb	EPA 525.2
105.101	001	Carbofuran (Furadan)	EPA 531.2
105.101	002	Oxamyl	EPA 531.2
105.101	003	Aldicarb (Temik)	EPA 531.2
105.101	004	Aldicarb Sulfone	EPA 531.2
105.101	005	Aldicarb Sulfoxide	EPA 531.2
105.101	006	Carbaryl (Sevin)	EPA 531.2
105.101	007	3-Hydroxycarbofuran	EPA 531.2
105.101	008	Methomyl (Lannate)	EPA 531.2
105.103	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 533
105.103	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 533
105.103	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 533
105.103	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 533
105.103	005	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 533
105.103	006	Perfluorobutanoic Acid (PFBA)	EPA 533
105.103	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 533
105.103	008	1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	EPA 533
105.103	009	Perfluorodecanoic Acid (PFDA)	EPA 533
105.103	010	Perfluorododecanoic Acid (PFDoA)	EPA 533
105.103	011	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	EPA 533
105.103	012	Perfluoroheptane Sulfonic Acid (PFHpS)	EPA 533
105.103	013	Perfluoroheptanoic Acid (PFHpA)	EPA 533
105.103	014	1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	EPA 533
105.103	015	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 533
105.103	016	Perfluorohexanoic Acid (PFHxA)	EPA 533
105.103	017	Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 533
105.103	018	Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 533
105.103	019	Perfluorononanoic Acid (PFNA)	EPA 533
105.103	020	1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	EPA 533
105.103	021	Perfluorooctane Sulfonic Acid (PFOS)	EPA 533
105.103	022	Perfluorooctanoic Acid (PFOA)	EPA 533
105.103	023	Perfluoropentanoic Acid (PFPeA)	EPA 533
105.103	024	Perfluoropentane Sulfonic Acid (PFPeS)	EPA 533
105.103	025	Perfluoroundecanoic Acid (PFUnDA)	EPA 533
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1

105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1
105.106	016	Perfluorotetradecanoic Acid (PFTeDA)	EPA 537.1
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1
105.107	001	Microcystin-LA	EPA 544
105.107	002	Microcystin-LF	EPA 544
105.107	003	Microcystin-LR	EPA 544
105.107	004	Microcystin-LY	EPA 544
105.107	005	Microcystin-RR	EPA 544
105.107	006	Microcystin-YR	EPA 544
105.107	007	Nodularin-R	EPA 544
105.108	001	Anatoxin-A	EPA 545
105.108	002	Cylindrospermopsin	EPA 545
105.109	001	Total microcystins	EPA 546
105.120	001	Glyphosate	EPA 547
105.140	001	Endothall	EPA 548.1
105.150	001	Diquat	EPA 549.2
105.201	003	Bromoacetic Acid	EPA 552.3
105.201	004	Chloroacetic Acid	EPA 552.3
105.201	005	Dibromoacetic Acid	EPA 552.3
105.201	006	Dichloroacetic Acid	EPA 552.3
105.201	007	Trichloroacetic Acid	EPA 552.3
105.215	003	Bromoacetic Acid	EPA 557
105.215	004	Chloroacetic Acid	EPA 557
105.215	006	Dibromoacetic Acid	EPA 557
105.215	007	Dichloroacetic Acid	EPA 557
105.215	008	Trichloroacetic Acid	EPA 557
105.230	002	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Screening Only	EPA 1613 B

Field of Accreditation:106 - Radionuclides in Drinking Water

106.010	001	Gross Alpha	EPA 900.0
106.010	002	Gross Beta	EPA 900.0
106.092	001	Uranium	EPA 200.8
106.270	001	Gross Alpha	SM 7110 C

Field of Accreditation:107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.001	001	Total Coliform (Enumeration)	SM 9221 B,C-2006

107.001	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.001	003	E. coli (Enumeration)	SM 9221 C,F-2006
107.007	002	Fecal Streptococci	SM 9230 B-2007
107.013	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
107.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
107.015	002	Fecal Coliform (Enumeration)	SM 9223 B-2004 Colilert 18
107.017	001	Enterococci	Enterolert

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.007	001	Residue, Volatile	EPA 160.4
108.009	001	Turbidity	EPA 180.1
108.013	001	Calcium	EPA 200.7
108.013	002	Magnesium	EPA 200.7
108.013	003	Phosphorus,Total	EPA 200.7
108.013	004	Potassium	EPA 200.7
108.013	005	Silica, Dissolved	EPA 200.7
108.013	006	Sodium	EPA 200.7
108.015	001	Calcium	EPA 200.8
108.015	002	Magnesium	EPA 200.8
108.015	003	Potassium	EPA 200.8
108.015	005	Sodium	EPA 200.8
108.017	001	Bromide	EPA 300.0
108.017	002	Chloride	EPA 300.0
108.017	003	Fluoride	EPA 300.0
108.017	004	Nitrate (as N)	EPA 300.0
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0
108.017	006	Nitrite (as N)	EPA 300.0
108.017	008	Sulfate (as SO4)	EPA 300.0
108.019	001	Bromide	EPA 300.1
108.023	001	Cyanide, Total	EPA 335.4
108.025	001	Ammonia (as N)	EPA 350.1
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2
108.033	002	Nitrite (as N)	EPA 353.2
108.035	001	Phosphate,Ortho (as P)	EPA 365.1
108.035	002	Phosphorus,Total	EPA 365.1
108.037	001	Phosphate,Ortho (as P)	EPA 365.3
108.037	002	Phosphorus,Total	EPA 365.3
108.045	001	Chemical Oxygen Demand	EPA 410.4
108.049	001	Phenols, Total	EPA 420.4
108.053	002	Oil & Grease, Total Recoverable	EPA 1664 B
108.055	001	Color	SM 2120 B-2011
108.063	001	Alkalinity	SM 2320 B-2011

108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.077	002	Residue, Fixed Filterable (FDS)	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.080	001	Temperature	SM 2550 B-2010
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.129	001	Cyanide, Available	SM 4500-CN G-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.189	001	Sulfite (as SO3)	SM 4500-SO3 B-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.215	001	Organic Carbon-Total (TOC)	SM 5310 B-2011
108.225	001	Surfactants	SM 5540 C-2011
108.226	001	Non-ionic Surfactants as CTAS	SM 5540 D-2011
108.320	001	Cyanide, Total	ASTM D7511-12(17)
108.321	001	Cyanide, Total	ASTM D7511-12
108.339	001	Cyanide, Available	OIA-1677-09

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7
109.623	002	Antimony	EPA 200.7
109.623	003	Arsenic	EPA 200.7
109.623	004	Barium	EPA 200.7
109.623	005	Beryllium	EPA 200.7
109.623	006	Boron	EPA 200.7
109.623	007	Cadmium	EPA 200.7
109.623	008	Chromium	EPA 200.7
109.623	009	Cobalt	EPA 200.7
109.623	010	Copper	EPA 200.7
109.623	011	Iron	EPA 200.7
109.623	012	Lead	EPA 200.7
109.623	013	Manganese	EPA 200.7
109.623	014	Molybdenum	EPA 200.7
109.623	015	Nickel	EPA 200.7
109.623	016	Selenium	EPA 200.7
109.623	017	Silver	EPA 200.7
109.623	018	Thallium	EPA 200.7

109.623	019	Tin	EPA 200.7
109.623	020	Titanium	EPA 200.7
109.623	021	Vanadium	EPA 200.7
109.623	022	Zinc	EPA 200.7
109.625	001	Aluminum	EPA 200.8
109.625	002	Antimony	EPA 200.8
109.625	003	Arsenic	EPA 200.8
109.625	004	Barium	EPA 200.8
109.625	005	Beryllium	EPA 200.8
109.625	006	Boron	EPA 200.8
109.625	007	Cadmium	EPA 200.8
109.625	008	Chromium	EPA 200.8
109.625	009	Cobalt	EPA 200.8
109.625	010	Copper	EPA 200.8
109.625	012	Iron	EPA 200.8
109.625	013	Lead	EPA 200.8
109.625	014	Manganese	EPA 200.8
109.625	015	Molybdenum	EPA 200.8
109.625	016	Nickel	EPA 200.8
109.625	017	Selenium	EPA 200.8
109.625	018	Silver	EPA 200.8
109.625	019	Thallium	EPA 200.8
109.625	020	Tin	EPA 200.8
109.625	021	Titanium	EPA 200.8
109.625	022	Vanadium	EPA 200.8
109.625	023	Zinc	EPA 200.8
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
109.635	001	Mercury	EPA 245.1
109.657	001	Mercury	EPA 1631 E
109.800	001	Tributyltin	SM 6710 B - 2011

Field of Accreditation:110 - Volatile Organic Constituents in Non-Potable Water

110.040	001	Acetone	EPA 624.1
110.040	002	Acetonitrile	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1

110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.040	047	2-Butanone (MEK)	EPA 624.1
110.070	002	n-Amyl Acetate	EPA 1666 A
110.070	004	n-Butyl Acetate	EPA 1666 A
110.070	005	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 1666 A
110.070	006	Diethylamine	EPA 1666 A
110.070	007	Dimethyl Sulfoxide	EPA 1666 A
110.070	009	Ethyl Acetate	EPA 1666 A
110.070	010	n-Heptane	EPA 1666 A
110.070	011	n-Hexane	EPA 1666 A
110.070	012	Isobutyraldehyde	EPA 1666 A
110.070	013	Isopropyl Acetate	EPA 1666 A
110.070	014	Isopropyl Alcohol (Isopropanol)	EPA 1666 A
110.070	015	Isopropyl Ether (DIPE)	EPA 1666 A
110.070	017	2-Methoxyethanol	EPA 1666 A

110.070	018	Methyl Formate	EPA 1666 A
110.070	019	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 1666 A
110.070	021	Tetrahydrofuran	EPA 1666 A
110.070	022	Triethylamine	EPA 1666 A
110.070	024	o-Xylene	EPA 1666 A
110.070	026	m+p-Xylene	EPA 1666 A

Field of Accreditation:111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.120	001	2,4-D	EPA 615
111.120	002	2,4-DB	EPA 615
111.120	003	Dicamba	EPA 615
111.120	004	Dichloroprop	EPA 615
111.120	005	Dinoseb	EPA 615
111.120	006	MCPA	EPA 615
111.120	007	MCPP	EPA 615
111.120	008	2,4,5-T	EPA 615
111.120	009	2,4,5-TP (Silvex)	EPA 615

111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1

111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	056	Azinphos Methyl	EPA 625.1
111.160	073	Chlorpyrifos	EPA 625.1
111.160	079	Demeton-O	EPA 625.1
111.160	080	Demeton-S	EPA 625.1
111.160	081	Diazinon	EPA 625.1
111.160	082	Dichlorvos (DDVP)	EPA 625.1
111.160	085	Disulfoton	EPA 625.1
111.160	092	Ethoprop	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	100	Malathion	EPA 625.1
111.160	130	Stirophos (Tetrachlorovinphos)	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	147	m+p-Cresol	EPA 625.1
111.210	006	Diuron	EPA 632
111.250	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	002	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	004	Total Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	005	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	006	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	007	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	008	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	009	Total Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	010	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	011	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	012	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	013	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	014	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	015	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	016	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	017	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	018	Total Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	019	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	020	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B

111.250	021	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	022	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	023	Total Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	024	OCDD	EPA 1613 B
111.250	025	OCDF	EPA 1613 B
111.260	041	N-nitrosodimethylamine	EPA 1625 B
111.260	042	N-nitroso-di-n-propylamine	EPA 1625 B
111.265	001	Perfluorobutanoic Acid (PFBA)	EPA 1633
111.265	002	Perfluoropentanoic Acid (PFPeA)	EPA 1633
111.265	003	Perfluorohexanoic Acid (PFHxA)	EPA 1633
111.265	004	Perfluoroheptanoic Acid (PFHpA)	EPA 1633
111.265	005	Perfluorooctanoic Acid (PFOA)	EPA 1633
111.265	006	Perfluorononanoic Acid (PFNA)	EPA 1633
111.265	007	Perfluorodecanoic Acid (PFDA)	EPA 1633
111.265	008	Perfluoroundecanoic Acid (PFUnDA)	EPA 1633
111.265	009	Perfluorododecanoic Acid (PFDoA)	EPA 1633
111.265	010	Perfluorotridecanoic Acid (PFTrDA)	EPA 1633
111.265	011	Perfluorotetradecanoic Acid (PFTeDA)	EPA 1633
111.265	012	Perfluorobutane Sulfonic Acid (PFBS)	EPA 1633
111.265	013	Perfluoropentane Sulfonic Acid (PFPeS)	EPA 1633
111.265	014	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 1633
111.265	015	Perfluoroheptane Sulfonic Acid (PFHpS)	EPA 1633
111.265	016	Perfluorooctane Sulfonic Acid (PFOS)	EPA 1633
111.265	017	Perfluorononane Sulfonic Acid (PFNS)	EPA 1633
111.265	018	Perfluorodecane Sulfonic Acid (PFDS)	EPA 1633
111.265	019	Perfluorododecanesulfonic acid (PFDoS)	EPA 1633
111.265	020	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	EPA 1633
111.265	021	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	EPA 1633
111.265	022	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	EPA 1633
111.265	023	Perfluorooctane Sulfonamide (PFOSAm)	EPA 1633
111.265	024	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	EPA 1633
111.265	025	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	EPA 1633
111.265	026	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 1633
111.265	027	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 1633
111.265	028	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	EPA 1633
111.265	029	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	EPA 1633
111.265	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 1633
111.265	031	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 1633
111.265	032	Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 1633
111.265	033	Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 1633
111.265	034	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 1633
111.265	035	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 1633

111.265	036	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 1633
111.265	037	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	EPA 1633
111.265	038	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	EPA 1633
111.265	039	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	EPA 1633
111.265	040	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	EPA 1633
111.265	041	Perfluorohexadecanoic Acid (PFHxDA)	EPA 1633
111.345	001	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	002	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	003	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	004	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	005	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	006	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
111.345	007	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
111.345	008	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
111.345	009	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
111.345	010	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
111.345	011	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
111.345	012	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
111.345	013	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
111.345	014	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
111.345	015	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
111.345	016	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
111.345	017	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
111.345	018	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	019	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
111.345	020	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
111.345	021	Perfluorotetradecanoic Acid (PFTeDA)	DoD QSM Version 5.1 (or newer)
111.345	022	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
111.345	023	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
111.345	024	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
111.345	025	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
111.345	026	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
111.345	027	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	028	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
111.345	029	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
111.345	031	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
111.345	032	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
111.345	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
111.345	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
111.345	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
111.345	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)

111.345	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
111.345	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
111.345	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
111.345	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)
111.440	001	Bisphenol A	ASTM D7065-17
111.440	002	Nonylphenol	ASTM D7065-17
111.440	003	Nonylphenol Monoethoxylate (NP1EO)	ASTM D7065-17
111.440	004	Nonylphenol Diethoxylate (NP2EO)	ASTM D7065-17
111.440	005	p-tert-Octylphenol (OP)	ASTM D7065-17

Field of Accreditation:112 - Radionuclides in Non-Potable Water

112.001	001	Gross Alpha	EPA 900.0
112.001	002	Gross Beta	EPA 900.0

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.315	001	Aluminum	EPA 6010 B
114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	006	Boron	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	008	Calcium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	012	Iron	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	014	Magnesium	EPA 6010 B
114.315	015	Manganese	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	018	Potassium	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	021	Sodium	EPA 6010 B
114.315	022	Strontium	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	024	Tin	EPA 6010 B
114.315	025	Titanium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B

114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	011	Manganese	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020
114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020
114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.465	001	Chromium VI (Hexavalent Chromium)	EPA 7199
114.535	001	Mercury	EPA 7471 A
114.745	001	Fluoride	EPA 9056

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.135	001	Corrosivity - pH Determination	EPA 9045 C

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B

116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
116.265	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
116.265	059	Diisopropyl ether (DIPE)	EPA 8260 B
116.265	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 B
116.265	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
116.266	001	Gasoline Range Organics (GRO)	EPA 8260 B

Field of Accreditation: 117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B
117.235	004	Oil Range Organics (ORO) [LUFT Range]	EPA 8015 B
117.255	012	Ethanol	EPA 8015 B
117.255	020	Methanol	EPA 8015 B
117.315	001	Aldrin	EPA 8081 A
117.315	002	alpha-BHC	EPA 8081 A
117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A
117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082
117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.405	001	Azinphos Methyl	EPA 8141 A
117.405	002	Chlorpyrifos	EPA 8141 A
117.405	003	Demeton-O	EPA 8141 A
117.405	004	Demeton-S	EPA 8141 A
117.405	005	Diazinon	EPA 8141 A
117.405	006	Dichlorvos (DDVP)	EPA 8141 A
117.405	007	Disulfoton	EPA 8141 A
117.405	008	Malathion	EPA 8141 A
117.405	009	Parathion Ethyl	EPA 8141 A
117.405	010	Parathion Methyl	EPA 8141 A

117.405	011	Phorate	EPA 8141 A
117.405	012	Ronnel	EPA 8141 A
117.405	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
117.425	001	2,4-D	EPA 8151 A
117.425	002	2,4-DB	EPA 8151 A
117.425	003	2,4,5-TP (Silvex)	EPA 8151 A
117.425	004	2,4,5-T	EPA 8151 A
117.425	005	Dalapon	EPA 8151 A
117.425	006	Dicamba	EPA 8151 A
117.425	007	Dichloroprop	EPA 8151 A
117.425	008	Dinoseb	EPA 8151 A
117.425	009	MCPA	EPA 8151 A
117.425	010	MCPP	EPA 8151 A
117.425	011	4-Nitrophenol	EPA 8151 A
117.425	012	Pentachlorophenol	EPA 8151 A
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C
117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C

117.435	028	Pentachlorobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	030	1-Chloronaphthalene	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	040	2,6-Dichlorophenol	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	052	Aldrin	EPA 8270 C
117.435	053	alpha-BHC	EPA 8270 C
117.435	054	beta-BHC	EPA 8270 C
117.435	055	delta-BHC	EPA 8270 C
117.435	056	gamma-BHC (Lindane)	EPA 8270 C
117.435	057	4,4'-DDD	EPA 8270 C
117.435	058	4,4'-DDE	EPA 8270 C
117.435	059	4,4'-DDT	EPA 8270 C
117.435	060	Dieldrin	EPA 8270 C
117.435	062	Endosulfan I	EPA 8270 C
117.435	063	Endosulfan II	EPA 8270 C
117.435	064	Endosulfan Sulfate	EPA 8270 C
117.435	065	Endrin	EPA 8270 C
117.435	066	Endrin Aldehyde	EPA 8270 C
117.435	067	Endrin Ketone	EPA 8270 C
117.435	068	Heptachlor	EPA 8270 C
117.435	069	Heptachlor Epoxide	EPA 8270 C
117.435	070	Methoxychlor	EPA 8270 C

117.435	087	N-nitrosodiethylamine	EPA 8270 C
117.435	088	N-nitrosodimethylamine	EPA 8270 C
117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C
117.575	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
117.575	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
117.575	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
117.575	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
117.575	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
117.575	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
117.575	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
117.575	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
117.575	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
117.575	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
117.575	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
117.575	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
117.575	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
117.575	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
117.575	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
117.575	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
117.575	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
117.575	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
117.575	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
117.575	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
117.575	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
117.575	029	Perfluorotetradecanoic Acid (PFTeDA)	DoD QSM Version 5.1 (or newer)
117.575	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
117.575	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
117.575	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
117.575	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)

117.575	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
117.575	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
117.575	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
117.575	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
117.575	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

Field of Accreditation:126 - Microbiological Methods for Ambient Water

126.003	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
126.003	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
126.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
126.017	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
126.019	001	Enterococci	Enterolert

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	001	Aluminum	EPA 6010 B
130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	006	Boron	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	008	Calcium	EPA 6010 B
130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	012	Iron	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	014	Magnesium	EPA 6010 B
130.010	015	Manganese	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B
130.010	017	Nickel	EPA 6010 B
130.010	018	Potassium	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	021	Sodium	EPA 6010 B
130.010	022	Strontium	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	024	Tin	EPA 6010 B
130.010	025	Titanium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B
130.030	001	Aluminum	EPA 6020

130.030	002	Antimony	EPA 6020
130.030	003	Arsenic	EPA 6020
130.030	004	Barium	EPA 6020
130.030	005	Beryllium	EPA 6020
130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	009	Copper	EPA 6020
130.030	010	Lead	EPA 6020
130.030	011	Manganese	EPA 6020
130.030	012	Nickel	EPA 6020
130.030	013	Silver	EPA 6020
130.030	014	Thallium	EPA 6020
130.030	015	Zinc	EPA 6020
130.030	016	Molybdenum	EPA 6020
130.030	017	Selenium	EPA 6020
130.030	018	Vanadium	EPA 6020
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199
130.250	001	Mercury	EPA 7470 A
130.555	001	Total Organic Halides	EPA 9076

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.060	001	Ignitability	EPA 1010
131.110	001	Corrosivity - pH Determination	EPA 9040 B

Field of Accreditation:132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B
132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B

132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
132.060	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
132.060	059	Diisopropyl ether (DIPE)	EPA 8260 B
132.060	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 B

132.060	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
132.061	001	Gasoline Range Organics (GRO)	EPA 8260 B
132.080	001	Acrylamide	EPA 8316

Field of Accreditation:133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.190	001	Azinphos Methyl	EPA 8141 A
133.190	002	Chlorpyrifos	EPA 8141 A
133.190	003	Demeton-O	EPA 8141 A
133.190	004	Demeton-S	EPA 8141 A
133.190	005	Diazinon	EPA 8141 A
133.190	006	Dichlorvos (DDVP)	EPA 8141 A
133.190	007	Disulfoton	EPA 8141 A
133.190	008	Malathion	EPA 8141 A
133.190	009	Parathion Ethyl	EPA 8141 A
133.190	010	Parathion Methyl	EPA 8141 A

133.190	011	Phorate	EPA 8141 A
133.190	012	Ronnel	EPA 8141 A
133.190	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
133.220	001	2,4-D	EPA 8151 A
133.220	002	2,4-DB	EPA 8151 A
133.220	003	2,4,5-TP (Silvex)	EPA 8151 A
133.220	004	2,4,5-T	EPA 8151 A
133.220	005	Dalapon	EPA 8151 A
133.220	006	Dicamba	EPA 8151 A
133.220	007	Dichloroprop	EPA 8151 A
133.220	008	Dinoseb	EPA 8151 A
133.220	009	MCPA	EPA 8151 A
133.220	010	MCPP	EPA 8151 A
133.220	011	4-Nitrophenol	EPA 8151 A
133.220	012	Pentachlorophenol	EPA 8151 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C

133.230	028	Pentachlorobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	030	1-Chloronaphthalene	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	040	2,6-Dichlorophenol	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	052	Aldrin	EPA 8270 C
133.230	053	alpha-BHC	EPA 8270 C
133.230	054	beta-BHC	EPA 8270 C
133.230	055	delta-BHC	EPA 8270 C
133.230	056	gamma-BHC (Lindane)	EPA 8270 C
133.230	057	4,4'-DDD	EPA 8270 C
133.230	058	4,4'-DDE	EPA 8270 C
133.230	059	4,4'-DDT	EPA 8270 C
133.230	060	Dieldrin	EPA 8270 C
133.230	062	Endosulfan I	EPA 8270 C
133.230	063	Endosulfan II	EPA 8270 C
133.230	064	Endosulfan Sulfate	EPA 8270 C
133.230	065	Endrin	EPA 8270 C
133.230	066	Endrin Aldehyde	EPA 8270 C
133.230	067	Endrin Ketone	EPA 8270 C
133.230	068	Heptachlor	EPA 8270 C
133.230	069	Heptachlor Epoxide	EPA 8270 C
133.230	070	Methoxychlor	EPA 8270 C

133.230	087	N-nitrosodiethylamine	EPA 8270 C
133.230	088	N-nitrosodimethylamine	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.280	001	Acetaldehyde	EPA 8315 A
133.280	010	Formaldehyde	EPA 8315 A
133.290	001	Aldicarb (Temik)	EPA 8318
133.290	002	Aldicarb Sulfone	EPA 8318
133.290	003	Carbaryl (Sevin)	EPA 8318
133.290	004	Carbofuran (Furadan)	EPA 8318
133.290	006	3-Hydroxycarbofuran	EPA 8318
133.290	007	Methiocarb (Mesurol)	EPA 8318
133.290	008	Methomyl (Lannate)	EPA 8318
133.290	009	Oxamyl	EPA 8318
133.290	011	Propoxur (Baygon)	EPA 8318
133.320	001	Aldicarb (Temik)	EPA 8321 A
133.320	002	Aldicarb Sulfone	EPA 8321 A
133.320	003	Aldicarb Sulfoxide	EPA 8321 A
133.320	004	Carbaryl (Sevin)	EPA 8321 A
133.320	005	Carbofuran (Furadan)	EPA 8321 A
133.320	007	Methiocarb (Mesurol)	EPA 8321 A
133.320	008	Methomyl (Lannate)	EPA 8321 A
133.320	009	Oxamyl	EPA 8321 A
133.320	011	Propoxur (Baygon)	EPA 8321 A
133.350	001	1,3,5-Trinitrobenzene	EPA 8330 A
133.350	002	1,3-Dinitrobenzene	EPA 8330 A
133.350	003	Nitrobenzene	EPA 8330 A
133.350	004	2,4,6-Trinitrotoluene	EPA 8330 A
133.350	005	2,4-Dinitrotoluene	EPA 8330 A
133.350	006	2,6-Dinitrotoluene	EPA 8330 A
133.350	007	2-Nitrotoluene	EPA 8330 A
133.350	008	3-Nitrotoluene	EPA 8330 A
133.350	009	4-Nitrotoluene	EPA 8330 A
133.380	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
133.380	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
133.380	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)

133.380	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
133.380	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
133.380	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
133.380	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
133.380	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
133.380	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
133.380	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
133.380	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
133.380	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
133.380	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
133.380	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
133.380	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
133.380	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
133.380	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
133.380	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
133.380	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
133.380	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
133.380	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
133.380	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
133.380	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
133.380	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
133.380	029	Perfluorotetradecanoic Acid (PFTeDA)	DoD QSM Version 5.1 (or newer)
133.380	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
133.380	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
133.380	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
133.380	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
133.380	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
133.380	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
133.380	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
133.380	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
133.380	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Enthalpy Analytical, LLC
Orange
931 West Barkley Avenue
Orange, CA 92868
Phone: 7147716900

Certificate Number: 1338
Expiration Date: 10/31/2026

Field of Accreditation: 101 - Microbiology of Drinking Water

101.010	001	Heterotrophic Bacteria	SM 9215 B
101.010	002	Heterotrophic Bacteria	SimPlate
101.020	004	Total Coliform (Enumeration)	SM 9221 B,C
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B,E
101.020	006	E. coli (Enumeration)	SM 9221 B,F
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18
101.050	006	E. coli P/A	SM 9223 B Colilert 18
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18
101.050	009	Total Coliform P/A	SM 9223 B Colisure
101.050	010	E. coli P/A	SM 9223 B Colisure
101.050	011	Total Coliform (Enumeration)	SM 9223 B Colisure
101.050	012	E. coli (Enumeration)	SM 9223 B Colisure

Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water

102.015	001	Hydrogen Ion (pH)	EPA 150.1
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	003	Chloride	EPA 300.0
102.030	005	Fluoride	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0
102.030	007	Nitrite (as N)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.045	001	Perchlorate	EPA 314.0
102.050	001	Cyanide, Total	EPA 335.4

102.095	001	Turbidity	SM 2130 B-2001
102.100	001	Alkalinity	SM 2320 B-1997
102.120	001	Hardness (Calculation)	SM 2340 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.190	001	Cyanide, Total	SM 4500-CN E-1999
102.192	001	Cyanide, Amenable	SM 4500-CN G-1999
102.200	001	Fluoride	SM 4500-F C-1997
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.234	001	Nitrite (as N)	SM 4500-NO3 F-2000
102.234	002	Nitrate (as N)	SM 4500-NO3 F-2000
102.240	001	Phosphate,Ortho (as P)	SM 4500-P E-1999
102.242	001	Silica	SM 4500-SiO2 C-1997
102.243	001	Silica	SM 4500-SiO2 D-1997
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000
102.270	001	Surfactants	SM 5540 C-2000

Field of Accreditation: 103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7
103.130	003	Barium	EPA 200.7
103.130	004	Beryllium	EPA 200.7
103.130	007	Chromium	EPA 200.7
103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	012	Nickel	EPA 200.7
103.130	015	Silver	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	012	Nickel	EPA 200.8

103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	017	Boron	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.160	001	Mercury	EPA 245.1
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6

Field of Accreditation: 104 - Volatile Organic Chemistry of Drinking Water

104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.200	001	1,1,1,2-Tetrachloroethane	EPA 524.2
104.200	002	1,1,1-Trichloroethane	EPA 524.2
104.200	003	1,1,2,2-Tetrachloroethane	EPA 524.2
104.200	004	1,1,2-Trichloroethane	EPA 524.2
104.200	005	1,1-Dichloroethane	EPA 524.2
104.200	006	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.200	007	1,2,3-Trichlorobenzene	EPA 524.2
104.200	008	1,2,4-Trichlorobenzene	EPA 524.2
104.200	009	1,2,4-Trimethylbenzene	EPA 524.2
104.200	010	1,2-Dichlorobenzene	EPA 524.2
104.200	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.200	012	1,2-Dichloropropane	EPA 524.2
104.200	013	1,3,5-Trimethylbenzene	EPA 524.2
104.200	014	1,3-Dichlorobenzene	EPA 524.2
104.200	015	1,4-Dichlorobenzene	EPA 524.2
104.200	016	2-Chlorotoluene	EPA 524.2
104.200	017	4-Chlorotoluene	EPA 524.2
104.200	018	Benzene	EPA 524.2
104.200	019	Carbon Disulfide	EPA 524.2
104.200	020	Carbon Tetrachloride	EPA 524.2
104.200	021	Chlorobenzene	EPA 524.2
104.200	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.200	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.200	024	Dichlorodifluoromethane	EPA 524.2
104.200	025	Dichloromethane (Methylene Chloride)	EPA 524.2
104.200	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.200	028	Ethylbenzene	EPA 524.2
104.200	029	Isopropylbenzene	EPA 524.2
104.200	030	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2
104.200	031	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.200	032	Naphthalene	EPA 524.2
104.200	033	n-Butylbenzene	EPA 524.2

104.200	034	N-propylbenzene	EPA 524.2
104.200	035	sec-Butylbenzene	EPA 524.2
104.200	036	Styrene	EPA 524.2
104.200	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2
104.200	038	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.200	039	tert-Butylbenzene	EPA 524.2
104.200	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.200	041	Toluene	EPA 524.2
104.200	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.200	043	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2
104.200	044	Trichloroethylene (Trichloroethene)	EPA 524.2
104.200	045	Trichlorofluoromethane	EPA 524.2
104.200	046	Trichlorotrifluoroethane	EPA 524.2
104.200	047	Vinyl Chloride	EPA 524.2
104.200	102	m+p-Xylene	EPA 524.2
104.200	103	o-Xylene	EPA 524.2
104.200	201	Bromodichloromethane	EPA 524.2
104.200	202	Bromoform	EPA 524.2
104.200	203	Chloroform	EPA 524.2
104.200	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2

Field of Accreditation: 107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.050	001	Total Coliform (Enumeration)	SM 9221 B-2014
107.052	001	Fecal Coliform (Enumeration)	SM 9221 E-2014
107.054	001	E. coli (Enumeration)	SM 9221 F-2014
107.062	001	Enterococci	SM 9230 B-2013
107.062	002	Fecal Streptococci	SM 9230 B-2013
107.068	001	E. coli (Enumeration)	SM 9223 B-2016 Colilert
107.070	001	E. coli (Enumeration)	SM 9223 B-2016 Colilert 18
107.070	002	Fecal Coliform (Enumeration)	SM 9223 B-2016 Colilert 18

Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1
108.007	001	Residue, Volatile	EPA 160.4
108.009	001	Turbidity	EPA 180.1
108.013	001	Calcium	EPA 200.7
108.013	002	Magnesium	EPA 200.7
108.013	004	Potassium	EPA 200.7
108.013	005	Silica, Dissolved	EPA 200.7
108.013	006	Sodium	EPA 200.7
108.015	001	Calcium	EPA 200.8
108.015	002	Magnesium	EPA 200.8
108.015	003	Potassium	EPA 200.8
108.015	005	Sodium	EPA 200.8

108.017	001	Bromide	EPA 300.0
108.017	002	Chloride	EPA 300.0
108.017	003	Fluoride	EPA 300.0
108.017	004	Nitrate (as N)	EPA 300.0
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0
108.017	006	Nitrite (as N)	EPA 300.0
108.017	008	Sulfate (as SO4)	EPA 300.0
108.023	001	Cyanide, Total	EPA 335.4
108.025	001	Ammonia (as N)	EPA 350.1
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2
108.033	002	Nitrite (as N)	EPA 353.2
108.045	001	Chemical Oxygen Demand	EPA 410.4
108.047	001	Phenols, Total	EPA 420.1
108.053	001	Oil & Grease, Total Recoverable	EPA 1664 A
108.055	001	Color	SM 2120 B-2011
108.059	001	Turbidity	SM 2130 B-2011
108.061	001	Acidity	SM 2310 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.070	001	Residue, Total	SM 2540 B-2015
108.072	001	Residue, Filterable TDS	SM 2540 C-2015
108.074	001	Residue, Non-filterable TSS	SM 2540 D-2015
108.076	001	Residue, Volatile	SM 2540 E-2015
108.076	002	Residue, Fixed Filterable (FDS)	SM 2540 E-2015
108.078	001	Residue, Settleable	SM 2540 F-2015
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.124	001	Cyanide, Total	SM 4500-CN- E-2016
108.131	001	Fluoride	SM 4500-F C-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.147	001	Ammonia (as N)	SM 4500-NH3 G-2011
108.147	002	Kjeldahl Nitrogen,Total (as N)	SM 4500-NH3 G-2011
108.158	001	Nitrate-Nitrite (as N)	SM 4500-NO3- F-2016
108.158	002	Nitrite (as N)	SM 4500-NO3- F-2016
108.174	001	Oxygen, Dissolved	SM 4500-O G-2016
108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011
108.175	002	Phosphorus,Total	SM 4500-P E-2011
108.184	001	Silica, Dissolved	SM 4500-SiO2 C-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.206	001	Biochemical Oxygen Demand	SM 5210 B-2016

108.206	002	Carbonaceous BOD	SM 5210 B-2016
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.214	001	Organic Carbon-Total (TOC)	SM 5310 B-2014
108.225	001	Surfactants	SM 5540 C-2011

Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7
109.623	002	Antimony	EPA 200.7
109.623	003	Arsenic	EPA 200.7
109.623	004	Barium	EPA 200.7
109.623	005	Beryllium	EPA 200.7
109.623	006	Boron	EPA 200.7
109.623	007	Cadmium	EPA 200.7
109.623	008	Chromium	EPA 200.7
109.623	009	Cobalt	EPA 200.7
109.623	010	Copper	EPA 200.7
109.623	011	Iron	EPA 200.7
109.623	012	Lead	EPA 200.7
109.623	013	Manganese	EPA 200.7
109.623	014	Molybdenum	EPA 200.7
109.623	015	Nickel	EPA 200.7
109.623	016	Selenium	EPA 200.7
109.623	017	Silver	EPA 200.7
109.623	018	Thallium	EPA 200.7
109.623	019	Tin	EPA 200.7
109.623	020	Titanium	EPA 200.7
109.623	021	Vanadium	EPA 200.7
109.623	022	Zinc	EPA 200.7
109.625	001	Aluminum	EPA 200.8
109.625	002	Antimony	EPA 200.8
109.625	003	Arsenic	EPA 200.8
109.625	004	Barium	EPA 200.8
109.625	005	Beryllium	EPA 200.8
109.625	006	Boron	EPA 200.8
109.625	007	Cadmium	EPA 200.8
109.625	008	Chromium	EPA 200.8
109.625	009	Cobalt	EPA 200.8
109.625	010	Copper	EPA 200.8
109.625	012	Iron	EPA 200.8
109.625	013	Lead	EPA 200.8
109.625	014	Manganese	EPA 200.8
109.625	015	Molybdenum	EPA 200.8
109.625	016	Nickel	EPA 200.8

109.625	017	Selenium	EPA 200.8
109.625	018	Silver	EPA 200.8
109.625	019	Thallium	EPA 200.8
109.625	021	Titanium	EPA 200.8
109.625	022	Vanadium	EPA 200.8
109.625	023	Zinc	EPA 200.8
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
109.635	001	Mercury	EPA 245.1

Field of Accreditation: 110 - Volatile Organic Constituents in Non-Potable Water

110.040	001	Acetone	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1

110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.040	047	2-Butanone (MEK)	EPA 624.1

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1

111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine (NDPA)	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1

111.160	108	N-nitrosodimethylamine (NDMA)	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	143	1,2-Diphenylhydrazine	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.160	147	m+p-Cresol	EPA 625.1
111.160	148	2-Methylnaphthalene	EPA 625.1
111.160	151	2,4,5-Trichlorophenol	EPA 625.1

Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste

114.315	001	Aluminum	EPA 6010 B
114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	006	Boron	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	008	Calcium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	012	Iron	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	014	Magnesium	EPA 6010 B
114.315	015	Manganese	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	018	Potassium	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	021	Sodium	EPA 6010 B
114.315	022	Strontium	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	024	Tin	EPA 6010 B
114.315	025	Titanium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.335	001	Aluminum	EPA 6020
114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020

114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	011	Manganese	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020
114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020
114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.435	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
114.465	001	Chromium VI (Hexavalent Chromium)	EPA 7199
114.535	001	Mercury	EPA 7471 A
114.705	001	Cyanide, Total	EPA 9012 A
114.705	002	Cyanide, Amenable	EPA 9012 A
114.725	001	Cyanide, Total	EPA 9014
114.785	001	Fluoride	EPA 9214

Field of Accreditation: 115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.105	001	Ignitability	EPA 1030
115.135	001	Corrosivity - pH Determination	EPA 9045 C

Field of Accreditation: 116 - Volatile Organic Compounds in Hazardous Waste

116.220	001	Gasoline Range Organics (GRO)	EPA 8015 B
116.220	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8015 B
116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B

116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
116.265	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
116.265	059	Diisopropyl ether (DIPE)	EPA 8260 B

116.265	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 B
116.265	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
116.266	001	Gasoline Range Organics (GRO)	EPA 8260 B
116.266	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8260 B

Field of Accreditation: 117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B
117.235	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 B
117.315	001	Aldrin	EPA 8081 A
117.315	002	alpha-BHC	EPA 8081 A
117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A
117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082
117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C
117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C

117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C

117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C

Field of Accreditation: 126 - Microbiological Methods for Ambient Water

126.102	001	Total Coliform (Enumeration)	SM 9221 B-2014
126.104	001	Fecal Coliform (Enumeration)	SM 9221 E-2014
126.106	001	E. coli (Enumeration)	SM 9221 F-2014
126.118	001	Enterococci	SM 9230 D-2013 Enterolert
126.120	001	E. coli (Enumeration)	SM 9223 B-2016 Colilert
126.122	001	E. coli (Enumeration)	SM 9223 B-2016 Colilert 18

Field of Accreditation: 130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	001	Aluminum	EPA 6010 B
130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	006	Boron	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	008	Calcium	EPA 6010 B
130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	012	Iron	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	014	Magnesium	EPA 6010 B
130.010	015	Manganese	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B
130.010	017	Nickel	EPA 6010 B
130.010	018	Potassium	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	021	Sodium	EPA 6010 B
130.010	022	Strontium	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	025	Titanium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B
130.030	001	Aluminum	EPA 6020
130.030	002	Antimony	EPA 6020
130.030	003	Arsenic	EPA 6020
130.030	004	Barium	EPA 6020
130.030	005	Beryllium	EPA 6020

130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	009	Copper	EPA 6020
130.030	010	Lead	EPA 6020
130.030	011	Manganese	EPA 6020
130.030	012	Nickel	EPA 6020
130.030	013	Silver	EPA 6020
130.030	014	Thallium	EPA 6020
130.030	015	Zinc	EPA 6020
130.030	016	Molybdenum	EPA 6020
130.030	017	Selenium	EPA 6020
130.030	018	Vanadium	EPA 6020
130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199
130.250	001	Mercury	EPA 7470 A
130.430	001	Cyanide, Total	EPA 9012 A
130.430	002	Cyanide, Amenable	EPA 9012 A
130.450	001	Cyanide, Total	EPA 9014
130.520	001	Fluoride	EPA 9214

Field of Accreditation: 131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.060	001	Ignitability	EPA 1010
131.110	001	Corrosivity - pH Determination	EPA 9040 B

Field of Accreditation: 132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.015	001	Gasoline Range Organics (GRO)	EPA 8015 B
132.015	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8015 B
132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B
132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B

132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
132.061	001	Gasoline Range Organics (GRO)	EPA 8260 B

132.061	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8260 B

Field of Accreditation: 133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.010	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 B
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C

133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	088	N-nitrosodimethylamine (NDMA)	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine (NDPA)	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C

133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Enthalpy Analytical, LLC

Orange

931 West Barkley Avenue

Orange, CA 92868

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1338**

Effective Date: **11/1/2024**

Expiration Date: **10/31/2026**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

EMAX Laboratories, Inc.

3051 Fujita St.

Torrance, CA 90505

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2672**

Effective Date: **12/15/2025**

Expiration Date: **12/14/2027**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

EMAX Laboratories, Inc.

3051 Fujita St.
Torrance, CA 90505
Phone: 3106188889

Certificate Number: 2672
Expiration Date: 12/14/2027

Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water			
102.015	001	Hydrogen Ion (pH)	EPA 150.1
102.020	001	Turbidity	EPA 180.1
102.045	001	Perchlorate	EPA 314.0
102.095	001	Turbidity	SM 2130 B-2001
102.100	001	Alkalinity	SM 2320 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.170	001	Chloride	SM 4500-Chloride B-1997
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000
102.270	001	Surfactants	SM 5540 C-2000
Field of Accreditation: 104 - Volatile Organic Chemistry of Drinking Water			
104.030	001	1,2-Dibromoethane (EDB)	EPA 504.1
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1
104.200	001	1,1,1,2-Tetrachloroethane	EPA 524.2
104.200	002	1,1,1-Trichloroethane	EPA 524.2
104.200	003	1,1,2,2-Tetrachloroethane	EPA 524.2
104.200	004	1,1,2-Trichloroethane	EPA 524.2
104.200	005	1,1-Dichloroethane	EPA 524.2
104.200	007	1,2,3-Trichlorobenzene	EPA 524.2
104.200	008	1,2,4-Trichlorobenzene	EPA 524.2
104.200	009	1,2,4-Trimethylbenzene	EPA 524.2
104.200	010	1,2-Dichlorobenzene	EPA 524.2
104.200	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.200	012	1,2-Dichloropropane	EPA 524.2
104.200	013	1,3,5-Trimethylbenzene	EPA 524.2
104.200	014	1,3-Dichlorobenzene	EPA 524.2
104.200	015	1,4-Dichlorobenzene	EPA 524.2
104.200	016	2-Chlorotoluene	EPA 524.2
104.200	017	4-Chlorotoluene	EPA 524.2
104.200	018	Benzene	EPA 524.2
104.200	019	Carbon Disulfide	EPA 524.2

104.200	020	Carbon Tetrachloride	EPA 524.2
104.200	021	Chlorobenzene	EPA 524.2
104.200	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.200	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.200	024	Dichlorodifluoromethane	EPA 524.2
104.200	025	Dichloromethane (Methylene Chloride)	EPA 524.2
104.200	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.200	028	Ethylbenzene	EPA 524.2
104.200	029	Isopropylbenzene	EPA 524.2
104.200	030	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2
104.200	031	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.200	032	Naphthalene	EPA 524.2
104.200	033	n-Butylbenzene	EPA 524.2
104.200	034	N-propylbenzene	EPA 524.2
104.200	035	sec-Butylbenzene	EPA 524.2
104.200	036	Styrene	EPA 524.2
104.200	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2
104.200	038	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.200	039	tert-Butylbenzene	EPA 524.2
104.200	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.200	041	Toluene	EPA 524.2
104.200	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.200	044	Trichloroethylene (Trichloroethene)	EPA 524.2
104.200	045	Trichlorofluoromethane	EPA 524.2
104.200	046	Trichlorotrifluoroethane	EPA 524.2
104.200	102	m+p-Xylene	EPA 524.2
104.200	103	o-Xylene	EPA 524.2
104.200	201	Bromodichloromethane	EPA 524.2
104.200	202	Bromoform	EPA 524.2
104.200	203	Chloroform	EPA 524.2
104.200	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2

Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1
108.009	001	Turbidity	EPA 180.1
108.013	001	Calcium	EPA 200.7
108.013	002	Magnesium	EPA 200.7
108.013	004	Potassium	EPA 200.7
108.013	006	Sodium	EPA 200.7
108.015	001	Calcium	EPA 200.8
108.015	002	Magnesium	EPA 200.8
108.015	003	Potassium	EPA 200.8
108.015	005	Sodium	EPA 200.8

108.017	001	Bromide	EPA 300.0
108.017	002	Chloride	EPA 300.0
108.017	003	Fluoride	EPA 300.0
108.017	004	Nitrate (as N)	EPA 300.0
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0
108.017	006	Nitrite (as N)	EPA 300.0
108.017	007	Phosphate,Ortho (as P)	EPA 300.0
108.017	008	Sulfate (as SO4)	EPA 300.0
108.045	001	Chemical Oxygen Demand	EPA 410.4
108.047	001	Phenols, Total	EPA 420.1
108.053	001	Oil & Grease, Total Recoverable	EPA 1664 A
108.055	001	Color	SM 2120 B-2011
108.059	001	Turbidity	SM 2130 B-2011
108.061	001	Acidity	SM 2310 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.067	001	Hardness	SM 2340 C-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.095	001	Bromide	SM 4110 B-2011
108.095	002	Chloride	SM 4110 B-2011
108.095	003	Fluoride	SM 4110 B-2011
108.095	004	Nitrate (as N)	SM 4110 B-2011
108.095	005	Nitrate-Nitrite (as N)	SM 4110 B-2011
108.095	006	Nitrite (as N)	SM 4110 B-2011
108.095	007	Phosphate,Ortho (as P)	SM 4110 B-2011
108.095	008	Sulfate (as SO4)	SM 4110 B-2011
108.115	001	Chloride	SM 4500-Chloride B-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.145	002	Kjeldahl Nitrogen,Total (as N)	SM 4500-NH3 F-2011
108.153	001	Nitrite (as N)	SM 4500-NO2 B-2011
108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011
108.175	002	Phosphorus,Total	SM 4500-P E-2011
108.184	001	Silica, Dissolved	SM 4500-SiO2 C-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.203	001	Sulfide (as S)	SM 4500-S F-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.221	001	Oil & Grease, Total Recoverable	SM 5520 B-2011
108.225	001	Surfactants	SM 5540 C-2011

Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7
109.623	002	Antimony	EPA 200.7
109.623	003	Arsenic	EPA 200.7

109.623	004	Barium	EPA 200.7
109.623	005	Beryllium	EPA 200.7
109.623	006	Boron	EPA 200.7
109.623	007	Cadmium	EPA 200.7
109.623	008	Chromium	EPA 200.7
109.623	009	Cobalt	EPA 200.7
109.623	010	Copper	EPA 200.7
109.623	011	Iron	EPA 200.7
109.623	012	Lead	EPA 200.7
109.623	013	Manganese	EPA 200.7
109.623	014	Molybdenum	EPA 200.7
109.623	015	Nickel	EPA 200.7
109.623	016	Selenium	EPA 200.7
109.623	017	Silver	EPA 200.7
109.623	018	Thallium	EPA 200.7
109.623	019	Tin	EPA 200.7
109.623	020	Titanium	EPA 200.7
109.623	021	Vanadium	EPA 200.7
109.623	022	Zinc	EPA 200.7
109.625	001	Aluminum	EPA 200.8
109.625	002	Antimony	EPA 200.8
109.625	003	Arsenic	EPA 200.8
109.625	004	Barium	EPA 200.8
109.625	005	Beryllium	EPA 200.8
109.625	006	Boron	EPA 200.8
109.625	007	Cadmium	EPA 200.8
109.625	008	Chromium	EPA 200.8
109.625	009	Cobalt	EPA 200.8
109.625	010	Copper	EPA 200.8
109.625	012	Iron	EPA 200.8
109.625	013	Lead	EPA 200.8
109.625	014	Manganese	EPA 200.8
109.625	015	Molybdenum	EPA 200.8
109.625	016	Nickel	EPA 200.8
109.625	017	Selenium	EPA 200.8
109.625	018	Silver	EPA 200.8
109.625	019	Thallium	EPA 200.8
109.625	020	Tin	EPA 200.8
109.625	021	Titanium	EPA 200.8
109.625	022	Vanadium	EPA 200.8
109.625	023	Zinc	EPA 200.8
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6

109.635	001	Mercury	EPA 245.1

Field of Accreditation: 110 - Volatile Organic Constituents in Non-Potable Water

110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3

111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1

111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine (NDPA)	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	108	N-nitrosodimethylamine (NDMA)	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	143	1,2-Diphenylhydrazine	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.160	147	m+p-Cresol	EPA 625.1
111.160	148	2-Methylnaphthalene	EPA 625.1
111.160	151	2,4,5-Trichlorophenol	EPA 625.1

Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste

114.315	001	Aluminum	EPA 6010 B

114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	006	Boron	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	008	Calcium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	012	Iron	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	014	Magnesium	EPA 6010 B
114.315	015	Manganese	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	018	Potassium	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	021	Sodium	EPA 6010 B
114.315	022	Strontium	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	024	Tin	EPA 6010 B
114.315	025	Titanium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.435	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
114.535	001	Mercury	EPA 7471 A
114.725	001	Cyanide, Total	EPA 9014
114.745	001	Fluoride	EPA 9056

Field of Accreditation: 115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.135	001	Corrosivity - pH Determination	EPA 9045 C

Field of Accreditation: 116 - Volatile Organic Compounds in Hazardous Waste

116.215	001	1,2-Dibromoethane (EDB)	EPA 8011
116.215	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011
116.220	001	Gasoline Range Organics (GRO)	EPA 8015 B
116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B

116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B

116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B

Field of Accreditation: 117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B
117.315	001	Aldrin	EPA 8081 A
117.315	002	alpha-BHC	EPA 8081 A
117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A
117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082
117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.405	001	Azinphos Methyl	EPA 8141 A
117.405	002	Chlorpyrifos	EPA 8141 A
117.405	005	Diazinon	EPA 8141 A
117.405	006	Dichlorvos (DDVP)	EPA 8141 A
117.405	007	Disulfoton	EPA 8141 A

117.405	008	Malathion	EPA 8141 A
117.405	009	Parathion Ethyl	EPA 8141 A
117.405	010	Parathion Methyl	EPA 8141 A
117.405	011	Phorate	EPA 8141 A
117.405	012	Ronnel	EPA 8141 A
117.405	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
117.425	004	2,4,5-T	EPA 8151 A
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C
117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C
117.435	028	Pentachlorobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	030	1-Chloronaphthalene	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C

117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	040	2,6-Dichlorophenol	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	087	N-nitrosodiethylamine (NDEA)	EPA 8270 C
117.435	088	N-nitrosodimethylamine (NDMA)	EPA 8270 C
117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine (NDPA)	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C
117.545	001	1,3,5-Trinitrobenzene	EPA 8330 A
117.545	002	1,3-Dinitrobenzene	EPA 8330 A
117.545	003	Nitrobenzene	EPA 8330 A
117.545	004	2,4,6-Trinitrotoluene	EPA 8330 A
117.545	005	2,4-Dinitrotoluene	EPA 8330 A
117.545	006	2,6-Dinitrotoluene	EPA 8330 A
117.545	007	2-Nitrotoluene	EPA 8330 A
117.545	008	3-Nitrotoluene	EPA 8330 A
117.545	009	4-Nitrotoluene	EPA 8330 A

Field of Accreditation: 130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	001	Aluminum	EPA 6010 B
130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	006	Boron	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	008	Calcium	EPA 6010 B

130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	012	Iron	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	014	Magnesium	EPA 6010 B
130.010	015	Manganese	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B
130.010	017	Nickel	EPA 6010 B
130.010	018	Potassium	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	021	Sodium	EPA 6010 B
130.010	022	Strontium	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	024	Tin	EPA 6010 B
130.010	025	Titanium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B
130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199
130.250	001	Mercury	EPA 7470 A
130.450	001	Cyanide, Total	EPA 9014
130.470	001	Fluoride	EPA 9056

Field of Accreditation: 131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.070	001	Ignitability	EPA 1010 A
131.110	001	Corrosivity - pH Determination	EPA 9040 B
131.120	001	Corrosivity - pH Determination	EPA 9040 C

Field of Accreditation: 132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.010	001	1,2-Dibromoethane (EDB)	EPA 8011
132.010	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011
132.015	001	Gasoline Range Organics (GRO)	EPA 8015 B
132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B

132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B

132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B

Field of Accreditation: 133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.190	001	Azinphos Methyl	EPA 8141 A
133.190	002	Chlorpyrifos	EPA 8141 A
133.190	005	Diazinon	EPA 8141 A
133.190	006	Dichlorvos (DDVP)	EPA 8141 A
133.190	007	Disulfoton	EPA 8141 A
133.190	008	Malathion	EPA 8141 A
133.190	009	Parathion Ethyl	EPA 8141 A
133.190	010	Parathion Methyl	EPA 8141 A
133.190	011	Phorate	EPA 8141 A

133.190	012	Ronnel	EPA 8141 A
133.190	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	028	Pentachlorobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	030	1-Chloronaphthalene	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	040	2,6-Dichlorophenol	EPA 8270 C

133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	087	N-nitrosodiethylamine (NDEA)	EPA 8270 C
133.230	088	N-nitrosodimethylamine (NDMA)	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine (NDPA)	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.350	001	1,3,5-Trinitrobenzene	EPA 8330 A
133.350	002	1,3-Dinitrobenzene	EPA 8330 A
133.350	003	Nitrobenzene	EPA 8330 A
133.350	004	2,4,6-Trinitrotoluene	EPA 8330 A
133.350	005	2,4-Dinitrotoluene	EPA 8330 A
133.350	006	2,6-Dinitrotoluene	EPA 8330 A
133.350	007	2-Nitrotoluene	EPA 8330 A
133.350	008	3-Nitrotoluene	EPA 8330 A
133.350	009	4-Nitrotoluene	EPA 8330 A

APPENDIX G

Receiving Water Surveys, Fourth Quarter 2025

RECEIVING WATER SURVEYS
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

Observation Requirements: General observations are required on a monthly basis when Outfall 002 (Bell Creek), Outfall 009 (Arroyo Simi), and/or Outfall 008 (Dayton Creek) are flowing.

FOURTH QUARTER 2025 BELL CREEK OBSERVATIONS AT OUTFALL 002			
BELL CREEK OBSERVATIONS	**OCTOBER**	**NOVEMBER**	**DECEMBER**
Date and time of inspection	N/A	11/15/2025, 11:45	12/4/2025, 08:17
Weather conditions	N/A	Rainy, overcast	Cool, clear, breezy
Color of water	N/A	Brown	Clear
Appearance of oil films or grease, or floatable materials	N/A	No oil or grease present, leaves present	None
Extent of visible turbidity or color patches	N/A	Opaque brown	None
Description of odor, if any	N/A	No odors	None
Presence or activity of California Least Tern or California Brown Pelicar	N/A	No	No

Notes:
N/A = not applicable. Since Outfall 002 did not flow in October, no monthly inspections were required at Outfall 002 for October.

FOURTH QUARTER 2025 ARROYO SIMI OBSERVATIONS AT ARROYO SIMI DOWNSTREAM			
ARROYO SIMI OBSERVATIONS	**OCTOBER**	**NOVEMBER**	**DECEMBER**
Date and time of inspection	10/31/2025, 10:28	11/15/2025, 10:05	12/26/2025, 14:30
Weather conditions	Dry, sunny, clear skies	Rainy, overcast	Cloudy, light rain, breezy
Color of water	Clear	Brown	Pale brown
Appearance of oil films or grease, or floatable materials	N/A	No oil or grease present	None
Extent of visible turbidity or color patches	Little to no turbidity	Very turbid brown color	Uniform opaque
Description of odor, if any	No odor	No odors	None
Presence or activity of California Least Tern or California Brown Pelicar	No	No	None

Notes:
N/A = not applicable.

FOURTH QUARTER 2025 ARROYO SIMI OBSERVATIONS AT ARROYO SIMI UPSTREAM			
ARROYO SIMI OBSERVATIONS	**OCTOBER**	**NOVEMBER**	**DECEMBER**
Date and time of inspection	N/A	11/15/2025, 09:25	12/26/2025, 14:15
Weather conditions	N/A	Rainy, overcast	Cloudy, light rain, breezy
Color of water	N/A	Brown	Pale brown
Appearance of oil films or grease, or floatable materials	N/A	No oil or grease present	None
Extent of visible turbidity or color patches	N/A	Very turbid brown color	None
Description of odor, if any	N/A	No odors	None
Presence or activity of California Least Tern or California Brown Pelicar	N/A	No	None

Notes:
N/A = not applicable. No flow at Arroyo Simi upstream location in October.

RECEIVING WATER SURVEYS
FOURTH QUARTER 2025
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

FOURTH QUARTER 2025 DAYTON CANYON CREEK OBSERVATIONS AT OUTFALL 008			
DAYTON CANYON CREEK OBSERVATIONS	**OCTOBER**	**NOVEMBER**	**DECEMBER**
Date and time of inspection	N/A	N/A	12/26/2025, 09:20
Weather conditions	N/A	N/A	Cloudy, rainy, breezy
Color of water	N/A	N/A	Pale brown
Appearance of oil films or grease, or floatable materials	N/A	N/A	None
Extent of visible turbidity or color patches	N/A	N/A	None
Description of odor, if any	N/A	N/A	None
Presence or activity of California Least Tern or California Brown Pelican	N/A	N/A	None

Notes:

N/A = not applicable. Since Outfall 008 did not flow in October or November, no monthly inspections were required at Outfall 008 for October or November.