

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

Via Email to losangeles@waterboards.ca.gov

August 12, 2022

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

Subject: Second Quarter 2022 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 April 1 through June 30 (Second Quarter 2022). 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 2015. The NPDES Permit covers the entire Santa Susana Site, which includes approximately 2,400 acres owned by Boeing, approximately 450 acres owned by the United States and administered by the National Aeronautics and Space Administration (NASA), and approximately 472 acres of Boeing's land for which the Department of Energy (DOE) has assumed responsibility for soil remediation.

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

# SECOND QUARTER 2022 DMR CONTENTS

This DMR includes the following sections and appendices:

- Discharge and Sample Collection Summary: This section describes the number of rain events, the number of samples collected, sample dates, and sample locations during the Second Quarter 2022. Table I summarizes the Second Quarter 2022 sampling record by outfall or location, sample frequency, and sample type collected per the requirements of the NPDES Permit.
- Receiving Water Surveys: This section summarizes the receiving water surveys required by the NPDES Permit.
- Summary of Exceedances and/or Non-Compliance: This section summarizes the Second Quarter 2022 sample results that exceeded NPDES Permit Limits, Benchmarks, and Receiving Water Limits, and the potential causes thereof.
- Stormwater Treatment System at Outfall 011 Activities: This section summarizes the Second Quarter 2022 activities at the stormwater treatment system (SWTS) at Outfall 011.
- Stormwater Treatment System at Outfall 018 Activities: This section summarizes the Second Quarter 2022 activities at the SWTS at Outfall 018.



- Stormwater Pollution Prevention Plan/Best Management Practice Activities: This section presents the Santa Susana Site-Wide Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practice (BMP)-related activities implemented in the Second Quarter 2022 as well as activities associated with NASA, DOE, the Stormwater Expert Panel (Expert Panel), NASA and Boeing BMP Monitoring-related activities, the Northern Drainage, the Outfall 001/002 BMP Compliance Report, and Other BMP Activities. Table II summarizes typical BMP-related activities that occur at outfalls every quarter. Table III summarizes specific BMP activities completed during the Second Quarter 2022 by location.
- Figure 1 shows the stormwater collection and conveyance system, the Bell Creek Receiving Water sampling location (RSW-001, Outfall 002), and Santa Susana Site features; Figure 2 shows the Arroyo Simi Receiving Water sampling location (RSW 002, Frontier Park) and upstream monitoring location.
- Annual Comprehensive Site Compliance Evaluation Report: This section discusses the annual site compliance evaluation.
- Bioassessment Monitoring: This section discusses the bioassessment review required by the NPDES Permit.
- SWPPP, BMP Plan, and Spill Contingency Plan Status and Effectiveness Report: This section references the specific DMR in which more information can be found.
- Appendix A summarizes the rainfall measured at the Santa Susana Site during the Second Quarter 2022.
- Appendix B tabulates waste shipments during the Second Quarter 2022.
- Appendix C presents chemical analytical results from the Second Quarter 2022 stormwater and/or receiving water sample discharge monitoring in tabular form by sampling locations, constituents evaluated (analytes), sample dates, and data validation qualifiers.
- Appendix D contains copies of the laboratory analytical reports, chain-of-custody forms, and data validation reports (if validation was performed).
- Appendix E presents the Annual Comprehensive Sitewide Compliance Evaluation Report.
- Appendix F presents the Annual Bioassessment Sampling Report.



# DISCHARGE AND SAMPLE COLLECTION SUMMARY

The Santa Susana Site had one qualifying rain event that produced greater than 0.1 inch of rainfall within a 24-hour period and were preceded by at least 72 hours of dry weather during the Second Quarter 2022 (Appendix A). Automated flow-weighted composite samplers (autosamplers) were set in preparation for all anticipated rain events. No discharge occurred at any of the outfalls; therefore, no samples were collected. There were no changes in the discharge as described in the NPDES Permit during the reporting period. The annual sediment sample and the quarterly surface water sample were collected at the Arroyo Simi–Frontier Park location on 25 April 2022.

Table I summarizes the Second Quarter 2022 sampling record by outfall or location, sample frequency, and sample type collected per NPDES Permit requirements, and results are included in Appendix C.

# TABLE I: Sampling Record during the Second Quarter 2022

Date	Outfall/Location	Sample Frequency	Sample Type
4/25/2022	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Quarterly Surface Water	Grab
4/25/2022	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Annual Sediment	Grab

All analyses were conducted at analytical laboratories certified by the State Water Resources Control Board (SWRCB) for such analyses (i.e., all have current certification from the Environmental Laboratory Accreditation Program [ELAP] established by the California Environmental Laboratory Improvement Act) or have been approved by the SWRCB Executive Officer in accordance with current U.S. Environmental Protection Agency (EPA) guideline procedures or as specified in the NPDES Permit. Laboratory analytical reports, including validation reports and notes (if validation was performed), are included in Appendix D. Attachment H of the NPDES Permit presents the SWRCB's minimum levels laboratories are expected to achieve for reporting and determining compliance with NPDES Permit limits. The analytical laboratory achieved these minimum levels in the Second Quarter 2022 except when reporting limits were above the minimum levels (generally because of matrix interference). In cases where the NPDES Permit limit was less than the reporting limit and minimum level or there was no minimum level specified in the NPDES Permit, the reporting limit was used to determine compliance.

# SECOND QUARTER 2022 RECEIVING WATER SURVEYS

The receiving water monitoring program required by the NPDES Permit includes surveys of Bell Creek, Dayton Canyon Creek, and Arroyo Simi. Observations are made only during discharge from Outfalls 002, 008, and 009, respectively, and at most monthly during periods of multiple flow events. During Second Quarter 2022, Outfalls 002, 008, and 009 did not discharge, thus, no receiving water surveys were conducted.



# SECOND QUARTER 2022 SUMMARY OF EXCEEDANCES AND/OR NON-COMPLIANCE

No surface water discharges occurred from the Santa Susana Site during Second Quarter 2022. As such, there are no onsite compliance issues to report for this period. Additionally, in the quarterly surface water sample and annual sediment samples collected at Arroyo Simi sampling location (RSW-002, Frontier Park) in Simi Valley, no constituents exceeded receiving water limits.

# STORMWATER TREATMENT SYSTEM AT OUTFALL 011 ACTIVITIES

The SWTS located near R-1 Pond (SWTS 011) is situated to discharge through Outfall 011. Maintenance items completed in the Second Quarter 2022 are as follows:

- Installed a new LED light by the instrument panel.
- Drained the system and prepared for seasonal shutdown.

SWTS 011 did not operate in the Second Quarter 2022.

# STORMWATER TREATMENT SYSTEM AT OUTFALL 018 ACTIVITIES

The SWTS located at Silvernale Pond (SWTS 018) discharges through Outfall 018. Maintenance items completed in the Second Quarter 2022 are as follows:

- Replaced the stainless steel static mixer for the sludge pump on the Screw Press.
- Replaced the Alum tubing in ChemBox 2.
- Performed seasonal shutdown of the system and the Screw Press.

SWTS 018 did not operate in the Second Quarter 2022.



# STORMWATER POLLUTION PREVENTION PLAN/BEST MANAGEMENT PRACTICE ACTIVITIES

Boeing implemented significant BMP activities in compliance with the Site-wide SWPPP (Haley & Aldrich, 2021) to assist in improving stormwater quality and compliance at the Santa Susana Site. Table II summarizes typical BMP-related activities that occur at outfalls every quarter.

# **TABLE II: Routine Quarterly Outfall BMP Activities**

PMD Activition						Out	falls					
Bivir Activities	001	002	003	004	005	006	007	008	009	010	011	018
Conducted erosion and sediment control, and drainage stabilization inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation.	x	x	X	x	x	х	x	х	x	х	x	x
Inspected the flume for sediment/debris.	х	х	x	х	N/A	х	N/A	х	х	х	N/A	х
Inspected the weir for sediment/debris.	N/A	N/A	N/A	N/A	х	N/A						
Cleaned the sample box of sediment and debris, checked for the presence of animals, and performed weed abatement as needed.	x	x	x	x	×	×	x	X	N/A	х	x	x
Checked the flow meter control box for the presence of debris and/or animals.	x	x	х	х	N/A	х	N/A	х	х	х	х	х
Cleaned the outfall area of sediment and debris and performed weed abatement as needed.	×	x	x	х	x	х	x	х	x	х	x	x
Reset the flow meter and replaced the tape monthly.	х	x	х	х	N/A	х	N/A	х	х	х	х	х
Conducted maintenance inspections of the stormwater conveyance system.	N/A	N/A	х	х	х	х	х	N/A	N/A	х	х	х
Conducted maintenance inspections of the stormwater retention system.	N/A	N/A	х	х	х	х	х	N/A	N/A	х	х	х
Conducted maintenance inspections of the flow-through structure.	N/A	N/A	х	х	N/A	х	N/A	N/A	N/A	х	х	N/A

## Notes:

X = BMP activity is applicable to the Outfall and was completed in Second Quarter 2022.

N/A = BMP activity is not applicable to the Outfall because the Outfall does not have a flume, sample box, flow meter, retention system or flow-through structure, or is not part of the stormwater conveyance system.



Table III summarizes the additional activities completed during the Second Quarter 2022 by outfall or BMP location.

TABLE III:	Additional	Second	Quarter	2022	BMP	Activities
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Outfall, Watershed or BMP Location	BMP Activities During Second Quarter 2022
001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 014, and 018	- Performed weed abatement and/or brush clearance in and around the Outfall.
002	- Replaced the fiber rolls at the top of the stairs leading to the Outfall.
005	<ul> <li>Installed dedicated 6" high density polyethylene (HDPE) suction and discharge lines for the Charles King pump.</li> <li>Installed a new felt walkway to the float switches.</li> </ul>
006	- Replaced the autosampler tubing.
007	- Installed new felt walkway for the wildlife.
008	- Replaced the deteriorated fiber roll in front of the autosampler enclosure.
009	<ul> <li>Removed sediment beneath the grating at the autosampler enclosure.</li> <li>Removed deteriorated fiber roll near the flow meter.</li> <li>Secured the step stones to the flow meter.</li> </ul>
011	<ul> <li>Removed deteriorated fiber rolls along the roadway and behind the autosampler enclosure.</li> <li>Repaired the media bed cover by the discharge point.</li> <li>Covered the sandbag check structure with 2 layers of felt.</li> <li>Removed the rip rap at the discharge point for the SWTS 011 discharge line.</li> <li>Removed gravel and sediment buildup at the lower water bar.</li> </ul>
018	- Replaced the bubbler tubing for the flow meter.
Bowl Road	- Removed sediment and leaf debris from the sump located at the entrance of the Bowl.
Research Road	<ul> <li>Cleaned the check structures along Research Road.</li> <li>Removed the deteriorated fiber roll at the top of Research Road and installed a rip rap berm.</li> </ul>
R-2A Pond	<ul> <li>Installed new anchors for the R2A conveyance lines along the roadway.</li> <li>Cleared vegetation around the staff gauge, submersible pump, and pump intakes.</li> </ul>
Weather Stations	<ul> <li>Installed a new solar panel and battery at the Canyon Location.</li> <li>Replaced the wind directional unit at the Area I weather station.</li> </ul>
Helipad	- Repaired the HDPE liner on the lower dam.
Lower Lot	- Installed fiber rolls around the telephone poles by the BMP staging area.
407 Yard	<ul> <li>Covered the sandbag berm extending from the shade house to the 407 Yard with 2 layers of felt.</li> <li>Installed a sandbag berm with a felt covering at the personal gate in the 407 Yard.</li> <li>Installed a rip rap check structure behind the High Bay.</li> </ul>
408 Contractor Staging Area	<ul> <li>Built a check structure at the northeast end slope and increased the height of the check structure at the southeast corner.</li> <li>Removed sediment from the swale along the southern end.</li> <li>Installed silt fence material over the wooden retaining wall and placed rip rap along the top and bottom of fence to stabilize the sediment.</li> </ul>

In addition to Site-wide SWPPP-related activities, specific BMP projects included: NASA, DOE, Expert Panel, Northern Drainage, and Outfall 001/002 BMP Compliance Report. These are discussed in more detail below.

# **NASA-Related Activities**

Demolition BMPs and stormwater activities covered by NASA's Construction SWPPP for the Bravo area are inspected in accordance with the Construction General Permit (CGP; NASA, 2021). During the Second Quarter 2022, NASA maintained fiber rolls as perimeter and linear sediment controls, maintained silt fencing and gravel/riprap in areas within these sites where construction activities have been completed.



# **DOE-Related Activities**

DOE reported no BMP-related activities during the Second Quarter 2022.

# **Expert Panel-Related Activities**

The BMP activities discussed below were performed, commenced, or completed during the Second Quarter 2022 in coordination with the Expert Panel.

Outfall, Watershed, BMP, or Other Location	BMP Activities During Second Quarter 2022
009 and 011	- More than 50 utility poles were removed from watersheds 009 and 011.
Culvert Modifications (CM)	- Performed BMP Inspections.
NASA Expendable Launch Vehicle (ELV) Area BMPs	- Performed BMP Inspections.
Well 13 Road	<ul> <li>Performed BMP Inspections.</li> <li>Removed sediment and debris from the check structures along Well 13 Road.</li> <li>Covered the lower sandbag check structure with 2 layers of felt.</li> </ul>
B-1 Area	<ul> <li>Performed BMP Inspections.</li> <li>Installed new fiber rolls along the slope of Building 450.</li> </ul>
Upper Parking Lot Media Filter	- Performed BMP Inspections.
Former Building 1436 Detention Bioswales	<ul> <li>Performed BMP Inspections.</li> <li>Installed new felt over the check structure for the eastern bioswale inlet.</li> </ul>
Lower Lot Biofilter (Sedimentation Basin and Biofilter)	<ul> <li>Performed BMP Inspections.</li> <li>Conducted weed abatement.</li> <li>Removed deteriorated fiber roll between biofilter and sedimentation basin.</li> <li>15,200 gallons of stormwater were pumped from the cistern to the sedimentation basin during the Second Quarter 2022.</li> </ul>
Administration Area Inlet Filters	- Performed BMP Inspections.
Former Shooting Range	<ul> <li>Performed BMP Inspections.</li> <li>Replaced deteriorated fiber rolls at the entrance.</li> <li>Removed deteriorated and unneeded fiber rolls near the beginning of the silt fence.</li> </ul>
Northern Drainage BMPs	- Performed BMP Inspections.

# **TABLE IV: Expert Panel-Related Second Quarter 2022 Activities**

# Outfall 001/002 BMP Compliance Report Related Activities

Boeing and the Expert Panel will continue to monitor and evaluate the effectiveness of BMPs within the watersheds of Outfall 001 and Outfall 002. Recommendations for these watersheds are provided in the 2021 Expert Panel Annual Report (Geosyntec and the Expert Panel, 2021). The Second Quarter 2022 activities included BMP inspections.

# **Other BMP Activities**

BMP observations and maintenance inspections were conducted in conformance with the Site-wide SWPPP (Haley & Aldrich, 2021) at and around the former test stands Alfa and Bravo and former Advanced Propulsion Test Facility.



# ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT

The annual comprehensive site compliance evaluation was conducted in April 2022 and a summary is included in Appendix E.

## **BIOASSESSMENT MONITORING**

A bioassessment review was conducted at the Santa Susana Site on 3 May 2022 to evaluate water quality conditions in the tributary to Arroyo Simi, downstream of Outfall 006 and the tributary to the Los Angeles River downstream of Outfall 001 in accordance with NPDES Permit requirements. The methods, procedures, and results of the bioassessment review are reported in the Bioassessment Monitoring Report included in Appendix F. Note that there was insufficient water flow to conduct the bioassessment monitoring in the Second Quarter 2022.

## CONCLUSIONS

Boeing 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 by implementing distributed, sustainable erosion control/restoration measures. The Expert Panel is reviewing the data collected this year and will make BMP and monitoring recommendations that will be communicated in the Expert Panel's 2022 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 12th of August 2022 at The Boeing Company, Seal Beach, California Site.

Sincerely,

Kim O'Rourks

Kim O'Rourke Global Remediation and Due Diligence Program Manager Global Enterprise Sustainability – Environment



# Enclosures:

References

- Figure 1 Site Map with Stormwater Collection and Conveyance System and Site Features
- Figure 2 Arroyo Simi Receiving Water (RSW-002, Frontier Park) Sampling Location and Upstream Monitoring Point
- Appendix A Second Quarter 2022 Daily Rainfall Summary
- Appendix B Second Quarter 2022 Waste Shipment Summary Table
- Appendix C Second Quarter 2022 Discharge Monitoring Data Summary Tables
- Appendix D Second Quarter 2022 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports
- Appendix E Annual Comprehensive Site Compliance Evaluation Report
- Appendix F Annual Bioassessment Sampling Report
- c: Los Angeles Regional Water Quality Control Board; Attn: Mr. Duong H. Trinh Los Angeles Regional Water Quality Control Board; Attn: Ms. Kelly Bronwyn California Department of Toxic Substances Control; Attn: Mr. Mark Malinowski



# REFERENCES

- 1. California Regional Water Quality Control Board, Los Angeles Region, 2015. Waste Discharge Requirements for The Boeing Company, Santa Susana Field Laboratory (Order No. R4-2015-0033, NPDES No. CA0001309). 12 February.
- 2. Geosyntec and the Expert Panel, 2021. Santa Susana Field Laboratory Site-Wide Stormwater Annual Report, 2020/21 Reporting Year, Ventura County, California (NPDES No. CA0001309, CI No.6027). October.
- 3. Haley & Aldrich, Inc., 2021. Stormwater Pollution and Prevention Plan (Version 7 for Compliance with 2015 NPDES Permit). 7 December.
- 4. National Aeronautics and Space Administration, 2021. Stormwater Pollution and Prevention Plan for the Pacific Region MATOC FY21 Facilities Reduction Program at the NASA Santa Susana Field Laboratory (Phase 5 Bravo Test Area Demolition), Ventura County, California. July.



**FIGURES** 





APPENDIX A

Second Quarter 2022 Rainfall Data Summary

# **APPENDIX A**

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Table A – April 2022 – Daily Rainfall Summary Table A – May 2022 – Daily Rainfall Summary Table A – June 2022 – Daily Rainfall Summary

# TABLE A DAILY RAINFALL SUMMARY

Station: AREA 1 Parameter: Inches of Rain Month/Year: April 2022

# SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

#### HOUR OF THE DAY, PACIFIC STANDARD TIME

	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
Α	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
0	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	0.00	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	0.00
Т	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	0.00
н	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
Е	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	d	0.00
М	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
0	20	0.00	0.00	0.00	0.00	0.00	d	d	d	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ν	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	0.17	0.06	0.11	0.34
Т	22	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	0.00	0.00	0.00	0.00	0.00	0.00	0.01
н	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 0.35

Flags: d = Off-line part of hour. Invalid hour due to communication error (April 18). Invalid hours due to maintenance activities (April 20). During the off-line hours on April 18 and April 20, the rain gauge at Sage Ranch did not record any measurable rainfall.

# TABLE A DAILY RAINFALL SUMMARY

Station: AREA 1 Parameter: Inches of Rain Month/Year: May 2022

# SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

#### HOUR OF THE DAY, PACIFIC STANDARD TIME

	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
Α	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
0	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	0.00	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	0.00
Т	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	0.00
н	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
Е	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
М	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
0	20	0.00	0.01	0.00	0.01	0.01	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	0.04
Ν	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
Т	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
н	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
Ļ	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
Ļ	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
																								Monthl	y Total	0.04

# TABLE A DAILY RAINFALL SUMMARY

Station: AREA 1 Parameter: Inches of Rain Month/Year: June 2022

# SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

#### HOUR OF THE DAY, PACIFIC STANDARD TIME

	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	0.01	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	0.01
[	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	d	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Α	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
0	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	0.00	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	0.00
Т	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	0.00
н	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
Е	17	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	0.00	0.01
	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
М	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
0	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
Ν	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
Т	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
н	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 0.02

Flags: d = Off-line part of hour. Invalid hour due to semi-annual audit (June 8). During the off-line hour from 0600 - 0700 on June 8, the rain gauge at Sage Ranch did not record any measurable rainfall.

APPENDIX B

Second Quarter 2022 Waste Shipment Summary Tables

#### TABLE B WASTE SHIPMENT SUMMARY TABLE

#### SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	DESTINATION
Hazardous Waste	Solid	179	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
Hazardous Waste	Solid	306	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Buttonwillow LLC. 2500 West Lokern Road Buttonwillow, CA 93206
Hazardous Waste	Liquid	3,114	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
Hazardous Waste	Liquid	5,000	Ρ	OC Vacuum Inc 5900 Cherry Ave. Long Beach, CA 90805	n/a	UC Ecology Vernon 5375 South Bovle Avenue Los Angeles, CA 90058
Hazardous Waste	Solid	487	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Environemntal Services, Inc. 2247 South Highway 71 Kimball, NE 69145
Non D.O.T. Regulated Material	Solid	41	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Non-RCRA Hazardous Waste	Solid	124	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Buttonwillow LLC. 2500 West Lokern Road Buttonwillow, CA 93206
Non-RCRA Hazardous Waste	Liquid	61	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
Non-RCRA Hazardous Waste	Solid	86	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
Non Hazardous, Non D.O.T. Regulated Material	Solid	24	Ρ	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
Non-Hazardous Waste	Liquid	25,000	Ρ	Southwest Processors, Inc. 4120 Bandini Blvd Vernon, CA 90058	n/a	Southwest Processors, Inc. 4120 Bandini Blvd Vernon, CA 90058
Non RCRA Hazardous Waste	Solid	600	Р	Patriot Environmental Services 508 East E Street Wilmington, CA 90744-6023	n/a	US Ecology Beatty US Hwy 95, 11 Miles South of Beatty Beatty, NV 89003
Hazardous Waste	Solid	2,000	Р	Patriot Environmental Services 508 East E Street Wilmington, CA 90744-6023	n/a	US Ecology Beatty US Hwy 95, 11 Miles South of Beatty Beatty, NV 89003

#### TABLE B WASTE SHIPMENT SUMMARY TABLE

#### SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	DESTINATION
Hazardous Waste	Solid	2	Y	Star Resources Corp. 1026 Blinn Avenue Wilmington, CA 90744	n/a	Azusa Land Reclamation 1211 W. Gladstone Street Azusa, CA 91702
Waste Fuel	Liquid	175	G	American Integrated Services	n/a	Crosby & Overton, Inc. 1630 W. 17th Street Long Beach, CA 90813
Waste Flammable Liquids	Liquid	50	G	American Integrated Services	n/a	Crosby & Overton, Inc. 1630 W. 17th Street Long Beach, CA 90813
Hazardous Waste	Solid	3,700	Ρ	American Integrated Services	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Hazardous Waste	Liquid	70	L	Patriot Environmental Services 508 East E Street Wilmington, CA 90744-6023	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Hazardous Waste	Liquid	40,000	G	Ecology Control Industries	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Hazardous Waste	Liquid	985	G	Patriot Environmental Services 508 East E Street Wilmington, CA 90744-6023	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Non RCRA Hazardous Waste	Solid	1,800	Ρ	American Integrated Services	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Hazardous Waste	Solid	125	Ρ	Ecology Control Industries	n/a	US Ecology Beatty US Hwy 95, 11 Miles South of Beatty Beatty, NV 89003
Hazardous Waste	Solid	72	Ρ	Araiza Trucking	n/a	Chemical Waste Management Inc. (WMI Kettleman Hills) 35251 Old Skyline Road Kettlemen City, CA 92339
Hazardouse Waste	Solid	90	Ρ	BTI Tank Rentals	n/a	Chemical Waste Management Inc. (WMI Kettleman Hills) 35251 Old Skyline Road Kettlemen City, CA 92339
Hazardous Waste	Solid	36	Ρ	Los Gomez Transport Inc	n/a	Chemical Waste Management Inc. (WMI Kettleman Hills) 35251 Old Skyline Road Kettlemen City, CA 92339

Notes:

n/a = Not Applicable

G = Gallons

L = Liters

P = Pounds

Y = Yards

**APPENDIX C** 

Second Quarter 2022 Discharge Monitoring Data Summary Tables

# **APPENDIX C**

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Reporting Summary Notes

Arroyo Simi - Discharge Monitoring Data Summary Table Arroyo Simi, Sediment - Discharge Monitoring Data Summary Table

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

- 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) toxic equivalents (TEQs) for the purpose of determining permit compliance are the sum of the products of the detected dioxin congener concentration multiplied by that congener's toxicity equivalency factor (TEF) and bioaccumulation equivalency factor (BEF). The resulting compliance TCDD TEQ does not include those congener concentrations that are reported as detected but not quantified (DNQ), as specified on page 26 of the NPDES permit (Water Board, 2015).
- 2. Temperature, total residual chlorine (TRC), dissolved oxygen (DO), and pH are measured in the field and are not validated.
- 3. pH and temperature are identified on the table as daily maximum discharge limits. The NPDES permit limit has an instantaneous minimum (6.5) and maximum (8.5) for pH and an instantaneous maximum of 86°F for temperature.
- 4. Exceedances are defined on page 6 of the NPDES permit as constituents in excess of daily maximum benchmark limits, daily maximum permit limits, or receiving water limits. Analytical concentrations or calculations to determine compliance to the NPDES permit are compared to the same number of significant figures as the daily maximum benchmark limits, daily maximum permit limits, or receiving water limits.
- 5. Priority pollutants sampled once every five years, at Arroyo Simi Receiving Water sampling location (RSW-002, Frontier Park) were analyzed during the First Quarter 2018.
- 6. Dissolved metals are filtered by the laboratory and reported as "Metal, dissolved". Total metals are not filtered by the laboratory and reported as "Metal".
- 7. 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)	Analyte not detected at a concentration greater than or equal to the detection limit (DL), method detection limit (MDL), or laboratory reporting limit (RL); see laboratory report for specific detail.
>(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-2 of attachment A of the NPDES permit.
*1	Improper preservation of sample.

*2	The inductively coupled plasma (ICP)/matrix spike (MS) parts per billion (ppb) check standard was recovered above the control limit; therefore, the constituent detected was qualified as estimated (J).
*3	Initial and or continuing calibration recoveries were outside acceptable control limits.
*5	Blank spike/blank spike duplicate relative percent difference was outside the control limit.
*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.
*11	No calibration was performed for this compound; result is reported as a tentatively identified compound (TIC).
*	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.).
Avg	Average.
В	Laboratory method blank contamination.
BA	Relative percent difference out of control.
BEF	Bioaccumulation equivalency factor.
BU	Analyzed out of holding time.
BV	Sample received after holding time expired.
С	Calibration percent relative standard deviation (%RSD) or percent difference (%D) were noncompliant.
CaCO3	Calcium carbonate
Chromium VI	Hexavalent chromium
Comp	Composite sample type.
C5	Calibration verification percent recovery (%R) was outside method control limits.
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.
%D	Percent difference between the initial and continuing calibration relative response factors.
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.

EB	Equipment blank.
EMPC	Estimated maximum possible concentration.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
FB	Field blank.
F1	Matrix spike (MS) and/or matrix spike duplicate (MSD) recovery is outside acceptance limits.
ft/sec	Feet per second.
G	Gallons.
gpd	Gallons per day.
Н	Holding time was exceeded.
Hardness	Equivalent of calcium carbonate (CaCO3).
Нр	Hepta.
Hx	Hexa.
ICP	Interference check solution results were 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.
J, DX	Estimated value, value < lowest standard method quantitation limit (MQL), but > than method detection limit (MDL).
к	The sample dilution's set-up did not meet the oxygen depletion criteria of at least 2 milligrams per liter (mg/L); therefore, the reported result is an estimated value only.
L	Laboratory control sample percent recovery (%R) was outside control limits.
L1	Laboratory control standard (LCS)/laboratory control standard duplicate (LCSD), relative percent difference (RPD) was outside the control limit.
L2	The laboratory control sample percent recovery (%R) was below the method control limits.
LBS/DAY	Pounds per day.
LCS	Laboratory control standard.
LCSD	Laboratory control standard duplicate.
LQ	Laboratory control standard (LCS)/ laboratory control standard duplicate (LCSD) recovery above method control limits.
M1	Matrix spike (MS) and/or matrix spike duplicate (MSD) were above the acceptance limits due to sample matrix interference.
M2	The matrix spike (MS) and/or matrix spike duplicate (MSD) were below the acceptance limits due to sample matrix interference.
Max	Maximum.
MB	Analyte present in the method blank.
MDA/MDC	Minimum detectable activity/minimum detectable concentration.

MDL	Method detection limit.
Meas	Measure sample type.
MFL	Million fibers per liter.
MGD	Million gallons per day.
MHA	Due to high level of analyte in the sample, the matrix spike (MS)/matrix spike duplicate (MSD) calculation does not provide useful spike recovery information.
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; no NPDES permit limit established for the constituent and/or outfall or analyte not required per receiving water monitoring requirements.
ND	Analyte not detected.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
NM	Not measured or determined or minimum detectable activities (MDAs) are not calculated as there is no statistical method for combining MDAs.
NPDES	National Pollutant Discharge Elimination System.
NR	Not reported by laboratory by the deadline of this report.
NTU	Nephelometric turbidity unit.
OCDD	Octa CDD.
OCDF	Octa CDF.
Р	Pounds.
ppb	Parts per billion.
pCi/L	PicoCuries per liter.
Pe	Penta.
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.
Q	Matrix spike (MS) recovery outside of control limits.
Q1	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.

RL-1	Reporting limit raised due to sample matrix effects.
RPD	Relative percent difference.
%R	Percent recovery.
%RSD	Percent relative standard deviation.
% Normal/Alive	Percent normal and alive.
% Survival	Percent survival.
S	Surrogate recovery was outside control limits.
s.u.	Standard unit.
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin.
TCDF	2,3,7,8-tetrachlorodibenzo-p-furan.
TEQ	Toxic equivalent.
TIC	Tentatively identified compound
TIE	Toxicity identification evaluation
TOC	Total organic carbon
Т	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.
w/out	Without.
٨	Analysis not completed due to hold time exceedance or insufficient sample volume.
#	Per Order No. R4-2015-0033, page 16, Footnote 1. The effluent limitations for total suspended solids and settleable solids are not applicable for discharges during wet weather. During wet weather flow, a discharge event is greater than 0.1 inch of rainfall in a 24-hour period. No more than one sample per week need be obtained during extended periods of rainfall or the discharge of collected stormwater. A storm event must be preceded by at least 72 hours of dry weather.
(1)	Based on the NPDES permit, table E-3a footnote 2, receiving water samples for pH, hardness, and priority pollutants must be collected on the same day as effluent samples.
(2)	Additional sample, not required by the NPDES permit.
(4.0)3.1	Represents (dry weather limit) wet weather limit / monthly average limit.
(3)	Secondary maximum contaminant level.

(4)	The drinking water maximum contaminant level of 3.00E-05 µg/L is for the dioxin congener 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). TCDD Toxic Equivalent (TEQ) without detected but not quantified (DNQ) values is the sum of the products of the detected dioxin congener concentration multiplied by that congener's toxic Equivalency factor (TEF) and bioaccumulation equivalency factor (BEF). There are 17 dioxin congeners.
(a)	Based on Order No. R4-2015-0033, page 17, footnote 7, sampling event is adry discharge and the NPDES Permit Limit for cadmium is 4.0 ug/L and 3.93 lbs/day at OF001,002,011,018 and 0.24 lbs/day at OF008.
(b)	Based on Order No. R4-2015-0033, page 17, footnote 7, sampling event is a wet discharge and the NPDES Permit Limit for cadmium is 3.1 ug/L and 4.91 lbs/day at OF001,002,011,018 and 3.05 lbs/day at OF008.
(c)	Based on Order No. R4-2015-0033, page 16, footnote 1, sampled during wet weather flow. The effluent limitations for total suspended solids and/or settleable solids are not applicable for discharges during wet weather.
(d)	Based on Order No. R4-2015-0033, page 16, footnote 1, sampled during dry weather flow. The effluent limitations for total suspended solids and/or settleable solids are applicable for discharges during dry weather.
(e)	Based on Order No. R4-2015-0033, page 17, footnote 8, sampling event is adry discharge and the NPDES Permit Limit for selenium is 5 ug/L and 4.91lbs/day.
(f)	Based on Order No. R4-2015-0033, page 17, footnote 8, sampling event is a wet discharge and the NPDES Permit Limit for selenium is 8.2 ug/L and 8.06lbs/day.
(g)	The composite sample was collected as a grab sample from the stream due to insufficient flow.
(h)	Total Ammonia is reported in wet weight units milligrams per kilogram (mg/kg).
(i)	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).
(j)	Analyte does not have a receiving water limit for Bell Creek Receiving Water (RSW-001, OF002).
(k)	Field parameter noted on field notes rather than COC.
(1)	When field staff arrived onsite to collect the composite sample, they discovered that the autosampler had malfunctioned and had not collected "sips." Field staff repaired the autosampler, reset it, determined it was functioning properly, then returned the next day to collect the composite sample.
(m)	The composite sample was collected as a grab sample from the sample box due to insufficient flow.
(n)	The grab sample was collected at the first opportunity given the short duration and low-flow at this Outfall.
(0)	Unsafe conditions all day prevented access to the Outfall.
(p)	Various annual constituents were analyzed by laboratory due to field and laboratory error.

(q)	Minimum levels met with the exception of 2-chlorovinyl ether. The minimum level is 1.0 $\mu$ g/L, while the laboratory reported with an MDL of 1.1 $\mu$ g/L due to an updated MDL study.
(r)	The sampling frequency of this constituent is increased from once per year to once per discharge until four consecutive sample results demonstrate compliance per the NPDES permit. The corresponding dissolved metal also increased in sampling frequency to once per discharge.
(s)	Analyte does not have a daily maximum permit limit for OF002.
(t)	Reanalysis

#### ARROYO SIMI DISCHARGE MONITORING DATA SUMMARY TABLE

## SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

## April 1 through June 30, 2022

ANALYTE POLLUTANTS WITH LIMITS 4,4'-DDD 4,4'-DDE 4,4'-DDT Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242		DAILY MAXIMUM PERMIT LIMIT	SAMPLE FREQUENCY	4/25/2022 07:30		
	UNITS			SAMPLE TYPE	RESULT	LABORATORY/ VALIDATION QUALIFIER
POLLUTANTS WITH LIMITS						
4,4'-DDD	μg/L	0.0014	1/Quarter	Grab	ND < 0.0044	U
4,4'-DDE	μg/L	0.001	1/Quarter	Grab	ND < 0.0019	U
4,4'-DDT	μg/L	0.001	1/Quarter	Grab	ND < 0.0016	U
Aroclor 1016	μg/L	0.0003	1/Quarter	Grab	ND < 0.044	U
Aroclor 1221	µg/L	0.0003	1/Quarter	Grab	ND < 0.044	U
Aroclor 1232	μg/L	0.0003	1/Quarter	Grab	ND < 0.044	U
Aroclor 1242	µg/L	0.0003	1/Quarter	Grab	ND < 0.044	U
Aroclor 1248	μg/L	0.0003	1/Quarter	Grab	ND < 0.044	U
Aroclor 1254	μg/L	0.0003	1/Quarter	Grab	ND < 0.052	U
Aroclor 1260	μg/L	0.0003	1/Quarter	Grab	ND < 0.052	U
Chlordane	μg/L	0.001	1/Quarter	Grab	ND < 0.026	U
Chlorpyrifos	μg/L	0.02	1/Quarter	Grab	ND < 0.0069	U
Diazinon	μg/L	0.16	1/Quarter	Grab	ND < 0.0052	U
Dieldrin	μg/L	0.0002	1/Quarter	Grab	ND < 0.0013	U
E. coli	mpn/100mL	235	1/Year	ANR	ANR	ANR
pH (Field)	s.u.	6.5-8.5	1/Quarter	Grab	6.91	*
Toxaphene	μg/L	0.0003	1/Quarter	Grab	ND < 0.054	U
POLLUTANTS WITHOUT LIMITS						
Hardness (as CaCO3)	mg/L	-	1/Quarter	Grab	330	=
Priority Pollutants	NA	-	1/5 Years	ANR	ANR	ANR
Temperature (Field)	Deg F	-	1/Quarter	Grab	64.3	*
TCDD - Equivalents	μg/L	-	1/Year	ANR	ANR	ANR
Total Suspended Solids	mg/L	-	1/Year	ANR	ANR	ANR
Water Velocity	ft/sec	-	1/Quarter	Meas	0.0	*

#### ARROYO SIMI, SEDIMENT DISCHARGE MONITORING DATA SUMMARY TABLE

#### SECOND QUARTER 2022 THE BOEING COMPANY SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

April 1 through June 30, 2022

				4/25/2022 07:45		
ANALYTE	UNITS	DAILY MAXIMUM PERMIT LIMIT	SAMPLE FREQUENCY	SAMPLE TYPE	RESULT	LABORATORY/ VALIDATION QUALIFIER
POLLUTANTS WITH LIMITS						
4,4'-DDD	µg/g	0.002	1/Year	Grab	ND < 0.00014	U
4,4'-DDE	µg/g	0.0014	1/Year	Grab	0.00028	J (DNQ)
4,4'-DDT	µg/g	0.0003	1/Year	Grab	ND < 0.00024	U
Aroclor 1016	µg/g	0.12	1/Year	Grab	ND < 0.0079	U
Aroclor 1221	μg/g	0.12	1/Year	Grab	ND < 0.0079	U
Aroclor 1232	µg/g	0.12	1/Year	Grab	ND < 0.0079	U
Aroclor 1242	µg/g	0.12	1/Year	Grab	ND < 0.0079	U
Aroclor 1248	μg/g	0.12	1/Year	Grab	ND < 0.0079	U
Aroclor 1254	μg/g	0.12	1/Year	Grab	ND < 0.0051	U
Aroclor 1260	μg/g	0.12	1/Year	Grab	ND < 0.0051	U
Chlordane	µg/g	0.0033	1/Year	Grab	ND < 0.00082	U
Dieldrin	µg/g	0.0002	1/Year	Grab	ND < 0.00011	U
Toxaphene	µg/g	0.0006	1/Year	Grab	ND < 0.0031	U
POLLUTANTS WITHOUT LIMITS						
Bivalve Embryo Toxicity (Mytilus edulis)	% Normal/Alive	-	1/Year	Grab	100	=
Conductivity (Field)	µmhos/cm	-	1/Year	Grab	880	*
Dissolved Oxygen (Field)	mg/L	-	1/Year	Grab	6.66	*
Percent Moisture	%	-	1/Year	Grab	9.8	*
pH (Field)	s.u.	-	1/Year	Grab	6.91	*
Sediment Toxicity (Eohaustorius estuarius)	% Survival	-	1/Year	Grab	100	=
Temperature (Field)	Deg F	-	1/Year	Grab	64.3	*
Total Ammonia	mg/kg	-	1/Year	Grab	ND < 1.98	U
Total Organic Carbon	mg/kg	-	1/Year	Grab	1300	J (DNQ)
Water Velocity	ft/sec	-	1/Year	Meas	0.0	*
PARTICLE SIZE DISTRIBUTION						
Clay (<0.00391 mm)	%	-	1/Year	Grab	0.17	*
Coarse Sand (0.5 mm to 1 mm)	%	-	1/Year	Grab	44.37	*
Fine Sand (0.125 mm to 0.25 mm)	%	-	1/Year	Grab	2.79	*
Gravel (greater than 2mm)	%	-	1/Year	Grab	11.83	*
Medium Sand (0.25 mm to 0.5 mm)	%	-	1/Year	Grab	15.26	*
Silt (0.00391 mm to 0.0625 mm)	%	-	1/Year	Grab	0.55	*
Total Silt and Clay (0 mm to 0.0626 mm)	%	-	1/Year	Grab	0.72	*
Very Coarse Sand (1 mm to 2 mm)	%	-	1/Year	Grab	24.47	*
Very Fine Sand (0.0625 mm to 0.125 mm)	%	_	1/Year	Grab	0.56	*

# APPENDIX D

Second Quarter 2022 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports

# APPENDIX D

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3	Arroyo Simi – 570-93645-1 – April 25, 2022, Eurofins Calscience Analytical Report
4	Arroyo Simi – 570-93645-2 – April 25, 2022, Eurofins Calscience Analytical Report
5	Arroyo Simi – 570-93645-3 – April 25, 2022, Eurofins Calscience Analytical Report

6 Data Usability Summary Report

Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 570-93643-1

Client Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

# For:

Haley & Aldrich, Inc. 400 E Van Buren St. Suite 545 Phoenix, Arizona 85004

Attn: Ms. Katherine Miller

Virentra R Paty

Authorized for release by: 5/17/2022 8:34:27 AM

Virendra Patel, Project Manager I (714)895-5494 Virendra.Patel@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

..... Links **Review your project** results through EOL Have a Question? Ask-The Expert Visit us at: www.eurofinsus.com/Env

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## Qualifiers

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GC Semi VO	Α	
Qualifier	Qualifier Description	
BA	Relative percent difference out of control	
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL	5
LH	Surrogate Recoveries were higher than QC limits	
PI	Primary and confirm results varied by > than 40% RPD	
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	0
%R	Percent Recovery	0
CFL	Contains Free Liquid	0
CFU	Colony Forming Unit	9
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)	13
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
	Method Detection Limit	

#### 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

#### Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-93643-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/25/2022 1:02 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7° C.

#### GC Semi VOA

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

#### Metals

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

#### **Organic Prep**

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

Job ID: 570-93643-1

This Detection Summary	does not include radiochemical test results.
------------------------	--

Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Client Sample ID: Arroyo_Simi_20220425_Grab						Lab S	Sa	mple ID: 5	570-93643-1
 Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Ргер Туре
Hardness as calcium carbonate	330		7.1	1.0	mg/L	1	_	SM 2340B	Total
									Recoverable

### Method: 608.3 - Organochlorine Pesticides in Water

Client Sample ID: Arroyo_Simi_20220425_Grab Date Collected: 04/25/22 07:30 Date Received: 04/25/22 13:02							Lab San	nple ID: 570-9 Matrix:	3643-1 Water
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.033	0.026	ug/L		04/26/22 10:24	04/28/22 16:54	1
4,4'-DDD	ND		0.0067	0.0044	ug/L		04/26/22 10:24	04/28/22 16:54	1
4,4'-DDE	ND		0.0033	0.0019	ug/L		04/26/22 10:24	04/28/22 16:54	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		04/26/22 10:24	04/28/22 16:54	1
Dieldrin	ND		0.0033	0.0013	ug/L		04/26/22 10:24	04/28/22 16:54	1
Toxaphene	ND		0.067	0.054	ug/L		04/26/22 10:24	04/28/22 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	147	LH	20 - 139				04/26/22 10:24	04/28/22 16:54	1

## **Client Sample Results**

#### Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Job ID: 570-93643-1

**Matrix: Water** 

Lab Sample ID: 570-93643-1

### Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

#### Client Sample ID: Arroyo\_Simi\_20220425\_Grab Date Collected: 04/25/22 07:30 Date Received: 04/25/22 13:02

Date Received: 04/25/22 13:	:02								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.044	ug/L		04/26/22 10:24	04/28/22 01:04	1
Aroclor 1221	ND		0.10	0.044	ug/L		04/26/22 10:24	04/28/22 01:04	1
Aroclor 1232	ND		0.10	0.044	ug/L		04/26/22 10:24	04/28/22 01:04	1
Aroclor 1242	ND		0.10	0.044	ug/L		04/26/22 10:24	04/28/22 01:04	1
Aroclor 1248	ND		0.10	0.044	ug/L		04/26/22 10:24	04/28/22 01:04	1
Aroclor 1254	ND		0.10	0.052	ug/L		04/26/22 10:24	04/28/22 01:04	1
Aroclor 1260	ND		0.10	0.052	ug/L		04/26/22 10:24	04/28/22 01:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	116		20 - 139				04/26/22 10:24	04/28/22 01:04	1
DCB Decachlorobiphenyl (Surr)	45		20 - 154				04/26/22 10:24	04/28/22 01:04	1

## **Client Sample Results**

Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Client Sample ID: Arroyo_Simi_20220425_Grab Date Collected: 04/25/22 07:30							Lab Sa	mple ID: 570-9 Matrix:	3643-1 Water
Date Received: 04/25/22 13:02									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	330		7.1	1.0	mg/L			05/12/22 02:10	1

Job ID: 570-93643-1

## **Surrogate Summary**

7

#### Method: 608.3 - Organochlorine Pesticides in Water **Matrix: Water** Prep Type: Total/NA Percent Surrogate Recovery (Acceptance Limits) TCX2 (20-139) Lab Sample ID **Client Sample ID** 570-93643-1 Arroyo\_Simi\_20220425\_Grab 147 LH Surrogate Legend TCX = Tetrachloro-m-xylene Method: 608.3 - Organochlorine Pesticides in Water **Matrix: Water** Prep Type: Total/NA Percent Surrogate Recovery (Acceptance Limits) TCX1 (20 - 139)Lab Sample ID **Client Sample ID** 570-93643-1 MS Arroyo\_Simi\_20220425\_Grab 66 570-93643-1 MSD Arroyo Simi 20220425 Grab 58 PI Method Blank MB 570-229384/1-A 61 Surrogate Legend TCX = Tetrachloro-m-xylene Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water				Prep Type: Total/NA
			Per	cent Surrogate Recovery (Acceptance Limits)
		TCX1	DCB1	
Lab Sample ID	Client Sample ID	(20-139)	(20-154)	
570-93643-1	Arroyo_Simi_20220425_Grab	116	45	
LCS 570-229384/4-A	Lab Control Sample	55	60	
LCSD 570-229384/5-A	Lab Control Sample Dup	64	70	
MB 570-229384/1-A	Method Blank	51	73	

Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)

DCB = DCB Decachlorobiphenyl (Surr)

Lab Sample ID: MB 570-22 Matrix: Water Analysis Batch: 230017	9384/1-A								Cli	ent Samı	ole ID: Metl Prep Type Prep Batc	nod   : Tot h: 22	Blank al/NA 29384
	_	MB	MB					_					
Analyte	Re	sult	Qualifier	RL		MDL	Unit			Prepared	Analyzed		Dil Fac
Chlordane (technical)		ND		0.033	0	0.026	ug/L		04/	26/22 10:23	04/28/22 13:	26	1
4,4'-DDD		ND		0.0067	0.0	0044	ug/L		04/	26/22 10:23	04/28/22 13:	26	1
4,4'-DDE		ND		0.0033	0.0	0019	ug/L		04/	26/22 10:23	04/28/22 13:	26	1
4,4'-DDT		ND		0.0033	0.0	0016	ug/L		04/	26/22 10:23	04/28/22 13:	26	1
Dieldrin		ND		0.0033	0.0	0013	ug/L		04/	26/22 10:23	04/28/22 13:	26	1
Toxaphene		ND		0.067	C	0.054	ug/L		04/	26/22 10:23	04/28/22 13:	26	1
		ΜВ	ΜΒ										
Surrogate	%Reco	very	Qualifier	Limits					I	Prepared	Analyzed		Dil Fac
Tetrachloro-m-xylene		61		20 - 139					04/	26/22 10:23	04/28/22 13	26	1
- I ah Sample ID: 570-93643	1 MS					6	lion	Sample	יחו	Arrovo S	Simi 20220	425	Grah
Matrix: Water								oumpic		Alloy0_0	Pren Tyne	· Tot	al/NA
Analysis Batch: 230017											Pren Bate	h 22	29384
Analysis Batch. 2000 h	Sample	San	nle	Snike	MS	MS					%Rec		20004
Analyte	Result	Qua	lifier	Added	Result	Qua	lifier	Unit	D	%Rec	Limits		
4.4'-DDD	ND			0.0333	0.0339			ua/L		102	31 - 141		
4.4'-DDE	ND			0.0333	0.0299			ua/L		90	30 - 145		
4 4'-DDT	ND			0.0333	0.0398			<u>9</u> /		119	25 - 160		
Dieldrin	ND			0.0333	0.0260			ug/L		78	36 - 146		
	MS	MS											
Surrogate	%Recoverv	Qua	lifier	Limits									
Tetrachloro-m-xylene	66			20 - 139									
	1 MOD						lion	Sample		Arrovo	Simi 20220	125	Grah
Matrix: Water								Jampie	; ID.	Alloyo_c	Drop Type	423_ • Tot	
Analysia Potoby 220017											Prop Pote	. 10t h: 21	al/INA
Analysis Batch. 230017	Samplo	San	olo	Spiko	MSD	мег	n					11. 24	29304 PDD
Analyto	Bosult		lifior		Posult	0.13	lifior	Unit	п	%Pac	Limite	חסס	Limit
		Qua		0.0333	0.0284	Qua					21 1/1	18	30
4.4'-DDE	םאי שאו			0.0333	0.0204			ug/L		70	30 1/5	22	35
				0.0333	0.0240	R^		ug/L		1 Z 7 1	25 160	۲۲ ۲	40
H,H - DD I Dioldrin				0.0333	0.0237	DA		ug/L		70	26 146	11	42
	ND			0.0333	0.0232			ug/L		70	JU - 140	11	49
	MSD	MSI	ס										
Surrogate	%Recovery	Qua	lifier	Limits									

 Tetrachloro-m-xylene
 58
 PI
 20 - 139

#### Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

#### Lab Sample ID: MB 570-229384/1-A Matrix: Water Analysis Batch: 229656

Analysis Batch: 229656								Prep Batch:	229384
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.044	ug/L		04/26/22 10:23	04/27/22 22:52	1
Aroclor 1221	ND		0.10	0.044	ug/L		04/26/22 10:23	04/27/22 22:52	1
Aroclor 1232	ND		0.10	0.044	ug/L		04/26/22 10:23	04/27/22 22:52	1
Aroclor 1242	ND		0.10	0.044	ug/L		04/26/22 10:23	04/27/22 22:52	1
Aroclor 1248	ND		0.10	0.044	ug/L		04/26/22 10:23	04/27/22 22:52	1

**Eurofins Calscience** 

Prep Type: Total/NA

Client Sample ID: Method Blank

Job ID: 570-93643-1

## **QC Sample Results**

#### Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

## Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Job ID: 570-93643-1	
le ID: Method Blank	
Pren Batch: 229384	
1 10p Baton. 220004	
Analyzed Dil Fac	

Lab Sample ID: MB 570-2	29384/1-A									Clie	ent Samp	ole ID: Mo	ethod	Blan	ık 🚽
Matrix: Water												Prep Ty	pe: To	tal/N	Α
Analysis Batch: 229656												Prep Ba	tch: 2	2938	4
-		MB	MB												
Analyte	Re	sult	Qualifier	RL		MDL	Unit		D	Р	repared	Analyz	ed	Dil Fa	ас
Aroclor 1254		ND		0.10	C	0.052	ug/L			04/2	6/22 10:23	04/27/22	22:52		1
Aroclor 1260		ND		0.10	C	0.052	ug/L			04/2	6/22 10:23	04/27/22	22:52		1
		ΜВ	МВ												
Surrogate	%Reco	/ery	Qualifier	Limits						Р	repared	Analyz	ed	Dil Fa	3C
Tetrachloro-m-xylene (Surr)		51		20 - 139						04/2	26/22 10:23	04/27/22	22:52		1
DCB Decachlorobiphenyl (Surr)		73		20 - 154						04/2	26/22 10:23	04/27/22	22:52		1
Lab Sample ID: LCS 570-2	229384/4-A							CI	ient	Sai	mple ID:	Lab Con	trol S	ampl	le
Matrix: Water												Prep Ty	pe: To	tal/N	Α
Analysis Batch: 229656												Prep Ba	tch: 2	2938	4
-				Spike	LCS	LCS	3					%Rec			
Analyte				Added	Result	Qua	alifier	Unit		D	%Rec	Limits			
Aroclor 1016				0.133	0.107			ug/L		_	80	50 - 140			
Aroclor 1260				0.133	0.122			ug/L			91	8 - 140			
	LCS	LCS	5												
Surrogate	%Recovery	Qua	lifier	Limits											
Tetrachloro-m-xylene (Surr)	55			20 - 139											
DCB Decachlorobiphenyl (Surr)	60			20 - 154											
Lab Sample ID: LCSD 570	)-229384/5-A						C	Client \$	Sam	ple	ID: Lab	Control \$	Samp	le Du	р
Matrix: Water										- -		Prep Ty	pe: To	tal/N	A
Analysis Batch: 229656												Prep Ba	tch: 2	2938	4
-				Spike	LCSD	LCS	SD					%Rec		RP	D
Analyte				Added	Result	Qua	alifier	Unit		D	%Rec	Limits	RPD	Lim	nit
Aroclor 1016				0.133	0.0948	J,D	x	ug/L			71	50 - 140	12	3	36
Aroclor 1260				0.133	0.121			ug/L			90	8 - 140	1	3	38
	LCSD	LCS	SD												
Surrogate	%Recovery	Qua	lifier	Limits											
Tetrachloro-m-xylene (Surr)	64			20 - 139											
DCB Decachlorobiphenyl (Surr)	70			20 - 154											

## **QC Association Summary**

Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

### GC Semi VOA

#### Prep Batch: 229384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93643-1	Arroyo_Simi_20220425_Grab	Total/NA	Water	608	
MB 570-229384/1-A	Method Blank	Total/NA	Water	608	
LCS 570-229384/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 570-229384/5-A	Lab Control Sample Dup	Total/NA	Water	608	
570-93643-1 MS	Arroyo_Simi_20220425_Grab	Total/NA	Water	608	
570-93643-1 MSD	Arroyo_Simi_20220425_Grab	Total/NA	Water	608	
Analysis Batch: 2296	56				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93643-1	Arroyo_Simi_20220425_Grab	Total/NA	Water	608.3	229384
MB 570-229384/1-A	Method Blank	Total/NA	Water	608.3	229384
LCS 570-229384/4-A	Lab Control Sample	Total/NA	Water	608.3	229384
LCSD 570-229384/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	229384
Analysis Batch: 2300	17				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93643-1	Arroyo_Simi_20220425_Grab	Total/NA	Water	608.3	229384
MB 570-229384/1-A	Method Blank	Total/NA	Water	608.3	229384
570-93643-1 MS	Arroyo_Simi_20220425_Grab	Total/NA	Water	608.3	229384
570-93643-1 MSD	Arroyo_Simi_20220425_Grab	Total/NA	Water	608.3	229384
Metals					
Analysis Batch: 2335	62				

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93643-1	Arroyo_Simi_20220425_Grab	Total Recoverable	Water	SM 2340B	

## Lab Chronicle

#### Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Job ID: 570-93643-1

#### Client Sample ID: Arroyo\_Simi\_20220425\_Grab Date Collected: 04/25/22 07:30 Date Received: 04/25/22 13:02

#### Lab Sample ID: 570-93643-1 Matrix: Water

<b>Prep Type</b> Total/NA Total/NA	Batch Type Prep Analysis Instrument	Batch Method 608 608.3 t ID: GC52A	Run	Dil Factor	Initial Amount 1500 mL	Final Amount 1 mL	Batch Number 229384 230017	Prepared or Analyzed 04/26/22 10:24 04/28/22 16:54	Analyst OAJ3 UHHN	Lab ECL 4 ECL 4
Total/NA Total/NA	Prep Analysis Instrument	608 608.3 t ID: GC64A		1	1500 mL	1 mL	229384 229656	04/26/22 10:24 04/28/22 01:04	oaj3 Uhhn	ECL 4 ECL 4
Total Recoverable	Analysis Instrument	SM 2340B t ID: NOEQUIP		1			233562	05/12/22 02:10	W1BQ	ECL 4

#### Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

## **Accreditation/Certification Summary**

Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Laboratory: Eurofins Calscience	
The accreditations/certifications listed below are applicable to this report.	

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-22

## **Method Summary**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and

#### Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Method Description

Organochlorine Pesticides in Water

Polychlorinated Biphenyls (PCBs) (GC)

Total Hardness (as CaCO3) by calculation

Liquid-Liquid Extraction (Separatory Funnel)

SM = "Standard Methods For The Examination Of Water And Wastewater"

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Method

608.3

608.3

608

SM 2340B

**Protocol References:** 

subsequent revisions.

Laboratory References:

Laboratory

ECL 4

ECL 4 ECL 4

ECL 4

Protocol

SM

40CFR136A

40CFR136A

40CFR136A

5
8
9
12

Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Lab Sample ID	Client Sample ID	Matrix	Collected Received
570-93643-1	Arroyo_Simi_20220425_Grab	Water	04/25/22 07:30 04/25/22 13:02

Test America

#### CHAIN OF CUSTODY FORM



Page 1 of 1

570-93643 Chain of Custody

Haley & Aldrich 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 #44024446 Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and effiliates, and Eurofins Calscience Laboratories inc. Sampler Adrien Mobeka				Boeing-SSFL NPDES Permit 2015 Quarterly Arroyo Simi-Frontier Park Dry Weather Project Manager Katherine Miller 520.289 8606, 520 904.6944 (cell) Field Manager Mark Dominick 978.234.5033, 818.599.0702 (cell)					as CaCO <sub>3</sub> , Recoverable (SM2340B)	<b>ss Diazinon (E525 2)</b> s in Hacienda Heights CA	. Chlordane 4,4-DDD 4,4-DDE, 4 4-DDT oxephene + PCBs only (E608)	IS REC	UIRED		Field Readings     Meter serial # $1/2$ , $\sqrt[3]{000}$ , $\sqrt[3]{100}$ , $\sqrt$
Sample		Samelias Dato/fime	Sample	Contaioor Turo	# of Cont	Procovative	Rottle #	MS/MSD	ardness a	hlorpyrifo eck Labs	asticides. Ieldrin To				Date/Time: 04 25 - 2022 0713
Description P Appryo Simi Q C 1 7 Of 1 9	Arroyo_Simi_20220425_Grab Arroyo_Simi_20220425_Grab_Extra Sample times added Dominick 4/26/2022	4/25/2022 /0730 4/25/2022 /0730 by M.	Matrix WS WS WS WS WS	250 mL Poly 1L Glass Amber 1L Glass Amber 1L Glass Amber 1L Glass Amber	3 6 6 2 2	HNO3 HCI None None None	100 275 285 275 285	Yes Yes Yes No No		<u>х</u> н	<u>к</u> о Х				Extract w thr 24-Hour of sampling at Weck Labs Hold Hold
Relinquished B	y Date/Time: y Date/Time: y Date/Time: y Date/Time: y Date/Time: y Date/Time: y Date/Time:	24 2022/10 122 1302	Compai STU Compa E-C	ny It;A ny			Received By	- Ec		Date/ Date/ of /25	Time: Time: /22	105	◆	)	Tum-around time: (Check)         24 Hour       72 Hour       10 Dayr       X         48 Hour       5 Dayr       Normal.          Sample Integrityr (Check)       Intact:       On ice:
Relinquished B	y Date/Time:		Compa			. (	Received By	in	- 8	Date/	Time: 4(2	122	, I	302	Store samples for 6 months. Data Requirements: (Check) No Level IV: All Level IV:X

3.2/49 IR96

## 1</t

Test America

#### CHAIN OF CUSTODY FORM



Page 1 of 1

570-93643 Chain of Custody

Client Name	lient Name/Address,				Project: Boeing-SSEL NPDES					ANALYSIS REQUIRED					Field Readings Meter serial # 12.500 WAT
Haley & Al 5333 Missio San Diego, (	ldrich n Center Rd Suite 300 CA 92108			Quar	Boeing Pe terly Arro	-SSFL NPDE ermit 2015 yo Simi-Fror	:5 ntier Park				DDT				Field Readings: (Include units) Time of Readings: $OF_15$
Eurofins Calscience Project Manager Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 ECI Project #44024446 ECI Project #44024446					Di.	y weaulei			rable (SM2340B)	i <b>2)</b> his cA	DD 4,4-DDE, 44- only (E608)				$pH = \frac{6 \cdot 9}{pH} pH unit$ $Temp = \frac{643}{eFP}$ Velocity $Q - 0$ ff/sec
Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and effiliates, and Eurofins Calscience Laboratories Inc.				Project Manager Katherine Miller 520.289 8606, 520 904.6944 (cell)					O <sub>3</sub> , Recove	non (E525 ienda Meig	tane 4,4-D ne + PCBs				Field readings QC
Sampler Ad	irien Mobeka		F 978	ield Mana 3.234.5033	ger Mark Do 3, 818.599.07	minick '02 (cell)		less as CaC	<b>oyrifos Diazi</b> Labs in Hac	ides. Chlord In Toxaphei				Checked by: <u>Mathematical</u> Date/Time: <u>04</u> <b>2</b> 5-2022 0715	
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	Hardr	Chlori Weck	Pestic Dieldr				Comments
P	Arroyo_Simi_20220425_Grab	4/25/2022	WS WS	250 mL Poly 1L Glass Amber	3 6	HNO3 HCI	100 275 285	Yes Yes	×	X	×				Extract w ibin 24-Hourn of sampling at Weck Labs
ge 1	Arroyo_Simi_20220425_Grab_Extra	4/25/2022	WS WS WS	1L Glass Amber 1L Glass Amber 1L Glass Amber	2	None	205 275 285	No No		н	н				Hold Hold
8 0f															
- <del>1</del> 9															
	· · · · · · · · · · · · · · · · · · ·														
		-24-2022/10	Compa	ny Iti A	I	I	Received By	I	<u> </u>	Date/	Time:		4	<u> </u>	Turn-around time: (Check)           24 Hour 72 Hour 10 Day           48 Hour 5 Day Normal
Relinquished B	y Date/Time $2\pi$ · $4/25$	e: /22 1302	Compa E-C	ny: Ę			Received By	- EC		Date/ 25	Time: /22	105	。 」	)	Sample Integrity (Check) Intact: On ice:
Relinquished B	y Date/Time	e:	Compa	<sup>ny</sup> <b>b</b>			Received By	ine	- 8	Date/	Time: 4(2	\$22	,	302	Store samples for 6 months. Data Requirements: (Check) No Level IV: All Level IV:X

3.2/49 IR96

57 /17 2009-2020 Rainy Season Version 2 Client: Haley & Aldrich, Inc.

#### Login Number: 93643 List Number: 1 Creator: Patel, Virendra

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

Job Number: 570-93643-1

List Source: Eurofins Calscience

# 🛟 eurofins

## Environment Testing America

## **ANALYTICAL REPORT**

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

### Laboratory Job ID: 570-93643-2

Client Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

### For:

..... Links

Review your project results through

EOL

Have a Question?

Ask-

The

www.eurofinsus.com/Env

Visit us at:

Expert

Haley & Aldrich, Inc. 400 E Van Buren St. Suite 545 Phoenix, Arizona 85004

Attn: Ms. Katherine Miller

Virentra R Paty

Authorized for release by: 6/1/2022 1:04:09 PM

Virendra Patel, Project Manager I (714)895-5494 Virendra.Patel@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

## **Table of Contents**

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Case Narrative	4
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Sample Summary	6
Subcontract Data	7
Chain of Custody	12
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## **Definitions/Glossary**

#### Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Job ID: 570-93643-2

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

#### Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-93643-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/25/2022 1:02 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7° C.

#### Lab Admin

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

#### Subcontract Work

Method Weck- 525.2 - Diaznon and Chlorpyrifos: This method was subcontracted to Weck Laboratories, Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report.

Job ID: 570-93643-2

## **Method Summary**

#### Client: Haley & Aldrich, Inc. Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Job ID: 570-93643-2

## 1 2 3 4 5 6 7 8

Mathad	Nothed Description	Dretecal	l ebereter.	- 3
wiethoa		Protocol		_
Subcontract	Weck- 525.2 - Diaznon and Chlorpyrifos	None	Weck Lab	

#### Protocol References:

None = None

#### Laboratory References:

Weck Lab = Weck Laboratories, Inc., 14859 E. Clark Avenue, City of Industry, CA 91745

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-93643-1	Arroyo_Simi_20220425_Grab	Water	04/25/22 07:30	04/25/22 13:02



## Certificate of Analysis

FINAL REPORT

Work Orders:	2D25042	Report Date:	5/24/2022	
Work Orders.		Received Date:	4/25/2022	
Project:	570-93643-1	Turnaround Time:	Normal	5
		Phones:	(949) 261-1022	
		Fax:	(949) 260-3297	
Attn:	Virendra Patel	P.O. #:	570-93643-1	7
Client:	Eurofins Calscience - Tustin 2841 Dow Avenue, Suite 100	Billing Code:		8
	Tustin, CA 92780			9

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 4/25/22 with the Chain-of-Custody document. The samples were received in good condition, at 4.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sa	mple Results							
Sample:	Arroyo_Simi_20220425_Grab	(570-93643-1)				Sa	ampled: 04/25/22	7:30 by Client
	2D25042-01 (Water)							
Analyte		Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA	525.2M			Instr: GCMS13				
Batch ID: V	V2D1846	Preparation: EPA 525.2/SPE	Prepared: 04/26/22 07:20					Analyst: EFC
Chlorpyrifo	S		6.9	10	ng/l	1	05/14/22	
Diazinon		ND	5.2	10	ng/l	1	05/14/22	
Surrogate(s)								
1,3-Dimeth	yl-2-nitrobenzene			50-141	Conc:	351	05/14/22	



## Certificate of Analysis

FINAL REPORT

## **Quality Control Results**

Semivolatile Organics - Low Level by Tandem GC/MS/MS

					Spike	Source		%REC		RPD	
Analyte	Result	MDL	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier
Blank (W2D1846-BLK1)				P	Prepared: 04/26/2	2 Analyzed: 0	)5/14/22				
Chlorpyrifos		6.9	10	ng/l							
Diazinon	ND	5.2	10	ng/l							
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	383			ng/l	500		77	50-141			
Triphenyl phosphate	588			ng/l	500		118	63-200			
LCS (W2D1846-BS1) Prepared: 04/26/22 Analyzed: 05/14/22											
Chlorpyrifos	48.8	6.9	10	ng/l	50.0		98	63-145			
Diazinon	45.7	5.2	10	ng/l	50.0		91	25-180			
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	396			ng/l	500		79	50-141			
Triphenyl phosphate	593			ng/l	500		119	63-200			
Matrix Spike (W2D1846-MS1)	Source	: 2D25042-01		Р	Prepared: 04/26/2	2 Analyzed: 0	)5/14/22				
Chlorpyrifos	52.3	6.9	10	ng/l	50.0	ND	105	37-168			
Diazinon	48.1	5.2	10	ng/l	50.0	ND	96	36-153			
Surroaate(s)											
1,3-Dimethyl-2-nitrobenzene	326			ng/l	500		65	50-141			
Triphenyl phosphate	586			ng/l	500		117	63-200			
Matrix Spike Dup (W2D1846-MSD1)	Source	: 2D25042-01		Р	Prepared: 04/26/2	2 Analyzed: 0	)5/14/22				
Chlorpyrifos	46.9	6.9	10	ng/l	50.0	ND	94	37-168	11	30	
Diazinon	46.7	5.2	10	ng/l	50.0	ND	93	36-153	3	30	
Surroaate(s)											
1,3-Dimethyl-2-nitrobenzene	355			ng/l	500		71	50-141			
Triphenyl phosphate	600			ng/l	500		120	63-200			

Page 2 of 3

W			
WECK LABORA	TC	DRIES	INC.

## Certificate of Analysis

FINAL REPORT

### Notes and Definitions

ltem	Definition
J	Estimated conc. detected <mrl and="">MDL.</mrl>
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL ND	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ) NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.
Any rema	aining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.
All results	s are expressed on wet weight basis unless otherwise specified.
All sampl	les collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002

**Reviewed by:** 

Rahul R. Nair Project Manager



#### DoD-ELAP ANAB #ADE-2882 • DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH #4047 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

2841 Dow Avenue, Suite 100 Tustin, CA 92780	Chain of Custody Rec							cord							*C570-93643*					
Phone: 714-895-5494	Sampler:													Carrier Tracking No(s):						
Client Information (Sub Contract Lab)		Patel, Virendra																		
Client Contact:	Phone:			E-I	Viait:	- D.								State of Origin:						
Shipping/Receiving				[Vi	rendr	a.Pa	atel@	et.et	urofin	nsus.	com			California						
Weck Laboratories, Inc.					St	ate	- Cal	iforni	a; St	ate F	ota). Progr	am ·	- Cali	fornia	æ					
Address: 14859 F. Clark Avenue	Due Date Request	ed:								A	nalv	sis	Red	Zannastad						
City:	TAT Requested (d	ays):			ि		<u> </u>				, 	T	T	1				T		
City of Industry		TANDAR	D TAT -																	
State, Zip: CA, 91745	LE LE	VEL 4 RI	EQUIRED	)			(gg				1	ł								
Phone:	PO#						inver													
Email:	WO #:				- 22	6	nd Chi													
Project Name:	Project #:				- Xes	5	0 a													
Quarterly Arroyo Simi-Frontier Park Dry		570-93	3643		ple (	ş	liazn													
Site:	SSOW#:				Sam	l as	3													
		[	l comoto	Matrix	- Pa	S	525													
			Type	(W=water,	Ĩ		Š.													
		Sample	(C=comp.	S=solid, O=waste/oil	5	Įξ	S.													
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab)	BT=Tissue, A=	ur) 🗒	Pe	ŝ													
	$\square$	$\geq$	Preserv	ation Code	X	$\mathbb{X}$	]									•				
Arroyo_Simi_20220425_Grab (570-93643-1)	4/25/22	07:30 Pacific	6	Water			X													
Аггоуо_Simi_20220425_Grab_Extra (570-93643-2)	4/25/22	07:30 Pacific	67	Water			но	LD												
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Note: Since laboratory accreditations are subject to change, Eurofins Ca maintain accreditation in the State of Origin listed above for analysis/test attention immediately. If all requested accreditations are current to date,	Iscience places the ownership s/matrix being analyzed, the s return the signed Chain of Cu	) of method, a amples must i istody attestin	nalyte & accre be shipped bar g to said comp	ditation comp ok to the Euro dicance to Eu	liance fins Ci rofins (	upon alscie Calsc	i out si ence le clence.	ubcon aborati	tract I ory.or	abora other	tories. instru	. This iction:	samr swili b	ile shij e prov	i oment ided.	is forv Any c	vardeo hange	i under is to ac		
Possible Hazard Identification	, <u>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997</u>	والمراجع والفرابية بالألمية والمستع	and and a state of the state of t			Sa	mple	Dis	posa	al ( A	fee	may	/ be a	isse	ssed	if sa	mpl	es arc		
Unconfirmed							$\Box_{\kappa}$	Roturi	n To	Clier	nt	-		Dispo	osal l	By La	ıb.	Ē		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2			Sp	ecial	Instr	uctic	ns/C	CR	equi	reme	nts:				<u>Airlinigen sin kinnin</u>		

Empty Kit Relinquished by:	Date:	ime:	Method of Shipment:
Relinquished by: Date/Time:	Company c	Received by:	Date/Time:

## Sample Receipt Checklist

ORATORIES, INC.

Weck WKO:2D25042D Logged by:Jerico BolotanoChecked by:JB		Time Received # of Samples Delivered by	: 04/25/22 @ 12:16 : 02 : Client				
ask	Yes	No	N/A	Comments			
DC present at receipt?	$\boxtimes$						
DC properly completed?	$\boxtimes$						
DC matches sample labels?	$\boxtimes$						
oject Manager notified?			$\boxtimes$				
mple Temperature	4.8	°C					
mples received on ice?	$\boxtimes$						
e Type (Blue/Wet)	We	t					
l samples intact?	$\boxtimes$						
mples in proper containers?	$\boxtimes$						
fficient sample volume?	$\boxtimes$						
mples intact?	$\boxtimes$						
eceived within holding time?	$\boxtimes$						
oject Manager notified?			X				
mple labels checked for correct preservation?				<u></u>			
DC Headspace: none, <6mm/ <pea size?<br="">4.2, 524.3, 624.1, 8260, 1666 P/T, LUFT</pea>							
l verified upon receipt? etals <2; H2SO4 pres tests <2; 522<4; TOC <2; 608.3 5-9				pH paper Lot# 231619			
ee Chlorine Tested <0.1			$\boxtimes$	CI Test Strip Lot# 070620			
&G-pH <2 verified? Fadjusted for O&G				pH paper Lot# pH Reading: Acid Lot# Amt added:			
oject Manager notified?							

Test America

#### CHAIN OF CUSTODY FORM



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Page 1 of 1

570-93643 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 #44024446 Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Service Agreement 2022-28-Eurofins Calscience by and between Haley & Adrich, Inc., its subsidiaries and affiliates, and			Qua	coverable (SM2340B)	(525 2) Heights CA	4-DDD 4,4-DDE, 4 4-DDT A	IS REC	UIRED		Field ReadingsMeter serial # $1/2.500\%$ Field Readings: (Include units)Time of Readings: $0715$ pH $6.9/$ pH unitTemp $643$ @PVelocity $0.0$ ft/sec					
Eurofins Calscience Laboratories Inc.			520.289 8606, 520 904.6944 (cell) Field Manager Mark Dominick 978.234.5033, 818.599.0702 (cell)				ness as CaCO <sub>3</sub> , R	<b>pyrifos Diazinon</b> < Labs in Haciends	cides. Chlordane Irin Toxaphene +				Field readings QC Checked by: <u>Multiple</u> Date/Time: <u>04</u> <del>Z</del> 5-2022 0715		
Sample	Sample I.D.	Sampling Date/Time	Sample	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	1 ard	Sec.	Dield				Comments
Description			WS	250 mL Poly	3	HNO <sub>3</sub>	100	Yes	x						
	Arroyo_Sirni_20220425_Grab	4/25/2022 /0730	ws	1L Glass Amber	6	нсі	275	Yes	-	X					Extract within 24-Hourn of sampling at Weck Labs
Anno Simi		7	WS	1L Glass Amber	6	None	285	Yes			X				
ge	America Simi 20220426 Comb Even	4/25/2025 /0730	ws	1L Glass Amber	2	None	275	No	1	н		1			Hold
<u> </u>	Alloyo_Sim_20220425_Glab_Exila	41231202210100	WS	1L Glass Amber	2	None	285	No			н				Hold
N		· · ·						<u> </u>	L	1	I				
of 14	Sample times added Dominick 4/26/2022	by M.													
i1			<u> </u>							1					
	y Date/Time:	14-2022/10	Compar STU	ny ItiA		······	Received By	•	·	Date/	Time:		4	 }	Turn-around time: (Check)           24 Hour 72 Hour 10 DayX           48 Hour 5 Day Normal
Relinquished E	$\frac{1}{2}$	22 1302	Compa E-C Compa	ny. e			Received By	- EC		Date/ Y /25 Date/	Time: /22 Time:	105	0 /	/	Sample Integrity' (Check) Intact: On ice: Store samples for 6 months.
	•			V		(	Al	inc	- 8	R	4/2	122		302	Data Requirements: (Check) No Level IV: All Level IV:X

3.2/49 IR96

Test America

#### CHAIN OF CUSTODY FORM



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Page 1 of 1

570-93643 Chain of Custody

Client Name	/Address.				Booing	Project:	.e			ļ	ANALYS	SIS REC	JUIRED	)	Field Readings Meter serial # 12.500 WAT	
Haley & Aldrich 5333 Mission Center Rd Suite 300 San Diego, CA 92108				Quarterly Arroyo Simi-Frontier Park				60						Field Readings: (Include units) Time of Readings:		
Eurofins Calscience Project Manager Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel: 714-895-5494 ECI Project #44024446				Diy Weadiei				rable (SM2340B)	:2) his cA	10D 4,4-DDE, 4 4- only (E608)				$pH \underbrace{6 - 9/}_{\text{Temp}} pH \text{ unit}$ $Temp \underbrace{643}_{\text{CP}} egp$ $Velocity O = 0 \qquad \text{ff/sec}$		
Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and Eurofins Calscience Laboratories inc.				Project Manager Katherine Miller 520.289 8606, 520 904.6944 (cell)				O <sub>3</sub> , Recove	inon (E526 ienda Heig	iane 4,4-E ne + PCBs				Field readings QC		
Sampler Ad	irien Mobeka			F 978	ield Mana 3.234.503	ger Mark Do 3, 818.599.07	minick 102 (cell)		ness as CaC	pyrifos Diaz	cides. Chlord In Toxephel				Checked by: <u>Multiple</u> Date/Time: <u>04</u> <b>2</b> 5-2022 0715	
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	Hardr	Chlor Weck	Pestic Dieldi				Comments	
P	Arroyo_Simi_20220425_Grab	4/25/2022	WS WS	250 mL Poly 1L Glass Amber	3 6	HNO <sub>3</sub> HCI	100 275 285	Yes Yes	×	X	×				Extract within 24-Hourn of sampling at Weck Labs	
ge 1	Arroyo_Simi_20220425_Grab_Extra	4/25/2022	WS WS WS	1L Glass Amber 1L Glass Amber	2	None None	275 285	No No		н	н				Hold Hold	
3 of																
4																
-																
	· · · · · · · · · · · · · · · · · · ·															
		·	Compar STU	nr Iti A			Received By			Date	Time:		4	5	Tum-around time: (Check)           24 Hour         72 Hour         10 Day         X           48 Hour         5 Day         Normal.	
Relinquished B	y Date/Time 222 · $4/25$	e: /22 1362	Compa E-C	ny: <			Received By	- 60		Date/ 25	Time: /フ レ	105	0.	)	Sample Integrity (Check) Intact: On ice:	
Relinquished B	y Date/Tim	e:	Compa	ny K			Received By	ine	- 8	Date/	Time: 4(2	\$22	ما	1302	Store samples for 6 months. Data Requirements: (Check) No Level IV: All Level IV:	

3.2/49 IR96

07 17 2029-2020 Rainy Season Vertion 2 Client: Haley & Aldrich, Inc.

#### Login Number: 93643 List Number: 1 Creator: Patel, Virendra

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

Job Number: 570-93643-2

List Source: Eurofins Calscience

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## Environment Testing America

## **ANALYTICAL REPORT**

#### Eurofins Calscience 2841 Dow Avenue, Suite 100 Tustin, CA 92780 Tel: (714)895-5494

## Laboratory Job ID: 570-93645-1

Client Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

## For:

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The

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Attn: Ms. Katherine Miller

Virentra R Paty

Authorized for release by: 5/18/2022 11:50:28 AM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## **Definitions/Glossary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

3

## Qualifiers

GC Semi V	/OA	
Qualifier	Qualifier Description	
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL	
LQ	LCS/LCSD recovery above method control limits	5

### Glossary

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

# \_\_\_\_\_

## Job ID: 570-93645-1

### Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-93645-1

**Case Narrative** 

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/25/2022 1:02 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.9° C.

#### GC Semi VOA

Method 8081A: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 570-230062 and analytical batch 570-231306 recovered outside control limits for the following analytes: 4,4'-DDT. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

#### General Chemistry

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

#### Organic Prep

Method 3546: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: Arroyo\_Simi-Sed\_20220425 (570-93645-1), Arroyo\_Simi-Sed\_20220425 (570-93645-1[MS]) and Arroyo\_Simi-Sed\_20220425 (570-93645-1[MSD]). The reagent lot number used was: 2327392 8082/8081 LL

Method D4464: The sample duplicate precision for the following sample associated with analytical batch 570-232053 was flagged as being outside control limits due to a L.I.M.S. limitation: Arroyo\_Simi-Sed\_20220425 (570-93645-1) and (570-93645-B-1 DU). The mean grain size for the sample and sample duplicate were within RPD acceptance criteria. Method D4464.

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

Job ID: 570-93645-1

## **Detection Summary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

## Client Sample ID: Arroyo\_Simi-Sed\_20220425

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDE	0.28	J,DX	1.0	0.14	ug/Kg	1	_	8081A	Total/NA
Clay (less than 0.00391 mm)	0.17		0.01	0.01	%	1		D4464	Total/NA
Coarse Sand (0.5mm to 1mm)	44.37		0.01	0.01	%	1		D4464	Total/NA
Fine Sand (0.125 to 0.25mm)	2.79		0.01	0.01	%	1		D4464	Total/NA
Gravel (greater than 2 mm)	11.83		0.01	0.01	%	1		D4464	Total/NA
Medium Sand (0.25 to 0.5 mm)	15.26		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	0.55		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	0.72		0.01	0.01	%	1		D4464	Total/NA
Very Coarse Sand (1 to 2mm)	24.47		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	0.56		0.01	0.01	%	1		D4464	Total/NA

Job ID: 570-93645-1

Lab Sample ID: 570-93645-1

This Detection Summary does not include radiochemical test results.
#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

# Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: Arroyo_S Date Collected: 04/25/22 07:	imi-Sed_2022 45	0425					Lab San	nple ID: 570-9 Matrix	3645-1 : Solid
Date Received: 04/25/22 16:	00								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.0	0.14	ug/Kg		04/28/22 09:33	05/04/22 09:54	1
4,4'-DDE	0.28	J,DX	1.0	0.14	ug/Kg		04/28/22 09:33	05/04/22 09:54	1
4,4'-DDT	ND	LQ	1.0	0.24	ug/Kg		04/28/22 09:33	05/04/22 09:54	1
Chlordane (technical)	ND		5.0	0.82	ug/Kg		04/28/22 09:33	05/04/22 09:54	1
Dieldrin	ND		0.20	0.11	ug/Kg		04/28/22 09:33	05/04/22 09:54	1
Toxaphene	ND		5.0	3.1	ug/Kg		04/28/22 09:33	05/04/22 09:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	78		27 - 176				04/28/22 09:33	05/04/22 09:54	1
Tetrachloro-m-xylene	75		20 - 163				04/28/22 09:33	05/04/22 09:54	1

Job ID: 570-93645-1

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

## Method: 8082 - Polychlorinated Biphenyls (PCBs) (GC)

#### Client Sample ID: Arroyo\_Simi-Sed\_20220425 Date Collected: 04/25/22 07:45 Date Received: 04/25/22 16:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	ND		10	7.9	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Aroclor-1221	ND		10	7.9	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Aroclor-1232	ND		10	7.9	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Aroclor-1242	ND		10	7.9	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Aroclor-1248	ND		10	7.9	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Aroclor-1254	ND		10	5.1	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Aroclor-1260	ND		10	5.1	ug/Kg		04/28/22 09:33	05/03/22 11:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	63		20 - 155				04/28/22 09:33	05/03/22 11:17	1
Tetrachloro-m-xvlene (Surr)	59		25 - 126				04/28/22 09:33	05/03/22 11:17	1

Job ID: 570-93645-1

9.88

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

ND

Analyte

Ammonia (as N)

Job ID: 570-93645-1

1

6

05/10/22 16:39 05/10/22 17:54

#### **General Chemistry** Client Sample ID: Arroyo\_Simi-Sed\_20220425 Lab Sample ID: 570-93645-1 Date Collected: 04/25/22 07:45 Matrix: Solid Date Received: 04/25/22 16:00 **Result Qualifier** RL MDL Unit D Prepared Analyzed Dil Fac

1.98 mg/Kg

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

Client Sample ID: Arroyo_Simi-S Date Collected: 04/25/22 07:45	Sed_2022	0425					Lab Sa	mple ID: 570-9 Matrix	3645-1 :: Solid
Date Received: 04/25/22 16:00									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay (less than 0.00391 mm)	0.17		0.01	0.01	%			05/05/22 13:39	1
Coarse Sand (0.5mm to 1mm)	44.37		0.01	0.01	%			05/05/22 13:39	1
Fine Sand (0.125 to 0.25mm)	2.79		0.01	0.01	%			05/05/22 13:39	1
Gravel (greater than 2 mm)	11.83		0.01	0.01	%			05/05/22 13:39	1
Medium Sand (0.25 to 0.5 mm)	15.26		0.01	0.01	%			05/05/22 13:39	1
Silt (0.00391 to 0.0625mm)	0.55		0.01	0.01	%			05/05/22 13:39	1
Total Silt and Clay (0 to 0.0626mm)	0.72		0.01	0.01	%			05/05/22 13:39	1
Very Coarse Sand (1 to 2mm)	24.47		0.01	0.01	%			05/05/22 13:39	1
Very Fine Sand (0.0625 to 0.125 mm)	0.56		0.01	0.01	%			05/05/22 13:39	1

Job ID: 570-93645-1

# PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Project:	Boeing-SSFL NPDES			
			Method:	ASTM D4464M
			Date Analyzed:	05/05/22
			Work Order No:	570-93645
			Date Received:	04/25/22
Haley & Alo	drich		Date Sampled:	04/25/22

	Depth		Mean Grain Size	
Sample ID	ft	Description	mm	
Arroyo_Simi-Sed_20220425		Very Coarse Sand	1.138	•

		Particl	e Size Distributio	n, wt by perce	ent			
	Very				Very			Total
Total	Coarse	Coarse	Medium	Fine	Fine			Silt &
Gravel	Sand	Sand	Sand	Sand	Sand	Silt	Clay	Clay
10.06	26.67	44.03	15.41	2.79	0.48	0.42	0.15	0.57



# PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

Project:	Boeing-SSFL NPDES		
		Method:	ASTM D4464M
		Date Analyzed:	05/05/22
		Work Order No:	570-93645
		Date Received:	04/25/22
Haley & Al	drich	Date Sampled:	04/25/22

			Moon	
	Depth		Grain Size	
Sample ID	ft	Description	mm	
Arroyo_Simi-Sed_20220425		Very Coarse Sand	1.167	•

		Particl	e Size Distributio	n, wt by perce	ent			
	Very				Very			Total
Total	Coarse	Coarse	Medium	Fine	Fine			Silt &
Gravel	Sand	Sand	Sand	Sand	Sand	Silt	Clay	Clay
11.83	24.47	44.37	15.26	2.79	0.56	0.55	0.17	0.72





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File name:	C:\LS13320\STD SAND_5	May 2022_15.52.	46.\$ls
	STD SAND_ 5 May 2022_1	5.52.46.\$Is	
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	4		
	Control Sample		
Comment 1:	ASTM D4464M, LPSA1		
Comment 2:	1986953		
Optical model:	Fraunhofer.rf780d		
Residual:	0.91%		
LS 13 320	Aqueous Liquid Module		
Start time:	15:51 5 May 2022	Run length:	60 seconds
Pump speed:	49	-	
Obscuration:	10%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



iviean.	<i>ΖΖΙ.Ι</i> μπ	S.D	63.47 µm				
Median:	221.2 µm	Variance:	4028 µm <sup>2</sup>				
Mean/Median ratio:	1.029	Skewness:	0.477 Right sk	kewed			
Mode:	223.4 µm	Kurtosis:	0.016 Leptoku	irtic			
d <sub>10</sub> : 151.3 µm	d <sub>50</sub> : 221	.2 µm	d <sub>90</sub> : 315.3	3 µm			
Folk and Ward Statisti	cs (Phi)						
Mean: 2.18	Median:	2.18	Deviation: 0.4	1			
Skewness: 0.04	Kurtosis:	0.96					
<5% <16%	<25%	<40%	<50%	<75%	<84%	<95%	
135.9 µm 164.7 µ	m 181.1 µm	205.2 µm	221.2 µm	268.7 µm	293.2 µm	343.6 µm	



	Particle	STD SAND
	Diameter	5 May 2022
	μm	15.52.46
	•	\$ls
		Volume
		%
	0.04	0
	0.4	0
	1.95	0
	3.91	0
	62.5	2.82
	125	63.5
	250	33.7
	500	0.00018
	1000	0
	2000	

STD SAND_5	May 2022_15.5	2.46.\$ls				
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	
0.375	0	20.71	0	1143	0	
0.412	0	22.73	0	1255	0	
0.452	0	24.95	0	1377	0	
0.496	0	27.39	0	1512	0	
0.545	0	30.07	0	1660	0	
0.598	0	33.01	0	1822	0	
0.657	0	36.24	0	2000		
0.721	0	39.78	0			
0.791	0	43.67	0			
0.869	0	47.94	0			
0.954	0	52.63	0			
1.047	0	57.77	0			
1.149	0	63.42	0.015			
1.261	0	69.62	0.14			
1.385	0	76.43	0.23			
1.520	0	83.90	0.19			
1.669	0	92.10	0.23			
1.832	0	101.1	0.45			
2.011	0	111.0	1.01			
2.208	0	121.8	2.12			
2.423	0	133.7	3.79			
2.660	0	146.8	5.95			
2.920	0	161.2	8.33			
3.206	0	1/6.9	10.5			
3.519	0	194.2	12.1			
3.863	0	213.2	12.7			
4.241	0	234.1	12.2			
4.656	0	256.9	10.6			
5.111	0	282.1	8.28 5.70			
0.011	0	309.0	5.70 2.25			
0.159	0	339.9	3.30			
0.701	0	373.1	1.00			
7.4ZZ 8.1/8	0	409.0	0.42			
0.140 8.044	0	449.7	0.030			
0.944	0	495.0 5/1 0	0.00021			
10 78	0	50/ 0	0			
11.83	0	653.0	0			
12 00	0	716 0	0			
14.35	0	786.0	0			
14.20	0	262 Q	0			
17 18	0	003.9 048 3	0			
18.86	0	1041	0			
10.00	0	1041	0			



5

6

File name:	C:\LS13320\STD SAND_5 M	lay 2022_16.07.3	2.\$ls
	STD SAND_ 5 May 2022_16	.07.32.\$IS	
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	1106		
Run number:	6		
	Control Sample		
Comment 1:	ASTM D4464M, LPSA1		
Comment 2:	1986953		
Optical model:	Fraunhofer.rf780d		
Residual:	1.42%		
LS 13 320	Aqueous Liquid Module		
Start time:	16:06 5 May 2022	Run length:	60 seconds
Pump speed:	49		
Obscuration:	12%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Calculations from 0.375 µm to 2000 µm

Volume: Mean: Median: Mean/Median Mode:	n ratio:	100% 225.9 μm 219.5 μm 1.029 223.4 μm	S.D.: Variance: Skewness: Kurtosis:	63.50 μm 4032 μm <sup>2</sup> 0.476 Right sk -0.0073 Platyk	ewed urtic			
d <sub>10</sub> : 149.5 µ	ım	d <sub>50</sub> : 21	9.5 µm	d <sub>90</sub> : 313.4	μm			
Folk and War Mean: Skewness:	rd Statist 2.19 0.04	tics (Phi) Median: Kurtosis:	2.19 E 0.96	Deviation: 0.41				
<5% 134.2 μm	<16% 163.0 j	<25% μm 179.4 μm	<40% 203.5 μm	<50% 219.5 μm	<75% 267.0 μm	<84% 291.5 μm	<95% 341.5 µm	



_		
	Particle	STD SAND
	Diameter	5 May 2022
	μm	16.07.32
	•	\$ls
		Volume
		%
	0.04	0
	0.4	0
	1.95	0
	3.91	0
	62.5	3.16
	125	64.0
	250	32.8
	500	0
	1000	0
	2000	

STD SAND_5	May 2022_16.0	7.32.\$ls				
Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	
0.375	0	20.71	0	1143	0	
0.412	0	22.73	0	1255	0	
0.452	0	24.95	0	1377	0	
0.496	0	27.39	0	1512	0	
0.545	0	30.07	0	1660	0	
0.598	0	33.01	0	1822	0	
0.657	0	36.24	0	2000		
0.721	0	39.78	0			
0.791	0	43.67	0			
0.869	0	47.94	0			
0.954	0	52.63	0			
1.047	0	57.77	0			
1.149	0	63.42	0.013			
1.261	0	69.62	0.13			
1.385	0	76.43	0.21			
1.520	0	83.90	0.20			
1.669	0	92.10	0.28			
1.832	0	101.1	0.54			
2.011	0	111.0	1.17			
2.208	0	121.8	2.31			
2.423	0	133.7	4.01			
2.660	0	146.8	6.15			
2.920	0	161.2	8.48			
3.206	0	176.9	10.6			
3.519	0	194.2	12.1			
3.863	0	213.2	12.6			
4.241	0	234.1	12.0			
4.656	0	256.9	10.4			
5.111	0	282.1	8.07			
5.611	0	309.6	5.54			
6.159	0	339.9	3.25			
6.761	0	373.1	1.50			
7.422	0	409.6	0.39			
8.148	0	449.7	0.024			
8.944	0	493.6	0			
9.819	0	541.9	0			
10.78	U	594.9	0			
11.83	U	653.0	U			
12.99	U	/16.9	U			
14.26	0	786.9	0			
15.65	U	863.9	U			
17.18	U	948.3	0			
18.86	0	1041	0			

# **Surrogate Summary**

#### Method: 8081A - Organochlorine Pesticides (GC) Matrix: Solid

			Perc	ent Surrogate Recovery (Acceptance Limits)
		DCB1	TCX1	
Lab Sample ID	Client Sample ID	(27-176)	(20-163)	
570-93645-1	Arroyo_Simi-Sed_20220425	78	75	
570-93645-1 MS	Arroyo_Simi-Sed_20220425	78	68	
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	76	68	
LCS 570-230062/2-A	Lab Control Sample	105	98	
LCSD 570-230062/3-A	Lab Control Sample Dup	101	93	
MB 570-230062/1-A	Method Blank	98	86	
Surrogate Legend				

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

#### Method: 8082 - Polychlorinated Biphenyls (PCBs) (GC) Matrix: Solid

			Prep Type: Total/NA	
		Per	cent Surrogate Recovery (Acceptance Limits)	
	DCB1	TCX1		
Client Sample ID	(20-155)	(25-126)		
Arroyo_Simi-Sed_20220425	63	59		
Arroyo_Simi-Sed_20220425	74	72		
Arroyo_Simi-Sed_20220425	78	73		
Lab Control Sample	87	75		
Lab Control Sample Dup	93	80		
Method Blank	70	71		
	Client Sample ID Arroyo_Simi-Sed_20220425 Arroyo_Simi-Sed_20220425 Arroyo_Simi-Sed_20220425 Lab Control Sample Lab Control Sample Dup Method Blank	Client Sample IDDCB1Arroyo_Simi-Sed_2022042563Arroyo_Simi-Sed_2022042574Arroyo_Simi-Sed_2022042578Lab Control Sample87Lab Control Sample Dup93Method Blank70	Client Sample ID         DCB1         TCX1           Arroyo_Simi-Sed_20220425         63         59           Arroyo_Simi-Sed_20220425         74         72           Arroyo_Simi-Sed_20220425         78         73           Lab Control Sample Dup         93         80           Method Blank         70         71	Prep Type: Total/NAPercent Surrogate Recovery (Acceptance Limits)DCB1TCX1Client Sample ID(20-155)(25-126)Arroyo_Simi-Sed_202204256359Arroyo_Simi-Sed_202204257472Arroyo_Simi-Sed_202204257873Lab Control Sample8775Lab Control Sample Dup9380Method Blank7071

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

\_\_\_\_\_

Job ID: 570-93645-1

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

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

#### Lab Sample ID: MB 570-230062/1-A Matrix: Solid Analysis Batch: 231306

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.0	0.14	ug/Kg		04/28/22 09:33	05/04/22 03:21	1
4,4'-DDE	ND		1.0	0.14	ug/Kg		04/28/22 09:33	05/04/22 03:21	1
4,4'-DDT	ND		1.0	0.23	ug/Kg		04/28/22 09:33	05/04/22 03:21	1
Chlordane (technical)	ND		5.0	0.82	ug/Kg		04/28/22 09:33	05/04/22 03:21	1
Dieldrin	ND		0.20	0.11	ug/Kg		04/28/22 09:33	05/04/22 03:21	1
Toxaphene	ND		5.0	3.1	ug/Kg		04/28/22 09:33	05/04/22 03:21	1
	МВ	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	98		27 - 176				04/28/22 09:33	05/04/22 03:21	1
Tetrachloro-m-xylene	86		20 - 163				04/28/22 09:33	05/04/22 03:21	1

#### Lab Sample ID: LCS 570-230062/2-A Matrix: Solid Analysis Batch: 231306

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
4,4'-DDD	5.00	6.02		ug/Kg		120	41 - 140	
4,4'-DDE	5.00	6.23		ug/Kg		125	46 - 132	
4,4'-DDT	5.00	7.59	LQ	ug/Kg		152	40 - 136	
cis-Chlordane	5.00	5.22		ug/Kg		104	42 - 128	
Dieldrin	5.00	5.39		ug/Kg		108	40 - 130	
trans-Chlordane	5.00	5.30		ug/Kg		106	20 - 166	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	105		27 - 176
Tetrachloro-m-xylene	98		20 - 163

#### Lab Sample ID: LCSD 570-230062/3-A Matrix: Solid Analysis Batch: 231306

Analysis Batch: 231306							Prep Ba	tch: 2	30062
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
4,4'-DDD	5.00	5.73		ug/Kg		115	41 - 140	5	22
4,4'-DDE	5.00	5.80		ug/Kg		116	46 - 132	7	20
4,4'-DDT	5.00	7.16	LQ	ug/Kg		143	40 - 136	6	21
cis-Chlordane	5.00	5.01		ug/Kg		100	42 - 128	4	20
Dieldrin	5.00	5.24		ug/Kg		105	40 - 130	3	21
trans-Chlordane	5.00	5.08		ug/Kg		102	20 - 166	4	44

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	101		27 - 176
Tetrachloro-m-xylene	93		20 - 163

#### Job ID: 570-93645-1

Prep Type: Total/NA Prep Batch: 230062

**Client Sample ID: Method Blank** 

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# **Client Sample ID: Lab Control Sample**

Prep	Type: T	otal/NA
Prep	<b>Batch:</b>	230062

Prep Type: Total/NA

125	46 - 132	
152	40 - 136	
104	42 - 128	
108	40 - 130	
106	20 - 166	

**Client Sample ID: Lab Control Sample Dup** 

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

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

Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231306	5-1 MS				Clie	nt Samp	le ID:	Arroyo	Simi-Se Prep Ty Prep Ba	d_2022 pe: Tot atch: 23	20425 al/NA 30062
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
4,4'-DDD	ND		10.0	9.44		ug/Kg		94	13 - 178		
4,4'-DDE	0.28	J,DX	10.0	10.1		ug/Kg		98	10 - 174		
4,4'-DDT	ND	LQ	10.0	10.8		ug/Kg		108	10 - 169		
cis-Chlordane	ND		10.0	7.61		ug/Kg		76	10 - 153		
Dieldrin	ND		10.0	5.80		ug/Kg		58	34 - 127		
trans-Chlordane	ND		10.0	7.77		ug/Kg		77	17 - 152		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
DCB Decachlorobiphenyl (Surr)	78		27 - 176								
Tetrachloro-m-xylene	68		20 - 163								
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231306	-1 MSD				Clie	nt Samp	le ID:	Arroyo	Simi-Se Prep Ty Prep Ba	d_2022 pe: Tot	20425 al/NA 30062
· ······ <b>·</b> · · · · · · · · · · · · · ·	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
4,4'-DDD	ND		9.97	8.99		ug/Kg		90	13 - 178	5	40
4,4'-DDE	0.28	J,DX	9.97	9.72		ug/Kg		95	10 - 174	4	40
4,4'-DDT	ND	LQ	9.97	10.2		ug/Kg		103	10 - 169	5	40
cis-Chlordane	ND		9.97	7.37		ug/Kg		74	10 - 153	3	40
Dieldrin	ND		9.97	7.21		ug/Kg		72	34 - 127	22	40

7.52

ug/Kg

trans-Chlordane ND 9.97 MSD MSD Surrogate %Recovery Qualifier Limits DCB Decachlorobiphenyl (Surr) 76 27 - 176 Tetrachloro-m-xylene 68 20 - 163

# Method: 8082 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 570-230	ample ID: MB 570-230062/1-A						Client Sample ID: Method Blank			
Matrix: Solid								Prep Type: To	otal/NA	
Analysis Batch: 231174								Prep Batch:	230062	
-	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Aroclor-1016	ND		10	7.8	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
Aroclor-1221	ND		10	7.8	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
Aroclor-1232	ND		10	7.8	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
Aroclor-1242	ND		10	7.8	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
Aroclor-1248	ND		10	7.8	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
Aroclor-1254	ND		10	5.1	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
Aroclor-1260	ND		10	5.1	ug/Kg		04/28/22 09:33	05/03/22 09:42	1	
	MB	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
DCB Decachlorobiphenyl (Surr)	70		20 - 155				04/28/22 09:33	05/03/22 09:42	1	
Tetrachloro-m-xylene (Surr)	71		25 - 126				04/28/22 09:33	05/03/22 09:42	1	

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17 - 152

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#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

# Method: 8082 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 570-2 Matrix: Solid	30062/6-A					Clier	nt Sai	mple ID	: Lab Cor Prep Ty	ntrol Sa pe: Tot	mple al/NA
Analysis Batch: 231174									Prep Ba	atch: 23	80062
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Aroclor-1016			20.0	18.0		ug/Kg		90	50 - 150		
Aroclor-1260			20.0	17.7		ug/Kg		89	50 - 150		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
DCB Decachlorobiphenyl (Surr)	87		20 - 155								
Tetrachloro-m-xylene (Surr)	75		25 - 126								
Lab Sample ID: LCSD 570	-230062/7-A				C	lient Sa	mple	ID: Lat	o Control	Sample	Dup
Matrix: Solid									Prep Ty	pe: Tot	al/NA
Analysis Batch: 231174									Prep Ba	atch: 23	80062
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016			20.0	19.4		ug/Kg		97	50 - 150	8	30
Aroclor-1260			20.0	20.0		ug/Kg		100	50 - 150	12	25
	LCSD	LCSD									
Surrogate	%Recoverv	Qualifier	l imits								
DCB Decachlorobiphenyl (Surr)	93	Quanner	20 155								
Tetrachloro-m-xylene (Surr)	80		25 126								
			201720								
Lab Sample ID: 570-93645	-1 MS		201120		Clie	nt Samp	le ID:	Arroyo	o Simi-Se	d 2022	20425
Lab Sample ID: 570-93645 Matrix: Solid	-1 MS		201720		Clie	nt Samp	le ID:	Arroyo	o_Simi-Se Prep Tv	d_2022 pe: Tot	20425 al/NA
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174	-1 MS		201720		Clie	nt Samp	le ID:	Arroyo	o_Simi-Se Prep Ty Prep Ba	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174	-1 MS Sample	Sample	Spike	MS	Clie	nt Samp	le ID:	Arroyo	D_Simi-Se Prep Ty Prep Ba %Rec	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte	-1 MS Sample Result	Sample Qualifier	Spike Added	MS Result	Clie MS Qualifier	nt Samp <sup>Unit</sup>	le ID: D	Arroyo %Rec	D_Simi-Se Prep Ty Prep Ba %Rec Limits	d_2022 pe: Tot atch: 23	20425 al/NA 30062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016	-1 MS Sample Result ND	Sample Qualifier	Spike Added	MS Result 17.4	Clie MS Qualifier	nt Samp Unit ug/Kg	le ID: D	Arroyo %Rec 87	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260	-1 MS Sample Result ND ND	Sample Qualifier	Spike Added 20.0 20.0	MS <u>Result</u> 17.4 16.4	Clie MS Qualifier	nt Samp Unit ug/Kg ug/Kg	le ID: D	<b>Arroyc</b> <b>%Rec</b> 87 82	<b>Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260	-1 MS Sample Result ND ND	Sample Qualifier	<b>Spike</b> Added 20.0 20.0	MS Result 17.4 16.4	Clie MS Qualifier	nt Samp Unit ug/Kg ug/Kg	le ID: D	<b>Arroyc</b> %Rec 87 82	<b>D_Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 30062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260	-1 MS Sample Result ND ND MS	Sample Qualifier MS	Spike Added 20.0 20.0	MS <u>Result</u> 17.4 16.4	Clie MS Qualifier	nt Samp Unit ug/Kg ug/Kg	le ID: D	<b>Arroyc</b> <b>%Rec</b> 87 82	Description Descri	d_2022 pe: Tot atch: 23	20425 al/NA 30062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate	-1 MS Sample Result ND ND MS %Recovery	Sample Qualifier MS Qualifier	Spike Added 20.0 20.0	MS <u>Result</u> 17.4 16.4	Clie MS Qualifier	nt Samp Unit ug/Kg ug/Kg	le ID: D	<b>Arroyc</b> <u>%Rec</u> 87 82	<b>D_Simi-Se</b> Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr)	-1 MS Sample Result ND ND MS %Recovery 74	Sample Qualifier MS Qualifier	Spike           Added           20.0           20.0           20.0           20.0	MS Result 17.4 16.4	Clie MS Qualifier	nt Samp Unit ug/Kg ug/Kg	le ID: D	<b>Arroyc</b> <u>%Rec</u> 87 82	<b>D_Simi-Se</b> Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr)	-1 MS Sample Result ND ND MS %Recovery 74 72	Sample Qualifier MS Qualifier	Spike           Added           20.0           20.0           20.0           20.0           20.1           20.2	MS Result 17.4 16.4	Clie MS Qualifier	nt Samp Unit ug/Kg ug/Kg	le ID: D	<b>Arroyc</b> %Rec 87 82	<b>D_Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 20062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr)	-1 MS Sample Result ND ND MS %Recovery 74 72	Sample Qualifier MS Qualifier	Spike           Added           20.0           20.0           20.0           20.155           25 - 126	MS Result 17.4 16.4	Clie MS Qualifier	Unit ug/Kg ug/Kg	le ID:	<b>Arroyc</b> <b>%Rec</b> 87 82	<b>Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180	d_2022 pe: Tot atch: 23	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD	Sample Qualifier MS Qualifier	Spike           Added           20.0           20.0           20.0           20.155           25 - 126	MS Result 17.4 16.4	Clie MS Qualifier Clie	Unit ug/Kg ug/Kg	le ID: D le ID:	Arroyo %Rec 87 82	<b>Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180 20 - 180	d_2022 pe: Tot atch: 23 	20425 al/NA 80062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 221174	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD	Sample Qualifier MS Qualifier	Spike           Added           20.0           20.0           20.0           20.0           20.155           25 - 126	MS <u>Result</u> 17.4 16.4	Clie MS Qualifier Clie	Unit ug/Kg ug/Kg	le ID: D le ID:	Arroyo %Rec 87 82	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot	20425 al/NA 30062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD	Sample Qualifier MS Qualifier	Spike           Added           20.0           20.0           20.0           20.0           20.155           25 - 126	MS <u>Result</u> 17.4 16.4	Clie MS Qualifier Clie	Unit ug/Kg ug/Kg	le ID: D le ID:	Arroyo %Rec 87 82	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180 20 - 180 20 - 180 Prep Ty Prep Ba	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23	20425 al/NA 30062 20425 al/NA 30062
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Posult	Sample Qualifier MS Qualifier Sample Qualifier	Spike           Added           20.0           20.0           20.0           Limits           20 - 155           25 - 126           Spike           Added	MS Result 17.4 16.4 MSD	Clie MS Qualifier Clie MSD Qualifier	nt Samp	le ID: D le ID:	Arroyce %Rec 87 82 Arroyce %Rec	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180	d_2022 pe: Tot atch: 23 d_2022 pe: Tot atch: 23	20425 al/NA 60062 20425 al/NA 80062 RPD
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Result	Sample Qualifier MS Qualifier Sample Qualifier	Spike           Added           20.0           20.0           20.0           Limits           20 - 155           25 - 126           Spike           Added           20.0	MS Result 17.4 16.4 MSD Result	Clie MS Qualifier Clie MSD Qualifier	Unit ug/Kg ug/Kg	le ID: D le ID: D	Arroy           %Rec           87           82   Arroy           %Rec           %Rec	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180 D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23  	20425 al/NA 20062 20425 al/NA 20062 RPD Limit
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Result ND ND	Sample Qualifier MS Qualifier Sample Qualifier	Spike           Added           20.0           20.0           20.0           Limits           20 - 155           25 - 126           Spike           Added           20.0	MS Result 17.4 16.4 MSD Result 18.0 17 °	Clie MS Qualifier Clie MSD Qualifier	Unit ug/Kg ug/Kg ug/Kg	le ID: D le ID: D	Arroy           %Rec           87           82           Arroy           %Rec           90           90	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180 D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23    <u></u>	20425 al/NA 20062 20425 al/NA 20062 RPD Limit 40
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Result ND ND ND	Sample Qualifier MS Qualifier Sample Qualifier	Spike           Added           20.0           20.0           20.155           25 - 126           Spike           Added           20.0	MS Result 17.4 16.4 MSD Result 18.0 17.8	Clie MS Qualifier Clie MSD Qualifier	Unit ug/Kg ug/Kg nt Samp Unit ug/Kg ug/Kg	le ID: D D	Arroy           %Rec           87           82           Arroy           MRec           90           89	<b>D_Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180 20 - 180 <b>D_Simi-Se</b> <b>Prep Ty</b> <b>Prep Ba</b> <b>%Rec</b> <b>Limits</b> 20 - 180 20 - 180 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23   	20425 al/NA 30062 20425 al/NA 30062 RPD Limit 40 40
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Result ND ND ND SD	Sample Qualifier MS Qualifier Sample Qualifier MSD	Spike           Added           20.0           20.0           20.0           20.155           25 - 126           Spike           Added           20.0	MS Result 17.4 16.4 MSD Result 18.0 17.8	Clie MS Qualifier Clie MSD Qualifier	Unit ug/Kg ug/Kg nt Samp Unit ug/Kg ug/Kg	le ID: <u>D</u> <u>D</u>	Arroy           %Rec           87           82           Arroy           MRec           90           89	D_Simi-Se Prep Ty %Rec Limits 20 - 180 20 - 180 20 - 180 D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23    <u></u> <u></u> 8	20425 al/NA 20062 20425 al/NA 20062 RPD Limit 40 40
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Result ND ND MSD %Recovery	Sample Qualifier MS Qualifier Sample Qualifier MSD Qualifier	Spike           Added           20.0           20.0           20.0           20.0           20.155           25 - 126           Spike           Added           20.0           Limits           20 - 155           25 - 126           Spike           Added           20.0           20.0           Limits	MS Result 17.4 16.4 MSD Result 18.0 17.8	Clie MS Qualifier Clie MSD Qualifier	nt Samp	le ID: D D	Arroya %Rec 87 82 Arroya %Rec 90 89	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180 D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23    8	20425 al/NA 30062 20425 al/NA 30062 RPD Limit 40 40
Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr) Tetrachloro-m-xylene (Surr) Lab Sample ID: 570-93645 Matrix: Solid Analysis Batch: 231174 Analyte Aroclor-1016 Aroclor-1260 Surrogate DCB Decachlorobiphenyl (Surr)	-1 MS Sample Result ND ND MS %Recovery 74 72 -1 MSD Sample Result ND ND MSD %Recovery 78	Sample Qualifier MS Qualifier Sample Qualifier MSD Qualifier	Spike           Added           20.0           20.0           20.0           20.0           Limits           20 - 155           25 - 126           Spike           Added           20.0           Limits           20.0           20.0           20.0           20.0           20.0           20.0           20.0           20.0           20.0	MS <u>Result</u> 17.4 16.4 MSD <u>Result</u> 18.0 17.8	Clie MS Qualifier Clie MSD Qualifier	nt Samp	le ID: D D	Arroyo %Rec 87 82 Arroyo %Rec 90 89	D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180 D_Simi-Se Prep Ty Prep Ba %Rec Limits 20 - 180 20 - 180 20 - 180	d_2022 pe: Tot atch: 23  d_2022 pe: Tot atch: 23  <u>RPD</u>  3 	20425 al/NA 30062 20425 al/NA 30062 RPD Limit 40 40

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Job ID: 570-93645-1

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Method: SM 4500 NH3 D - Ammonia Lab Sample ID: MB 570-233182/1-A **Client Sample ID: Method Blank** Matrix: Solid Prep Type: Total/NA Analysis Batch: 233186 Prep Batch: 233182 MB MB **Result Qualifier** RL MDL Unit Analyzed Dil Fac Analyte D Prepared 10.0 05/10/22 16:39 05/10/22 17:54 Ammonia (as N) ND 2.00 mg/Kg 1 Lab Sample ID: LCS 570-233182/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Prep Type: Total/NA Analysis Batch: 233186 **Prep Batch: 233182** Spike LCS LCS %Rec Added Result Qualifier D %Rec Limits Analyte Unit 49.8 67 - 127 Ammonia (as N) 42.17 mg/Kg 85 Lab Sample ID: LCSD 570-233182/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 233186 Prep Batch: 233182 Spike LCSD LCSD %Rec RPD Added Result Qualifier Limits Limit Analyte Unit D %Rec RPD Ammonia (as N) 50.0 40.79 82 67 - 127 3 13 mg/Kg Lab Sample ID: 570-93645-1 MS Client Sample ID: Arroyo\_Simi-Sed\_20220425 Matrix: Solid Prep Type: Total/NA Analysis Batch: 233186 **Prep Batch: 233182** Spike MS MS %Rec Sample Sample Analyte **Result Qualifier** Added Result Qualifier Unit %Rec Limits D 49.6 39.35 54 - 168 Ammonia (as N) ND mg/Kg 79 Lab Sample ID: 570-93645-1 MSD Client Sample ID: Arroyo\_Simi-Sed\_20220425 Matrix: Solid Prep Type: Total/NA Analysis Batch: 233186 Prep Batch: 233182 MSD MSD Sample Sample Spike %Rec RPD Analyte **Result Qualifier** Added Limits **Result Qualifier** Unit D %Rec RPD Limit ND 49.8 38.96 78 54 - 168 Ammonia (as N) mg/Kg 1 11

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

Lab Sample ID: 570-93645-1 DU Matrix: Solid Analysis Batch: 232053			Client Sample ID: Arroyo_Simi-Sed_20220 Prep Type: Total					
Analysis Batch: 232055	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Clay (less than 0.00391 mm)	0.17		0.15		%		13	20
Coarse Sand (0.5mm to 1mm)	44.37		44.03		%		0.8	20
Fine Sand (0.125 to 0.25mm)	2.79		2.79		%		0	20
Gravel (greater than 2 mm)	11.83		10.06		%		16	20
Medium Sand (0.25 to 0.5 mm)	15.26		15.41		%		1	20
Silt (0.00391 to 0.0625mm)	0.55		0.42		%		27	20
Total Silt and Clay (0 to 0.0626mm)	0.72		0.57		%		23	20
Very Coarse Sand (1 to 2mm)	24.47		26.67		%		9	20
Very Fine Sand (0.0625 to 0.125 mm)	0.56		0.48		%		15	20

# **QC Association Summary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Job ID: 570-93645-1

# GC Semi VOA

#### Prep Batch: 230062

Lab Sample ID 570-93645-1	Client Sample ID Arroyo Simi-Sed 20220425	Prep Type Total/NA	Matrix	Method 3546	Prep Batch
MB 570-230062/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-230062/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 570-230062/6-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-230062/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
LCSD 570-230062/7-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-93645-1 MS	Arroyo_Simi-Sed_20220425	Total/NA	Solid	3546	
570-93645-1 MS	Arroyo_Simi-Sed_20220425	Total/NA	Solid	3546	
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	Total/NA	Solid	3546	
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	Total/NA	Solid	3546	

#### Analysis Batch: 231174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93645-1	Arroyo_Simi-Sed_20220425	Total/NA	Solid	8082	230062
MB 570-230062/1-A	Method Blank	Total/NA	Solid	8082	230062
LCS 570-230062/6-A	Lab Control Sample	Total/NA	Solid	8082	230062
LCSD 570-230062/7-A	Lab Control Sample Dup	Total/NA	Solid	8082	230062
570-93645-1 MS	Arroyo_Simi-Sed_20220425	Total/NA	Solid	8082	230062
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	Total/NA	Solid	8082	230062

#### Analysis Batch: 231306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93645-1	Arroyo_Simi-Sed_20220425	Total/NA	Solid	8081A	230062
MB 570-230062/1-A	Method Blank	Total/NA	Solid	8081A	230062
LCS 570-230062/2-A	Lab Control Sample	Total/NA	Solid	8081A	230062
LCSD 570-230062/3-A	Lab Control Sample Dup	Total/NA	Solid	8081A	230062
570-93645-1 MS	Arroyo_Simi-Sed_20220425	Total/NA	Solid	8081A	230062
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	Total/NA	Solid	8081A	230062

# General Chemistry Prep Batch: 233182

Lab Sample ID 570-93645-1	Client Sample ID Arroyo_Simi-Sed_20220425	Prep Type Total/NA	Matrix Solid	Method SM 4500 NH3 B	Prep Batch
MB 570-233182/1-A	Method Blank	Total/NA	Solid	SM 4500 NH3 B	
LCS 570-233182/2-A	Lab Control Sample	Total/NA	Solid	SM 4500 NH3 B	
LCSD 570-233182/3-A	Lab Control Sample Dup	Total/NA	Solid	SM 4500 NH3 B	
570-93645-1 MS	Arroyo_Simi-Sed_20220425	Total/NA	Solid	SM 4500 NH3 B	
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	Total/NA	Solid	SM 4500 NH3 B	

#### Analysis Batch: 233186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93645-1	Arroyo_Simi-Sed_20220425	Total/NA	Solid	SM 4500 NH3 D	233182
MB 570-233182/1-A	Method Blank	Total/NA	Solid	SM 4500 NH3 D	233182
LCS 570-233182/2-A	Lab Control Sample	Total/NA	Solid	SM 4500 NH3 D	233182
LCSD 570-233182/3-A	Lab Control Sample Dup	Total/NA	Solid	SM 4500 NH3 D	233182
570-93645-1 MS	Arroyo_Simi-Sed_20220425	Total/NA	Solid	SM 4500 NH3 D	233182
570-93645-1 MSD	Arroyo_Simi-Sed_20220425	Total/NA	Solid	SM 4500 NH3 D	233182

**Eurofins Calscience** 

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# **QC Association Summary**

Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

#### Geotechnical

#### Analysis Batch: 232053

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
570-93645-1	Arroyo_Simi-Sed_20220425	Total/NA	Solid	D4464	
LCS 570-232053/4	Lab Control Sample	Total/NA	Solid	D4464	
LCSD 570-232053/6	Lab Control Sample Dup	Total/NA	Solid	D4464	
570-93645-1 DU	Arroyo_Simi-Sed_20220425	Total/NA	Solid	D4464	

Job ID: 570-93645-1

#### **Eurofins Calscience**

# Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

#### Client Sample ID: Arroyo\_Simi-Sed\_20220425 Date Collected: 04/25/22 07:45 Date Received: 04/25/22 16:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3546			19.98 g	2 mL	230062	04/28/22 09:33	SP9M	ECL 4
Total/NA	Analysis	8081A		1			231306	05/04/22 09:54	UHHN	ECL 4
	Instrumer	t ID: GC52A								
Total/NA	Prep	3546			19.98 g	2 mL	230062	04/28/22 09:33	SP9M	ECL 4
Total/NA	Analysis	8082		1			231174	05/03/22 11:17	UHHN	ECL 4
	Instrumer	t ID: GC81A								
Total/NA	Prep	SM 4500 NH3 B			2.53 g	50 mL	233182	05/10/22 16:39	GG0B	ECL 4
Total/NA	Analysis	SM 4500 NH3 D		1			233186	05/10/22 17:54	GG0B	ECL 4
	Instrumer	t ID: NOEQUIP								
Total/NA	Analysis	D4464		1			232053	05/05/22 13:39	C4LT	ECL 4
	Instrumer	It ID: NOEQUIP								

#### Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Lab Sample ID: 570-93645-1 Matrix: Solid

Job ID: 570-93645-1

# Lab Chronicle

# Accreditation/Certification Summary

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

#### Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-30-22
California	SCAQMD LAP	17LA0919	12-01-22
California	State	2944	09-30-22
Guam	State	21-003R	06-22-22
Nevada	State	CA00111	07-31-22
Oregon	NELAP	CA300001	01-31-23
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-12-22

Job ID: 570-93645-1

# **Method Summary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Method	Method Description	Protocol	Laboratory
8081A	Organochlorine Pesticides (GC)	SW846	ECL 4
8082	Polychlorinated Biphenyls (PCBs) (GC)	SW846	ECL 4
SM 4500 NH3 D	Ammonia	SM	ECL 4
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 4
SM 4500 NH3 B	Distillation, Ammonia	SM	ECL 4

#### **Protocol References:**

ASTM = ASTM International

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Sample Summary

Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment Job ID: 570-93645-1

			<b>0</b> / .	
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-93645-1	Arroyo_Simi-Sed_20220425	Solid	04/25/22 07:45	04/25/22 16:00

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Page 1 of 1



А А А Α А А А А Client Name/Address: ANALYSIS REQUIRED Field Readings Meter serial # Haley & Aldrich Field readings: (Include units) 5333 Mission Center Rd Suite 300 4,4-DDT Crassostrea Fime of readings\_ 0765Project: San Diego, CA 92108 Boeing-SSFL NPDES Eurofins Calscience Project Manager Virendra Patel Permit 2015 Total Organic Carbon (9060) - Dry Weight Corrected Toxaphene, 4,4-DDD 4,4-DDE 2841 Dow Avenue Suite #100 48-hour Bivalve Embryo toxicity (Mytlius edulis or giges) (EPAR-95/136) ABC Labs In Venture CA Annual Sediment Arroyo Simi-Frontier Park pH unit Tustin CA 92780 Chronic 10-day eohaustorius estuarius Toxicity (EPA/600/R-94/025) ABC Labs in Ventura CA Tel: 714-895-5494 FEE ECI Project #44024446 mg/L Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Project Manager Katherine Miller Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and Size Distribution (D422M) Total Ammonia (SM4500-NH3-D) 180 520.289.8606, 520.904.6944 (cell) в filiates, and Eurofins Calscience Laboratories Inc Conductivity umhos/cm  $\mathcal{O}$ O. Velocity ft/sec Sampler Adrien Mobeka Field Manager Mark Dominick Dieldrin % Moisture (2540G) Field readings QC 978.234.5033, 818.599.0702 (cell) PCBs (SW8082) Checked hv: Chlordane, C (SW8081A) Date/Time: 04.-2 5-1022 Particle Sample Sample Sample I.D. Sampling Date/Time Container Type # of Cont. Preservative Bottle # MS/MSD Comments Description Matrix SE 9 oz Jar 3 None 165 Yes х SF 9 oz Jar 1 None 246 No х SE 9 oz Jar 3 None 280 Yes х SE 3 None Yes х 9 oz Jar 290 Arroyo Simi Arroyo\_Simi-Sed\_20220425 4/25/2022 /0745 1L wide mouth 3 SE None 295 No Х Deriver to ABC cabs in Ventura CA Plastic 1L wide mouth SE 4 4°C in the Dark 300 х Keep sample in cooler in the dark until delivered to ABC Labs No Plastic SE 9 oz Jar 1 None 305 No х Sample time added by M. Dominick 4/26/2022 SË 9 oz Jar None 310 χ 1 No Legend: A=Annual Date/Time: Relinquished By Company Received By Date/Time um-around time: (Check EC 10501 24 Hour 72 Hour 4/28/22 - 10 Day: 25-2022 22 8 Hour: 5 Day: ÉC 1/25/22 1307 ų 25 1302 1 22 Relinguished By Company: Received By Date/Time Date/Time: mples for 6 months ata Requirements: (Check) No Level | All Level IV \* Hard-delivered by HiA to ADC in Vertura, CA 3.2/4.9 IR96 2019-2020 Rainy Season Version 2

4

5/18/2022

2



Page 1 of 1



570-93645 Chain of Custody

А А Α Α А А А Α Client Name/Address: ANALYSIS REQUIRED Field Readings Meter serial # Haley & Aldrich Field readings: (Include units) 5333 Mission Center Rd Suite 300 4,4-DDT Crassostrea Time of readings 0765Project: San Diego, CA 92108 Boeing-SSFL NPDES Eurofins Calscience Project Manager Virendra Patel Permit 2015 Total Organic Carbon (9060) - Dry Weight Corrected Toxaphene, 4,4-DDD 4,4-DDE 2841 Dow Avenue Suite #100 48-hour Bivalve Embryo toxicity (Mytlius edulis or gigas) (EPAR-95/136) ABC Labs in Ventura CA Annual Sediment Arroyo Simi-Frontier Park pH unit Tustin CA 92780 Chronic 10-day eohaustorius estuarius Toxicity (EPA/800/R-94/025) ABC Labs in Ventura CA Tel: 714-895-5494 FEF ECI Project #44024446 mg/L Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Project Manager Katherine Miller Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and Distribution (D422M) Total Ammonia (SM4500-NH3-D) 520.289.8606, 520.904.6944 (cell) в '80 filiates, and Eurofins Calscience Laboratories Inc. Conductivity umbos/cm 0.  $\mathcal{O}$ Velocity ft/sec Sampler Adrien Mobeka Field Manager Mark Dominick Dieldrin Molsture (2540G) Fleid readings QC 978.234.5033, 818.599.0702 (cell) PCBs (SW8082) Checked hr Size Chlordane, C (SW8081A) Date/Time: 04 5-2022 Particle Sample Sample Sample I.D. Sampling Date/Time Container Type # of Cont. Preservative Bottle # MS/MSD Comments % Description Matrix SE 9 oz Jar 3 None 165 Yes х SF 9 oz Jar 1 None 246 No х SE 9 oz Jar 3 None 280 Yes х SE 3 None 290 х 9 oz Jar Yes Arroyo Simi Arroyo\_Simi-Sed\_20220425 4/25/2022 1L wide mouth 3 SE None 295 No Х Deliver to ABC Labs in Ventura CA Plastic 1L wide mouth SE 4 Keep sample in cooler in the dark until delivered to ABC Labs 4"C in the Dark 300 Х No Plastic SE 9 oz Jar 1 None 305 No х SE 9 oz Jar None 310 No х 1 Legend: A=Annual Relinquished By Date/Time: Company Received By Date/Time: um-around time: (Check EC 1050 24 Hour 72 Hour\_ 4/28/22 - 10 Day: -25-2022 22 8 Hour: 5 Day: Norma quished By ÉC 125/22 130 eority: (Check ų 1302 10 25 22 Relinquished By Company: Received By Date/Time: notes for 6 months ata Requirements: (Check) No Level | All Level IV \* Hard-delivered by HiA to ADC in Ventra, CA

3.2/4.9 IR96

4

5/18/2022

2019-2020 Rainy Season

Version 2

Client: Haley & Aldrich, Inc.

#### Login Number: 93645 List Number: 1 Creator: Patel, Virendra

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

Job Number: 570-93645-1

List Source: Eurofins Calscience

# Environment Testing America

# **ANALYTICAL REPORT**

## Eurofins Calscience 2841 Dow Avenue, Suite 100 Tustin, CA 92780 Tel: (714)895-5494

# Laboratory Job ID: 570-93645-2

Client Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

# For:

..... Links

Review your project results through

EOL

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The

www.eurofinsus.com/Env

Visit us at:

Expert

Haley & Aldrich, Inc. 400 E Van Buren St. Suite 545 Phoenix, Arizona 85004

Attn: Ms. Katherine Miller

Virentra R Paty

Authorized for release by: 5/17/2022 8:37:04 AM

Virendra Patel, Project Manager I (714)895-5494 Virendra.Patel@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# **Definitions/Glossary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

3

# Qualifiers

#### **General Chemistry**

Qualifier	Qualifier Description					
BU	Analyzed out of holding time					
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL					

# Glossary

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

#### Job ID: 570-93645-2

#### Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-93645-2

**Case Narrative** 

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/25/2022 1:02 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.9° C.

#### Metals

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

#### **General Chemistry**

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

Job ID: 570-93645-2

Client: Haley & Aldrich, Inc.
Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Client Sample ID: Arroyo_Simi-Sed_20220425						Lab S	Sam	ple ID:	570-93645-1
Analyte Total Organic Carbon - Average Dup	<b>Result</b> 1300	Qualifier J,DX		<b>MDL</b> 110	Unit mg/Kg	Dil Fac	D/∞ M/90	lethod 060A	Prep Type Total/NA

Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment Job ID: 570-93645-2

# **General Chemistry**

Client Sample ID: Arroyo_Simi-Sed_20220425 Date Collected: 04/25/22 07:45 Date Received: 04/25/22 16:00						Lab Sa	mple ID: 570-9 Matrix	3645-1 :: Solid	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	1300	J,DX	2200	110	mg/Kg	☆		05/10/22 14:14	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.8	BU	0.10	0.10	%			05/11/22 13:14	1
Percent Solids	90	BU	0.10	0.10	%			05/11/22 13:14	1

RL

2000

Spike

Added

120000

Spike

Added

120000

Spike

Added

120000

Spike

Added

120000

MDL Unit

LCS LCS

LCSD LCSD

MS MS

MSD MSD

**Result Qualifier** 

Result Qualifier

Result Qualifier

118000

115000

121000

124000

Result Qualifier

97 mg/Kg

Unit

Client

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

MB MB **Result Qualifier** 

ND

Sample Sample

1200 J,DX

Sample Sample

1200 J,DX

**Result Qualifier** 

**Result Qualifier** 

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-390132/5

Lab Sample ID: LCS 580-390132/6

Lab Sample ID: LCSD 580-390132/7

Lab Sample ID: 580-113170-A-1 MS

Lab Sample ID: 580-113170-A-1 MSD

Lab Sample ID: 580-113170-A-1 DU

Analysis Batch: 390132

Analysis Batch: 390132

Total Organic Carbon - Average

Total Organic Carbon - Average Dup

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Matrix: Solid

Analyte

Analyte

Analyte

Analyte

Analyte

Dup

Dup

Dup

Dup

			Job ID:	570-93	645-2	
	Clie	ent Sam	ple ID: M Prep Ty	ethod I pe: Tot	Blank al/NA	
						5
D	Р	repared	Analyz	ed l	Dil Fac	
			05/10/22	13:48	1	
Client	Sai	mple ID	: Lab Cor Prep Ty	itrol Sa pe: Tot	mple al/NA	7
						8
			%Rec			0
Unit	D	%Rec	Limits			9
mg/Kg		98	80 - 120			
			0	•	<b>D</b>	
lient Sam	pie	ID: Lab		Sample		
			Fiep iy	pe. Tot	al/INA	
			%Rec		RPD	
Unit	D	%Rec	Limits	RPD	Limit	
mg/Kg	_	96	80 - 120	3	20	13
	CI	ient Sa	mple ID: I	Matrix \$	Spike	
			Prep Ty	pe: Tot	al/NA	
			%Rec			
Unit	D	%Rec	Limits			
mg/Kg	_	100	75 - 125			
Client Sa	mp	le ID: M	atrix Spil	ce Dup	licate	
			Prep Ty	pe: Tot	al/NA	
			%Rec		RPD	
Unit	D	%Rec	Limits	RPD	Limit	
mg/Kg	_	102	75 - 125	2	20	

# **Client Sample ID: Duplicate** Prep Type: Total/NA

Analysis Batch: 390132								
-	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limi
Total Organic Carbon - Average	1200	J,DX	 1230	J,DX	mg/Kg		 7	20

```
Dup
```

#### Method: Moisture - 2540 - Percent Moisture

Lab Sample ID: 570-93645- Matrix: Solid Analysis Batch: 390242	1 DU			Clie	nt Samp	ble ID: /	Arroyo_Simi-Sed_202 Prep Type: Tot	20425 tal/NA
-	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Moisture	9.8	BU	 10		%			20
Percent Solids	90	BU	90		%		0.2	20

# **QC Association Summary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

# **General Chemistry**

#### Analysis Batch: 390132

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
570-93645-1	Arroyo_Simi-Sed_20220425	Total/NA	Solid	9060A	
MB 580-390132/5	Method Blank	Total/NA	Solid	9060A	
LCS 580-390132/6	Lab Control Sample	Total/NA	Solid	9060A	
LCSD 580-390132/7	Lab Control Sample Dup	Total/NA	Solid	9060A	
580-113170-A-1 MS	Matrix Spike	Total/NA	Solid	9060A	
580-113170-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	9060A	
580-113170-A-1 DU	Duplicate	Total/NA	Solid	9060A	
_ Analysis Batch: 3902	242				

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-93645-1	Arroyo_Simi-Sed_20220425	Total/NA	Solid	Moisture - 2540	
570-93645-1 DU	Arroyo_Simi-Sed_20220425	Total/NA	Solid	Moisture - 2540	

# Lab Chronicle

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Job ID: 570-93645-2

#### Client Sample ID: Arroyo\_Simi-Sed\_20220425 Date Collected: 04/25/22 07:45 Date Received: 04/25/22 16:00

## Lab Sample ID: 570-93645-1 Matrix: Solid

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	9060A at ID: TAC105		1			390132	05/10/22 14:14	N1R	FGS SEA
Total/NA	Analysis Instrumer	Moisture - 2540 at ID: NOEQUIP		1			390242	05/11/22 13:14	N1R	FGS SEA

#### Laboratory References:

FGS SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# Accreditation/Certification Summary

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

#### Laboratory: Eurofins Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236	01-19-25
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	07-07-22
Florida	NELAP	E87575	06-30-22
Louisiana	NELAP	03073	06-30-22
Maine	State	WA01273	05-02-24
Montana (UST)	State	NA	04-14-27
New Jersey	NELAP	WA014	06-30-22
New York	NELAP	11662	04-01-23
Oregon	NELAP	4167	07-07-22
US Fish & Wildlife	US Federal Programs	058448	05-31-22
USDA	US Federal Programs	P330-20-00031	02-10-23
Washington	State	C788	07-13-22
Wisconsin	State	399133460	08-31-22

Job ID: 570-93645-2

10

5/17/2022

# **Method Summary**

#### Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Method	Method Description	Protocol	Laboratory
9060A	Organic Carbon, Total (TOC)	SW846	FGS SEA
Moisture - 2540	Percent Moisture	SM	FGS SEA

#### Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

FGS SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Job ID: 570-93645-2

# Sample Summary

Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-93645-1	Arroyo_Simi-Sed_20220425	Solid	04/25/22 07:45	04/25/22 16:00



# Job ID: 570-93645-2
24



Page 1 of 1



570-93645 Chain of Custody

А А А Α А А А А Client Name/Address: ANALYSIS REQUIRED Field Readings Meter serial # Haley & Aldrich Field readings: (Include units) 5333 Mission Center Rd Suite 300 Crassostrea 4,4-DDT Fime of readings\_ 0765Project: San Diego, CA 92108 Boeing-SSFL NPDES Eurofins Calscience Project Manager Virendra Patel Permit 2015 Total Organic Carbon (9060) - Dry Weight Corrected Toxaphene, 4,4-DDD 4,4-DDE 2841 Dow Avenue Suite #100 48-hour Bivalve Embryo toxicity (Mytlius edulis or giges) (EPAR-95/136) ABC Labs In Venture CA Annual Sediment Arroyo Simi-Frontier Park pH unit Tustin CA 92780 Chronic 10-day eohaustorius estuarius Toxicity (EPA/600/R-94/025) ABC Labs in Ventura CA Tel: 714-895-5494 FEE ECI Project #44024446 mg/L Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Project Manager Katherine Miller Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and Size Distribution (D422M) Total Ammonia (SM4500-NH3-D) 180 520.289.8606, 520.904.6944 (cell) в filiates, and Eurofins Calscience Laboratories Inc Conductivity umbos/cm  $\mathcal{O}$ O. Velocity ft/sec Sampler Adrien Mobeka Field Manager Mark Dominick Dieldrin % Moisture (2540G) Field readings QC 978.234.5033, 818.599.0702 (cell) PCBs (SW8082) Checked hv: Chlordane, C (SW8081A) Date/Time: 04.-2 5-1022 Particle Sample Sample Sample I.D. Sampling Date/Time Container Type # of Cont. Preservative Bottle # MS/MSD Comments Description Matrix SE 9 oz Jar 3 None 165 Yes х SF 9 oz Jar 1 None 246 No х SE 9 oz Jar 3 None 280 Yes х SE 3 None Yes х 9 oz Jar 290 Arroyo Simi Arroyo\_Simi-Sed\_20220425 4/25/2022 /0745 1L wide mouth 3 SE None 295 No Х Deriver to ABC cabs in Ventura CA Plastic 1L wide mouth SE 4 4°C in the Dark 300 х Keep sample in cooler in the dark until delivered to ABC Labs No Plastic SE 9 oz Jar 1 None 305 No х Sample time added by M. Dominick 4/26/2022 SË 9 oz Jar None 310 χ 1 No Legend: A=Annual Date/Time: Relinquished By Company Received By Date/Time um-around time: (Check EC 10501 24 Hour 72 Hour 4/28/22 - 10 Day: 25-2022 22 8 Hour: 5 Day: ÉC 1/2/22 1307 ų 25 1302 1 22 Relinguished By Company: Received By Date/Time Date/Time: mples for 6 months ata Requirements: (Check) No Level | All Level IV \* Hard-delivered by HiA to ADC in Vertera, CA

3.2/4.9 IR96

ω

5/17/2022

2019-2020 Rainy Season Version 2

2



Page 1 of 1



570-93645 Chain of Custody

А А А Α А А А Α Client Name/Address: ANALYSIS REQUIRED Field Readings Meter serial # Haley & Aldrich Field readings: (Include units) 5333 Mission Center Rd Suite 300 4,4-DDT Crassostrea Time of readings 0765Project: San Diego, CA 92108 Boeing-SSFL NPDES Eurofins Calscience Project Manager Virendra Patel Permit 2015 Total Organic Carbon (9060) - Dry Weight Corrected Toxaphene, 4,4-DDD 4,4-DDE 2841 Dow Avenue Suite #100 48-hour Bivalve Embryo toxicity (Mytlius edulis or gigas) (EPAR-95/136) ABC Labs in Ventura CA Annual Sediment Arroyo Simi-Frontier Park pH unit Tustin CA 92780 Chronic 10-day eohaustorius estuarius Toxicity (EPA/800/R-94/025) ABC Labs in Ventura CA Tel: 714-895-5494 FEF ECI Project #44024446 mg/L Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Project Manager Katherine Miller Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and Distribution (D422M) Total Ammonia (SM4500-NH3-D) 520.289.8606, 520.904.6944 (cell) в '80 filiates, and Eurofins Calscience Laboratories Inc. Conductivity umbos/cm 0.  $\mathcal{O}$ Velocity ft/sec Sampler Adrien Mobeka Field Manager Mark Dominick Dieldrin Molsture (2540G) Fleid readings QC 978.234.5033, 818.599.0702 (cell) PCBs (SW8082) Checked hr Size Chlordane, C (SW8081A) Date/Time: 04 5-2022 Particle Sample Sample Sample I.D. Sampling Date/Time Container Type # of Cont. Preservative Bottle # MS/MSD Comments % Description Matrix SE 9 oz Jar з None 165 Yes х SF 9 oz Jar 1 None 246 No х SE 9 oz Jar 3 None 280 Yes х SE 3 None 290 х 9 oz Jar Yes Arroyo Simi Arroyo\_Simi-Sed\_20220425 4/25/2022 1L wide mouth 3 SE None 295 No Х Deliver to ABC Labs in Ventura CA Plastic 1L wide mouth SE 4 Keep sample in cooler in the dark until delivered to ABC Labs 4"C in the Dark 300 Х No Plastic SE 9 oz Jar 1 None 305 No х SE 9 oz Jar None 310 No х 1 Legend: A=Annual Relinquished By Date/Time: Company Received By Date/Time: um-around time: (Check EC 1050 24 Hour 72 Hour\_ 4/28/22 - 10 Day: -25-2022 22 8 Hour: 5 Day: Norro quished By ÉC 125/22 130 ų 1302 10 25 22 Relinquished By Company: Received By Date/Time: notes for 6 months ata Requirements: (Check) No Level | All Level IV \* Hard-delivered by HiA to ADC in Vertera, CA

3.2/4.9 IR96

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Page 14 of 17



#### **Eurofins Calscience**

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

Client Contact:

Company:

Address;

Tacoma

State, Zip:

Phone:

Email:

Site

WA, 98424

Project Name:

ity:

Shipping/Receiving

5755 8th Street East,

253-922-2310(Tel)

Client Information (Sub Contract Lab)

Boeing NPDES SSFL Outfalls - Annual Sediment

Sample Identification - Client ID (Lab ID)

Arroyo\_Simi-Sed\_20220425 (570-93645-1)

Eurofins Environment Testing Northwest,

# **Chain of Custody Record**

Lab PM;

E-Mail

Patel, Virendra

Field Filtered Sample (Yes or No)

Matrix

(W=water, S=solid,

O=waste/olf,

BT\*Tissue

A\*Air)

Solid

Note: Since laboratory accreditations are subject to change. Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently

Preservation Code:

Sample

Type

(C=comp.

G=grab)

Sample

Time

07:45

Pacific

Perform MS/MSD (Yes or No)

100

9060A\_DW/ Standard Sol

MOISTURE\_2640G

Х

X

Virendra.Patel@et.eurofinsus.com

Accreditations Required (See note)

State Program - California

Sampler

Phone

5/5/2022

PO #:

WO #:

Project #:

SSOW#:

44024446

Sample Date

4/25/22

Due Date Requested:

TAT Requested (days):



Carrier Tracking No(s):

State of Origin:

California

**Analysis Requested** 

Reurofins Env Am

Special Instructions/Note:

COC No:

Page

JOD #

A - HCL

B - NaOH

C - Zn Acetate

D - Nitric Acid

E - NaHSO4

F - MeOH

I - Ice

Itainers

5 Other:

ъ

Total Number

G - Amchior

J - DI Water

K - EDTA

L - EDA

H - Ascorbic Acid

570-166156.1

Page 1 of 1

570-93645-2

Preservation Codes:

Environment Pating America	
les: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	

1	
1	

5

13

Possible Hazard Identification			Sample Disposal ( A fee n	nay be assessed if samples are retained longer t	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 Re	quirements:	
Empty Kit Relinquished by:	Date:	T	'ime:	Method of Shipment:	
Relinquished by:	Date/Time: 4126/22 1338	Company	Received by:	Date/Time; 4/27/22 //	AEETNU
Relinquished by:	Date/Time:	Company	Récéived by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Custody Seal No.:			Cooler Temperature(s) °C and	Other Remerks R8 17/19	

5/17/2022

Client: Haley & Aldrich, Inc.

### Login Number: 93645 List Number: 1 Creator: Patel, Virendra

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

Job Number: 570-93645-2

List Source: Eurofins Calscience

Client: Haley & Aldrich, Inc.

### Login Number: 93645 List Number: 2 Creator: Presley, Kim A

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	IR8=1.7/1.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
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	

Job Number: 570-93645-2

List Source: Eurofins Seattle

List Creation: 04/27/22 12:29 PM

Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 570-93645-3

Client Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

# For:

Haley & Aldrich, Inc. 400 E Van Buren St. Suite 545 Phoenix, Arizona 85004

Attn: Ms. Katherine Miller

Virentra R Paty

Authorized for release by: 6/9/2022 7:24:17 AM

Virendra Patel, Project Manager I (714)895-5494 Virendra.Patel@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

LINKS **Review your project** results through EOL Have a Question? Ask-The Expert Visit us at: www.eurofinsus.com/Env

# **Table of Contents**

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Method Summary	5
Sample Summary	6
Subcontract Data	7
Chain of Custody	33
Receipt Checklists	35

# **Definitions/Glossary**

## Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Job ID: 570-93645-3

3
5
8

AbbreviationThese commonly used abbreviations may or may not be present in this report.nListed under the "D" column to designate that the result is reported on a dry weight basis%RPercent RecoveryCFLContains Free LiquidCFUColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DLIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	Glossary	
n         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         Daticates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	Abbreviation	These commonly used abbreviations may or may not be present in this report.
%RPercent RecoveryCFLContains Free LiquidCFUColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
CFLContains Free LiquidCFUColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	%R	Percent Recovery
CFUColony Forming UnitCNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	CFL	Contains Free Liquid
CNFContains No Free LiquidDERDuplicate Error Ratio (normalized absolute difference)Dil FacDilution FactorDLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDL OP Construction (Dop discharging in the sample)	CFU	Colony Forming Unit
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	CNF	Contains No Free Liquid
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	DER	Duplicate Error Ratio (normalized absolute difference)
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       DL Q     Description Limit (Dop/DOE)	Dil Fac	Dilution Factor
DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	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)	DLC	Decision Level Concentration (Radiochemistry)
EDL Estimated Detection Limit (Dioxin)	EDL	Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)	LOD	Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)	LOQ	Limit of Quantitation (DoD/DOE)
MCL EPA recommended "Maximum Contaminant Level"	MCL	EPA recommended "Maximum Contaminant Level"
MDA Minimum Detectable Activity (Radiochemistry)	MDA	Minimum Detectable Activity (Radiochemistry)
MDC Minimum Detectable Concentration (Radiochemistry)	MDC	Minimum Detectable Concentration (Radiochemistry)
MDL Method Detection Limit	MDL	Method Detection Limit
ML Minimum Level (Dioxin)	ML	Minimum Level (Dioxin)
MPN Most Probable Number	MPN	Most Probable Number
MQL Method Quantitation Limit	MQL	Method Quantitation Limit
NC Not Calculated	NC	Not Calculated
ND Not Detected at the reporting limit (or MDL or EDL if shown)	ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG Negative / Absent	NEG	Negative / Absent
POS Positive / Present	POS	Positive / Present
PQL Practical Quantitation Limit	PQL	Practical Quantitation Limit
PRES Presumptive	PRES	Presumptive
QC Quality Control	QC	Quality Control
RER Relative Error Ratio (Radiochemistry)	RER	Relative Error Ratio (Radiochemistry)
RL Reporting Limit or Requested Limit (Radiochemistry)	RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD Relative Percent Difference, a measure of the relative difference between two points	RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF Toxicity Equivalent Factor (Dioxin)	TEF	Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)	TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC Too Numerous To Count	TNTC	Too Numerous To Count

#### Laboratory: Eurofins Calscience

Narrative

Job Narrative 570-93645-3

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/25/2022 1:02 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.9° C.

#### Lab Admin

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

#### Subcontract Work

Methods 48-hour Bivalve Embryo toxicity, Bioassay-Chronic 10day eohaustorius: These methods were subcontracted to Aquatic Bioassay & Consulting. The subcontract laboratory certifications are different from that of the facility issuing the final report.

## Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

Job ID: 570-93645-3

Method	Method Description	Protocol	Laboratory
Subcontract	48-hour Bivalve Embryo toxicity	None	Aquatic
Subcontract	Bioassay-Chronic 10day eohaustorius	None	Aquatic

#### Protocol References:

None = None

Laboratory References:

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

**Eurofins Calscience** 

## Client: Haley & Aldrich, Inc. Project/Site: Boeing NPDES SSFL Outfalls - Annual Sediment

**Client Sample ID** 

Arroyo\_Simi-Sed\_20220425

Lab Sample ID

570-93645-1

Sample Summary

Collected

04/25/22 07:45 04/25/22 16:00

Received

Matrix

Solid

5	
_	
	5
	6





June 8, 2022

Virendra Patel Eurofins Calscience 2841 Dow Avenue, Suite 100 Tustin, CA 92780

Dear Virendra Patel:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA/R-95/136.* Results were as follows:

CLIENT:	Eurofins Calscience
SAMPLE I.D.:	Arroyo_Simi-Sed_20220425
DATE RECEIVED:	4/25/2022
ABC LAB, NO.:	CSE0422.136

## CHRONIC MYTILUS SEDIMENT WATER INTERFACE BIOASSAY

) =	100.00 %
=	1.00
=	>100.00 %
=	>100.00 %
	2 = = =

Yours very truly, Scott Johnson

Laboratory Director

29 north olive st. ventura, ca 93001 (805) 643 5621 aquabio.org

CETIS Sur	nmary Rep	ort			Report Test Co	Date: ode/ID:	08 CSE042	Jun-22 16 22.126m / 1	:33 (p 1 of 15-7899-29	1) 598		
Mussel Shell	Development T	est					Aquatio	: Bioassay &	Consultin	g Labs, In		
Batch ID:	19-9614-6693	Test	Туре:	Development-S	urvival		Anal	yst: Jo	e Freas			
Start Date:	03 May-22 12:1	0 Prot	ocol:	EPA/600/R-95/	(136 (1995)		Dilue	ent: La	boratory Wate	r		
Ending Date:	05 May-22 12:1	0 <b>Spe</b>	cies:	Mytilus gallopro	ovincialis		Brine	e:				
Test Length:	48h	Taxo	on:	Bivalvia			Sour	ce: Ca	arlsbad Aquafa	arms CA	Age:	_
Sample ID:	20-7496-0882	Cod	e:	7BAD63F2			Proje	ect: Bo	eing-SSFL N	PDES		
Sample Date:	25 Apr-22 07:4	5 Mate	erial:	Sediment			Sour	rce: Bi	oassay Report			
Receipt Date:	25 Apr-22 12:2	5 CAS	(PC):				Stati	on: Ar	royo_Simi-Sec	1_2020052	1	
Sample Age:	8d 4h	Clier	nt:	Eurofins Calsci	ence							
Single Compa	arison Summar	y										
Analysis ID	Endpoint		Comp	arison Method			P-Value	Compar	ison Result			S
06-6778-7413	Combined Prop	ortion Normal	Equal	Variance t Two-	Sample Test		0.9441	100% pa	issed combine	ed proportio	n normal	1
Test Accepta	bility					TAC I	Limits					
Analysis ID	Endpoint		Attrib	ute	Test Stat	Lower	Upper	Overlap	Decision			
06-6778-7413	Combined Prop	ortion Normal	PMSD	)	0.01322	<<	0.25	No	Passes C	riteria		
Combined Pro	oportion Norma	I Summary										
Сопс-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effec	:t
0	N	5	0.9795	5 0.9699	0.9892	0.9721	0.9907	0.0035	0.0078	0.79%	0.00%	
100		5	0.9888	<b>0.9792</b>	0.9985	0.9814	1.0000	0,0035	0.0078	0.79%	-0.95%	
Combined Pre	oportion Norma	l Detail					MD	5: FCC60	4EC84DA76A	CF00877F	88332566	4
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	N	0.9814	0.9721	0.9907	0.9814	0.9721						
100		0.9907	1,0000	0.9814	0.9907	0.9814						
Combined Pre	oportion Norma	I Binomials										
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	N	211/215	209/21	15 213/215	211/215	209/215						
100		213/215	215/21	15 211/215	213/215	211/215						

Analyst: \_\_\_\_\_ QA: \_\_\_\_ 6/9/2022

CETIS Ana	alyti	cal Repo	ort						Re Te	port Date: st Code/II	: ):	08 CSE042	Jun-22 16: 22.126m / 1	33 (p 1 of 2) 5-7899-2598
Mussel Shell	Deve	lopment Te	st							Ac	juatic E	Bioassay &	Consulting	g Labs, Inc.
Analysis ID:	06-6	5778-7413		End	point: Co	mbined Prop	ortion Norma	I		CETIS Ve	rsion:	CETISv2	.1.1	
Analyzed: Edit Date:	08 J 08 J	un-22 16:33 un-22 16:32		Anal MD5	ysis: Pa Hash: FC	rametric-Two C604FC84D	Sample	77F883325	664	Status Le Editor ID:	vel:	1 007-615-	942-9	
Batch ID:	10.0	614 6603		Test	Type: De	velopment-Si	Invival			Analyst:	loe	Freas	_	
Start Date:	03 N	/lay-22 12:10		Prote	ocol: EP	A/600/R-95/	136 (1995)			Diluent:	Labo	oratory Wate	۲	
Ending Date:	05 N	/lay-22 12:10		Spec	cles: My	tilus gallopro	vincialis			Brine:				
Test Length:	48h			Taxo	on: Biv	alvia				Source:	Carls	sbad Aquafa	arms CA	Age:
Sample ID:	20-7	496-0882		Code	e: 7B	AD63F2				Project:	Boei	ng-SSFL NI	PDES	
Sample Date:	25 A	pr-22 07:45		Mate	erial: Se	diment				Source:	Bioa	ssay Report		
Receipt Date:	25 A	Apr-22 12:25		CAS	(PC):	vefice Calesi				Station:	Arro	yo_Simi-Sec	1_20200521	
Sample Age:	80	40		Cilei	n: _u				_			_	_	
Data Transfor	m		Alt H	lyp				Comparis	son Res	sult			!	PMSD
Angular (Corre	cted)		C > 1					100% pas	ssed cor	nbinea pro	portion	normal end	point	1.32%
Equal Variance	e t T	wo-Sample	Test											
Control	vs	Conc-%	_	df	Test Stat	Critical	MSD	Р-Туре	P-Va	lue De	cision(	a:5%)		
Negative Contr	ol	100	_	8	-1.787	1.86	0.04266	CDF	0.944	1 Noi	n-Signif	icant Effect		
Test Acceptat	bility	Criteria	Т	AC Li	mits									
Attribute		Test Stat	Lowe	er	Upper	Overlap	Decision							
PMSD		0.01322	<<		0.25	No	Passes Cr	iteria						
ANOVA Table														
Source		Sum Squa	ires		Mean Sq	uare	DF	F Stat	P-Va	lue De	cision(	a:5%)		
Between		0.0042015			0.004201	5	1	3.194	0.111	7 Noi	n-Signif	icant Effect		
Error		0.0105242			0.001315	5	8							
Total		0.0147257					9							
ANOVA Assu	mptio	ons Tests												
Attribute		Test					Test Stat	Critical	P-Va	lue De	cision(	α:1%)		
Variance		Levene Eq	uality o	f Varia	ance Test		0.3223	11.26	0.585	58 Equ	ual Vari	ances		
		Mod Leven	e Equa	ality of	Variance 1	est	0.4193	13.75	0.541	3 Equ	ual Vari	ances		
Distribution		Variance R	latio F	Test	oot		2.053	23,15	0.503	31 Equ 72 Nor	uai vari: mal Die	ances		
Distribution		D'Arostino	Skewr	ness T	esi Fest		1.242	2.576	0.214	2 Noi 13 Noi	rmal Dis	stribution		
		Kolmogoro	v-Smiri	nov D	Test		0.2493	0.3025	0.078	35 Noi	rmal Dis	stribution		
		Shapiro-W	ilk W N	lorma	lity Test		0.8777	0.7411	0.122	27 Noi	rmal Dis	stribution		
Combined Pro	oport	ion Normal	Summ	nary										
Conc-%		Code	Coun	nt	Mean	95% LCL	95% UCL	Median	Min	Ма	x	Std Err	CV%	%Effect
0		N	5		0.9795	0.9699	0.9892	0.9814	0.972	1 0.9	907	0.0035	0.79%	0.00%
100			5		0.9888	0.9792	0.9985	0.9907	0.981	4 1.0	000	0.0035	0.79%	-0.95%
Angular (Corr	ecte	d) Transform	ned Su	Jmma	rγ									
Conc-%		Code	Cour	nt	Mean	95% LCL	95% UCL	Median	Min	Ma	x	Std Err	CV%	%Effect
0		N	5		1.4300	1.3930	1.4660	1,4340	1,403	30 1.4	740	0.0131	2,05%	0.00%
100			5		1.4710	1.4180	1.5230	1.4740	1.434	1.5	370	0.0188	2.86%	-2.87%
Combined Pro	oport	ion Normal	Detail											
Conc-%		Code	Rep	1	Rep 2	Rep 3	Rep 4	Rep 5						
0		N	0.981	4	0.9721	0.9907	0.9814	0.9721						
100	0.990	07	1.0000	0.9814	0 9907	0.9814								

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6/9/2022

CETIS A	nalytical Repo	ort					Report Date: Test Code/ID:	08 Jun-22 16:33 (p 2 of 2) CSE0422.126m / 15-7899-2598
Mussel She	II Development Te	st					Aquatic E	Bioassay & Consulting Labs, Inc.
Analysis ID Analyzed: Edit Date:	: 06-6778-7413 08 Jun-22 16:33 08 Jun-22 16:32	Enc Ana MD	<b>lpoint:</b> Co alysis: Pa 5 Hash: FC	mbined Prop rametric-Two C604EC84E	oortion Norm 5 Sample 0A76ACF00	al 877F883325664	CETIS Version: Status Level: Editor ID:	CETISv2.1.1 1 007-615-942-9
Angular (Co	orrected) Transforn	ned Detail						
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5		
0	N	1.4340	1.4030	1.4740	1.4340	1.4030		
100		1.4740	1.5370	1.4340	1.4740	1.4340		
Combined F	Proportion Normal	Binomials						
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5		
0	N	211/215	209/215	213/215	211/215	209/215		
100		213/215	215/215	211/215	213/215	211/215		
Graphics								
- 0.1 - 8.0 - 7.0 - 7.0			5		▼ 	0.06 - 0.04 - 0.02 - 0.00 - -0.02 - -0.02 -	• • •	

-1.5

-1.0

-0.5

0.0

Rankits

0.5

1.0

1.5

Conc-%

100

0 N

CETIS Mea	asurement	Repo	rt			Re	5:33 (p 1 of 1)							
		_				Te	st Code/ID:	CSE04	122.126m /	15-7899-2598				
Mussel Shell	Development T	est					Aqua	atic Bioassay &	Consultin	ıg Labs, Inc.				
Batch ID:	19-9614-6693		Test Type:	Development-S	Survival			Analyst:	Joe Freas					
Start Date:	03 May-22 12:1	0	Protocol:	EPA/600/R-95	/136 (1995)		1	Diluent:	Laboratory Wat	er				
Ending Date:	05 May-22 12:1	0	Species:	Mytilus gallopro	ovincialis		1	Brine:						
Test Length:	48h		Taxon:	Bivalvia			;	Source:	Carlsbad Aquat	farms CA	Age:			
Sample ID:	20-7496-0882		Code:	7BAD63F2				Project:	Boeing-SSFL N	SSFL NPDES				
Sample Date:	25 Apr-22 07:4	5	Material:	Sediment			;	Source:	Bioassay Repo	rt				
<b>Receipt Date:</b>	25 Apr-22 12:2	5	CAS (PC):				:	Station:	Arroyo_Simi-Se	ed_2020052	11			
Sample Age:	8d 4h		Client:	Eurofins Calsc	ience									
Dissolved Ox	ygen-mg/L													
Conc-%	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count			
0	N	2	6.75	4.844	8.656	6.6	6,9	0.1061	0.2121	3.14%	0			
100		2	6.55	5.915	7.185	6.5	6.6	0.0353	5 0.0707	1.08%	0			
Overall		4	6.65	6.374	6.926	6.5	6.9	0.0866	0.1732	2.61%	0 (0%)			
pH-Units														
Conc-%	Code	Count	t Mean	95% LCL	95% UCL	Min	Мах	Std Er	Std Err Std Dev		QA Count			
0	N	2	7.9	7_884	7.916	7.9	7.9	0	0	0.00%	0			
100		2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0			
Overall		4	7.9	79	7.9	7.9	7. <del>9</del>	0	0	0.00%	0 (0%)			
Salinity-ppt														
Сопс-%	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count			
0	N	2	34	34	34	34	34	0	0	0.00%	0			
100		2	34	34	34	34	34	0	0	0.00%	0			
Overall		4	34	34	34	34	34	0	0	0.00%	0 (0%)			
Temperature-	°C													
Conc-%	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count			
0	N	2	14.85	14.21	15.49	14.8	14.9	0.0353	9 0.07077	0.48%	0			
100		2	14.85	14.21	15.49	14.8	14.9	0.0353	9 0.07077	0.48%	0			
Overall		4	14.85	14.76	14.94	14.8	14.9	0.0288	0.05773	0.39%	0 (0%)			

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Analyst:\_\_\_\_\_ QA:\_\_\_

6/9/2022



June 8, 2022

Virendra Patel Eurofins Calscience 2841 Dow Avenue, Suite 100 Tustin, CA 92780

Dear Virendra Patel

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Methods for Assessing the Toxicity of Sediment-associated Contaminants with Estuarine and Marine Amphipods*, EPA/600/R-94/025. Results were as follows:

CLIENT:	Eurofins Calscience
SAMPLE I.D.:	Arroyo_Simi-Sed_20220425
DATE RECEIVED:	4/25/2022
ABC LAB. NO.:	CSE0422.126

## Eohaustorius estuarius 10 Day Survival Sediment Bioassay

=

Percent Survival

100.00% Survival

ery truly, Scott Johnson

·Laboratory Director

29 north olive st. ventura, ca 93001 (805) 643 5621 aquabio.org

CETIS Sur	nmary Repo	rt					Report   Test Co	Date: de/iD:	08 Jun-22 16:12 (p 1 of 1) 636F4790 / 16-6823-7200				
Eohaustorius	10-d Survival an	d Reburial	Sedime	nt Test				Aquat	ic Bioassay &	Consulting	Labs, Inc.		
Batch ID:	00-6873-9673	Test	Type:	Survival-Reburia	al		Analy	/st: J	oe Freas				
Start Date:	06 May-22 12:01	Prot	ocol:	EPA/600/R-94/0	025 (1994)		Dilue	nt: L	aboratory Seaw	ater			
Ending Date:	16 May-22 12:01	Spec	cies:	Eohaustorius es	stuarius		Brine	: N	ot Applicable				
Test Length:	10d Oh	Taxo	on:	Malacostraca			Sour	ce: N	orthwestern Ac	luatic Scien	c Age:		
Sample ID:	06-6371-2648	Cod	e:	278F7388			Proje	ct: B	oring-SSFL NF	DES			
Sample Date:	25 Apr-22 07:45	Mate	erial:	Sediment			Sour	ce: B	ioassay Report				
Receipt Date:	25 Apr-22 12:25	CAS	(PC):				Statio	on: A	rroyo_Simi-Sec	_20220425			
Sample Age:	11d 4h	Clier	nt:	Eurofins Calscie	ence								
Single Compa	rison Summary												
Analysis ID	Endpoint		Comp	arison Method			P-Value	Compa	rison Result		S		
01-8461-0318	Survival Rate		on Rank Sum T	wo-Sample T	est	1.0000	100% p	1					
Test Acceptal	oility						imits						
Analysis ID	Endpoint		Attribu	ute	Test Stat	Lower	Upper Overla		p Decision				
01-8461-0318	Survival Rate		Contro	l Resp	1	0.9	<<	Yes	Passes Ci	riteria			
Survival Rate	Summary												
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect		
0	N	5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%		
100		5	1,0000	1.0000	1,0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%		
Survival Rate	Detail						MD5	D2BA4	4081 DA DOA 69	D63482373	1B2DEACB		
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5							
0	N	1.0000	1.0000	1.0000	1.0000	1.0000							
100		1.0000	1.0000	1.0000	1.0000	1.0000							
Survival Rate	Binomials												
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5							
0	N	20/20	20/20	20/20	20/20	20/20							
100		20/20	20/20	20/20	20/20	20/20							

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CETIS Anal	ytical Rep			R Te	eport est Co	Date: ode/ID:	30 6	3 Jun-22 16 36F4790 /	:12 (p 1 of 2 16-6823-720			
Eohaustorius 1	0-d Survival a	nd Reburial	Sedime	ent Test					Aquati	c Bioassay &	Consultin	g Labs, Inc.
Analysis ID: ( Analyzed: ( Edit Date: (	01-8461-0318 08 Jun-22 16:11 08 Jun-22 16:11	End Ana MDS	point: lysis: Hash:	Survival Rate Nonparametric- D2BA4081DAE	-Two Sample 00A69D6348	23731B2DE	EACB	CET State Edite	IS Version us Level: or ID:	n: CETISv2 1 007-615-	2.1.1 -942-9	
Batch ID: 0	0-6873-9673	Test	Type:	Survival-Reburi	al			Anal	yst: Jo	e Freas		
Start Date: 0	06 May-22 12:01	1 Prot	ocol:	EPA/600/R-94/	025 (1994)			Dilue	ent: La	aboratory Seav	vater	
Ending Date: 1	6 May-22 12:01	1 Spe	cies:	Eohaustorius e	stuarius			Brin	e: N	ot Applicable		
Test Length: 1	10d 0h	Taxe	on:	Malacostraca				Sou	rce: N	orthwestern A	quatic Sciel	nc Age:
Sample ID: 0	06-6371-2648	Cod	e:	278F7388				Proj	ect: B	oring-SSFL N	PDES	
Sample Date: 2	25 Apr-22 07:45	5 Mate	erial:	Sediment				Sou	ce: B	ioassay Repor	t	
Receipt Date: 2	25 Apr-22 12:25	CAS	(PC):					Stati	on: A	rroyo_Simi-Se	d_2022042	5
Sample Age: 1	1d 4h	Clie	nt:	Eurofins Calsci	ence			_				
Data Transform	)	Alt Hyp				Comparis	son Re	sult			_	
Angular (Correct	ed)	C > T				100% pas	sed su	irvival	rate endpo	bint		
Wilcoxon Rank	Sum Two-San	nple Test										
Control v	/s Conc-%	df	Test S	Stat Critical	Ties	Р-Туре	P-Va	alue	Decisio	n(α: <b>5</b> %)		
Negative Control	100	8	27.5		1	Exact	1.00	00	Non-Sig	nificant Effect		
Test Acceptabil	lity Criteria	TACL	imito									
, Attribute	, Test Stat	Lower	Upper	Overlap	Decision							
Control Resp	1	0.9	<<	Yes	Passes Cr	riteria						
Source	Sum Sau	2765	Mean	Square	DE	F Stat	P-V/	alue	Decisio	n(a:5%)		
Between	0	uics	0	oquine	1	1 Olul			Indetern	ninate		
Error	0		0		8							
Total	0				9							
ANOVA Assum	ptions Tests											
Attribute	Test				Test Stat	Critical	P-Va	alue	Decisio	n(α:1%)		
Variance	Variance F	Ratio F Test							Indetern	ninate		
Distribution	Shapiro-W	Vilk W Norma	lity Test						Indetern	ninate		
Survival Rate S	ummary											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min		Max	Std Err	CV%	%Effect
0	N	5	1.0000	1_0000	1,0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%
100		5	1:0000	1.0000	1-0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%
Angular (Correc	cted) Transfori	med Summa	iry									
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min		Max	Std Err	CV%	%Effect
0	N	5	1.4590	1.4580	1.4590	1.4590	1.45	90	1.4590	0.0000	0.00%	0.00%
100		5	1.4590	1.4580	1.4590	1.4590	1.45	90	1.4590	0.0000	0.00%	0.00%
Survival Rate D	etail											
Сопс-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	N	1,0000	1.0000	1.0000	1.0000	1.0000						
100		1.0000	1.0000	1.0000	1.0000	1.0000						
Angular (Correc	cted) Transform	med Detail										
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	N	1.4590	1.4590	1 4590	1,4590	1,4590						
100		1.4590	1.4590	1 4590	1,4590	1.4590						

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CET	IS An	alytical Repo	ort						Rep Test	ort Date: t Code/ID:		08 Jun-2 636F47	22 16:12 ( 790 / 16-68	p 2 of 2) 323-7200
Eoha	austorius	s 10-d Survival an	d Rebur	ial Sedime	nt Test					Aquatic E	Bioassay	/ & Cons	sulting La	bs, Inc.
Anal Anal Edit	ysis ID: yzed: Date:	01-8461-0318 08 Jun-22 16:11 08 Jun-22 16:11	E A N	indpoint: nalysis: 1D5 Hash:	Survival Rate Nonparametric D2BA4081DA	c-Two Sam D0A69D63	iple 3482373	1B2DEA	C S CB E	ETIS Version: tatus Level: ditor ID:	CETIS 1 007-6	Sv2.1.1 15-942-9		
Surv	vival Rate	Binomials												
Cond	c-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Re	p 5						
0 100		N	20/20 20/20	20/20 20/20	20/20 20/20	20/20 20/20	20/ 20/	20 20						
Grap	hics													
Survival Rate	1.0 - 0.9 - 0.8 - 0.7 - 0.6 - 0.5 - 0.4 - 0.3 - 0.2 - 0.1 - 0.0 -						Corr. Angle	•	•	• • •	•		•	•
	50 L	0 N			100			-1.5	-1.0	-0.5 (	0.0	0.5	1.0	1.5
			Co	nc-%						Ra	nkits			

007-615-942-9

A DA:C Analyst:

6/9/2022

CETIS Mea	asurement F	Repo	rt			Rej Tes	oort Date: t Code/ID:	0 6	8 Jun-22 10 36F4790 /	6:12 (p 1 of 1) 16-6823-7200	
Eohaustorius	10-d Survival ar	nd Reb	urial Sedime	ent Test				Aquatio	: Bioassay 8	Consultin	ng Labs, Inc.
Batch ID:	00-6873-9673		Test Type:	Survival-Rebur	ial		Ļ	Analyst: Jo	e Freas		
Start Date:	06 May-22 12:01	l	Protocol:	EPA/600/R-94	/025 (1994)		0	Diluent: La	boratory Seav	water	
Ending Date:	16 May-22 12:01		Species:	Eohaustorius e	stuarius		E	Brine: No	t Applicable		
Test Length:	10d Oh		Taxon:	Malacostraca			9	Source: No	orthwestern A	quatic Scie	nc Age:
Sample ID:	06-6371-2648		Code:	278F7388			F	Project: Bo	ring-SSFL N	PDES	
Sample Date:	25 Apr-22 07:45		Material:	Sediment			\$	Source: Bi	assay Repo	rt	
<b>Receipt Date:</b>	25 Apr-22 12:25		CAS (PC):				5	Station: Ar	royo_Simi-Se	ed_2022042	25
Sample Age: 11d 4h Client: Eurofins Calscience											
Dissolved Ox	ygen-mg/L										
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	10.05	9.415	10.69	10	10.1	0.03536	0.07073	0.70%	0
100		2	9.7	7.159	12.24	9.5	9.9	0.1414	0.2828	2.92%	0
Overall		4	9.875	9.457	10.29	9.5	10.1	0.1315	0.263	2.66%	0 (0%)
pH-Units											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	7,9	7.884	7.916	7.9	7.9	0	0	0.00%	0
100		2	7.7	7.698	7.702	7.7	7.7	0	0	0.00%	0
Overall		4	7.8	7,616	7.984	7.7	7. <del>9</del>	0.05774	0.1155	1.48%	0 (0%)
Salinity-ppt											
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	20	20	20	20	20	0	0	0.00%	0
100		2	20	20	20	20	20	0	0	0.00%	0
Overall		4	20	20	20	20	20	0	0	0.00%	0 (0%)
Temperature-	°C										
Conc-%	Code	Count	: Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
100		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
Overall		4	14.85	14.76	14.94	14.8	14.9	0.02887	0.05773	0.39%	0 (0%)



## **Eurofins Calscience**

**Chain of Custody Record** 

\*C570-93645\*

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

Client Information (Sub Contract Lab)	Sampler:		Sampler: Lab PM: Palel, V								C	Carrier Tracking No(s):					COC No: 570-165859,1		
Client Contact: Shipping/Receiving	Phone:			E-N Vir	Mail: rendr	a.Pate	el@et.e	eurofin	sus.co	m	St	ate of Ori alifornia	gin: 1				Page: Page 1 of 1		
Company:					Ac	creditat	ions Red	quired (S	See note	):	-						Job #:		
Aquatic Bioassay	Due Onto Paguant	adı.			SI	tate Pr	ogram	- Cali	iomia		-		_	_		-	570-93645-1		
29 North Olive Street,	Due Date Request	eu;							Ana	lysis	Requ	ested						M Hovene	- 1
City Ventura	TAT Requested (da Si	ays): tandrd TAT	- Level 4														B - NaOH C - Zn Acetate	N - None O - AsNaO2	
State, Zip: CA, 93001	PO #					Asu	nou-8										E - NaHSO4 F - MeOH	P - Na2O45 Q - Na2SO3 R - Na2S2O3	
Phone:	PO #:				9	lausto	city)/										G - Amchlor H - Ascerbic Acid	S - H2SO4 T - TSP Dodecahy	ydrate
Email:	WO #:				10	Q A	o tox									2	I-lce J-DłWater	U - Acetone V - MCAA	- 1
Project Name: Boeing NPDES SSFL Outfalls	Project #:	570-93	645		e (Yes	es or l c 10da	ay eoh									Italnei	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)	
Site:	SSOW#:					SD (Y	valve									of col	Other:		
Sample Identification Client ID 4 ab ID)	Sample Date	Sample	Sample Type (C=comp,	Matrix (W=water, S=solid, O=waste/oil,	Teld Filtered	Perform MS/M	UB (48-hour B)									otal Number	Special In	atau atia na /blat	
Sample Identification - Chent ID (Lab ID)	Sample Date	Time	Preserva	tion Code:	1				-	-		-	-	-		$\overline{\mathbf{A}}$	Special In	structions/Not	e;
Arroyo_Simi-Sed_20220425 (570-93645-1)	4/25/22	07:45 Pacific	6	Solid	Í	¥1	x x									7	sub to Aquatic Bio 7 x 1 liter wide mo	assay Consultant outh plastic contai	s- iners
				1.2	Τ														
																		.124	
				_														/	
			1. Sec. 1	1															
	1									1		-				_			
											-								
Note: Since laboratory accreditations are subject to change, Eurofins Calscience maintain accreditation in the State of Origin listed above for analysis/tests/matrix attention immediately. If all requested accreditations are current to date, return I	places the ownership being analyzed, the s he signed Chain of Cu	of method, ar amples must b istody attesting	alyte & accred e shipped bac to said compl	litation compli k to the Eurol icance to Eur	iance fins C. ofins	upon ou alscienc Calscier	ut subco se labora nce.	ntract la itory or d	boratorio other ins	es This tructions	sample : will be p	shipment rovided.	is forwa Any cha	rded und anges to	ler chair accredit	n-of- tatior	custody. If the labora n status should be br	atory does not curre ought to Eurofins Ca	ntly alscience
Possible Hazard Identification						Sam	ple Di	sposa	I ( A fe	e may	be as	sessed	if san	ples a	re reta	aine	ed longer than 1	month)	-
Unconfirmed							<sup>]</sup> Retu	m To (	Client	E	] Dis	sposal E	By Lab			\rch	nive For	Months	-
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank: 2	2			Spec	ial Inst	truction	ns/QC	Requir	ements	5:							
Empty Kit Relinquished by:	Territoria I.	Date:		(	Π	ime:						Meth	od of St	nipment:					
Relinquished by:	Date/Tima: 4-25-202	2/12	.20	Company		R	leceived	byn	~				D	ate/Time	25 7	ι	7.53	Company Aur h	w-21
Relinquished by:	Date/Time:	1		Company		R	eceived	by:					0	ate/Time	E			Company	
Relinquished by:	Date/Time:			Company		F	eceived	l by:					C	ate/Time	£			Company	
Custody Seals Intact: Custody Seal No.: <u> </u>						C	Coler Te	emperat	ure(s) °C	C and Ot	her Rem	arks:						Ver 06/08/2021	

6/9/2022

\* < 570 - 93645\*

lient Name/	Address:			1					The second secon	~	AN	ALYSIS	REQU	IRED	~		Field Readings Meter serial	
aley & Aldi	ame/Address: Aldrich Islon Center Rd Sulte 300 o, CA 92108 Calscience Project Manager: Virendra Patel Avenue Suite #100											5	8				Field readings: (include units)	
an Diego <i>Cl</i>	e/Address: drich bon Center Rd Sulte 300 CA 92108 liscience Project Manager: Virendra Patel Avenue, Suite #100 32780 5-5494 t #44024448 xet's services under this COC shall be performed in accordance with the T8Ce with the 1022-26-26-200 under this COC shall be performed in accordance with the T8Ce with the 1022-26-26-200 drien Mobeka Sample LD. Sampling Oste/Time Arroyo_Simi-Sed_20220425 4/25/2022					Project:						ğ	ostr				Time of readings 0765	
umfine Cale	rience Droject Manager: Virer	udra Datel	_	-	Boeing	9-SSFL NPDE	S			_		4	888					
341 Dow Av	enue. Suite #100				P	ermit 2015				풍		u Q	õ				6.91	
stin, CA 92	780			Annual	Sediment	: Arroyo Simi-F	Frontier P	ark		₽.		4	ိဒ္မွ	<u>e</u> e		0.1	pH pH unit	
I: 714-895-	5494									Ŭ		4	edul Nra	o Sci			Temp 64.3 CEFE	
Ci Project #	#44024446									Walgh		4-DO[	ytitus Nent	hius T /entur			po 6.66 mg/L	
onns Cassaence vice Agreement lates, and Eurof	rs services under the COC shall be perform II 2022-36-terrofins Catactones by and betwee ins Catactionce Leboratories Inc.	ed in accordance with the 1404 w ann Halley & Aldrich, Inc., ita subai	nthin Eulanker Skories and	Pr 52	oject Man 0.289.860	ager: Katherin 6, 520.904.69	e Miller 44 (celi)		500-NH3-D)	(8060) - Dry		oxaphane, 4,	yo toxicity (M ABC Leosi	<b>ustorius estu</b> a ABC Lebs In V		ion (D422M)	Conductivity <u>880</u> µmhos/cm Velocityfl/sec	
ampler: Adr	ien Mobeka			97	Field Mana 8.234.503	ager: Mark Dor 3, 818.599.07	ninick 02 (cell)		imonia (SM4:	ganic Cerbon	W8082)	ne, Dieldrin, T 1A)	Bivalve Embr EPAR-95/138	10-day eohal 0/R-94/025) /	ura (2540G)	Size Distribut	Field readings QC Checked by: Unit Daniel	
Sample	Sample I.D.	Sampling Date/Time	Sampio	Container Type	# of Cont.	Preservative	8ottle #	MS/MSD	Total An	Total On	PCBs (S	Chlorda (SW808	48-hour pigas) (E	Chronic (EPA/60	% Moist	Particle	Comments	
			SE	9 oz Jar	3	None	165	Yes	×						İ			
			SE	9 oz Jar	1	None	246	No		x								
			SE	9 oz Jer	3	None	280	Yes			x							
rroyo Simi	Arroyo_Simi-Sed_20220425	4/25/2022	SE	9 oz jar 11. wide mou/h	3	None	290	Yes	_			X	-	_	-	-		
		₩	SE	Plastic	3	None	295	No	-	-		_	X	-	-	-	De vertariado estar di ventitar cas	
		¥	SE	Plastic	4	4°C in the Dark	300	No		-			-	х	-		(eep simple a conterin the dal- until delivered to ABC Labs	
			SE	9 oz Jar	1	None	305	No		-	-	-	-	-	X	-		
			SE	9 oz jar	,	None	310	NO	-	-		-	-	-	-	L^		
-														-				
		()	2				1											
_									-		-		-			-		
						L	egend: A=#	Innual		_								
Inquished By	Date/Time		mpany:				Received	By .		C	Date/Tir	me:		Turnaro	und time	(Checi	A)	
Telinquished By Dete/Time: 4-25-2022/12.22		221)	HA			A	Pm		7	X	12		48 Hour	, 1∡ Hou 5 Day:	r:	- 10 Dey:X _ Normal		
		mpany:	<u></u>			Received E	Зу		ť	Date/Ta	me:		Sample	integrity:	(Check	)		
elinquished By	Dete/Time	: Co	mpany:				Received 8	Зу		Ľ	Date/Ti	me:	-	Induct _ On Ice: Store samples for 6 months				
								No.					(Jeta Koquiremena: (Chock) No Level I at I well 0. X					

\* Hand-delivered by HiA to ADC in Vertice, CA 4-25-2025/1220

6/9/2022

Page 18 of 35



# 96 Hour *Eohaustorius estuarius* Survival Bioassay - Standard Toxicant

DATE: 03/6/2022

STANDARD TOXICANT:	Ammonium Chloride	

ENDPOINT: SURVIVAL

## UNIONIZED AMMONIA

NOEC = 0.4520 mg/L

EC25 = 0.9022mg/L EC50 = 1.8400mg/L

Yours very truly,

Scott Johnson

Laboratory Director

CETIS Sur	nmary Repo	ort						Repor Test C	t Date: ode/ID:		08 EOH	Jun-22 15:5 050622 / 09	7 (p 1 of 1) -2352-3700
Reference To	xicant 96-h Acut	e Surviv	al Test						Aqu	atic	: Bioassay & (	Consulting	Labs, Inc.
Batch ID: Start Date: Ending Date: Test Length;	08-3934-3527 06 May-22 12:00 10 May-22 12:00 96h	T P S T	est Type: Protocol: Species: axon:	Survival EPA/600/R-94 Eohaustorius e Malacostraca	/025 (1994) estuarius			Ana Dilu Brir Sou	lyst: ent: ne: irce:	Jo La No	e Freas boratory Seawa ot Applicable orthwestern Aqu	ater Jatic Scienc	Age:
Sample ID: Sample Date: Receipt Date: Sample Age:	00-0000-0307 06 May-22 06 May-22 12h		Code: /laterial: CAS (PC): Client:	EOH050622 Ammonia (Unio	onized)			Proj Sou Stat	ject: irce: iion:	RE Re RE	EF TOX eference Toxica EF TOX	nt	
Multiple Com	parison Summar	у											
Analysis ID	Endpoint		Comp	arison Method		V	ŕ	NOEL	LOE	L	TOEL	PMSD	S
20-7831-1755	Survival Rate		Steel	Many-One Rank	sum Test		C	0.452	0.80	5	0.6036	6.21%	1
Point Estimate	e Summarv												
Analysis ID 19-7439-7153	Endpoint		Point Linear	Estimate Meth	od CPIN)	~	Ľ	Level EC15	<b>mg/l</b> 0.65	 43	<b>95% LCL</b> 0.543	<b>95% UCL</b> 0.7352	<u>s</u> 1
							E E E	EC20 EC25 EC40 EC50	0.75 0.90 1.48 1.84	54 22	0.6475 0.6853 1.284 1.571	0.8363 1.056 1.787 2.065	
Survival Rate	Summary												
Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	P	Max	Std	Err	Std Dev	CV%	%Effect
0	N	4	1.000	0000 1.0000	1.0000	1.0000	1	1.0000	0.00	00	0.0000	0.00%	0.00%
0.227		4	1.000	1.0000	1.0000	1.0000	1	1.0000	0.00	00	0.0000	0.00%	0.00%
0.452		4	0.950	0.8581	1.0420	0.9000	1	1.0000	0.02	39 50	0.0577	6.08%	5.00%
0.806		4	0.775	0.6954	0.8546	0.7000	(	0.8000	0.02	50 20	0.0500	6.45%	22,50%
1.672		4	0.550	J 0.4581	0.6419	0.5000		0.6000	0.02	39	0.0577	10.50%	45.00%
3 524		4	0.000	J 0.0000	0.0000	0.0000		0,0000	0.004		0.0000		100.00%
Survival Rate	Detail							ME	5: 0C8	137	E8C4EE80C4	91CEB112F	33DE8B2
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4					_			
0	N	1.0000	1.000	0 0000	1.0000								
0.227		1.0000	1.000	0 1.0000	1.0000								
0.452		1.0000	0.900	0 1.0000	0.9000								
0.806		0.8000	0,800	0 7000	0.8000								
1.672		0 6000	0.500	0 5000	0.6000								
3.524		0.0000	0.000	0.0000	0.0000								
Survival Rate	Binomials												
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4								
0	N	10/10	10/10	10/10	10/10								
0.227		10/10	10/10	10/10	10/10								
0.452		10/10	9/10	10/10	9/10								
0.806		8/10	8/10	7/10	8/10								
1 672		6/10	5/10	5/10	6/10								
3,524		0/10	0/10	0/10	0/10								





CETIS Ana	lyti	ical Repo	ort						F	leport est Co	Date: ode/ID:	( EC	)8 Jun-22 15: DH050622 / 0	57 (p 1 of 2) 9-2352-3700
Reference To	xicar	nt 96-h Acute	e Survi	val T	est						Aquati	c Bioassay	& Consulting	g Labs, Inc.
Analysis ID:	20-7	7831-1755		Endp	point:	Survival Rate	O antestas T			CET	IS Versio	n: CETIS	/2.1.1	
Edit Date:	08.	Jun-22 15:57 Jun-22 15:55		MD5	ysis: Hash:	0C8137E8C4E	E80C491CE	B112F33D	E8B2	Edito	or ID:	007-61	5-942-9	
Batch ID:	08-3	3934-3527		Test	Туре:	Survival				Anal	yst: Jo	be Freas		
Start Date:	06 N	May-22 12:00		Prote	ocol:	EPA/600/R-94	/025 (1994)			Dilue	ent: La	aboratory Sea	awater	
Ending Date:	10 1	May-22 12:00		Spec	ies:	Eohaustorius e	stuarius			Brine	e: N	ot Applicable		
Test Length:	96h			Тахо	n:	Malacostraca				Sour	rce: N	orthwestern	Aquatic Scien	c Age:
Sample ID:	00-0	0000-0307		Code	e:	EOH050622				Proje	ect: R	EF TOX		
Sample Date:	06 N	May-22		Mate	rial:	Ammonia (Unio	onized)			Sour	r <b>ce:</b> R	eference Tox	ticant	
Receipt Date:	06 N	May-22		CAS	(PC):					Stati	on: R	EF TOX		
Sample Age:	12h			Clier	nt:	Internal Lab								
Data Transfor	m		Alt H	ур				NOEL	LO	EL	TOEL	TU	MSDu	PMSD
Angular (Corre	cted)		C > T					0.452	0.8	06	0,6036		0.06209	6.21%
Steel Many-O	ne R	ank Sum Te	st											
Control	٧s	Conc-mg/L		df	Test Si	tat Critical	Ties	Р-Туре	P-V	alue	Decisio	on(α:5%)		
Negative Contr	ol	0.227		6	18	10	1	CDF	0.8	000	Non-Sig	Inificant Effe	ot -•	
		0.452		6	14	10	1	CDF	0.3	J81 J81	Non-Sig	nincant Effect		
		1.672*		ь 6	10	10	0	CDF	0.0	350 350	Significa	ant Effect		
ANOVA Table		1.012							0.0					
Source		Sum Squa	res		Mean S	Square	DF	F Stat	P-V	alue	Decisio	n(α:5%)		
Between		1.01415			0.2535	37	4	81.29	<1.0	DE-05	Significa	ant Effect		
Error		0.0467862			0.0031	191	15	_						
Totai		1.06093					19	_						
ANOVA Assur	nptio	ons Tests												
Attribute		Test					Test Stat	Critical	P-V	alue	Decisio	on(α:1%)		
Variance		Bartlett Equ	lality of	Varia	ance Tes	st					Indeterr	ninate		
		Levene Equ	⊔ality of	Varia	ance Tes	st	29.25	4,893	<1.	DE-05	Unequa	I Variances		
		Mod Leven	e Equal	lity of	Variance	e Test	7.198	4.893	0.0	019	Unequa	l Variances		
Distribution		Anderson-L	Jarling	A2 10	est		0.8614	3.878	0.0	269	Normal	Distribution		
		D'Agostino	Skewn	ess T	s. Test		0.5775	2,576	0.5	336	Normal	Distribution		
		D'Anostino	-Pearso	n K2	Omnihu	is Test	0 4172	9.21	0.8	117	Normal	Distribution		
		Kolmogorov	v-Smirn	nov D	Test		0.25	0.2235	0.0	020	Non-No	rmal Distribu	tion	
		Shapiro-Wi	ilk W N	orma	lity Test		0.9164	0.866	0.0	343	Normal	Distribution		
Survival Rate	Sum	mary												
Conc-mg/L		Code	Coun	t	Mean	95% LCL	95% UCL	Median	Mir		Мах	Std Err	CV%	%Effect
0		N	4		1.0000	1.0000	1.0000	1.0000	1.0	000	1.0000	0.0000	0.00%	0.00%
0.227			4		1.0000	1.0000	1.0000	1,0000	1.0	000	1.0000	0,0000	0.00%	0.00%
0.452			4		0,9500	0.8581	1.0000	0,9500	0.9	000	1.0000	0.0289	6.08%	5.00%
0.806			4		0 7750	0.6954	0.8546	0,8000	0.70	000	0.8000	0.0250	6.45%	22 50%
1.672			4		0.5500	0.4581	0.6419	0.5500	0.5	000	0,6000	0.0289	10.50%	45.00%
3.524			4		0.0000	0.0000	0.0000	0.0000	0.0	000	0.0000	0.0000		100.00%
Angular (Corr	ecte	d) Transform	ned Su	mma	ry						• /	<b>a</b> : / =		
Conc-mg/L	_	Code	Coun	t	Mean	95% LCL	95% UCL	Median	Mir		Max	Std Err	CV%	%Effect
0.007		N	4		1.4120	1.4120	1.4120	1,4120	1.4	120	1,4120	0.0000	0.00%	
0 452			4 1		1 3210	1 4120	1.4120	1,4120	1.4	120	1 4120	0.0000	7 07%	5 77%
0 402			4 4		1 0780	0 9859	1.1700	1,1070	0.0	912	1.1070	0.0290	5 38%	23 64%
1 672			4		0.8357	0.7432	0.9282	0.8357	0.7	354	0.8861	0.0291	6.96%	40.81%
3 524			4		0 1588	0 1588	0.1588	0,1588	0.1	588	0.1588	0.0000	0.00%	88.76%

CETIS™ v2.1.1.6 x64 Page 21 of 35 Analyst:\_\_

1 QA:Z

CETIS An	alytical Repo	ort					Report Date: Test Code/ID:	08 Jun-22 15:57 (p 2 of 2) EOH050622 / 09-2352-3700
Reference To	oxicant 96-h Acut	e Survival	Test				Aquatic E	lioassay & Consulting Labs, Inc.
Analysis ID: Analyzed: Edit Date:	20-7831-1755 08 Jun-22 15:57 08 Jun-22 15:55	En An MC	dpoint: Se alysis: Ne 05 Hash: 00	urvival Rate onparametric C8137E8C4E	-Control v EE80C491	vs Treatments ICEB112F33DE8B2	CETIS Version: Status Level: Editor ID:	CETISv2.1.1 1 007-615-942-9
Survival Rate	e Detail							
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4			
0	N	1.0000	1.0000	1.0000	1.0000	1		
0.227		1.0000	1.0000	1.0000	1.0000	)		
0.452		1.0000	0.9000	1,0000	0.9000	)		
0.806		0.8000	0.8000	0.7000	0.8000	)		
1.672		0.6000	0.5000	0.5000	0.6000	)		
3.524		0.0000	0.0000	0.0000	0.0000	)		
Angular (Cor	rected) Transforr	ned Detail						
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4			
0	N	1.4120	1.4120	1.4120	1.4120	)		
0.227		1.4120	1.4120	1,4120	1.4120	)		
0,452		1.4120	1.2490	1.4120	1,2490	)		
0.806		1.1070	1.1070	0.9912	1,1070	)		
1.672		0.8861	0.7854	0.7854	0.8861			
3.524		0,1588	0.1588	0,1588	0,1588	\$		
Survival Rate	e Binomials							
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4			
0	N	10/10	10/10	10/10	10/10			
0.227		10/10	10/10	10/10	10/10			
0.452		10/10	9/10	10/10	9/10			
0.806		8/10	8/10	7/10	8/10			
1.672		6/10	5/10	5/10	6/10			
3.524		0/10	0/10	0/10	0/10			
Graphics								
1.0 -	<del>.</del>					0.08 -		• /•
09						0.00		
0.8 -						0.06 -		
0.7 -						0.04 -		
- 90 gate						<u>ම</u> 0_02 -		
						Ang 0 00 -		2h
						-0.02	/	
03-						0.00		
02-						-0 04 -	10.	
						-0.06 -	/	

CETIS™ v2 1 1 6 x64

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Conc-mg/L

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CETIS	S Ana	lytical Repo	ort						Repo Test	ort Date: Code/ID:		E	08 Jun-22 15 OH0506227 (	:57 (p 1 of 2) 09-2352-3700
Referen	nce Tox	kicant 96-h Acute	e Survival T	est						Aqu	atic E	Bioassay	& Consultin	g Labs, Inc.
Analysi Analyzo Edit Da	is ID; ed: te:	19-7439-7153 08 Jun-22 15:57 08 Jun-22 15:55	End Anal MD5	point: lysis: 6 Hash:	Survival F Linear Int 0C8137E	Rate erpolation (IC 8C4EE80C49	PIN) 91CEB11:	2F33DE8	Cl St B2 Ec	ETIS Versi tatus Leve ditor ID:	on: I:	CETIS 1 007-61	5v2.1.1 15-942-9	
Batch I	D:	08-3934-3527	Test	Type:	Survival				A	nalyst:	Joe F	Freas		
Start D	ate:	06 May-22 12:00	Prot	ocol:	EPA/600	/R-94/025 (19	94)		Di	iluent:	Labo	ratory Se	awater	
Ending	Date:	10 May-22 12:00	Spee	cies:	Eohausto	orius estuarius	5		В	rine:	Not A	Applicabl	е	
Test Le	ength:	96h	Taxo	on:	Malacost	raca			Se	ource:	North	hwestern	Aquatic Scier	nc Age:
Sample	D:	00-0000-0307	Cod	e:	EOH050	622			Р	roject:	REF	тох		
Sample	Date:	06 May-22	Mate	erial:	Ammonia	(Unionized)			Se	ource:	Refe	rence To	xicant	
Receipt	t Date:	06 May-22	CAS	(PC):					S	tation:	REF	тох		
Sample	e Age:	12h	Clier	nt:	Internal L	ab								
Linear l	Interpo	lation Options												
X Trans	sform	Y Transform	See	1	Resamp	les Exp	95% CL	Metho	d		_			
Linear		Linear	0		280	Yes		Two-P	oint Inte	erpolation				
Point E	stimate	es												
Level	mg/L	95% LCL	95% UCL									_		
EC15	0.654	3 0.543	0.7352											
EC20	0.755	4 0.6475	0,8363											
EC25	1.48	1 284	1,000											
EC50	1.40	1.571	2.065											
Surviva	al Rate	Summary				(	Calculate	d Variate	(A/B)				Isoto	nic Variate
Conc-m	ng/L	Code	Count	Mean	Med	dian Min	Ма	x	CV%	%Effe	ct	A/B	Mean	%Effect
0		N	4	1.000	0 1.00	000 1.000	0 1.0	000	0.00%	0.00%	5	40/40	1.0000	0.00%
0.227			4	1.000	0 1.00	000 1.000	00 1.0	000	0.00%	0.00%	b	40/40	1.0000	0.00%
0.452			4	0.950	0 0.95	500 0.900	00 1.0	000	6.08%	5.00%	þ	38/40	0.9500	5.00%
0.806			4	0.775	0 0.80	00 0.700	3.0 0.0	000	6.45%	22.50	% ~	31/40	0.7750	22,50%
1.672			4	0.550	0 0.55		0 0.6	000	10.50%	3 45.00 100.0	% ∩%	22/40	0.5500	45,00%
5.524			4	0.000					5051	100.0	0 /0	0/40		
Surviva	al Rate	Detail			_									
Сопс-п	ıg/L	Code	Rep 1	Rep 2	Rep	3 Rep	4	_						
0 227		IN	1,0000	1.000	0 1.00		0							
0.452			1,0000	0.000			0							
0.902			0.8000	0.800		0.00 0.000	0							
1.672			0.6000	0.500	0 0.50	00 0.600	00							
3.524			0.0000	0.000	0.00	000.000	00							
Surviva	I Rate	Binomials												
Conc-m	ng/L	Code	Rep 1	Rep 2	Rep	3 Rep 4	4							
0		N	10/10	10/10	10/1	0 10/10	)							
0,227			10/10	10/10	10/1	0 10/10	)							
0.452			10/10	9/10	10/1	0 9/10								
0.806			8/10	8/10	7/10	) 8/10								
1.672			6/10	5/10	5/10	6/10								
3.524			0/10	0/10	0/10	0/10								

Analyst: 2 QA: 1 6/9/2022

CETIS Ana	alytical Report			Report Date:	08 Jun-22 15:57 (p 2 of 2) EOH050622 / 09-2352-3700		
Reference To	oxicant 96-h Acute Su	rvival Test		Aquatic E	Bioassay & Consulting Labs, Inc.		
Analysis ID:	19-7439-7153	Endpoint:	Survival Rate	CETIS Version:	CETISv2.1.1		
Analyzed:	08 Jun-22 15:57	Analysis:	Linear Interpolation (ICPIN)	Status Level:	1		
Edit Date:	08 Jun-22 15:55	MD5 Hash:	0C8137E8C4EE80C491CEB112F33DE8B2	2 Editor ID:	007-615-942-9		
- 10 - 9.9 - 8.0 - 7.0 - 6.0 - 5.0 - 0.5 - 0.4	a a a	R					

007-615-942-9

0.6 -0.5 0,4 0.3 0.2 0.1 -0.0 -0.0

0.5

1.0

1,5

Conc-mg/L

2.0

2,5

3.0

3.5

6/9/2022

CETIS Mea	asurement F	kepor	τ				Test	Code/ID:	EO	H050622/	09-2352-3700		
Reference To	xicant 96-h Acut	e Survi	val Test					Aquatic	Bioassay &	& Consultin	g Labs, Inc.		
Batch ID: Start Date: Ending Date: Test Length:	08-3934-3527 06 May-22 12:00 10 May-22 12:00 96h	)	Test Type: Protocol: Species: Taxon:	Survival EPA/600/R-94, Eohaustorius e Malacostraca	/025 (1994) stuarius		Analyst:Joe FreasDiluent:Laboratory SeawaterBrine:Not ApplicableSource:Northwestern Aquatic Scienc Age:						
Sample ID: Sample Date: Receipt Date: Sample Age:	00-0000-0307 06 May-22 06 May-22 12h		Code: Material: CAS (PC): Client:	EOH050622 Ammonia (Unio Internal Lab	onized)		Pr Sc St	oject: RE ource: Re ation: RE	F TOX ference Toxi F TOX	cant			
Dissolved Ox	ygen-mg/L												
Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count		
0	N	2	7.1	-0.5237	14.72	6.5	7.7	0.4243	0.8485	11.95%	0		
0.227		2	6.9	6 889	6.911	6.9	6.9	0	0	0.00%	0		
0.452		2	6.75	3.573	9.927	6.5	7	0.1768	0.3536	5.24%	0		
0.806		2	6.55	5.915	7.185	6.5	6.6	0.03535	0.0707	1.08%	0		
1 672		2	6.55	5.915	7 185	6.5	6.6	0.03535	0.0707	1.08%	0		
3 524		2	6.5	5 229	7 771	64	6.6	0.07071	0 1414	2 18%	0		
Overall		12	6.725	6.495	6.955	6.4	7.7	0.1045	0.3621	5.39%	0 (0%)		
pH-Units													
Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count		
0	N	2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0		
0.227		2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0		
0.452		2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0		
0.806		2	7.8	7.787	7.813	7.8	7.8	0	0	0.00%	0		
1.672		2	7.85	7.215	8.485	7.8	7.9	0.03535	0.07071	0.90%	0		
3.524		2	7.8	7.787	7.813	7.8	7.8	0	0	0.00%	0		
Overall		12	7.858	7.826	7.891	7.8	7.9	0.01486	0.05149	0.66%	0 (0%)		
Salinity-ppt													
Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count		
0	N	2	20	20	20	20	20	0	0	0.00%	0		
0.227		2	20	20	20	20	20	0	0	0.00%	0		
0.452		2	20	20	20	20	20	0	0	0.00%	0		
0.806		2	20	20	20	20	20	0	0	0,00%	0		
1.672		2	20	20	20	20	20	0	0	0.00%	0		
3.524		2	20	20	20	20	20	0	0	0.00%	0		
Overall		12	20	20	20	20	20	0	0	0.00%	0 (0%)		
Temperature-	°C												
Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count		
0	N	2	14.85	14.21	15.49	14.8	14.9	0,03539	0.07077	0.48%	0		
0.227		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0		
0.452		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0		
0.806		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0		
1.672		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0,48%	0		
3.524		2	14.85	14.21	15_49	14.8	14.9	0.03539	0.07077	0.48%	0		
Overall		12	14.85	14.82	14.88	14.8	14.9	0.01508	0.05222	0.35%	0 (0%)		

007-615-942-9





# CHRONIC MYTILUS DEVELOPMENT BIOASSAY

DATE: 5/3/2022

STANDARD TOXICANT Unionized Ammonia

NOEC = 0.037 mg/l

EC25 = 0.09158 mg/l EC50 = 0.12890 mg/l

very truly, Your

بر Scott Johnson Laboratory Director

CETIS Sur	nmary Rep	ort						Report Test Co	Date: ode/ID:		08 MYT	Jun-22 16:4 050322 / 20	42 (p 1 of 1) )-4689-8673
Mussel Sheli	Development T	est							Aqu	atic I	Bioassay &	Consulting	Labs, Inc.
Batch ID: Start Date: Ending Date: Test Length:	19-9614-6693 03 May-22 12:0 05 May-22 12:1 48h	Test 0 Prot 1 Spe Taxe	Type: De ocol: EF cies: M on: Bi	evelopment-Si PA/600/R-95/ ytilus gallopro ivalvia	urvival 136 (1995) vincialis			Ana Dilu Brin Sou	lyst: ent: e: rce:	Labo Carl	oratory Water sbad Aquafa	rms CA	Age:
Sample ID: Sample Date: Receipt Date: Sample Age:	01-0606-4145 03 May-22 12:1 03 May-22 12:0 	Cod 1 Mate 00 CAS Clie	e: 65 erial: Ar (PC): nt: In	526911 mmonia (Unio ternal Lab	nized)			Proj Sou Stat	ect: rce: ion:	REF Refe REF	TOX erence Toxica TOX	ant	
Multiple Com	parison Summa	ary											
Analysis ID	Endpoint		Compari	ison Method			$\checkmark$	NOEL	LOEI	•	TOEL	PMSD	S
08-4766-2166	Combined Prop	ortion Normal	Dunnett f	Multiple Comp	arison Test			0_037	0.079		0.05406	3,43%	1
Point Estimate	e Summary												
Analysis ID	Endpoint		Point Es	timate Metho	bd		$\checkmark$	Level	mg/L		95% LCL	95% UCL	S
01-3713-7610	Combined Prop	ortion Normal	Linear Inf	terpolation (IC	PIN)			EC15 EC20 EC25 EC40 EC50	0.081 0.086 0.091 0.108 0.128	58 58 58 3 9	0.06841 0.08009 0.08623 0.09956 0.1204	0.08745 0.09235 0.09805 0.1199 0.138	1
Test Acceptal	bility					та	~ 1	imito					
Analysis ID	Endnoint		Attribute	2	Test Stat	Lower	• L	Upper	Over	lap	Decision		
08-4766-2166	Combined Prop	ortion Normal	PMSD		0.03431	<<		0.25	No		Passes Cr	iteria	
Combined Pro	oportion Norma	I Summary											
Conc-ma/L	Code	Count	Mean	95% LCL	95% UCL	Min		Max	Std E	rr	Std Dev	CV%	%Effect
0	N	5	0.9758	0.9583	0.9933	0.9535	_	0.9907	0.006	3	0.0141	1.45%	0.00%
0.037		5	0.9786	0.9647	0.9925	0.9628		0.9907	0.005	0	0.0112	1.14%	-0.29%
0.079		5	0.8558	0.7780	0.9336	0.7721		0.9302	0.028	0	0.0627	7.32%	12.30%
0.105		5	0.6019	0.5157	0.6881	0.5163		0.7023	0.031	1	0.0694	11.54%	38.32%
0.14		5	0.4363	0.3847	0.4878	0.4000		0.4977	0.018	6	0.0415	9.52%	55.29%
0.165		5	0.1144	0.0662	0.1627	0.0744		0.1581	0.017	4	0.0389	33.96%	88.27%
Combined Pro	oportion Norma	l Detail						MD	5: 3A1	7151	CB5151D98	CECA35F6	2FBCCC02
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5							
0	Ν	0.9721	0.9535	0.9814	0.9907	0.9814							
0.037		0.9628	0.9721	0.9814	0.9907	0.9860							
0.079		0.9302	0.8744	0.8140	0.7721	0.8884							
0.105		0.7023	0.6186	0.5628	0.6093	0.5163							
0.14		0.4977	0.4605	0.4093	0.4000	0.4140							
0.165		0.1209	0.0744	0.1442	0.1581	0.0744							
Combined Pro	oportion Norma	I Binomials											
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5							
0	N	209/215	205/215	211/215	213/215	211/215	5						
0.037		207/215	209/215	211/215	213/215	212/215	5						
0.079		200/215	188/215	175/215	166/215	191/215	5						
0.105		151/215	133/215	121/215	131/215	111/215	5						
0.14		107/215	99/215	88/215	86/215	89/215							
0.165		26/215	16/215	31/215	34/215	16/215							

007-615-942-9

Analyst:\_\_\_\_\_\_QA:\_\_\_\_ 6/9/2022

CETIS Ana	lyti	ical Repo	ort							R	Report Test Co	Date: de/ID:		OS MY	3 Jun-22 16: T050322 / 2	42 (p 1 of 3) 0-4689-8673
Mussel Shell	Deve	lopment Te	st									Aqua	tic B	lioassay &	Consulting	j Labs, Inc.
Analysis ID: Analyzed: Edit Date:	08-4 08 \ 08 \	4766-2166 Jun-22 16:42 Jun-22 16:39		End Anal MD5	point: lysis: Hash:	Corr Para 3A1	nbined Prop ametric-Con 7151CB515	ortion Norma trol vs Treatr 1D98CECA	al ments 35F62FBC0	C02	CETI Statu Edito	S Versie Is Level or ID:	on: :	CETISv2 1 007-615-	942-9	
Batch ID: Start Date: Ending Date: Test Length:	19-9 03 N 05 N 48h	9614-6693 May-22 12:00 May-22 12:11		Test Prot Spec Taxo	Type: ocol: <del>cies</del> : on:	Devo EPA Myti Biva	elopment-Si \/600/R-95/^ lus galloprov	urvival  36 (1995) vincialis			Analy Dilue Brine Sour	yst: int: :: ce:	Labo Carls	ratory Wate bad Aquaf	er arms CA	Age:
Sample ID: Sample Date: Receipt Date: Sample Age:	01-0 03 M 03 M	)606-4145 Лау-22 12:11 Лау-22 12:00		Code Mate CAS Clier	e: erial: (PC): nt:	6526 Amr	691 <b>1</b> nonia (Unio rnal Lab	nized)			Proje Sour Statio	ect: ce: on:	REF Refe REF	TOX rence Toxic TOX	cant	
Data Transfor	m		Alt H	lvp					NOEL	LO	EL	TOEL		τυ	MSDu	PMSD
Angular (Corre	cted)		C > 1	T		_			0.037	0.0	79	0.0540	)6		0.03348	3.43%
Dunnett Multi	nle C	omparicon	Toct			-										
	hie C		rest	,10	Toot C	tat	Critical	Men		עם	alue	Decis	0.01	- 29/ 1		
Control	VS	Conc-mg/L			Test S	เลเ	Oritical	0.001.44	Р-туре	P-V	anue	Nep C	ianifi	(:3%)	_	
Negative Contr	UI	0.037		0 8	-0.2154 5.986	+	2.362	0.09141	CDF	<1.0	0F-05	Signifi	ignin cant	Effect		
		0.105*		8	13.71		2.362	0.09141	CDF	<1.(	0E-05	Sianifi	cant	Effect		
		0,14*		8	18.04		2.362	0.09141	CDF	<1.0	0E-05	Signifi	cant	Effect		
		0.165*		8	27,86		2.362	0.09141	CDF	<1.0	0E-05	Signifi	cant	Effect		
Test Acceptat	vilitv	Criteria	-													
Attribute	,	Test Stat	Lowe	AC LI Pr	Upper		Overlap	Decision								
PMSD		0.03431	<<		0.25		No	Passes Cr	iteria							
ANOVA Table	_															
Source		Sum Squa	res		Mean S	Squa	are	DF	F Stat	P-V	alue	Decisi	on(c	t:5%)		
Between		4.59322			0.9186	43		5	245.3	<1.0	0E-05	Signifi	cant	Effect		
Error	_	0.0898802	_		0.0037	450		24	_							
Total		4 6831		_				29								
ANOVA Assur	nptic	ons Tests														
Attribute		Test						Test Stat	Critical	P-V	alue	Decisi	on(c	(:1%)		
Variance		Bartlett Eq	uality o	of Varia	ance Tes	st		4.227	15.09	0.5	172	Equal	Varia	inces		
		Levene Eq	uality o	of Varia	ance Tes	st		1,354	3.895	0.27	762	Equal	Varia	inces		
		Mod Leven	e Equa	ality of	Varianc	e Te	st	1.244	4.248	0.3	301	Equal	Varia	Inces		
Distribution		Anderson-I	Jarling	JA2 II nic To	est			0.2644	3.878	0.72	236 501	Norma	I DIS	tribution		
		D'Agostino	Skewr	ness 1	s. Fest			0.08479	2.576	0.93	324	Norma	l Dis	tribution		
		D'Agostino	-Pears	son K2	Omnibu	is Te	est	0.101	9.21	0.95	508	Norma	l Dis	tribution		
		Kolmogoro	v-Smir	nov D	Test			0.1091	0.1853	0.47	712	Norma	l Dis	tribution		
		Shapiro-W	ilk W M	Norma	lity Test			0.9828	0.9031	0.89	931	Norma	l Dis	tribution		
Combined Pro	port	ion Normal	Summ	nary												
Conc-mg/L		Code	Cour	nt	Mean		95% LCL	95% UCL	Median	Min	n	Max		Std Err	CV%	%Effect
0		N	5		0.9758		0.9583	0.9933	0.9814	0.9	535	0.9907	,	0.0063	1.45%	0.00%
0.037			5		0.9786		0.9647	0.9925	0.9814	0.96	628	0.9907	7	0.0050	1.14%	-0.29%
0.079			5		0,8558		0,7780	0.9336	0.8744	0.7	721	0,9302	2	0.0280	7,32%	12.30%
0.105			5		0,6019		0.5157	0.6881	0.6093	0.51	163	0.7023	3	0.0311	11.54%	38.32%
0.14			5		0.4363		0.3847	0.4878	0.4140	0.40	000	0.4977	7	0.0186	9.52%	55.29%
0.165			5		0,1144		0,0662	0.1627	0.1209	0.07	744	0.1581		0.0174	33.96%	88.27%





CETIS Ana	alytical Repo	ort					Re Te	eport Datest Code/	e: ID:	30 YM	3 Jun-22 16 T050322 / 2	42 (p 2 of 3) 20-4689-8673
Mussel Shell	Development Te	st						A	quatic	Bioassay 8	Consultin	g Labs, Inc.
Analysis ID: Analyzed: Edit Data	08-4766-2166 08 Jun-22 16:42	E A	ndpoint: nalysis:	Combined Prop Parametric-Con	ortion Norm trol vs Treat	al ments	2002	CETIS V Status L Editor ID	ersion: evel:	CETISv2 1 007-615	2.1.1	
Luit Date.	08 Juli-22 10.39	141	Do Hash.	SATTISTOBUL	51D30CLCF		5002			007-015	-342-3	
Angular (Cor	rected) Transform	ned Sum	mary		054 1101	Madian					C)///	
Sonc-mg/L	Code	Count	1 4200	95% LCL	1 4750	1 4340	1 351	IVI 30 1	4740	0.0201	3 16%	0.00%
, 1 037	IN	5	1 4280	1.3800	1.4750	1 4340	1.33	70 1.	4740	0.0174	2.72%	-0.59%
079		5	1,1880	1 0760	1 3000	1 2090	1.073	30 1.	3030	0.0405	7.61%	16.32%
105		5	0.8889	0.7999	0.9779	0.8956	0.80	17 0.	9937	0.0321	8.06%	37.39%
14		5	0.7213	0 6694	0.7733	0.6989	0.684	47 0.	7831	0.0187	5.80%	49.19%
.165		5	0,3412	0.2638	0.4187	0.3552	0.276	53 0.	4090	0.0279	18.27%	75.96%
ombined Pr	oportion Normal	Detail										
onc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
	Ν	0.9721	0.9535	0.9814	0.9907	0.9814						
.037		0.9628	0.9721	0.9814	0.9907	0.9860						
).079		0.9302	0.8744	0.8140	0.7721	0.8884						
0.105		0.7023	0.6186	0.5628	0.6093	0.5163						
).14		0.4977	0.4605	0.4093	0.4000	0.4140						
).165		0.1209	0.0744	0.1442	0.1581	0.0744						
Angular (Cor	rected) Transform	ned Deta	il									
onc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5		_				
)	N	1.4030	1.3530	1.4340	1.4740	1.4340						
.037		1.3770	1.4030	1.4340	1.4740	1.4520						
0.079		1.3030	1.2090	1.1250	1.0730	1.2300						
0.105		0.9937	0.9051	0.8484	0.8956	0.8017						
0.14		0.7831	0.7458	0.6942	0.6847	0.6989						
0.165		0.3552	0.2763	0.3895	0.4090	0.2763			_			
Combined Pr	oportion Normal	Binomial	s									
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	-	_				
)	N	209/215	205/21	5 211/215	213/215	211/215						
).037		207/215	209/21	5 211/215	213/215	212/215						
0.079		200/215	188/21	5 1/5/215	100/215	191/210						
0.105		151/215	0 133/21	5 121/215	131/215	111/215						
J.14		107/215	99/215	88/215	80/215	89/215						
.165		26/215	16/215	31/215	34/215	16/215						
≩raphics												
1.0		_				0.10-						• / •
- 0.9												
Ĕ 08-											6	•
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0.4-						3			100			
03-						-0 05 -		1.	10			
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01-					1	-0.10	/					
0.0 -			- 10	·· · ·				1.	t.			
	0 N 0.037	0.079	0.105	0.14 0.16	5	-2.0	-1_5	-1.0	-0.5	0.0 0.9	5 10	1.5 2.0
		Conc-	mg/L						F	Rankits		
											n	1
07-615-942-9				C	ETIS™ v2.'	1 1.6 x64				Analyst:	(/[ 0	2A:

CETIS™ v2.1 1.6 x64 Page 29 of 35

6/9/2022

CETIS	S Anal	ytical F	Repo	rt						R	Report Test Co	Date: ode/ID:		08 J MYT(	lun-22 16: )50322 / 2	42 (p 1 of 2) 20-4689-8673
Mussel	Shell D	evelopme	nt Tes	t								Aqua	tic B	ioassay & C	onsulting	g Labs, Inc.
Analysi Analyza Edit Da	is ID: ( ed: ( te: (	01-3713-76 08 Jun-22 08 Jun-22	510 16:42 16:39	Endr Anal MD5	ooint: ysis: Hash:	Combin Linear II 3A1715	ed Prop nterpola 1CB515	ortion Norma tion (ICPIN) 51D98CECA	al 35F62FBC0	CC02	CET Stat Edit	'IS Versio us Level or ID:	on: :	CETISv2.1 1 007-615-94	.1 42-9	
Batch li Start Da Ending Test Le	D: ate: ( Date: ( ength: 4	19-9614-66 03 May-22 05 May-22 18h	593 12:00 12:11	Test Prote Spec Taxo	Type: ocol: :ies: :n:	Develop EPA/60 Mytilus Bivalvia	oment-S 0/R-95/ gallopro	urvival 136 (1995) vincialis			Ana Dilu Brin Sou	lyst: ent: e: rce:	Labor Carls	atory Water bad Aquafar	ms CA	Age:
Sample Sample Receipt Sample	e ID: () e Date: () t Date: () e Age: -	01-0606-4 03 May-22 03 May-22	145 12:11 12:00	Code Mate CAS Clier	e: rial: (PC): nt:	652691 Ammon Internal	1 ia (Unio Lab	nized)			Proj Sou Stat	ect: rce: ion:	REF Refer REF	TOX ence Toxica TOX	nt	
Linear I	Interpola	ation Opti	ons													
X Trans	sform	Y Tran	sform	Seed		Resam	ples	Exp 95%	CL Meth	nod						
Linear		Linear		0		280		Yes	Two	-Point	Interp	olation	_			
Point E	stimates	5														
Level	mg/L	95%	LCL	95% UCL												
EC15 EC20 EC25 EC40	0.0815 0.0865 0.0915 0.1083	i8 0.06i i8 0.08i i8 0.08i i8 0.08i i8 0.09i	841 009 623 956	0.08745 0.09235 0.09805 0.1199												
EC50	0.1289	0.12	04	0.138												
Combir	ned Prop	portion No	ormal S	Summary				Calcu	lated Varia	te(A/I	В)				Isoto	nic Variate
Conc-m	ng/L	Code	e	Count	Mean	M	edian	Min	Max	C۷	%	%Effe	ct	A/B	Mean	%Effect
0 0.037 0.079 0.105 0.14 0.165		N		5 5 5 5 5 5 5	0.9758 0.9786 0.8558 0.6019 0.4363 0.1144	3 0.9 5 0.9 3 0.6 9 0.6 3 0.4	9814 9814 9744 9093 4140 1209	0.9535 0.9628 0.7721 0.5163 0.4000 0.0744	0.9907 0.9907 0.9302 0.7023 0.4977 0.1581	1.4 1.1 7.3 11. 9.5 33.9	5% 4% 2% 54% 2% 96%	0.00% -0.29% 12.30% 38.32% 55.29% 88.27%	6 % % %	1049/1075 1052/1075 920/1075 647/1075 469/1075 123/1075	0.9772 0.9772 0.8558 0.6019 0.4363 0.1144	0.00% 0.00% 12.42% 38.41% 55.35% 88.29%
Combir	ned Prop	portion No	ormal C	)etail												
Conc-m	na/L	Cod	e	Rep 1	Rep 2	Re	ep 3	Rep 4	Rep 5							
0 0 037 0 079 0.105 0.14 0 165	<u>,</u>	N		0,9721 0,9628 0,9302 0,7023 0,4977 0,1209	0.9535 0.9721 0.8744 0.6186 0.4605 0.0744	5 0.9 1 0.9 4 0.8 5 0.4 5 0.4	9814 9814 3140 5628 4093 1442	0.9907 0.9907 0.7721 0.6093 0.4000 0.1581	0.9814 0.9860 0.8884 0.5163 0.4140 0.0744							
Combir	ned Prop	portion No	ormal E	Binomials												
Conc-m	ng/L	Cod	e	Rep 1	Rep 2	Re	ep 3	Rep 4	Rep 5							
0 0.037 0.079 0.105 0.14		N		209/215 207/215 200/215 151/215 107/215	205/21 209/21 188/21 133/21 99/215	15 21 15 21 15 17 15 12 5 88	1/215 1/215 5/215 1/215 //215	213/215 213/215 166/215 131/215 86/215	211/215 212/215 191/215 111/215 89/215							
0.165				26/215	16/215	5 31	/215	34/215	16/215							

Analyst: <u>A</u> QA:<u>C</u> 6/9/2022

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CETIS An	alytical Report			Report Date: Test Code/ID:	08 Jun-22 16:42 (p 2 of 2) MYT050322 / 20-4689-8673
Mussel Shel	Development Test			Aquatic E	Bioassay & Consulting Labs, Inc.
Analysis ID:	01-3713-7610	Endpoint:	Combined Proportion Normal	CETIS Version: Status Level:	CETISv2_1.1
Edit Date:	08 Jun-22 16:39	MD5 Hash;	3A17151CB5151D98CECA35F62FBCCC02	2 Editor ID:	007-615-942-9
Graphics					C
	•				
0.9		-			
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<b>2</b> 0.7					
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0.5 -					
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0.3 -					
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007-615-942-9

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04 03 0.2 0.1 0.0 -0.00

0.02

0.04

0.06

0.08

Conc-mg/L

0.10

0.12

0.14

0.16

Analyst: 2 QA:C
CETIS Measurement Report						Report Date:         08 Jun-22 1           Test Code/ID:         MYT050322 /			8 Jun-22 16 /T050322 /	6:42 (p 1 of 1) 20-4689-8673	
Mussel Shell	Development To	est						Aquatio	: Bioassay &	& Consultir	ig Labs, Inc.
Batch ID: Start Date: Ending Date: Test Length:	19-9614-6693 03 May-22 12:0 05 May-22 12:1 48h	0 1	Test Type: Protocol: Species: Taxon:	Development-S EPA/600/R-95 Mytilus gallopre Bivalvia	Development-Survival EPA/600/R-95/136 (1995) Mytilus galloprovincialis Bivalvia			Analyst: Diluent: Laboratory Water Brine: Source: Carlsbad Aquafarms CA			Age:
Sample ID: Sample Date: Receipt Date: Sample Age:	01-0606-4145 03 May-22 12:1 03 May-22 12:0 	1 0	Code: Material: CAS (PC): Client:	6526911 Ammonia (Unionized) Internal Lab			Pr Sc St	Project:REF TOXSource:Reference ToxicantStation:REF TOX			
Dissolved Ox	ygen-mg/L										
Conc-mg/L	Code	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	6.7	5.429	7.971	6.6	6.8	0.07071	0.1414	2.11%	0
0.037		2	6.7	4.159	9.241	6.5	6.9	0.1414	0.2828	4.22%	0
0.079		2	6.8	4.259	9,341	6.6	7	0.1414	0.2828	4.16%	0
0.105		2	6.9	5.629	8.171	6.8	7	0.07071	0.1414	2.05%	0
0.14		2	7.15	6.515	7.785	7.1	7.2	0.03536	0.07071	0.99%	0
0.165		2	6.55	5,915	7.185	6.5	6.6	0.03535	0.0707	1.08%	0
Overall		12	6.8	6.647	6.953	6.5	7.2	0.06963	0.2412	3.55%	0 (0%)
Total Ammon	ia (N)-mg/L										
Conc-mg/L	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Ν	2	0	0	0	0	0	0	0	***	0
Overall		2	0	0	0	0	0	0	0	#Num!	0 (0%)
pH-Units											
Conc-mg/L	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0
0.037		2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0
0.079		2	7.9	7,884	7.916	7.9	7.9	0	0	0.00%	0
0.105		2	7.85	7.215	8.485	7.8	7.9	0.03535	0.07071	0.90%	0
0.14		2	7.8	7,787	7.813	7.8	7.8	0	0	0.00%	0
0.165		2	7.7	7.698	7.702	7.7	7.7	0	0	0.00%	0
Overall		12	7.842	7,791	7.892	7.7	7,9	0.02289	0.0793	1.01%	0 (0%)
Salinity-ppt				V							
Conc-mg/L	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	34	34	34	34	34	0	0	0.00%	0
0.037		2	34	34	34	34	34	0	0	0.00%	0
0.079		2	34	34	34	34	34	0	0	0.00%	0
0.105		2	34	34	34	34	34	0	0	0.00%	0
0.14		2	34	34	34	34	34	0	0	0.00%	0
0.165		2	34	34	34	34	34	0	0	0.00%	0
Overall		12	34	34	34	34	34	0	0	0.00%	0 (0%)
Temperature-	°C										
Conc-mg/L	Code	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Ν	2	14.8	13.53	16.07	14.7	14.9	0.07072	0.1414	0.96%	0
0_037		2	14.8	13,53	16.07	14.7	14.9	0.07072	0.1414	0.96%	0
0.079		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
0_105		2	14.75	14.11	15.39	14.7	14.8	0.03537	0.07075	0.48%	0
0.14		2	14 9	14 87	14.93	14.9	14.9	0	0	0.00%	0
0.165		2	14 85	14 21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
Overall		12	14.82	14.77	14.88	14.7	14.9	0.025	0.0866	0.58%	0 (0%)

Analyst:

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QA:C 6/9/2022

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Page 1 of 1



570-93645 Chain of Custody

Α A A Α А А А А Client Name/Address: ANALYSIS REQUIRED Field Readings Meter serial # Haley & Aldrich Field readings: (Include units) 5333 Mission Center Rd Suite 300 4,4-DDT Crassostrea Fime of readings\_ 0765Project: San Diego, CA 92108 Boeing-SSFL NPDES Eurofins Calscience Project Manager Virendra Patel Permit 2015 Total Organic Carbon (9060) - Dry Weight Corrected Toxaphene, 4,4-DDD 4,4-DDE 2841 Dow Avenue Suite #100 48-hour Bivalve Embryo toxicity (Mytlius edulis or giges) (EPAR-95/136) ABC Labs In Venture CA Annual Sediment Arroyo Simi-Frontier Park pH unit Tustin CA 92780 Chronic 10-day eohaustorius estuarius Toxicity (EPA/600/R-94/025) ABC Labs in Ventura CA Tel: 714-895-5494 FEE ECI Project #44024446 mg/L Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Project Manager Katherine Miller Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and Size Distribution (D422M) Total Ammonia (SM4500-NH3-D) '80 520.289.8606, 520.904.6944 (cell) в filiates, and Eurofins Calscience Laboratories Inc Conductivity umhos/cm  $\mathcal{O}$ O. Velocity ft/sec Sampler Adrien Mobeka Field Manager Mark Dominick Dieldrin % Moisture (2540G) Field readings QC 978.234.5033, 818.599.0702 (cell) PCBs (SW8082) Checked hv: Chlordane, C (SW8081A) Date/Time: 04.-2 5-1022 Particle Sample Sample Sample I.D. Sampling Date/Time Container Type # of Cont. Preservative Bottle # MS/MSD Comments Description Matrix SE 9 oz Jar 3 None 165 Yes х SF 9 oz Jar 1 None 246 No х SE 9 oz Jar 3 None 280 Yes х SE 3 None Yes х 9 oz Jar 290 Arroyo Simi Arroyo\_Simi-Sed\_20220425 4/25/2022 /0745 1L wide mouth 3 SE None 295 No Х Deriver to ABC cabs in Ventura CA Plastic 1L wide mouth SE 4 4°C in the Dark 300 х Keep sample in cooler in the dark until delivered to ABC Labs No Plastic SE 9 oz Jar 1 None 305 No х Sample time added by M. Dominick 4/26/2022 SË 9 oz Jar None 310 χ 1 No Legend: A=Annual Date/Time: Relinquished By Company Received By Date/Time um-around time: (Check EC 10501 24 Hour 72 Hour 4/28/22 - 10 Day: 22 -25-2022 8 Hour: 5 Day: ÉC 12/22 1307 rity: (Check ų 25 1302 p 22 Relinguished By Company: Received By Date/Time: mples for 6 months ata Requirements: (Check) No Level | All Level IV

\* Hard-delivered by HiA to ADC in Vertera, CA

3.2/4.9 IR96

#### 2019-2020 Rainy Season Version 2

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Page 1 of 1



570-93645 Chain of Custody

А A A Α А А А Α Client Name/Address: ANALYSIS REQUIRED Field Readings Meter serial # Haley & Aldrich Field readings: (Include units) 5333 Mission Center Rd Suite 300 4,4-DDT Crassostrea Time of readings 0765Project: San Diego, CA 92108 Boeing-SSFL NPDES Eurofins Calscience Project Manager Virendra Patel Permit 2015 Total Organic Carbon (9060) - Dry Weight Corrected Toxaphene, 4,4-DDD 4,4-DDE 2841 Dow Avenue Suite #100 48-hour Bivalve Embryo toxicity (Mytlius edulis or gigas) (EPAR-95/136) ABC Labs in Ventura CA Annual Sediment Arroyo Simi-Frontier Park pH unit Tustin CA 92780 Chronic 10-day eohaustorius estuarius Toxicity (EPA/800/R-94/025) ABC Labs in Ventura CA Tel: 714-895-5494 FEF ECI Project #44024446 mg/L Eurofins Calscience's services under this COC shall be performed in accordance with the T&Cs within Blanket Project Manager Katherine Miller Service Agreement# 2022-26-Eurofins Calscience by and between Haley & Aldrich, Inc., its subsidiaries and Distribution (D422M) Total Ammonia (SM4500-NH3-D) 520.289.8606, 520.904.6944 (cell) в '80 filiates, and Eurofins Calscience Laboratories Inc. Conductivity umbos/cm 0.  $\mathcal{O}$ Velocity ff/sec Sampler Adrien Mobeka Field Manager Mark Dominick Dieldrin Molsture (2540G) Fleid readings QC 978.234.5033, 818.599.0702 (cell) PCBs (SW8082) Checked hr Size Chlordane, C (SW8081A) Date/Time: 04 512022 Particle Sample Sample Sample I.D. Sampling Date/Time Container Type # of Cont. Preservative Bottle # MS/MSD Comments % Description Matrix SE 9 oz Jar 3 None 165 Yes х SF 9 oz Jar 1 None 246 No х SE 9 oz Jar 3 None 280 Yes х SE 3 None 290 х 9 oz Jar Yes Arroyo Simi Arroyo\_Simi-Sed\_20220425 4/25/2022 1L wide mouth 3 SE None 295 No Х Deliver to ABC Labs in Ventura CA Plastic 1L wide mouth SE 4 4"C in the Dark 300 Х Keep sample in cooler in the dark until delivered to ABC Labs No Plastic SE 9 oz Jar 1 None 305 No х SE 9 oz Jar None 310 No х 1 Legend: A=Annual Relinquished By Date/Time: Company Received By Date/Time: um-around time: (Check EC 1050 24 Hour 72 Hour\_ 4/28/22 - 10 Day: -25-2022 22 8 Hour: 5 Day: Norro quished By ÉC 125/22 130 eority: (Check ų 1302 10 25 22 Relinquished By Company: Received By Date/Time: notes for 6 months ata Requirements: (Check) No Level | All Level IV

\* Hard-delivered by HiA to ADC in Ventra, CA

3.2/4.9 IR96

2019-2020 Rainy Season Version 2

# Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

### Login Number: 93645

List Number: 1 Creator: Patel, Virendra

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

Job Number: 570-93645-3

List Source: Eurofins Calscience



Haley & Aldrich, Inc. 600 South Meyer Ave Suite 100 Tucson, AZ 85701 520.289.8621

## Data Usability Summary Report

Project Name: Boeing NPDES SSFL Project Description: Second Quarter 2022 Sample Date(s): 25 April 2022 Analytical Laboratory: Eurofins Calscience – Tustin, CA Validation Performed by: Sean Fischer Validation Reviewed by: Vanessa Godard Validation Date: 12 July 2022

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. Sample Delivery Group Number 570-93643-1, 570-93643-2, 570-93645-1, 570-93645-2, and 570-93645-3
- 2. Precision and Accuracy [for SDG(s) above]
- 3. Explanations
- 4. Glossary
- 5. Abbreviations
- 6. 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:

- National Functional Guidelines (NFG) for Inorganic Data Review.
- National Functional Guidelines (NFG) for Organic Data Review.
- The project-specific Quality Assurance Project Plan (QAPP), herein referred to as the specified limits (see references section). Written in 2015, the QAPP referenced the NFG written at the time. Data in this report has been reviewed against the most recent NFG.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL) or estimated detection limit (EDL). Results found between the MDL and the 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 for the project and therefore usable; any exceptions are noted in the following pages.

Method D4464 for grain size was not validated in this DUSR.



# 1. Sample Delivery Group Number 570-93643-1, 570-93643-2, 570-93645-1, 570-93645-2, and 570-93645-3

### **1.1 SAMPLE MANAGEMENT**

This DUSR summarizes the review of SDG numbers:

- 570-93643-1, dated 17 May 2022
- 570-93643-2, dated 1 June 2022
- 570-93645-1, dated 18 May 2022
- 570-93645-2, dated 17 May 2022
- 570-93645-3, dated 9 June 2022

Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC. Issues noted with sample management are listed below:

- Samples times added on COCs for all SDGs on 26 April 2022.
- 570-93643-2: Method SW8315 subcontracted to Weck Laboratories, Inc., City of Industry, CA.
- 570-93645-3: Methods EPA/600/R-94/025 and EPA/600/R-95/136 subcontracted to Aquatic Bioassay & Consulting, Ventura, CA.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Date	Matrix	Methods
Arroyo_Simi_20220425_Grab	N	2D25042-01*	04/25/2022	WS	С
Arroyo_Simi_20220425_Grab	N	570-93643-1	04/25/2022	WS	А, В
Arroyo_Simi-Sed_20220425	Ν	570-93645-1**	04/25/2022	SE	D, E, F, G, H, I, J

\* Method SW8315 subcontracted to Weck Laboratories, Inc., City of Industry, CA

\*\* Methods EPA/600/R-94/025 and EPA/600/R-95/136 subcontracted to Aquatic Bioassay & Consulting, Ventura, CA.

Meth	od Holding Times				
^	FC08.2	Organochlorine Pesticides and PCBs	14 days extraction / 40 days analysis for		
А.	E008.3	by GC/HSD	liquid, unpreserved		
В.	SM2340	Hardness	180 days for liquid, preserved		
			Immediate extraction within 24 hours of		
C	\$\\/\2215	Diazinon and Chlornwrifos	collection for diazinon,		
С.	200212	Diazinon and emorpymos	14 days extraction for chlorpyrifos /		
			30 days analysis for liquid, preserved		
D.	D4464*	Grain Size	No holding time		
Ε.	SM4500-NH3D	Total Ammonia	28 days for sediment, unpreserved		
E	C\N/QOQ1A	Organachlarina Bostisidas	7 days extraction / 40 days analysis for		
г.	200001A	organochionne resticides	sediment, unpreserved		
c	CINIQUOD	Polychloringtod Pinhonyls (PCPs)	7 days extraction / 40 days analysis for		
О.	300002	Polychiormated Diphenyls (PCBS)	sediment, unpreserved		



Meth	od Holding Times		
Н.	SW9060A	Total Organic Carbon	28 days for sediment, unpreserved
١.	EPA/600/R-94/025	Sediment Toxicity (chronic 10-day eohaustorius estuaries toxicity)	14 days for sediment, unpreserved
J.	EPA/600/R-95/136	48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas)	14 days for sediment, unpreserved

\* Method D4464 not validated in this DUSR

### **1.2 CASE NARRATIVE**

The laboratory report case narratives included the following issues:

- 570-93645-1 for Method 3546 Organic Prep: The following samples required a mercury cleanup, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: Arroyo\_Simi-Sed\_20220425 (570-93645-1), Arroyo\_Simi-Sed\_20220425 (570-93645-1[MS]) and Arroyo\_Simi-Sed\_20220425 (570-93645-1[MSD]).
- 570-93645-1 for Method D4464: The sample duplicate precision for the following sample associated with analytical batch 570-232053 was flagged as being outside control limits due to a L.I.M.S. limitation: Arroyo\_Simi-Sed\_20220425 (570-93645-1) and (570-93645-B-1 DU). The mean grain size for the sample and sample duplicate were within RPD acceptance criteria.

### 1.3 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.

### 1.4 **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.

No dilutions were performed for the analysis of the samples in this report.

### 1.5 REPORTING BASIS (WET/DRY)

Refer to section E 1.1. Sediment data in this SDG were reported on a wet/dry weight basis.

Where reported, percent solid results or percent moisture were reviewed and found to be within limits.

### 1.6 SURROGATE RECOVERY COMPLIANCE

<u>Refer to section E 1.2.</u> 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, with the following exceptions:

Method	Sample ID	Lab ID	Surrogate	Dilution	%R	Qualification
E608.3	Arroyo Simi_ 20220425_Grab	570-93643-1	Tetrachloro-m- xylene	1x	147%	None, samples are ND



### 1.7 LABORATORY CONTROL SAMPLES

<u>Refer to section E 1.3</u>. Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS/LCSD) analyses exhibited recoveries and relative percent differences (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	SW8081A	231306	4,4'-DDT	152%/143%	J+/None	None, samples are ND

### 1.8 MATRIX SPIKE SAMPLES

<u>Refer to section E 1.4.</u> The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD):

Lab Sample Number	Matrix Spike/Matrix Spike Duplicate Sample Client ID	Method(s)
570-93643-1 MS/MSD	Arroyo_Simi_20220425_Grab	E608.3
W2D1846-MS1/MSD1	Arroyo_Simi_20220425_Grab	SW8315
570-93645-1 MS/MSD	Arroyo_Simi-Sed_20220425	SW8081A, SW8082, SM4500-NH3D

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

Sample Type	Method	Parent Sample	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	E608.3	Arroyo_Simi_20220425_Grab	4,4'-DDT	RPD = 51	J/None	None, samples are ND

### **1.9 BLANK SAMPLE ANALYSIS**

<u>Refer to section E 1.5.</u> Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

### 1.10 DUPLICATE SAMPLE ANALYSIS

<u>Refer to section E 1.6.</u> No client samples were used for laboratory duplicate analysis.

No field duplicates were collected in this data set.



### 1.11 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. No qualifiers were applied to any data in this report.



# 2. Precision and Accuracy [for SDG(s) above]

<u>Refer to section E 1.7.</u> Where required by the method, some measurement of analytical accuracy and precision was reported for each method with the site samples.



# 3. 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 1.1 Reporting Basis (Wet/Dry)
  - Soil samples can be reported on either a wet (as received) or dry weight basis. Dry
    weight data indicate calculations were made to compensate for the moisture content of
    the soil sample.
  - Percent (%) solids should be appropriately considered when evaluating analytical results for non-aqueous samples. Sediments with high moisture content may or may not be successfully analyzed by routine analytical methods. Samples should have greater than or equal to 30 percent solids to be appropriately quantified.
- 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 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 1.4 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.
  - For inorganic methods, when a matrix spike recovery falls outside of the control limits and the sample result is less than four times the spike added, a post digestion spike (PDS) is performed.
- E 1.5 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 1.6 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.



- The field duplicate sample analysis is used to assess the precision of the field sampling
  procedures and analytical method. The relative percent difference (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 (%Rec) of certain spiked compounds. This can be assessed using LCS, BS, MS, and/or surrogate recoveries.



# 4. 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:
  - ng/L nanograms per liter
  - μg/kg microgram per kilogram
  - μg/L microgram per liter
  - μg/m3 microgram per cubic meter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
  - ppb v/v parts per billion volume/volume
  - pCi/L
     picocuries per liter
  - pg/g picograms per gram
- Matrices:
  - AA Ambient Air
  - GS Soil Gas
  - GW/WG Groundwater
  - QW Water Quality
  - IA Indoor Air
  - SE Sediment
  - SO Soil
  - WQ Water Quality control matrix
  - WS Surface Water
- Table Footnotes:
  - NA
     Not applicable
  - ND Non-detect
  - NR Not reported
- Common Symbols:
  - % percent
  - < less than
  - − ≤ less than or equal to
  - > greater than
  - $\geq$  greater than or equal to
  - = equal
  - °C degrees Celsius
  - ± plus or minus
  - ~ approximately
  - x times (multiplier)



# 5. Abbreviations

%D	Percent Difference	MS/MSD	Matrix Spike/Matrix Spike Duplicate
%R	Percent Recovery	NA	not applicable
%RSD	Percent Relative Standard Deviation	ND	Non-Detect
%v/v	Percent volume by volume	NFG	National Functional Guidelines
μg/L	micrograms per liter	NH₃	Ammonia
2s	2 sigma	NYSDEC	New York State Department of
4,4-DDT	4 4-dichlorodiphenyltrichloroethane		Environmental Conservation
Abs Diff	Absolute Difference	РАН	polycyclic aromatic hydrocarbon
BPJ	Best Professional Judgement	РСВ	Polychlorinated Biphenyl
BS	Blank Spike	PDS	Post Digestion Spike
ССВ	Continuing Calibration Blank	PEM	Performance Evaluation Mixture
CCV	Continuing Calibration Verification	PFAS	Per- and Polyfluoroalkyl Substances
CCVL	Continuing Calibration Verification	PFBA	Perfluorbutanoic Acid
	Low	PFD	Perfluorodecalin
COC	Chain of Custody	PFOA	Perfluorooctanoic Acid
COM	Combined Isotope Calculation	PFOS	Perfluorooctanoic Acid
Cr (VI)	Hexavalent Chromium	PFPeA	nonafluorovaleric acid
CRI	Collision Reaction Interface	QAPP	Quality Assurance Project Plan
DoD	Department of Defense	QC	Quality Control
DUSR	Data Usability Summary Report	QSM	Quality Systems Manual
EMPC	Estimated Maximum Possible	R <sup>2</sup>	R-squared value
	Concentration	Ra-226	Radium-226
FBK	Field Blank Contamination	Ra-228	Radium-228
FDP	Field Duplicate	RESC	Resolution Check Measure
GC	Gas Chromatograph	RL	Laboratory Reporting Limit
GC/MS	Gas Chromatography/Mass	RPD	Relative Percent Difference
	Spectrometry	RRF	Relative Response Factors
GPC	Gel Permeation Chromatography	RT	Retention Time
H2	Hydrogen gas	SAP	sampling analysis plan
HCI	Hydrochloric Acid	SDG	Sample Delivery Group
ICAL	Initial Calibration	SIM	Selected ion monitoring
ICB	Initial Calibration Blank	SOP	Laboratory Standard Operating
ICP/MS	Inductively Coupled Plasma/ Mass		Procedures
	Spectrometry	SPE	Solid Phase Extraction
ICV	Initial Calibration Verification	SVOC	Semi-Volatile Organic Compounds
ICVL	Initial Calibration Verification Low	TIC	Tentatively Identified Compound
IPA	Isopropyl Alcohol	TKN	Total Kjeldahl Nitrogen
LC	Laboratory Control	ТРН	Total Petroleum Hydrocarbon
LCS/LCSD	Laboratory Control Sample/Laboratory	TPU	Total Propagated Uncertainty
	Control Sample Duplicate	u	atomic mass unit
МВК	Method Blank Contamination	USEPA	U.S. Environmental Protection Agency
MDC	Minimum Detectable Concentration	VOC	Volatile Organic Compounds
MDL	Laboratory Method Detection Limit	WP	Work Plan
mg/kg	milligrams per kilogram		



# 6. Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Validation Note:
  - \*III Unusual problems found with the data that have been described in the validation report.
  - B Laboratory method blank contamination.
  - D The analysis with this flag should not be used because another more technically sound analysis is available.
  - DNQ Detected but not quantified (constituent value greater than or equal to the laboratory method detection limit and less than the laboratory reporting limit).
  - H Holding time was exceeded.
- Validation Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or "ND".
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - 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.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.
  - = No Qualifier



# References

- 1. United States Environmental Protection Agency (USEPA), 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.
- 2. USEPA, 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-20-005. November.
- 3. Haley & Aldrich, Inc, 2015. Quality Assurance Project Field Plan for Santa Susana Field Laboratory Stormwater Sampling Program. December.



**APPENDIX E** 

Annual Comprehensive Sitewide Compliance Evaluation Report

### **APPENDIX E**

### ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT REPORTING YEAR JULY 1, 2021 THROUGH JUNE 30, 2022

This Annual Comprehensive Site Compliance Evaluation Report (Annual Evaluation) was prepared for The Boeing Company (Boeing) Santa Susana Field Laboratory (Site), located in Simi Hills, Ventura County, California in general accordance with Attachment G (Section IX.D.) of the Site's Waste Discharge Requirements (National Pollutant Discharge Elimination System [NPDES] Permit No. CA0001309, Cl No. 6027). This Report evaluates compliance with the Site-Wide Stormwater Pollution Prevention Plan (SWPPP) during reporting year July 1, 2021 through June 30, 2022. The Annual Evaluation was conducted between April 26 to 29, 2022 and May 2 to 4, 2022 by Mark Dominick, PG, QSD and Michelle Dallalah, both of Haley & Aldrich, Inc.

### **REVIEW OF VISUAL OBSERVATION RECORDS, INSPECTION RECORDS, AND SAMPLING AND ANALYSIS RESULTS**

For the reporting year, the Inspectors reviewed all inspection forms during the Annual Evaluation, up to March 2022, that documented inspections/visual observations. Inspection forms completed for the reporting year after the Annual Evaluation was conducted were reviewed by June 30, 2022; each inspection form was complete or revised as needed. A process exists and has been implemented for non-compliance items to be properly evaluated and corrected.

Sampling and analysis results are evaluated in each quarterly Discharge Monitoring Report (DMR).

### POTENTIAL POLLUTANT SOURCE VISUAL INSPECTION

For the reporting year, the Inspectors conducted visual inspections at the Site during the Annual Evaluation at buildings, equipment, and surrounding areas to evaluate the status of existing potential pollutant sources. The Inspectors confirmed that areas where known potential pollutants exist have appropriate best management practices (BMPs) installed and maintained to minimize and/or eliminate the potential for pollutant releases to reach the drainage system. No additional BMPs are required at this time. No additional buildings, equipment, or surrounding areas were identified that require BMPs.

### **BEST MANAGEMENT PRACTICE REVIEW**

For the reporting year, the Inspectors reviewed and evaluated the structural and non-structural BMPs at the Site during the Annual Evaluation. The Inspectors determined the BMPs were adequate, properly implemented, required minor maintenance, and were in compliance with the SWPPP and BMP plan. The Inspectors observed minor amounts of sediment delivered or accumulated around sediment control BMPs due to the upstream areas being well-vegetated with a diversity of plants. The on-site evaluation did result in recommendations which the Inspectors identified on the inspection forms and verified that the corrective actions were completed prior to the issuance of the Second Quarter DMR, with the exception of the recommendation to remove accumulated sediment from behind check structures in several site drainages. Check structures will be cleared once the Los Angeles Regional Water Quality Control Board (Regional Board) issues a Clean Water Act Section 401 Water Quality Certification (401C) approving the work.

### **APPENDIX E**

### ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT REPORTING YEAR JULY 1, 2021 THROUGH JUNE 30, 2022

### SWPPP REVISIONS AND SCHEDULE

The Regional Board adopted the 2015 NPDES Permit No. R4-2015-0033 on February 12, 2015, effective April 1, 2015, to revise the existing 2010 NPDES Permit No. R4-2010-0090. Version 9 of the SWPPP will be completed in the fall of 2022 based on observations made during the Annual Evaluation and include the following revisions:

- Updated text to Santa Susana Site Areas (Section 2.3);
- Updated text to Surface Water Drainages (Section 2.4.1);
- Updated text to Surface Water Monitoring Locations (Section 2.4.3);
- Updated text to Groundwater Treatment (Section 2.5.2);
- Updated text to Significant Materials and Potential Sources (Sections 2.8.1.1 and 2.8.1.4);
- Updated text to Dust and Particulate Generating Activities (Section 2.8.2);
- Updated text to Non-Stormwater Discharges (Section 2.8.4);
- Updated text to Pollutants with Potential to be Present (Section 3.2);
- Updated text to Waste Handling/Waste Recycling (Section 4.1.5);
- Added text to New BMPs to be Implemented (Section 4.3);
- Updated text to the Sampling and Analysis Plan section;
- Updated text to the References (Section 6);
- Updated figures;
- Updated Significant Materials Inventory (Appendix C);
- Updated Spill Prevention and Response Plan (Appendix E); and
- Updated inspection forms (Appendix F).

### NON-COMPLIANCE INCIDENTS AND CORRECTIVE ACTIONS TAKEN

As part of the Annual Evaluation, the Inspectors reviewed the non-compliance issues (Permit Limit exceedances) discussed in the DMRs and reviewed the corrective actions. The Inspectors have determined that the corrective actions were appropriate and have been completed. During the onsite portion of the annual evaluation, minor recommendations were made to Boeing and the Inspectors have determined that the recommendations were either completed prior to the issuance of the Second Quarter DMR or will be scheduled to be completed following issuance of the 401C.

### CERTIFICATION

Per NPDES Permit Appendix G, Section IX.D, the signature and certification requirements for this evaluation report are included in the DMR text.

**APPENDIX F** 

Annual Bioassessment Sampling Report

### **APPENDIX F**

### BIOASSESSMENT MONITORING AND SAMPLING SANTA SUSANA FIELD LABORATORY 2022

The National Pollutant Discharge Elimination System permit specifies that bioassessment monitoring will be performed at two locations (SSFL-001 [Outfall 001] and SSFL-006 [Outfall 006]) in the spring/summer of each year, approximately four to six weeks following the last significant rainfall event. This time period was established by, and is included in, the state-wide bioassessment protocols established by the State of California's Surface Water Ambient Monitoring Program (SWAMP 2016).

The permit specifies that visual assessment of the physical habitat conditions will be conducted and, if flow is present at either location, sampling will be conducted to assess the integrity of the benthic macroinvertebrate community at each site.

Rainfall amount for the 2021 through 2022 rain year was approximately 1 inch greater than average. Between July 2021 and June 2022, a total of 18.16 inches of rain was recorded at the Area I weather station. Average annual rainfall for the site vicinity is approximately 17 inches (Geosyntec and the Expert Panel, 2021). The latest significant rainfall event for the 2021 through 2022 rain year occurred on March 22, 2022 (total equals 1.02 inches; Figure 1).



Figure 1. Rainfall measured at the Area I weather station between July 2021 and June 2022.

The Boeing Company (Boeing) conducted the annual bioassessment monitoring on May 3, 2022 to assess the physical habitat conditions and to determine if bioassessment samples could be collected. Neither SSFL-001 nor SSFL-006 had flow and both were completely dry across their entire reaches (Figure 2). Therefore, bioassessment sampling was not performed.

### **APPENDIX F**

### BIOASSESSMENT MONITORING AND SAMPLING SANTA SUSANA FIELD LABORATORY 2022



SSFL-001, downstream

SSFL-001, upstream



SSFL-006, downstream

SSFL-006, upstream

Figure 2. Downstream and upstream views of SSFL-001 and SSFL-006.