



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

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Via Email to losangeles@waterboards.ca.gov

November 15, 2022

In reply refer to SHEA-116395

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

Subject: Third 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 July 1 through September 30, 2022 (Third 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 90 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: <http://www.boeing.com/principles/environment/santa-susana/monitoring-reports.page>

### THIRD 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 Third Quarter 2022. Table I summarizes the Third Quarter 2022 sampling record by outfall or location, sample frequency, and sample type collected per the requirements of the NPDES Permit.
- **Summary of Exceedances and/or Non-Compliance:** This section summarizes the Third Quarter 2022 sample results that exceeded NPDES Permit Limits, Benchmarks, and Receiving Water Limits, and the potential causes thereof.
- **Receiving Water Surveys:** This section summarizes the receiving water surveys required by the NPDES Permit.
- **Stormwater Treatment System at Outfall 011 Activities:** This section summarizes the Third Quarter 2022 activities at the stormwater treatment system (SWTS) at Outfall 011.
- **Stormwater Treatment System at Outfall 018 Activities:** This section summarizes the Third 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 Third Quarter 2022 as well as activities associated with NASA, DOE, the Stormwater Expert Panel (Expert Panel), and other BMP activities. Table II summarizes typical BMP-related activities that occur at outfalls every quarter. Table III summarizes specific SWPPP/BMP activities completed during the Third Quarter 2022 by location. Table IV summarizes activities completed in coordination with the Expert Panel during the Third Quarter 2022.
- **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.
- **Appendix A** summarizes the rainfall measured at the Santa Susana Site during the Third Quarter 2022.
- **Appendix B** tabulates waste shipments during the Third Quarter 2022.
- **Appendix C** presents chemical analytical results from the Third 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).

## 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 Third 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 quarterly surface water sample was collected at the Arroyo Simi–Frontier Park location on 7 July 2022.

Table I summarizes the Third 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 Third Quarter 2022**

Date	Outfall/Location	Sample Frequency	Sample Type
7/7/2022	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Quarterly Surface Water	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 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 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 Third 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.

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

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

## THIRD 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 Third Quarter 2022, Outfalls 002, 008, and 009 did not discharge, thus, no receiving water surveys were conducted.

### **STORMWATER TREATMENT SYSTEM AT OUTFALL 011 ACTIVITIES**

The SWTS located near R-1 Pond (SWTS 011) discharges through Outfall 011. Maintenance items completed in the Third Quarter 2022 are as follows:

- Performed weed abatement in and around the treatment system compound.
- Purged all the chemical lines.
- Replaced the peristaltic pump tube for the hydrochloric acid pumps.
- Replaced the two 2hp supernatant pumps with 5hp pumps.
- Replaced the polymer tubing in the chemical skid.
- Removed sediment and material from the Backwash, Weir, and Supernatant Tanks.
- Installed a new compound light on top of the Plate Settler.
- Installed a new compound light above the Filter Feed Pumps, illuminating the influent board location.
- Installed a new compound light illuminating the master control cabinet (MCC).
- Modified the ACTIFLO outlet high density polyethylene line to bypass the Buffer Tank.
- Installed a switch to power off the pH unit on ACTIFLO.

SWTS 011 did not operate in the Third 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 Third Quarter 2022 are as follows:

- Performed weed abatement in and around the treatment system compound.
- Completed purging all chemical lines.
- Replaced the electrical wires from the MCC to the catwalk over the pond. Electrical wires were damaged by rodents.
- Removed the media from the Sand Filters and installed new gravel and sand in the tanks.
- Removed sediment and material from the Backwash Tank.
- Repaired the waterline supplying the SWTS.
- Installed a switch to power off the pH unit on ACTIFLO.
- Installed an electrical outlet outside of the breakroom.

SWTS 018 did not operate in the Third Quarter 2022.

**STORMWATER POLLUTION PREVENTION PLAN/BEST MANAGEMENT PRACTICE ACTIVITIES**

Boeing, NASA, and DOE each took actions during the Third Quarter 2022 to control erosion and sediment transport on each party’s property and/or area of responsibility. 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**

BMP Activities	Outfalls												
	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	X	X	X	X	X	X	X	X
Inspected the flume for sediment/debris.	X	X	X	X	N/A	X	N/A	X	X	X	N/A	X	
Inspected the weir for sediment/debris.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	X	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	X	X	N/A	X	X	X	
Checked the flow meter control box for the presence of debris and/or animals.	X	X	X	X	N/A	X	N/A	X	X	X	X	X	
Cleaned the outfall area of sediment and debris and performed weed abatement as needed.	X	X	X	X	X	X	X	X	X	X	X	X	
Reset the flow meter and replaced the tape monthly.	X	X	X	X	N/A	X	N/A	X	X	X	X	X	
Conducted maintenance inspections of the stormwater conveyance system.	N/A	N/A	X	X	X	X	X	N/A	N/A	X	X	X	
Conducted maintenance inspections of the stormwater retention system.	N/A	N/A	X	X	X	X	X	N/A	N/A	X	X	X	
Conducted maintenance inspections of the flow-through structure.	N/A	N/A	X	X	N/A	X	N/A	N/A	N/A	X	X	N/A	

**Notes:**

X = BMP activity is applicable to the Outfall and was completed in Third 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 Third Quarter 2022 by outfall or BMP location.

**TABLE III: Additional Third Quarter 2022 SWPPP/BMP Activities**

Outfall, Watershed, BMP, or Other Location	SWPPP/BMP Activities During Third Quarter 2022
001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, and 018	<ul style="list-style-type: none"> <li>– Performed weed abatement in and around the Outfall.</li> </ul>
001, 002, 003, 004, 006, 008, 009, 010, 011, and 018	<ul style="list-style-type: none"> <li>– Performed yearly maintenance and calibration of the flow meters and autosamplers.</li> <li>– Installed new sample tubing.</li> </ul>
002	<ul style="list-style-type: none"> <li>– Installed new split loom protection over the Autosampler tubing and flowmeter bubbler tubing.</li> </ul>
003	<ul style="list-style-type: none"> <li>– Installed new split loom protection over the Autosampler tubing and flowmeter bubbler tubing.</li> <li>– Rerouted the Autosampler tubing to eliminate trip hazard.</li> </ul>
004	<ul style="list-style-type: none"> <li>– Removed boulders from the inactive waterline at the top of the Outfall.</li> <li>– Installed new split loom protection over the Autosampler tubing and flowmeter bubbler tubing.</li> </ul>
006	<ul style="list-style-type: none"> <li>– Installed a new Charles King suction line for the upper right media bed.</li> <li>– Installed a new 25hp submersible pump in the upper left retention basin.</li> <li>– Relocated the 10hp submersible pump to the upper right media bed.</li> <li>– Installed new intake structures around the 10hp and 25hp submersible pumps.</li> <li>– Installed a 3/4hp pump in the basin right before the flume.</li> <li>– Repaired the PVC electrical line from the master control cabinet to the local disconnect.</li> <li>– Trimmed the oak tree around the site light and the local disconnects.</li> <li>– Installed new split loom protection over the Autosampler tubing and flowmeter bubbler tubing.</li> </ul>
007	<ul style="list-style-type: none"> <li>– Resecured the steppingstones to the sample box.</li> </ul>
018	<ul style="list-style-type: none"> <li>– Installed new split loom protection over the Autosampler tubing and flowmeter bubbler tubing.</li> </ul>
010	<ul style="list-style-type: none"> <li>– Installed new split loom protection over the Autosampler tubing and flowmeter bubbler tubing.</li> </ul>
Perimeter Pond	<ul style="list-style-type: none"> <li>– Performed weed abatement and brush clearance along conveyance line.</li> <li>– Performed weed abatement around the intake structure.</li> </ul>
R2A Pond	<ul style="list-style-type: none"> <li>– Performed weed abatement in and around R2A Pond.</li> </ul>
Remote rain gauges	<ul style="list-style-type: none"> <li>– Replaced the solar panels at the remote rain gauges.</li> </ul>
408 Yard	<ul style="list-style-type: none"> <li>– Removed fallen oak tree off the parts storage container.</li> </ul>

In addition to Site-wide SWPPP-related activities, specific BMP projects included: NASA, DOE, and Expert Panel activities. 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 (NASA, 2021). During the Third Quarter 2022, NASA maintained fiber rolls as perimeter and linear sediment controls and 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 Third Quarter 2022.

**Expert Panel-Related Activities**

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

**TABLE IV: Expert Panel-Related Third Quarter 2022 Activities**

Outfall, Watershed, BMP, or Other Location	Activities During Third Quarter 2022
Culvert Modifications (CM)	<ul style="list-style-type: none"> <li>– Performed BMP Inspections.</li> <li>– Removed sediment and debris from the drop inlet of CM-9.</li> </ul>
B-1 Area	<ul style="list-style-type: none"> <li>– Performed BMP Inspections.</li> </ul>
Upper Parking Lot Media Filter	<ul style="list-style-type: none"> <li>– Performed BMP Inspections.</li> <li>– Conducted weed abatement in the media bed and removed sediment, leaf litter, and debris.</li> </ul>
Former Building 1436 Detention Bioswales	<ul style="list-style-type: none"> <li>– Performed BMP Inspections.</li> </ul>
Lower Lot Biofilter (Sedimentation Basin and Biofilter)	<ul style="list-style-type: none"> <li>– Performed BMP Inspections.</li> <li>– Conducted weed abatement.</li> <li>– Performed brush clearance around the racetrack of the Biofilter.</li> <li>– No stormwater was pumped from the cistern to the sedimentation basin during the Third Quarter 2022.</li> </ul>
Former Shooting Range	<ul style="list-style-type: none"> <li>– Performed BMP Inspections.</li> </ul>

**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 (APTF).

**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 15th of November 2022 at The Boeing Company, Seal Beach, California Site.

Sincerely,



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 – Third Quarter 2022 Daily Rainfall Summary

Appendix B – Third Quarter 2022 Waste Shipment Summary Table

Appendix C – Third Quarter 2022 Discharge Monitoring Data Summary Tables

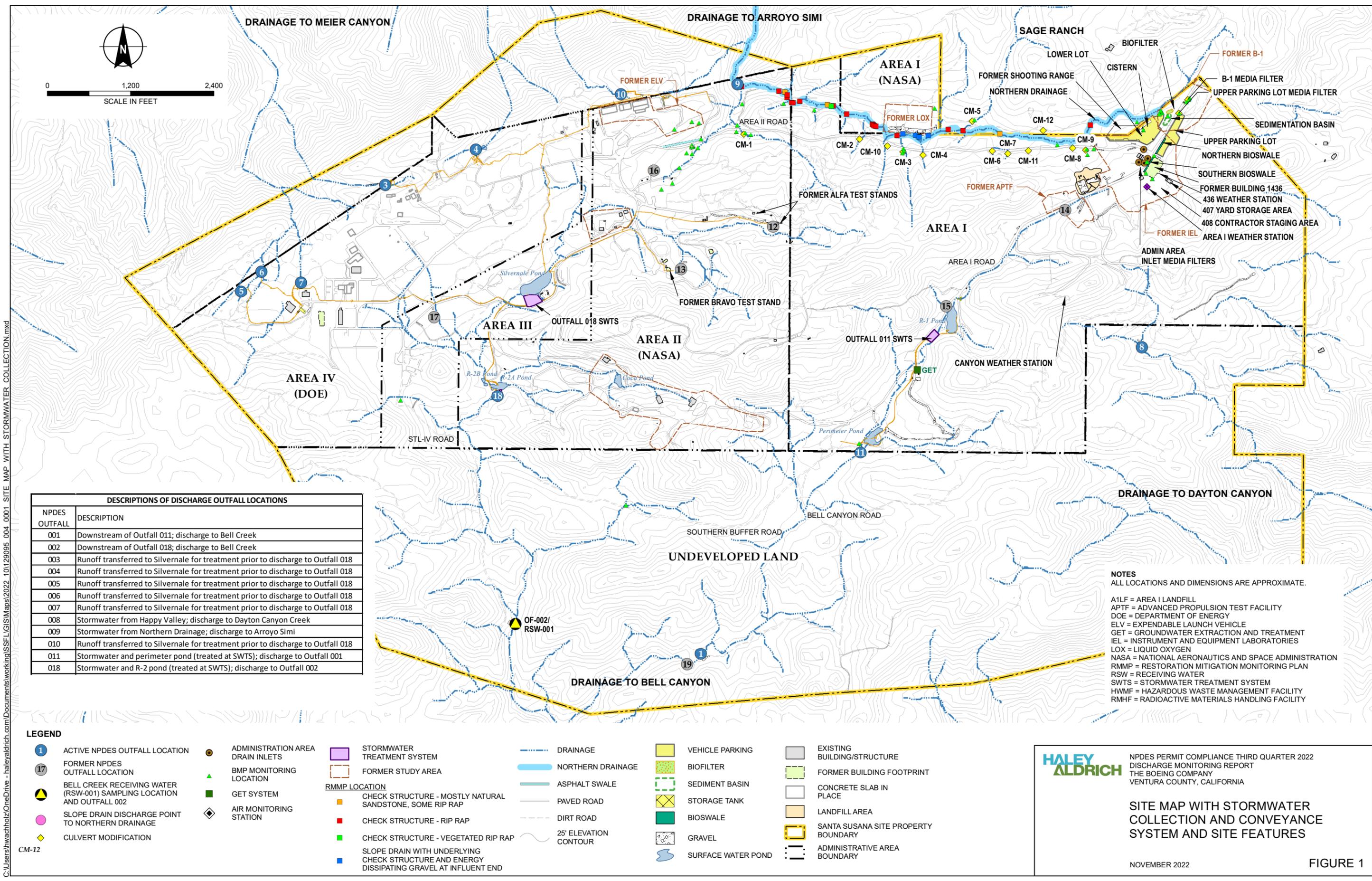
Appendix D – Third Quarter 2022 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports

- 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



DESCRIPTIONS OF DISCHARGE OUTFALL LOCATIONS	
NPDES OUTFALL	DESCRIPTION
001	Downstream of Outfall 011; discharge to Bell Creek
002	Downstream of Outfall 018; discharge to Bell Creek
003	Runoff transferred to Silvernale for treatment prior to discharge to Outfall 018
004	Runoff transferred to Silvernale for treatment prior to discharge to Outfall 018
005	Runoff transferred to Silvernale for treatment prior to discharge to Outfall 018
006	Runoff transferred to Silvernale for treatment prior to discharge to Outfall 018
007	Runoff transferred to Silvernale for treatment prior to discharge to Outfall 018
008	Stormwater from Happy Valley; discharge to Dayton Canyon Creek
009	Stormwater from Northern Drainage; discharge to Arroyo Simi
010	Runoff transferred to Silvernale for treatment prior to discharge to Outfall 018
011	Stormwater and perimeter pond (treated at SWTS); discharge to Outfall 001
018	Stormwater and R-2 pond (treated at SWTS); discharge to Outfall 002

**NOTES**  
 ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

A1LF = AREA I LANDFILL  
 APTF = ADVANCED PROPULSION TEST FACILITY  
 DOE = DEPARTMENT OF ENERGY  
 ELV = EXPENDABLE LAUNCH VEHICLE  
 GET = GROUNDWATER EXTRACTION AND TREATMENT  
 IEL = INSTRUMENT AND EQUIPMENT LABORATORIES  
 LOX = LIQUID OXYGEN  
 NASA = NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
 RMMP = RESTORATION MITIGATION MONITORING PLAN  
 RSW = RECEIVING WATER  
 SWTS = STORMWATER TREATMENT SYSTEM  
 HWMF = HAZARDOUS WASTE MANAGEMENT FACILITY  
 RMHF = RADIOACTIVE MATERIALS HANDLING FACILITY

- LEGEND**
- ① ACTIVE NPDES OUTFALL LOCATION
  - ⑱ FORMER NPDES OUTFALL LOCATION
  - 🟡 BELL CREEK RECEIVING WATER (RSW-001) SAMPLING LOCATION AND OUTFALL 002
  - 🟡 SLOPE DRAIN DISCHARGE POINT TO NORTHERN DRAINAGE
  - 🟡 CULVERT MODIFICATION
  - ADMINISTRATION AREA DRAIN INLETS
  - ▲ BMP MONITORING LOCATION
  - GET SYSTEM
  - ◆ AIR MONITORING STATION
  - 🟡 STORMWATER TREATMENT SYSTEM
  - 🟡 FORMER STUDY AREA
  - 🟡 RMMP LOCATION
  - 🟡 CHECK STRUCTURE - MOSTLY NATURAL SANDSTONE, SOME RIP RAP
  - 🟡 CHECK STRUCTURE - RIP RAP
  - 🟡 CHECK STRUCTURE - VEGETATED RIP RAP
  - 🟡 SLOPE DRAIN WITH UNDERLYING CHECK STRUCTURE AND ENERGY DISSIPATING GRAVEL AT INFLUENT END
  - 🟡 DRAINAGE
  - 🟡 NORTHERN DRAINAGE
  - 🟡 ASPHALT SWALE
  - 🟡 PAVED ROAD
  - 🟡 DIRT ROAD
  - 🟡 25' ELEVATION CONTOUR
  - 🟡 VEHICLE PARKING
  - 🟡 BIOFILTER
  - 🟡 SEDIMENT BASIN
  - 🟡 STORAGE TANK
  - 🟡 BIOSWALE
  - 🟡 GRAVEL
  - 🟡 SURFACE WATER POND
  - 🟡 EXISTING BUILDING/STRUCTURE
  - 🟡 FORMER BUILDING FOOTPRINT
  - 🟡 CONCRETE SLAB IN PLACE
  - 🟡 LANDFILL AREA
  - 🟡 SANTA SUSANA SITE PROPERTY BOUNDARY
  - 🟡 ADMINISTRATIVE AREA BOUNDARY

**HALEY ALDRICH**

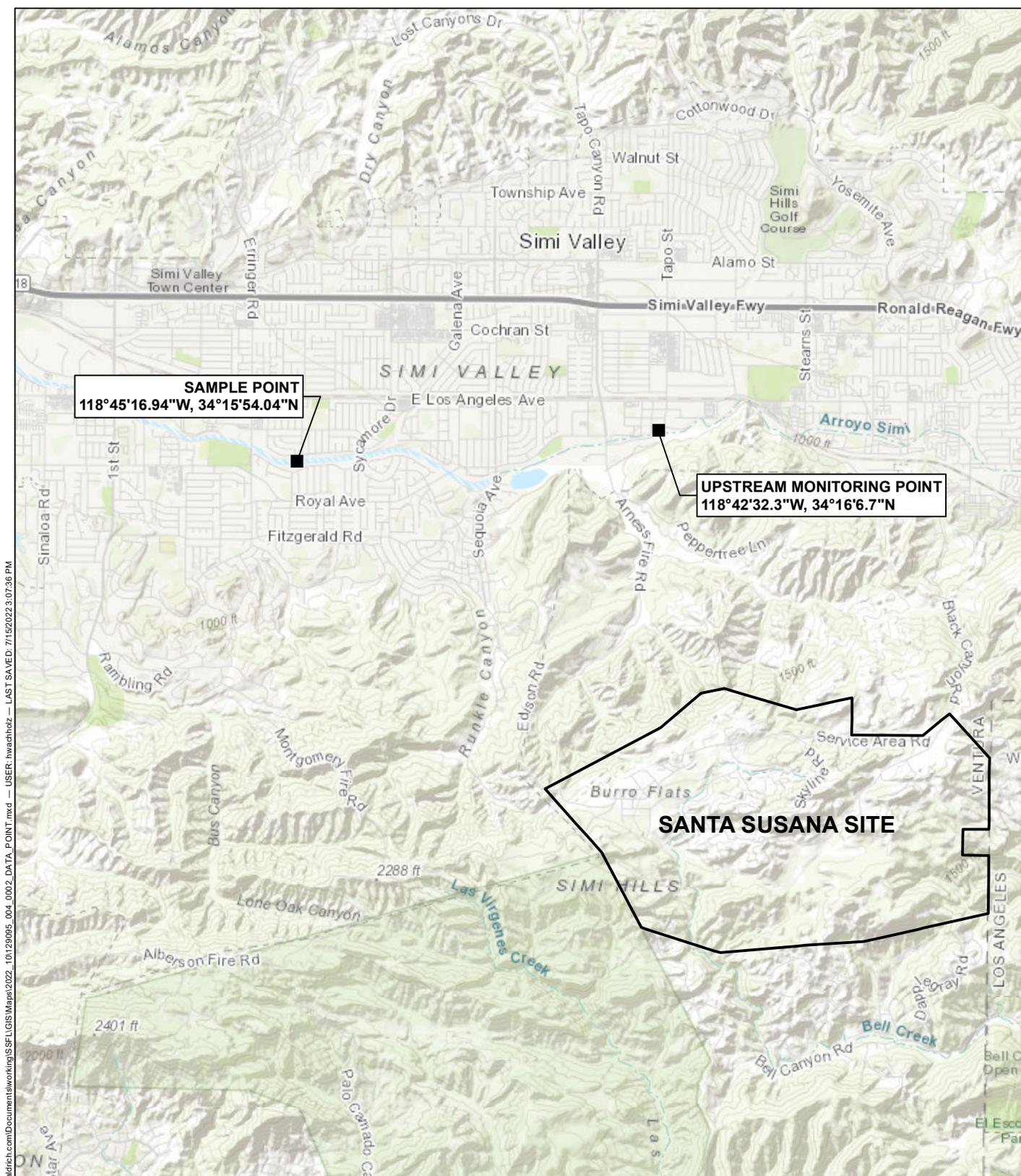
NPDES PERMIT COMPLIANCE THIRD QUARTER 2022  
 DISCHARGE MONITORING REPORT  
 THE BOEING COMPANY  
 VENTURA COUNTY, CALIFORNIA

**SITE MAP WITH STORMWATER COLLECTION AND CONVEYANCE SYSTEM AND SITE FEATURES**

NOVEMBER 2022

FIGURE 1

C:\Users\hwachholz\OneDrive - halevaldrich.com\Documents\working\SF\GIS\Maps\2022\_10129095\_004\_0001\_SITE\_MAP\_WITH\_STORMWATER\_COLLECTION.mxd



**SAMPLE POINT**  
 118°45'16.94"W, 34°15'54.04"N

**UPSTREAM MONITORING POINT**  
 118°42'32.3"W, 34°16'6.7"N

**SANTA SUSANA SITE**

**NOTES**

1. THE SAMPLE POINT IS FOR QUARTERLY WATER QUALITY AND ANNUAL SEDIMENT SAMPLING.
2. THE UPSTREAM SAMPLE POINT LOCATION WAS CHOSEN BASED ON IT BEING UPSTREAM OF ALL POSSIBLE DISCHARGE FROM THE SANTA SUSANA SITE.



**HALEY  
ALDRICH**

NPDES PERMIT COMPLIANCE THIRD QUARTER 2022  
 DISCHARGE MONITORING REPORT  
 THE BOEING COMPANY  
 VENTURA COUNTY, CALIFORNIA

**ARROYO SIMI RECEIVING WATER  
 (RSW-002, FRONTIER PARK)  
 SAMPLING LOCATION AND UPSTREAM  
 MONITORING POINT**

NOVEMBER 2022

**FIGURE 2**

**APPENDIX A**

**Third Quarter 2022 Daily Rainfall Summary**

**APPENDIX A**

**THIRD QUARTER 2022 DAILY RAINFALL SUMMARY**

**TABLE OF CONTENTS**

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: July 2022

**THIRD 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
D	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	0.00
A	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	0.00
Y	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	0.00
O	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	0.00
F	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	0.00
T	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	0.00
H	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	0.00
E	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	0.00
M	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	0.00
O	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	0.00
N	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	0.00
T	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	0.00
H	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	0.00
M	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	0.00
O	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	0.00
N	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	0.00
T	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	0.00
H	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	0.00
M	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	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	0.00
O	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	0.00
N	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	0.00
T	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	0.00
H	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	0.00
M	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	0.00
O	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	0.00
N	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	0.00
																											Monthly Total
																											0.00

**TABLE A  
DAILY RAINFALL SUMMARY**

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

**THIRD 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
D	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	0.00
A	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	0.00
Y	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	0.00
O	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	0.00
F	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	0.00
T	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	0.00
H	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	0.00
E	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	0.00
M	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	0.00
O	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	0.00
N	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	0.00
T	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	0.00
H	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	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	0.00
	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	0.00
	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	0.00
	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	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	0.00
	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	0.00
	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	0.00
	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	0.00
	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	0.00
	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	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	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	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	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	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	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	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	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	0.00
																											Monthly Total
																											0.00

**TABLE A  
DAILY RAINFALL SUMMARY**

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

**THIRD 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
D	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	0.00
A	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	0.00
Y	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	0.00
O	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	0.00
F	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	0.00
T	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	0.00
H	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	0.00
E	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	0.00
M	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	0.01	0.04	0.00	0.01	0.00	0.01	0.02	0.09
O	10	0.03	0.01	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	0.05
N	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	0.00
T	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	0.00
H	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	0.00
E	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	0.00
M	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	0.00
O	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	0.00
N	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	0.00
T	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	0.00
H	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	d
M	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	0.00
O	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	0.00
N	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	0.00
T	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	0.00
H	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	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	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	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	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	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	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	0.00

Monthly Total 0.14

Flags: d = Off-line part of hour. Invalid hour due to communication error (September 19). The rain gauge for Sage Ranch did not record any measurable rain for September 19.

**APPENDIX B**

**Third Quarter 2022 Waste Shipment Summary Table**

**APPENDIX B**

**THIRD QUARTER 2022 WASTE SHIPMENT SUMMARY TABLE**

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Table B – Waste Shipment Summary Table

**TABLE B  
WASTE SHIPMENT SUMMARY TABLE**

**THIRD QUARTER 2022  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	DESTINATION
NA3077, Hazardous Waste N.O.S., (Trichloroethene, Tetrachloroethylene)	Solid	5	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	Action Resources	Clean Harbors Environemntal Services, Inc. 2247 South Highway 71 Kimball, NE 69145
NA3077, Hazardous Waste N.O.S., (Chlordane)	Solid	22	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	Action Resources	Clean Harbors Environemntal Services, Inc. 2247 South Highway 71 Kimball, NE 69145
NA3077, Hazardous Waste N.O.S., (Trichloroethene, Pyrolusite)	Solid	113	P	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
NA3077, Hazardous Waste N.O.S., (Trichloroethene, Tetrachloroethylene)	Solid	79	P	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
NA3098, Waste Oxidizing Liquid, Corrosive N.O.S., (Sodium Hypochlorite)	Liquid	32	P	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-RCRA Hazardous Waste	Solid	120	Y	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Buttonwillow LLC 2500 West Lokern Road Buttonwillow, CA 93206
Batteries, Dry, Sealed, N.O.S., (Alkaline Batteries), (Universal Waste - Batteries)	Solid	43	P	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	Liquid	103	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Buttonwillow LLC. 2500 West Lokern Road Buttonwillow, CA 93206
NA3077, Hazardous Waste Solid, N.O.S., (Cadmium, Lead)	Solid	6	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Buttonwillow LLC. 2500 West Lokern Road Buttonwillow, CA 93206
UN1490, Waste Potassium Permanganate Solution	Liquid	8,013	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Aragonite LLC 11600 North Aptus Road Grantsville, UT 84029
Non-RCRA Hazardous Waste Liquids (Aluminum Sulfate Solution)	Liquid	16	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Buttonwillow LLC. 2500 West Lokern Road Buttonwillow, CA 93206
UN3262, Corrosive Solid, Basic, Inorganic, N.O.S., (Sodium Hydroxide, Potassium Hydroxide)	Solid	5	P	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 (Debris)	Solid	19	P	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 (Sand)	Solid	24	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744

**TABLE B  
WASTE SHIPMENT SUMMARY TABLE**

**THIRD QUARTER 2022  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	DESTINATION
Non Hazardous Waste	Liquid	25,000	G	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058	n/a	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058
Non-RCRA Hazardous Waste Solid (Potassium Permanganate Residue)	Solid	31	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
NA3082, Hazardous Waste Liquid, N.O.S., (Trichloroethylene)	Liquid	3,990	P	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 Solids (Debris. Sulfuric Acid)	Solid	33	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
UN1791, Waste Hypochlorite Solutions (Sodium Hypochlorite)	Liquid	406	P	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 Solids (Debris/Oil)	Solid	314	P	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 (Potassium Permanganate Residue)	Solid	29	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
RQ, NA3077, Hazardous Waste, Solid, N.O.S. (Rock Solids)	Solid	120	Y	Ecology Control Industries	n/a	US Ecology Beatty US Hwy 95, 11 Miles South of Beatty Beatty, NV 89003
NA3082, Hazardous Waste Liquid, N.O.S., (Water)	Liquid	43,900	G	Ecology Control Industries	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
NA3082, Hazardous Waste Liquid, N.O.S., (Water)	Liquid	1,250	G	Patriot Environmental Services	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Non Hazardous Waste	Liquid	9,700	G	American Integrated Services	n/a	Crosby & Overton, Inc. 1630 W. 17th Street Long Beach, CA 90813

Notes:  
n/a = Not Applicable  
G = Gallons  
P = Pounds  
Y = Yards

## **APPENDIX C**

### **Third Quarter 2022 Discharge Monitoring Data Summary Tables**

**APPENDIX C**

**THIRD QUARTER 2022 DISCHARGE MONITORING DATA SUMMARY TABLES**

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Reporting Summary Notes

Arroyo Simi - Discharge Monitoring Data Summary Table

**ARROYO SIMI  
DISCHARGE MONITORING DATA SUMMARY TABLE**

**THIRD QUARTER 2022  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

July 1 through September 30, 2022

				7/7/2022 07:40		
ANALYTE	UNITS	DAILY MAXIMUM PERMIT LIMIT	SAMPLE FREQUENCY	SAMPLE TYPE	RESULT	LABORATORY/ VALIDATION QUALIFIER
<b>POLLUTANTS WITH LIMITS</b>						
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 < 0.0013	U
Diazinon	µg/L	0.16	1/Quarter	Grab	ND < 0.0010	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	8.02	*
Toxaphene	µg/L	0.0003	1/Quarter	Grab	ND < 0.054	U
<b>POLLUTANTS WITHOUT LIMITS</b>						
Hardness (as CaCO3)	mg/L	-	1/Quarter	Grab	800	--
Priority Pollutants	NA	-	1/5 Years	ANR	ANR	ANR
Temperature (Field)	Deg F	-	1/Quarter	Grab	67.1	*
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	*

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

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

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

1. 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 National Pollutant Discharge Elimination System (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.

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

*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).
*III	Unusual problems found with the data that have been described in the validation report.
ANR	Analysis not required; e.g., constituent or outfall was not required by the NPDES permit to be sampled and analyzed over the reporting period (annual, semi-annual, etc.).
Avg	Average.
B	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.
C	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.

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

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.
H	Holding time was exceeded.
Hardness	Equivalent of calcium carbonate (CaCO <sub>3</sub> ).
Hp	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).
K	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.

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

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.
P	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.

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

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
T	Presumed contamination, as indicated by a detect in the trip blank.
U	Result not detected.
µg/L	Micrograms per liter.
µg/g	Micrograms per gram.
µg/kg	Micrograms per kilogram.
µmhos/cm	Micromhos per centimeter.
UJ	Result not detected at the estimated reporting limit.
WHO TEF	World Health Organization toxic equivalency factor.
w/out	Without.
^	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.

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

(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 a dry discharge and the NPDES Permit Limit for cadmium is 4.0 µg/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 µg/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 a dry discharge and the NPDES Permit Limit for selenium is 5 µg/L and 4.91 lbs/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 µg/L and 8.06 lbs/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.
(l)	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.
(o)	Unsafe conditions all day prevented access to the Outfall.
(p)	Various annual constituents were analyzed by laboratory due to field and laboratory error.

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

(q)	Minimum levels met with the exception of 2-chlorovinyl ether. The minimum level is 1.0 µg/L, while the laboratory reported with an MDL of 1.1 µg/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

## **APPENDIX D**

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

**APPENDIX D**

**THIRD QUARTER 2022 ANALYTICAL LABORATORY REPORTS,  
CHAIN OF CUSTODY FORMS, AND VALIDATION REPORTS**

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Arroyo Simi – 570-102102-1 – July 7, 2022, Eurofins Calscience Analytical Report  
Arroyo Simi – 570-102102-2 – July 7, 2022, Eurofins Calscience Analytical Report  
Data Usability Summary Report

## ANALYTICAL REPORT

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

Laboratory Job ID: 570-102102-1

Client Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-  
Dry Weather

Revision: 1

**For:**

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

Attn: Ms. Katherine Miller

*Virendra & Patel*

---

Authorized for release by:  
9/23/2022 10:38:42 AM

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

### LINKS

Review your project  
results through



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Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
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.
α	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

# Case Narrative

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry Weath

Job ID: 570-102102-1

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## Job ID: 570-102102-1

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### Laboratory: Eurofins Calscience

#### Narrative

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#### Job Narrative 570-102102-1

#### Comments

No additional comments.

#### Revision

The report being provided is a revision of the original report sent on 7/18/2022. The report (revision 1) is being revised due to: Due to laboratory oversight, EPA 608.3 analyte list was reported incorrectly. We revised to match/report only as requested on the COC..

#### Receipt

The samples were received on 7/7/2022 5:50 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 2.1° C.

#### Receipt Exceptions

Insufficient sample volume was provided for the following samples for the 608 analysis: Arroyo\_Simi\_20220707\_Grab (570-102102-1), Arroyo\_Simi\_20220707\_Grab (570-102102-1[MS]), Arroyo\_Simi\_20220707\_Grab (570-102102-1[MSD]) and Arroyo\_Simi\_20220707\_Grab\_Extra (570-102102-2).

COC listed 12 amber glass unpreserved for sample #1 and 4 amber glass unpreserved for sample #2 but received only 9 for sample #1 and 3 for sample #2. Per PM instructions MS/MSD was canceled for 608.

#### 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

Method 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-247393. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

608LL

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

# Detection Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

**Client Sample ID: Arroyo\_Simi\_20220707\_Grab**

**Lab Sample ID: 570-102102-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hardness, as CaCO3	800		0.91	0.17	mg/L	1		SM 2340B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Calscience

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Client Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
 Weather

Job ID: 570-102102-1

## Method: 608.3 - Organochlorine Pesticides in Water

**Client Sample ID: Arroyo\_Simi\_20220707\_Grab**

**Date Collected: 07/07/22 07:40**

**Date Received: 07/07/22 17:50**

**Lab Sample ID: 570-102102-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.033	0.026	ug/L		07/08/22 08:19	07/11/22 17:28	1
4,4'-DDD	ND		0.0067	0.0044	ug/L		07/08/22 08:19	07/11/22 17:28	1
4,4'-DDE	ND		0.0033	0.0019	ug/L		07/08/22 08:19	07/11/22 17:28	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		07/08/22 08:19	07/11/22 17:28	1
Dieldrin	ND		0.0033	0.0013	ug/L		07/08/22 08:19	07/11/22 17:28	1
Toxaphene	ND		0.067	0.054	ug/L		07/08/22 08:19	07/11/22 17:28	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene	51		20 - 139				07/08/22 08:19	07/11/22 17:28	1

# Client Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
 Weather

Job ID: 570-102102-1

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

**Client Sample ID: Arroyo\_Simi\_20220707\_Grab**

**Date Collected: 07/07/22 07:40**

**Date Received: 07/07/22 17:50**

**Lab Sample ID: 570-102102-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.044	ug/L		07/08/22 08:19	07/11/22 19:54	1
Aroclor 1221	ND		0.10	0.044	ug/L		07/08/22 08:19	07/11/22 19:54	1
Aroclor 1232	ND		0.10	0.044	ug/L		07/08/22 08:19	07/11/22 19:54	1
Aroclor 1242	ND		0.10	0.044	ug/L		07/08/22 08:19	07/11/22 19:54	1
Aroclor 1248	ND		0.10	0.044	ug/L		07/08/22 08:19	07/11/22 19:54	1
Aroclor 1254	ND		0.10	0.052	ug/L		07/08/22 08:19	07/11/22 19:54	1
Aroclor 1260	ND		0.10	0.052	ug/L		07/08/22 08:19	07/11/22 19:54	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene (Surr)	94		20 - 139				07/08/22 08:19	07/11/22 19:54	1
DCB Decachlorobiphenyl (Surr)	82		20 - 154				07/08/22 08:19	07/11/22 19:54	1

# Client Sample Results

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

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

Client Sample ID: Arroyo\_Simi\_20220707\_Grab

Lab Sample ID: 570-102102-1

Date Collected: 07/07/22 07:40

Matrix: Water

Date Received: 07/07/22 17:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness, as CaCO3	800		0.91	0.17	mg/L			07/15/22 14:12	1

1

2

3

4

5

6

7

8

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10

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12

13

14

15

# Surrogate Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

## Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (20-139)
570-102102-1	Arroyo_Simi_20220707_Grab	51
LCS 570-247393/2-A	Lab Control Sample	97
LCSD 570-247393/3-A	Lab Control Sample Dup	98
MB 570-247393/1-A	Method Blank	36

#### Surrogate Legend

TCX = Tetrachloro-m-xylene

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (20-139)	DCB1 (20-154)
570-102102-1	Arroyo_Simi_20220707_Grab	94	82
LCS 570-247393/4-A	Lab Control Sample	52	71
LCSD 570-247393/5-A	Lab Control Sample Dup	138	41
MB 570-247393/1-A	Method Blank	33	38

#### Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)

DCB = DCB Decachlorobiphenyl (Surr)

# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
 Weather

Job ID: 570-102102-1

## Method: 608.3 - Organochlorine Pesticides in Water

**Lab Sample ID: MB 570-247393/1-A**  
**Matrix: Water**  
**Analysis Batch: 248030**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlordane (technical)	ND		0.033	0.026	ug/L		07/07/22 09:27	07/11/22 15:42	1
4,4'-DDD	ND		0.0067	0.0044	ug/L		07/07/22 09:27	07/11/22 15:42	1
4,4'-DDE	ND		0.0033	0.0019	ug/L		07/07/22 09:27	07/11/22 15:42	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		07/07/22 09:27	07/11/22 15:42	1
Dieldrin	ND		0.0033	0.0013	ug/L		07/07/22 09:27	07/11/22 15:42	1
Toxaphene	ND		0.067	0.054	ug/L		07/07/22 09:27	07/11/22 15:42	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene	36		20 - 139				07/07/22 09:27	07/11/22 15:42	1

**Lab Sample ID: LCS 570-247393/2-A**  
**Matrix: Water**  
**Analysis Batch: 248593**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
4,4'-DDD	0.0333	0.0397		ug/L		119	31 - 141
4,4'-DDE	0.0333	0.0365		ug/L		109	30 - 145
4,4'-DDT	0.0333	0.0405		ug/L		122	25 - 160
Dieldrin	0.0333	0.0377		ug/L		113	36 - 146
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
Tetrachloro-m-xylene	97		20 - 139				

**Lab Sample ID: LCSD 570-247393/3-A**  
**Matrix: Water**  
**Analysis Batch: 248593**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
4,4'-DDD	0.0333	0.0391		ug/L		117	31 - 141	2	39
4,4'-DDE	0.0333	0.0363		ug/L		109	30 - 145	1	35
4,4'-DDT	0.0333	0.0397		ug/L		119	25 - 160	2	42
Dieldrin	0.0333	0.0373		ug/L		112	36 - 146	1	49
<b>LCSD LCSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Tetrachloro-m-xylene	98		20 - 139						

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

**Lab Sample ID: MB 570-247393/1-A**  
**Matrix: Water**  
**Analysis Batch: 248113**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor 1016	ND		0.10	0.044	ug/L		07/07/22 09:27	07/11/22 18:08	1
Aroclor 1221	ND		0.10	0.044	ug/L		07/07/22 09:27	07/11/22 18:08	1
Aroclor 1232	ND		0.10	0.044	ug/L		07/07/22 09:27	07/11/22 18:08	1
Aroclor 1242	ND		0.10	0.044	ug/L		07/07/22 09:27	07/11/22 18:08	1

Eurofins Calscience

# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
 Weather

Job ID: 570-102102-1

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

**Lab Sample ID: MB 570-247393/1-A**  
**Matrix: Water**  
**Analysis Batch: 248113**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor 1248	ND		0.10	0.044	ug/L		07/07/22 09:27	07/11/22 18:08	1
Aroclor 1254	ND		0.10	0.052	ug/L		07/07/22 09:27	07/11/22 18:08	1
Aroclor 1260	ND		0.10	0.052	ug/L		07/07/22 09:27	07/11/22 18:08	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene (Surr)	33		20 - 139	07/07/22 09:27	07/11/22 18:08	1
DCB Decachlorobiphenyl (Surr)	38		20 - 154	07/07/22 09:27	07/11/22 18:08	1

**Lab Sample ID: LCS 570-247393/4-A**  
**Matrix: Water**  
**Analysis Batch: 248113**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Aroclor 1016	0.133	0.0974	J,DX	ug/L		73	50 - 140
Aroclor 1260	0.133	0.0904	J,DX	ug/L		68	8 - 140

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene (Surr)	52		20 - 139
DCB Decachlorobiphenyl (Surr)	71		20 - 154

**Lab Sample ID: LCSD 570-247393/5-A**  
**Matrix: Water**  
**Analysis Batch: 248113**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 247393**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Aroclor 1016	0.133	0.0717	J,DX	ug/L		54	50 - 140	30	36
Aroclor 1260	0.133	0.0912	J,DX	ug/L		68	8 - 140	1	38

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene (Surr)	138		20 - 139
DCB Decachlorobiphenyl (Surr)	41		20 - 154

# QC Association Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

## GC Semi VOA

### Prep Batch: 247393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-102102-1	Arroyo_Simi_20220707_Grab	Total/NA	Water	608	
MB 570-247393/1-A	Method Blank	Total/NA	Water	608	
LCS 570-247393/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 570-247393/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 570-247393/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 570-247393/5-A	Lab Control Sample Dup	Total/NA	Water	608	

### Analysis Batch: 248030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-102102-1	Arroyo_Simi_20220707_Grab	Total/NA	Water	608.3	247393
MB 570-247393/1-A	Method Blank	Total/NA	Water	608.3	247393

### Analysis Batch: 248113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-102102-1	Arroyo_Simi_20220707_Grab	Total/NA	Water	608.3	247393
MB 570-247393/1-A	Method Blank	Total/NA	Water	608.3	247393
LCS 570-247393/4-A	Lab Control Sample	Total/NA	Water	608.3	247393
LCSD 570-247393/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	247393

### Analysis Batch: 248593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-247393/2-A	Lab Control Sample	Total/NA	Water	608.3	247393
LCSD 570-247393/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	247393

## Metals

### Analysis Batch: 672713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-102102-1	Arroyo_Simi_20220707_Grab	Total Recoverable	Water	SM 2340B	

# Lab Chronicle

Client: Haley & Aldrich, Inc.  
 Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
 Weather

Job ID: 570-102102-1

**Client Sample ID: Arroyo\_Simi\_20220707\_Grab**

**Lab Sample ID: 570-102102-1**

**Date Collected: 07/07/22 07:40**

**Matrix: Water**

**Date Received: 07/07/22 17:50**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	608			1500 mL	1 mL	247393	07/08/22 08:19	H1SH	EET CAL 4
Total/NA	Analysis	608.3		1			248030	07/11/22 17:28	N5Y3	EET CAL 4
Instrument ID: GC54A										
Total/NA	Prep	608			1500 mL	1 mL	247393	07/08/22 08:19	H1SH	EET CAL 4
Total/NA	Analysis	608.3		1			248113	07/11/22 19:54	AJ2Q	EET CAL 4
Instrument ID: GC66										
Total Recoverable	Analysis	SM 2340B		1			672713	07/15/22 14:12	W1BQ	EET TUS 2
Instrument ID: NOEQUIP										

**Laboratory References:**

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

EET TUS 2 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494



# Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

## 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	3082	07-31-22
Nevada	State	CA00111	07-31-22
Oregon	NELAP	4175	02-02-23
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-12-22

## 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
Kansas	NELAP	E-10420	07-31-22
Nevada	State	CA015312022-1	07-31-22
Washington	State	C900	09-03-22



# Method Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

Method	Method Description	Protocol	Laboratory
608.3	Organochlorine Pesticides in Water	40CFR136A	EET CAL 4
608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	EET CAL 4
SM 2340B	Total Hardness (as CaCO <sub>3</sub> ) by calculation	SM	EET TUS 2
608	Liquid-Liquid Extraction (Separatory Funnel)	40CFR136A	EET CAL 4

#### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.  
SM = "Standard Methods For The Examination Of Water And Wastewater"

#### Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494  
EET TUS 2 = 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-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-102102-1	Arroyo_Simi_20220707_Grab	Water	07/07/22 07:40	07/07/22 17:50

1

2

3

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6

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15

**Eurofins Calscience**

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

**Chain of Custody Record**

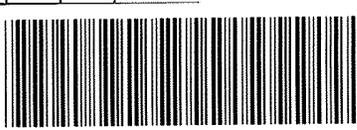


eurofins

EUROFINS CALIFORNIA  
LABORATORY

<b>Client Information (Sub Contract Lab)</b>		Sampler: Patel, Virendra		Lab PM: Patel, Virendra		Carrier Tracking No(s):		COC No. 570-177279 1			
Client Contact: Shipping/Receiving		Phone:		E-Mail: Virendra.Patel@et.eurofinsus.com		State of Origin California		Page Page 1 of 1			
Company: Weck Laboratories Inc				Accreditations Required (See note): State Program - California				Job #: 570-102102-1			
Address: 14859 E Clark Avenue		Due Date Requested		<b>Analysis Requested</b>						<b>Preservation Codes</b> A HCL M Hexane B NaOH N None C - Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V - MCAA K - EDTA W - pH 4-5 L EDTA Y - Trizma Z - other (specify)  Other:	
City: City of Industry		TAT Requested (days): Standard TAT - Level 2 Standard TAT - Level 4									
State Zip CA, 91745		PO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SUB (Weck-5252 - Diazinon and Chlorpyrifos (ug/L units))		Total Number of containers	
Phone:		WO #:									
Email		Project #: 570-102102		SSOW#:		Special Instructions/Note					
Project Name Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry Weather		Site:									
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code	
Arroyo_Simi_20220707_Grab (570-102102-1)		7/7/22		07 40 Pacific		Water		Water		X	
Arroyo_Simi_20220707_Grab (570-102102-1MS)		7/7/22		07 40 Pacific		MS		Water		X	
Arroyo_Simi_20220707_Grab (570-102102-1MSD)		7/7/22		07 40 Pacific		MSD		Water		X	
Arroyo_Simi_20220707_Grab_Extra (570-102102-2)		7/7/22		07 40 Pacific		Water		Water		HOLD	
<p>Note: Since laboratory accreditations are subject to change Eurofins Calscience places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.</p>											
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>					
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested I, II, III, IV, Other (specify)				Primary Deliverable Rank 2		Special Instructions/QC Requirements					
Empty Kit Relinquished by:				Date		Time		Method of Shipment:			
Relinquished by: <i>[Signature]</i>		Date/Time: 7/7/22 1342		Company: EC		Received by: <i>[Signature]</i>		Date/Time: 07/07/22 13:42		Company: WECK	
Relinquished by: <i>[Signature]</i>		Date/Time: 7/7/22 1750		Company: EC		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks. 2.6 7-0262							

CHAIN OF CUSTODY FORM

Client Name/Address: <b>Haley &amp; Aldrich</b> 5333 Mission Center Rd Suite 300 San Diego, CA 92108				Project: Boeing-SSFL NPDES Permit 2015 <b>Quarterly Arroyo Simi-Frontier Park                  Dry Weather</b>				ANALYSIS REQUIRED				Field Readings Meter serial # <b>EABP006</b>	
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel. 714-895-5494 ECI Project #44024446				Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)				Hardness as CaCO <sub>3</sub> , Recoverable (SM2340B) Chlorpyrifos, Diazinon (E525.2) Weck Labs in Hacienda Heights, CA Pesticides: Chlordane, 4,4-DDD, 4,4-DDE, 4,4-DDT Dieldrin, Toxaphene + PCBs only (E608)				Field Readings: (Include units) Time of Readings: <b>0740</b>	
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.				Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)								pH <b>8.02</b> pH unit Temp <b>67.1</b> °C/F Velocity <b>0.0</b> ft/sec	
Sampler: Adrien Mobeka				Field readings QC Checked by: <i>[Signature]</i> Date/Time: <b>7-7-2022/0740</b>									
Comments													
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD					
Arroyo Simi	Arroyo_Simi_20220707_Grab	7/7/2022 12740	WS	250 mL Poly	3	HNO <sub>3</sub>	100	Yes	X				
			WS	1L Glass Amber	6	None	275	Yes		X		Extract with n 24-Hours of sampling at Weck Labs	
	Arroyo_Simi_20220707_Grab_Extra	7/7/2022 12740	WS	1L Glass Amber	6	None	285	Yes			X		
			WS	1L Glass Amber	2	None	275	No			H	Hold	
			WS	1L Glass Amber	2	None	285	Ne			H	Hold	
 570-102102 Chain of Custody													

9/23/2022 (REV 2-1)  
 2019-2020 Rainy Season  
 Version 2

2.1/2.1 SC12



# Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-102102-1

SDG Number:

**Login Number: 102102**

**List Number: 1**

**Creator: Patel, Virendra**

**List Source: Eurofins Calscience**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Insufficient volume received for MS/MSD for 608.
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

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

Laboratory Job ID: 570-102102-2

Client Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-  
Dry Weather

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

Attn: Ms. Katherine Miller

*Virendra R Patel*

---

Authorized for release by:  
7/26/2022 3:15:26 PM

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

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-2

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

# Case Narrative

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry Weath

Job ID: 570-102102-2

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## Job ID: 570-102102-2

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### Laboratory: Eurofins Calscience

#### Narrative

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#### Job Narrative 570-102102-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/7/2022 5:50 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 2.1° C.

#### Receipt Exceptions

Insufficient sample volume was provided for the following samples for the 608 analysis: Arroyo\_Simi\_20220707\_Grab (570-102102-1), Arroyo\_Simi\_20220707\_Grab (570-102102-1[MS]), Arroyo\_Simi\_20220707\_Grab (570-102102-1[MSD]) and Arroyo\_Simi\_20220707\_Grab\_Extra (570-102102-2).

COC listed 12 amber glass unpreserved for sample #1 and 4 amber glass unpreserved for sample #2 but received only 9 for sample #1 and 3 for sample #2. Per PM instructions MS/MSD was canceled for 608.

#### Lab Admin

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

#### Subcontract Work

Method Weck- 525.2 - Diazinon and Chlorpyrifos (ug/L units): This method was subcontracted to Weck Laboratories, Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report.

# Method Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-2

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Method	Method Description	Protocol	Laboratory
Subcontract	Weck- 525.2 - Diazinon and Chlorpyrifos (ug/L units)	None	Weck Lab

---

**Protocol References:**

None = None

**Laboratory References:**

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



# Sample Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Boeing NPDES SSFL Outfalls-Arroyo Simi-Dry  
Weather

Job ID: 570-102102-2

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-102102-1	Arroyo_Simi_20220707_Grab	Water	07/07/22 07:40	07/07/22 17:50

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

**Work Orders:** 2G07053

**Project:** 570-102102-1

**Attn:** Virendra Patel

**Client:** Eurofins Calscience - Tustin  
2841 Dow Avenue, Suite 100  
Tustin, CA 92780

**Report Date:** 7/25/2022

**Received Date:** 7/7/2022

**Turnaround Time:** Normal

**Phones:** (949) 261-1022

**Fax:** (949) 260-3297

**P.O. #:** 570-102102-1

**Billing Code:**

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 7/07/22 with the Chain-of-Custody document. The samples were received in good condition, at 2.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

## Sample Results

Sample: Arroyo\_Simi\_20220707\_Grab (570-102102-1)  
2G07053-01 (Water)

Sampled: 07/07/22 7:40 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Method:</b> EPA 525.2M		<b>Instr:</b> GCMS13					
<b>Batch ID:</b> W2G0395	<b>Preparation:</b> EPA 525.2/SPE		<b>Prepared:</b> 07/07/22 14:50		<b>Analyst:</b> EFC		
Chlorpyrifos	ND	0.0013	0.010	ug/l	1	07/14/22	
Diazinon	ND	0.0010	0.010	ug/l	1	07/14/22	
<i>Surrogate(s)</i>							
1,3-Dimethyl-2-nitrobenzene	90%		50-141	Conc: 0.448		07/14/22	
Triphenyl phosphate	106%		63-200	Conc: 0.528		07/14/22	

## Quality Control Results

### Semivolatiles Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Qualifier
<b>Blank (W2G0395-BLK1)</b>					<b>Prepared: 07/07/22 Analyzed: 07/14/22</b>						
Chlorpyrifos	ND	0.0013	0.010	ug/l							
Diazinon	ND	0.0010	0.010	ug/l							
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.433			ug/l	0.500		87	50-141			
Triphenyl phosphate	0.508			ug/l	0.500		102	63-200			
<b>LCS (W2G0395-BS1)</b>					<b>Prepared: 07/07/22 Analyzed: 07/14/22</b>						
Chlorpyrifos	0.0450	0.0013	0.010	ug/l	0.0500		90	63-145			
Diazinon	0.0245	0.0010	0.010	ug/l	0.0500		49	25-180			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.406			ug/l	0.500		81	50-141			
Triphenyl phosphate	0.512			ug/l	0.500		102	63-200			
<b>Matrix Spike (W2G0395-MS1)</b>					<b>Source: 2G07053-01</b>		<b>Prepared: 07/07/22 Analyzed: 07/14/22</b>				
Chlorpyrifos	0.0444	0.0013	0.010	ug/l	0.0500	ND	89	37-168			
Diazinon	0.0338	0.0010	0.010	ug/l	0.0500	ND	68	36-153			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.407			ug/l	0.500		81	50-141			
Triphenyl phosphate	0.489			ug/l	0.500		98	63-200			
<b>Matrix Spike Dup (W2G0395-MSD1)</b>					<b>Source: 2G07053-01</b>		<b>Prepared: 07/07/22 Analyzed: 07/14/22</b>				
Chlorpyrifos	0.0479	0.0013	0.010	ug/l	0.0500	ND	96	37-168	8	30	
Diazinon	0.0382	0.0010	0.010	ug/l	0.0500	ND	76	36-153	12	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.455			ug/l	0.500		91	50-141			
Triphenyl phosphate	0.508			ug/l	0.500		102	63-200			

## Notes and Definitions

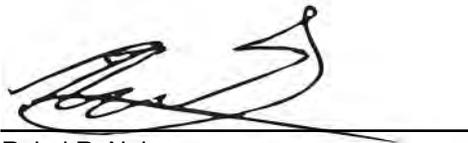
Item	Definition
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED 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 remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples 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 • 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.*





# Sample Receipt Checklist

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

Weck WKO: 2G07053  
 41WKO Logged by: Lester Abad  
 Samples Checked by: LKA

Date/Time Received: 07/07/22 @ 13:42  
 # of Samples: 01  
 Delivered by: Client

Task	Yes	No	N/A	Comments	
COC	COC present at receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	COC matches sample labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Receipt Information	Sample Temperature			2.1°C	
	Samples received on ice?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Ice Type (Blue/Wet)			WET	
	All samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Samples in proper containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Sufficient sample volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Samples intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Project Manager notified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Sample Preservation Verification?	Sample labels checked for correct preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	VOC Headspace: none, <6mm/<Pea size? 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Headspace is <6mm
	pH verified upon receipt?				pH paper Lot# 2316168
	Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; S25.2<2; 6710B<2; 608.3 5-9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Free Chlorine Tested <0.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cl Test Strip Lot# 020821
	O&G pH <2 verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH paper Lot#
	pH adjusted for O&G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH Reading: Acid Lot# Amount added:
Project Manager notified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

PM Comments

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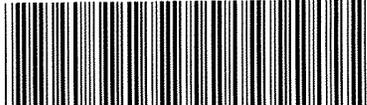
Sample Receipt Checklist Prepared by:

Signature: LKA

Date: 07/06/22



CHAIN OF CUSTODY FORM

Client Name/Address: <b>Haley &amp; Aldrich</b> 5333 Mission Center Rd Suite 300 San Diego, CA 92108				Project: Boeing-SSFL NPDES Permit 2015 <b>Quarterly Arroyo Simi-Frontier Park                  Dry Weather</b>				ANALYSIS REQUIRED				Field Readings Meter serial # <b>EABP006</b>	
Eurofins Calscience Project Manager: Virendra Patel 2841 Dow Avenue, Suite #100 Tustin, CA 92780 Tel. 714-895-5494 ECI Project #44024446				Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)				Hardness as CaCO <sub>3</sub> , Recoverable (SM2340B) Chlorpyrifos, Diazinon (E525.2) Weck Labs in Hacienda Heights, CA Pesticides: Chlordane, 4,4-DDD, 4,4-DDE, 4,4-DDT Dieldrin, Toxaphene + PCBs only (E608)				Field Readings: (Include units) Time of Readings: <b>0740</b>	
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.				Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)								pH <b>8.02</b> pH unit Temp <b>67.1</b> °C/F Velocity <b>0.0</b> ft/sec	
Sampler: Adrien Mobeka				Field readings QC Checked by: <i>[Signature]</i> Date/Time: <b>7-7-2022/0740</b>									
Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	Comments				
Arroyo Simi	Arroyo_Simi_20220707_Grab	7/7/2022 <i>12740</i>	WS	250 mL Poly	3	HNO <sub>3</sub>	100	Yes	X				
			WS	1L Glass Amber	6	None	275	Yes		X	Extract with n 24-Hours of sampling at Weck Labs		
	Arroyo_Simi_20220707_Grab_Extra	7/7/2022 <i>12740</i>	WS	1L Glass Amber	6	None	285	Yes		X			
			WS	1L Glass Amber	2	None	275	No		H	Hold		
			WS	1L Glass Amber	2	None	285	Ne		H	Hold		
 570-102102 Chain of Custody													
Relinquished By: <i>[Signature]</i> Date/Time: <b>7-7-2022/1055</b> Company: <b>H.A</b>			Received By: <i>[Signature]</i> Date/Time: <b>7/7/22 1055</b>			Turn-around time: (Check) 24 Hour _____ 72 Hour _____ 10 Day: <input checked="" type="checkbox"/> X 48 Hour _____ 5 Day _____ Normal: _____							
Relinquished By: <i>[Signature]</i> Date/Time: <b>7/7/22 1750</b> Company: <b>EC</b>			Received By: <i>[Signature]</i> Date/Time: <b>7/7/22 1750</b>			Sample Integrity: (Check) Intact: _____ On Ice: _____ Store samples for 6 months. Data Requirements: (Check) No Level IV: _____ All Level IV: <input checked="" type="checkbox"/> X							

2.1/2.1 SC12



# Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-102102-2

SDG Number:

**Login Number: 102102**

**List Number: 1**

**Creator: Patel, Virendra**

**List Source: Eurofins Calscience**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Insufficient volume received for MS/MSD for 608.
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Data Usability Summary Report

**Project Name: Boeing NPDES SSFL**

**Project Description: Third Quarter 2022**

**Sample Date(s): 7 July 2022**

**Analytical Laboratory: Eurofins Calscience – Tustin, CA**

**Validation Performed by: Oscar Cervantes**

**Validation Reviewed by: Vanessa Godard**

**Validation Date: 27 September 2022**

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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 Numbers 570-102102**
  - 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).

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). 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.

# 1. Sample Delivery Group Numbers 570-102102

## 1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG numbers 570-102102-1 (dated 23 September 2022) and 570-102102-2 (dated 26 July 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:

- 9 jars out of a listed 12 were collected for sample 1; and 3 jars out of a listed 4 were collected for sample 2. Per Project Manager instructions, matrix spike/matrix spike duplicate (MS/MSD) was canceled for Method 608.
- 570-102102-2: Method E525.2M subcontracted to Weck Laboratories, Inc., City of Industry, California.

Analysis were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Date	Matrix	Methods
Arroyo_Simi_20220707_Grab	N	570-102102-1	07/07/2022	WS	A, B, C

*\* Method E525.2M subcontracted to Weck Laboratories, Inc., City of Industry, California*

Method Holding Times			
A.	E608.3	Organochlorine Pesticides and Polychlorinated Biphenyl (PCBs) by Gas Chromatograph/Halogen-specific Detector (GC)/HSD	14 days extraction / 40 days analysis for liquid, unpreserved
B.	SM2340	Hardness	180 days for liquid, preserved
C.	E525.2M	Diazinon and Chlorpyrifos	Immediate extraction within 24 hours of collection for diazinon, 14 days extraction for chlorpyrifos / 30 days analysis for liquid, preserved

## 1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

## 1.3 REPORTING LIMITS AND SAMPLE DILUTIONS

The RLs for the samples within this SDG met or were below the minimum RL requirements specified by the project specific QAPP.

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

#### **1.4 SURROGATE RECOVERY COMPLIANCE**

[Refer to section E 1.2.](#) The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified quality control (QC) limits.

#### **1.5 LABORATORY CONTROL SAMPLES**

[Refer to section E 1.3.](#) 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.

#### **1.6 MATRIX SPIKE SAMPLES**

[Refer to section E 1.4.](#) No client samples were used for MS/MSD analysis in this SDG.

#### **1.7 BLANK SAMPLE ANALYSIS**

[Refer to section E 1.5.](#) Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

#### **1.8 DUPLICATE SAMPLE ANALYSIS**

[Refer to section E 1.6.](#) No client samples were used for laboratory duplicate analysis.

#### **1.9 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]

[Refer to section E 1.7.](#) Where required by the method, some measurement of analytical accuracy and precision was reported for each method with the site samples.

### 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 1.2 Surrogate Recovery Compliance
  - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determine 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/m<sup>3</sup> 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
  - ≥ 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	NH <sub>3</sub>	Ammonia
2s	2 sigma	NYSDEC	New York State Department of Environmental Conservation
4,4-DDT	4 4-dichlorodiphenyltrichloroethane		
Abs Diff	Absolute Difference	PAH	polycyclic aromatic hydrocarbon
BPJ	Best Professional Judgement	PCB	Polychlorinated Biphenyl
BS	Blank Spike	PDS	Post Digestion Spike
CCB	Continuing Calibration Blank	PEM	Performance Evaluation Mixture
CCV	Continuing Calibration Verification	PFAS	Per- and Polyfluoroalkyl Substances
CCVL	Continuing Calibration Verification Low	PFBA	Perfluorbutanoic Acid
		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 Concentration	R <sup>2</sup>	R-squared value
		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 Spectrometry	RPD	Relative Percent Difference
		RRF	Relative Response Factors
GPC	Gel Permeation Chromatography	RT	Retention Time
H <sub>2</sub>	Hydrogen gas	SAP	sampling analysis plan
HCl	Hydrochloric Acid	SDG	Sample Delivery Group
ICAL	Initial Calibration	SIM	Selected ion monitoring
ICB	Initial Calibration Blank	SOP	Laboratory Standard Operating Procedures
ICP/MS	Inductively Coupled Plasma/ Mass Spectrometry	SPE	Solid Phase Extraction
		SVOC	Semi-Volatile Organic Compounds
ICV	Initial Calibration Verification	TIC	Tentatively Identified Compound
ICVL	Initial Calibration Verification Low	TKN	Total Kjeldahl Nitrogen
IPA	Isopropyl Alcohol	TPH	Total Petroleum Hydrocarbon
LC	Laboratory Control	TPU	Total Propagated Uncertainty
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate	u	atomic mass unit
		USEPA	U.S. Environmental Protection Agency
MBK	Method Blank Contamination	VOC	Volatile Organic Compounds
MDC	Minimum Detectable Concentration	WP	Work Plan
MDL	Laboratory Method Detection Limit		
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.