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

Via Email to losangeles@waterboards.ca.gov

August 13, 2021

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

Subject: Second Quarter 2021 NPDES Discharge Monitoring Report
Compliance File CI-6027 and NPDES No. CA0001309
Santa Susana Field Laboratory
Ventura County, California

The Boeing Company (Boeing) hereby submits this Discharge Monitoring Report (DMR) for the Santa Susana Field Laboratory (Santa Susana Site) for the period of April 1 through June 30 (Second Quarter 2021). 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 290 acres of Boeing's land for which the Department of Energy (DOE) has assumed responsibility for soil remediation.

Hard copies of this DMR are available to the public at the California State University Northridge Oviatt Library, the Simi Valley Public Library, and the Platt Branch of the Los Angeles Public Library. An electronic version of this DMR is located at: http://www.boeing.com/principles/environment/santa-susana/monitoring-reports.page.

SECOND QUARTER 2021 DMR CONTENTS

This DMR includes the following sections and appendices:

- **Discharge and Sample Collection Summary:** This section describes the number of rain events, the number of samples collected, sample dates, and sample locations during the Second Quarter 2021. Table I summarizes the Second Quarter 2021 sampling record by outfall or location, sample frequency, and sample type collected per the requirements of the NPDES Permit.
- **Receiving Water Surveys:** This section summarizes the receiving water surveys required by the NPDES Permit.
- **Summary of Exceedances and/or Non-Compliance:** This section summarizes the Second Quarter 2021 sample results that exceeded NPDES Permit Limits, Benchmarks, and Receiving Water Limits, and the potential causes thereof.
- **Stormwater Treatment System at Outfall 011 Activities:** This section summarizes the Second Quarter 2021 activities at the stormwater treatment system (SWTS) at Outfall 011.
- **Stormwater Treatment System at Outfall 018 Activities:** This section summarizes the Second Quarter 2021 activities at the SWTS at Outfall 018.

- **Stormwater Pollution Prevention Plan/Best Management Practice Activities: This section presents the** Santa Susana Site-Wide Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practice (BMP)-related activities implemented in the Second Quarter 2021 as well as activities associated with NASA, DOE, the Stormwater Expert Panel (Expert Panel), NASA and Boeing BMP Monitoring-related activities, the Northern Drainage, the Outfall 001/002 BMP Compliance Report, and Other BMP Activities. Table II summarizes typical BMP-related activities that occur at outfalls every quarter. Table III summarizes specific BMP activities completed during the Second Quarter 2021 by location.
- **Annual Comprehensive Site Compliance Evaluation Report:** This section discusses the annual site compliance evaluation.
- **Bioassessment Monitoring:** This section discusses the bioassessment review required by the NPDES Permit.
- **SWPPP, BMP Plan, and Spill Contingency Plan Status and Effectiveness Report:** This section references the specific DMR in which more information can be found.
- **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 Second Quarter 2021.
- **Appendix B** tabulates waste shipments during the Second Quarter 2021.
- **Appendix C** presents chemical analytical results from the Second Quarter 2021 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** summarizes the NPDES Permit Limit, Benchmark, and Receiving Water Limit exceedances.
- **Appendix E** contains copies of the laboratory analytical reports, chain-of-custody forms, and data validation reports (if validation was performed).
- **Appendix F** presents the Annual Comprehensive Sitewide Compliance Evaluation Report.
- **Appendix G** presents the Annual Bioassessment Sampling Report.

DISCHARGE AND SAMPLE COLLECTION SUMMARY

The Santa Susana Site measured no qualifying rain events that produced greater than 0.1 inch of rainfall within a 24-hour period and were preceded by at least 72 hours of dry weather during the Second Quarter 2021 (Appendix A). Automated flow-weighted composite samplers (autosamplers) were set in preparation for all anticipated rain events. No discharge occurred at any of the outfalls; therefore, no samples were collected. There were no changes in the discharge as described in the NPDES Permit during the reporting period. The annual sediment sample and the quarterly surface water sample were collected at the Arroyo Simi–Frontier Park location on 14 April 2021.

Table I summarizes the Second Quarter 2021 sampling record by outfall or location, sample frequency, and sample type collected per NPDES Permit requirements, and results are included in Appendix C.

TABLE I: Sampling Record during the Second Quarter 2021

Date	Outfall/Location	Sample Frequency	Sample Type
4/14/2021	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Quarterly Surface Water	Grab
4/14/2021	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Annual Sediment	Grab

All analyses were conducted at analytical laboratories certified by the State Water Resources Control Board (SWRCB) for such analyses (i.e., all have current certification from the Environmental Laboratory Accreditation Program [ELAP] established by the California Environmental Laboratory Improvement Act) or have been approved by the SWRCB Executive Officer in accordance with current U.S. Environmental Protection Agency (EPA) guideline procedures or as specified in the NPDES Permit. Laboratory analytical reports, including validation reports and notes (if validation was performed), are included in Appendix E. Attachment H of the NPDES Permit presents the SWRCB's minimum levels laboratories are expected to achieve for reporting and determining compliance with NPDES Permit limits. The analytical laboratory achieved these minimum levels in the Second Quarter 2021 except when reporting limits were above the minimum levels (generally because of matrix interference). In cases where the NPDES Permit limit was less than the reporting limit and minimum level or there was no minimum level specified in the NPDES Permit, the reporting limit was used to determine compliance.

SECOND QUARTER 2021 RECEIVING WATER SURVEYS

The receiving water monitoring program required by the NPDES Permit includes surveys of Bell Creek, Dayton Canyon Creek, and Arroyo Simi. Observations are made only during discharge from Outfalls 002, 008, and 009, respectively, and at most monthly during periods of multiple flow events. During Second Quarter 2021, Outfalls 002, 008, and 009 did not discharge, thus, no receiving water surveys were conducted.

SECOND QUARTER 2021 SUMMARY OF EXCEEDANCES AND/OR NON-COMPLIANCE

No surface water discharges occurred from the Santa Susana Site during Second Quarter 2021. As such, there are no onsite compliance issues to report for this period.

In the quarterly surface water sample and annual sediment sample collected at the Arroyo Simi sampling location (RSW-002, Frontier Park) in Simi Valley, two constituents exceeded receiving water limits. As summarized in Appendix D, the Second Quarter 2021 exceedances of Daily Maximum Benchmarks, Daily Maximum Permit Limits, or Receiving Water Limits included:

- Dieldrin at Arroyo Simi – Frontier Park (RSW-002) in the quarterly surface water sample; and
- 4,4-DDE at Arroyo Simi – Frontier Park (RSW-002) in the annual sediment sample.

Arroyo Simi – Frontier Park (RSW-002)

Pesticides

In two samples collected on 14 April 2021, offsite at the Arroyo Simi – Frontier Park (RSW-002) location, approximately 4 miles downstream of Outfall 009, two pesticides were detected above their sample maximum receiving water limits. Dieldrin was detected in the quarterly surface water sample at 0.0015 J micrograms per liter (µg/L), which is above the sample maximum receiving water limit of 0.0002 µg/L; and 4,4-DDE was detected in the annual sediment sample at 0.011 micrograms per gram (µg/g), which is above the sample maximum receiving water sediment limit of 0.0014 µg/g. Since there was no discharge at this time from Outfall 009, the only Santa Susana Site Outfall situated to contribute surface water flow to Arroyo Simi, any pesticides detected at Arroyo Simi – Frontier Park (RSW-002) during the Second Quarter 2021 are from the surrounding area, and not from onsite discharge.

STORMWATER TREATMENT SYSTEM AT OUTFALL 011 ACTIVITIES

The SWTS located near R-1 Pond (SWTS 011) is situated to discharge through Outfall 011. Maintenance items completed in the Second Quarter 2021 are as follows:

- Installed reflective labels to identify each tank on the Sand Filters.
- Replaced the plastic zip ties on ACTIFLO® with Stainless Steel zip ties.
- Installed clear plexiglass in the ChemBoxes.
- Installed a guard over the 4160-volt line by the influent board.
- Grounded the fence around the Motor Control Cabinet (MCC).
- Grounded the metal potassium permanganate ($KMnO_4$) chemical skid.
- Installed a bypass line from the sump to ACTIFLO®.
- Isolated the damaged Granular Activated Carbon tank by removing the valves and installing blind flanges.
- Installed reflective tank signs on all tanks and chemical skids.
- Installed an 8-inch High Density Polyethylene (HDPE) blind flange in ChemBox 2.
- Installed a diffuser on the end of the discharge line at Outfall 011.

SWTS 011 did not operate in the Second Quarter 2021.

STORMWATER TREATMENT SYSTEM AT OUTFALL 018 ACTIVITIES

The SWTS located at Silvernale Pond (SWTS 018) discharges through Outfall 018. Maintenance items completed in the Second Quarter 2021 are as follows:

- Installed LED lights in all chemical skids as well as in the Personal Protective Equipment (PPE) shed.
- Painted the Alum, Hydrochloric Acid (HCl), and Sodium Chloride (NaCl) Chemical Skids.
- Installed reflective labels to identify each tank on the Sand Filters.
- Replaced the plastic zip ties on ACTIFLO® with Stainless Steel zip ties.
- Installed a new air line with an air reel by the chemical skids to aid in chemical transfers.

SWTS 018 did not operate in the Second Quarter 2021.

STORMWATER POLLUTION PREVENTION PLAN/BEST MANAGEMENT PRACTICE ACTIVITIES

Boeing implemented significant BMP activities in compliance with the Site-wide SWPPP (Haley & Aldrich, 2020) 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
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 Second Quarter 2021.

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

Table III summarizes the additional activities completed during the Second Quarter 2021 by outfall or BMP location.

TABLE III: Additional Second Quarter 2021 BMP Activities

Outfall, Watershed or BMP Location	BMP Activities During Second Quarter 2021
001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 014, and 018	- Performed weed abatement and/or brush clearance in and around the Outfall.
004	- Cleaned the upper and lower swales, removing leaf litter and debris. - Trimmed the oak tree away from the lower Baker Tank.
007	- Removed the abandoned 10-in HDPE pipe from behind the Outfall.
008	- Removed the deteriorated and unneeded wattles.
011	- Removed unneeded sandbags along the rolling dip.
013	- Straightened up the felt covering the media bags.
Culvert Modifications (CMs)	- Removed all old and deteriorated silt fence material covering the weir boards and installed HDPE liner at all of the CMs.
CM-3	- Removed sediment buildup from behind the upper check structure.
CM-4	- Rebuilt the check structure in front of the weir.
CM-9	- Removed spent wattles.
Perimeter Pond	- Performed weed abatement and brush clearance around the MCC, conveyance pump, and all along the HDPE conveyance line up to R-1 Pond and the Bowl.
R-2A Pond	- Reinstalled the 10-inch and 12-inch flow meters that were recently repaired. - Performed weed abatement and brush clearance around the MCC, conveyance pump, staff gauge, and all along the HDPE conveyance lines up to Silvernale Pond. - Removed the housing for the belts in an attempt to keep the rodents out.
Weather Station	- Changed a temperature and relative humidity sensor on the unit.
Helipad	- Performed weed abatement and brush clearance around the sump, the totalizer, and the staging area for the Charles King pump.
28 Tank Area	- Performed weed abatement and brush clearance around the tank.
Lower Lot	- Removed sediment buildup by the wooden retaining wall. - Increased the height and length of the check structure on the gunite slope.
Area I Road and Research Road	- Dragged the slope across the street from the fire station to decrease the angle of slope in an attempt to prevent sediment from washing onto the road. Installed a layer of weed cloth and gravel along the curb. - Installed a check structure along Research Road. - Removed burnt silt fence material from the top of Research Road. - Repaired the wooden retaining wall at the sump at the Bowl entrance. Installed a new drain and cement diversion.
Area II Road	- Removed spent wattles along the wooden retaining wall and installed biodegradable wattles.
Sage Ranch	- Replaced damaged sandbags. - Removed fiber rolls along the roadway and installed mulch-filled wattles. - Installed mulch-filled wattles along the north slope of a tributary.
407 Yard	- Installed new chemical signs on the Conex boxes. - Installed wattles at the base of the northeast slope.
408 Contractor Staging Area	- Built a check structure at the northeast end slope and increased the height of the check structure at the southeast corner. - Removed sediment from the swale along the southern end. - Installed silt fence material over the wooden retaining wall and placed rip rap along the top and bottom of fence to stabilize the sediment.

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

NASA-Related Activities

Demolition BMPs and stormwater activities covered by NASA's Construction SWPPP for the Alfa and Bravo areas are inspected in accordance with the Construction General Permit (CGP; NASA, 2017). All demolition and soil disturbance activities were completed in 2018. During the Second Quarter 2021, NASA maintained fiber rolls as perimeter and linear sediment controls, maintained silt fencing, and gravel/riprap in areas within these sites where construction activities had been completed. A Notice of Termination was submitted to the Regional Board in Second Quarter 2020.

DOE-Related Activities

Demolition BMPs and stormwater activities covered by DOE's Construction SWPPPs for the Hazardous Waste Management Facility (HWMF), Radioactive Materials Handling Facility (RMHF), and other facilities within Area IV were inspected in accordance with the CGP (DOE, 2020a, 2020b, 2020c).

Expert Panel-Related Activities

The BMP activities discussed below were performed, commenced, or completed during the Second Quarter 2021 in coordination with the Expert Panel.

Culvert Modifications

Twelve culvert modifications (CM) were constructed in 2009 at various locations at or along the main road adjacent to the Northern Drainage. The CMs were designed to treat stormwater from roads and/or the surrounding hillsides. The Second Quarter 2021 activities included:

- Conducted BMP inspections, including the culvert inlets and riprap check dams;
- Cleaned CM basins and weir boards of debris, as needed;
- Removed old and deteriorated silt fence material covering the weir boards and installed HDPE liners at the CMs;
- Removed sediment buildup from behind the upper check structure at CM-3;
- Rebuilt the check structure in front of the weir at CM-4; and
- Removed spent wattles at CM-9.

NASA Expendable Launch Vehicle (ELV) Area BMPs

BMPs and drainage improvements were installed between June and October 2013 at the NASA ELV to improve the quality of stormwater from the ELV area. After being pumped from the cistern at the bottom of the swale to the ELV system, stormwater is gravity-driven through the tank system, starting with the settling tanks, then through the filter media tank, before discharging to a tributary that flows to Outfall 009. In the Second Quarter 2016, a sandbag berm was placed across the ELV asphalt swale to divert stormwater toward CM-1 for treatment instead of directly discharging to the Northern Drainage. A generator was installed at the ELV system during the Third Quarter 2019. The Second Quarter 2021 activities included BMP inspections.

Well 13 Road

Sandbag berms located near the culvert inlet and downgradient of the hydroseeded area were reinforced and increased in height during Fourth Quarter 2017. The Second Quarter 2021 activities included BMP inspections, cleaning, and rebuilding the check structures along the roadway.

B-1 Area

The B-1 Area BMPs include:

- A sedimentation basin, constructed in 2012;
- A media filter, constructed in 2012; and
- An upper parking lot media filter, constructed in 2017.

The Second Quarter 2021 activities included continued BMP inspections.

Upper Parking Lot Media Filter

Construction of a media filter at the northeast corner of the upper parking lot was completed during the Second Quarter 2017. This BMP included a new media filter similar in style to the B-1 media filter and designed to treat runoff from parts of the parking lot as well as parts of the adjacent entrance road. The Second Quarter 2021 activities included BMP inspections.

Former Building 1436 Detention Bioswales

Two detention bioswales were constructed at the former Building 1436 following its removal in Third Quarter 2014. The graded surface was hydroseeded, and more than 2,900 native plantings were installed in December 2014. The bioswales were designed to capture, pretreat, and detain stormwater from the adjacent parking lot and from approximately 13.9 acres of drainage area east and upgradient prior to releasing the stormwater to the former Instrument and Equipment Laboratories (IEL) storm drain, where flow is diverted to the lower lot biofilter for treatment. The Second Quarter 2021 activities included conducting BMP inspections, replacing damaged sandbags and fiber rolls, and installing mulch-filled wattles along the roadway and the north slope of a tributary.

Lower Lot Biofilter

The lower lot biofilter is a stormwater treatment BMP designed and built to capture, convey, and treat stormwater from the lower lot and former IEL watershed. The lower lot biofilter consists of a 30,000-gallon cistern, a stormwater conveyance line, a sedimentation basin, and a media biofilter.

The Second Quarter 2021 activities included inspections to verify that the sedimentation basin and biofilter were free of sediment and debris, checks of the cistern area and pump, weed abatement as needed, in addition to inspections of surrounding BMPs.

No stormwater was pumped from the cistern to the sedimentation basin during the Second Quarter 2021.

Administration Area Inlet Filters

Four storm drain inlets were modified with either drop inlet filters or weighted wattles filled with media mixtures during the Second Quarter 2017. At the inlet closest to the lower lot, a storm drain filter sock was placed upstream of the inlet to increase the settling of solids. The Second Quarter 2021 activities included BMP inspections.

Former Shooting Range

BMPs at the Former Shooting Range consist of:

- Slope stabilization measures (i.e., vegetation planting areas);
- Riprap berms along the Northern Drainage;

- A culvert maintenance media filter;
- Fiber rolls;
- Sandbag berm;
- Silt fencing;
- Water bar across the trail;
- Three check structures on the Northern Drainage Trail;
- Sandbags with fiber rolls;
- A check structure at the dissipater; and
- Hydroseeding.

The entire area continues to benefit from the growth of dense vegetation that shields lead shot from direct contact with or dislodging during precipitation events and prevents soil erosion and mobility of the shot to downstream areas.

At the request of the Expert Panel, the Sage Ranch side of the Former Shooting Range was inspected to confirm that BMPs (i.e., fiber rolls, silt fence, etc.) control and/or treat stormwater runoff from that side of the Former Shooting Range to the Northern Drainage. The Second Quarter 2021 activities included BMP inspections.

Northern Drainage BMPs

Boeing restored the Northern Drainage (Outfall 009) following cleanup activities performed under the Department of Toxic Substance Control oversight and in accordance with the requirements of the Regional Board's Cleanup and Abatement Order No. R4-2007-0054 (Regional Water Quality Control Board, 2007). The restoration and mitigation activities proposed in the Northern Drainage Restoration, Mitigation, and Monitoring Plan (RMMP)[1] were implemented in 2012. In accordance with the RMMP, regular maintenance, monitoring, and reporting were implemented in the Northern Drainage from 2012 through the Third Quarter 2017 for the stream's plant biology and geomorphology. The successful restoration and mitigation of the Northern Drainage according to the success criteria of the RMMP were documented in the fifth and final Annual Mitigation Monitoring Report (Haley & Aldrich, 2017). Based on the success of the project, Boeing requested that the Regional Board provide written notice stating that Boeing had complied with all terms of the Cleanup and Abatement Order and Boeing's obligations under the Order would therefore be terminated. No RMMP-related inspections of Northern Drainage BMPs were performed during Second Quarter 2021. Boeing will continue to inspect the Northern Drainage BMPs annually and maintain them on an as-needed basis. The Second Quarter 2021 activities included BMP inspections.

Outfall 001/002 BMP Compliance Report Related Activities

Boeing and the Expert Panel will continue to monitor and evaluate the effectiveness of BMPs within the watersheds of Outfall 001 and Outfall 002. Recommendations for these watersheds are provided in the 2020 Expert Panel Annual Report (Geosyntec and the Expert Panel, 2020).

Other BMP Activities

BMP observations and maintenance inspections were conducted in conformance with the Site-wide SWPPP (Haley & Aldrich, 2020) at and around the former test stands Alfa and Bravo and former Advanced Propulsion Test Facility.

[1] Available at: http://www.boeing.com/principles/environment/santa-susana/technical-reports.page

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT

The annual comprehensive site compliance evaluation was conducted in April 2021 and a summary is included in Appendix F.

BIOASSESSMENT MONITORING

A bioassessment review was conducted at the Santa Susana Site on 28 April 2021 to evaluate water quality conditions in the tributary to Arroyo Simi, downstream of Outfall 009 and the tributary to the Los Angeles River downstream of Outfall 001 in accordance with NPDES Permit requirements. The methods, procedures, and results of the bioassessment are reported in the Bioassessment Monitoring Report included in Appendix G. Note that there was insufficient water flow to conduct the bioassessment monitoring in the second quarter of 2021.

SWPPP, BMP PLAN, AND SPILL CONTINGENCY PLAN STATUS AND EFFECTIVENESS REPORT

The SWPPP, BMP Plan, and Spill Contingency Plan (heretofore referred to as the Spill Prevention and Response Plan [SPRP]) are implemented and the effectiveness is evaluated by Boeing annually. The SWPPP, BMP Plan, and SPRP were reviewed following the annual comprehensive site compliance evaluation in April 2021 (Appendix F).

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 2021 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 13th of August 2021 at The Boeing Company, Seal Beach, California Site.

Sincerely,

Kim O'Rourke

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

Enclosures:

References
Figure 1 – Site Map with Stormwater Collection and Conveyance System and Site Features
Figure 2 – Arroyo Simi Receiving Water (RSW-002, Frontier Park) Sampling Location and Upstream Monitoring Point
Appendix A – Second Quarter 2021 Daily Rainfall Summary
Appendix B – Second Quarter 2021 Waste Shipment Summary Table
Appendix C – Second Quarter 2021 Discharge Monitoring Data Summary Tables
Appendix D – Second Quarter 2021 NPDES Permit Limit Exceedances
Appendix E – Second Quarter 2021 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports
Appendix F – Annual Comprehensive Site Compliance Evaluation Report
Appendix G – Annual Bioassessment Sampling Report

c: Los Angeles Regional Water Quality Control Board; Attn: Mr. Duong H. Trinh
Los Angeles Regional Water Quality Control Board; Attn: Ms. Kelly Bronwyn
California Department of Toxic Substances Control; Attn: Mr. Mark Malinowski
California State University Northridge Oviatt Library
Simi Valley Public Library
Los Angeles Public Library, Platt Branch

REFERENCES

1. California Regional Water Quality Control Board, 2007. Cleanup and Abatement Order No. R4-2007-0054. 6 November.

2. 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.

3. California State Water Resources Control Board, National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ).

4. U.S. Department of Energy, 2020a. Stormwater Pollution Prevention Plan for HWMF Phase 1 Decommissioning and Demolition U.S. Department of Energy, Energy Technology Engineering Center – Area IV, Santa Susana Field Laboratory, Ventura County, California, October.

5. U.S. Department of Energy, 2020b. Stormwater Pollution Prevention Plan for RMHF Phase 1 Decommissioning and Demolition U.S. Department of Energy, Energy Technology Engineering Center – Area IV, Santa Susana Field Laboratory, Ventura County, California, July.

6. U.S. Department of Energy, 2020c, Stormwater Pollution Prevention Plan for CLIN 008 Phase I Decommissioning and Demolition, U.S. Department of Energy, Energy Technology Engineering Center – Area IV, Santa Susana Field Laboratory, Ventura County California, December.

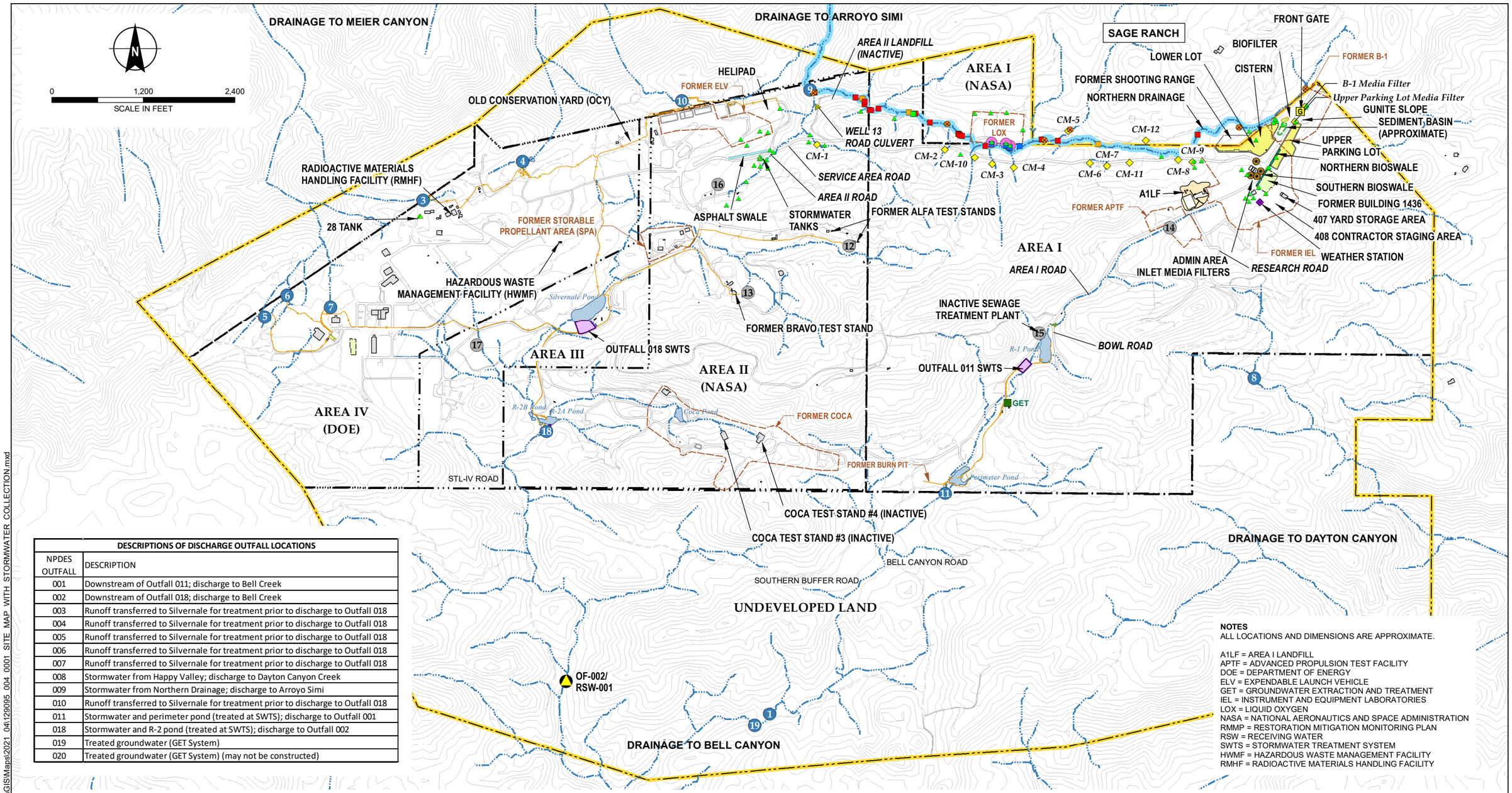
7. Geosyntec and the Expert Panel, 2020. Santa Susana Field Laboratory Site-Wide Stormwater Annual Report, 2019/20 Reporting Year, Ventura County, California (NPDES No. CA0001309, CI No.6027). 31 October.

8. Haley & Aldrich, Inc., 2017. Northern Drainage 2017 Annual Report, Clean Water Act Section 401 Water Quality Certification, File No. 12-001, Cleanup and Abatement Order No. R4-2007-0054, Streambed Alteration Agreement No. 1600-2003-5052-R5, Streambed Alteration Agreement No. 1600-2015-0079-R5, U.S. Army Corps of Engineers SPL-2012-00015, Santa Susana Field Laboratory, Ventura County, California. 13 December.

9. Haley & Aldrich, Inc., 2020. Stormwater Pollution and Prevention Plan (Version 7 for Compliance with 2015 NPDES Permit). 7 December.

10. NASA, 2017. Stormwater Pollution and Prevention Plan, Pacific Region MATOC FY17 NASA SSFL, Ventura County, California, Phase IIIa Demolition. 31 March.

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
019	Treated groundwater (GET System)
020	Treated groundwater (GET System) (may not be constructed)

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

- ACTIVE NPDES OUTFALL LOCATION
- FORMER NPDES OUTFALL LOCATION
- BELL CREEK RECEIVING WATER (RSW-001) SAMPLING LOCATION AND OUTFALL 002
- SLOPE DRAIN DISCHARGE POINT TO NORTHERN DRAINAGE
- CULVERT MODIFICATION (CM-12)
- INLET MEDIA FILTER
- BMP MONITORING LOCATION
- SPECIAL STUDIES LOCATION
- GET SYSTEM
- 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 AREA
- BIOFILTER
- BIOSWALE
- SEDIMENT BASIN
- STORMWATER TANK
- 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

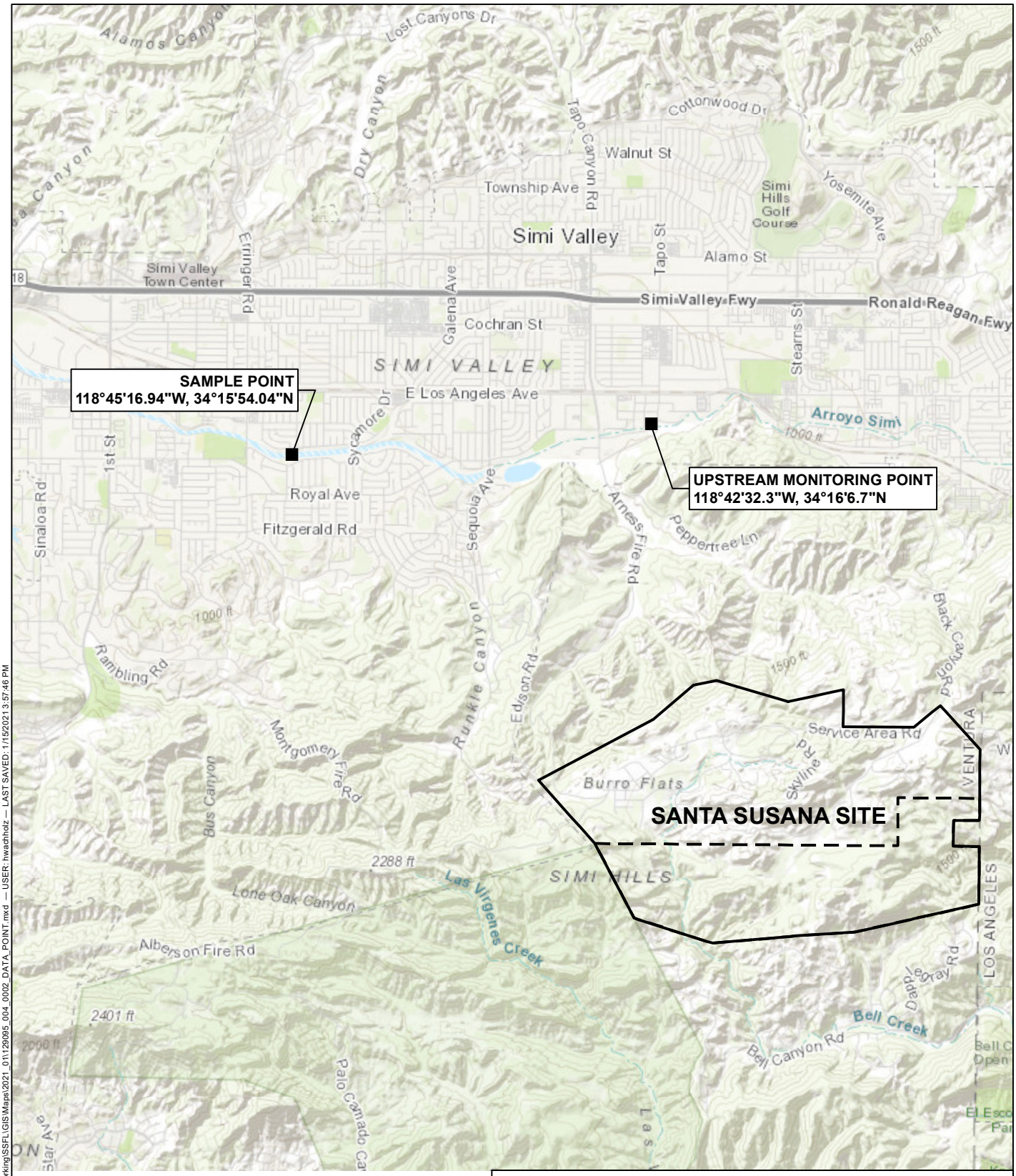
NPDES PERMIT COMPLIANCE SECOND QUARTER 2021
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

SITE MAP WITH STORMWATER COLLECTION AND CONVEYANCE SYSTEM AND SITE FEATURES

AUGUST 2021

FIGURE 1

C:\Users\hwachholz\Documents\working\SSFL\GIS\Maps\2021_04\129095_004_0001_SITE_MAP_WITH_STORMWATER_COLLECTION.mxd



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.

N

0 0.5 1

SCALE IN MILES

HALEY ALDRICH

NPDES PERMIT COMPLIANCE SECOND QUARTER 2021
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

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

AUGUST 2021

FIGURE 2

GIS FILE PATH: C:\Users\hwachholz\Documents\working\SSFL\GIS\Maps\2021_01\129095_004_0002_DATA_POINT.mxd — USER: hwachholz — LAST SAVED: 1/15/2021 3:57:46 PM

APPENDIX A

Second Quarter 2021 Rainfall Data Summary

APPENDIX A

TABLE OF CONTENTS

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Inches of Rain
Month/Year: April 2021

HOUR OF THE DAY, PACIFIC STANDARD TIME

	HR-BEG	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	DAY																									Total
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
T	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Inches of Rain
Month/Year: May 2021

HOUR OF THE DAY, PACIFIC STANDARD TIME

	HR-BEG	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	DAY																									Total
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
D	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
T	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Inches of Rain
Month/Year: June 2021

HOUR OF THE DAY, PACIFIC STANDARD TIME

	HR-BEG	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	DAY																									Total
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	0.02
D	8	0.00	0.00	0.00	0.00	0.00	0.00	d	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
T	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Flags: d = Off-line part of hour, invalid hour due to semi-annual audit (June 8). For the off-line event, the rain gauge at Sage Ranch confirmed that no rainfall was recorded on June 8 during the 06:00-07:00 hour.

APPENDIX B

Second Quarter 2021 Waste Shipment Summary Tables

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TABLE B
WASTE SHIPMENT SUMMARY TABLE

SECOND QUARTER 2021
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	DESTINATION
Hazardous Waste	Solid	6,659	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Environmental Services, Inc. 2247 South Highway 71 Kimball, NE 69145
Hazardous Waste	Liquid	1,397	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	2,047	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	59	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
Hazardous Waste Hypochlorite Solutions	Liquid	369	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 500 Independence Parkway South La Porte TX 77571
Hazardous Waste Hypochlorite Solutions	Liquid	3,202	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors El Dorado LLC 309 American Circle El Dorado, AR 71730
Hazardous Waste	Liquid	7,476	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 500 Independence Parkway South La Porte TX 77571
Hazardous Waste, Corrosive	Liquid	10	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
Hazardous Waste, Corrosive	Liquid	22	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
Hazardous Waste, Potassium Permanganate Solution	Liquid	1,825	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
Hazardous Waste	Liquid	11,000	G	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Non RCRA Hazardous Waste	Solid	66	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	Tri-State Motor Transit Co. 17235 N 75th Ave., Suite D175 Glendale, AZ 85308	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Non RCRA Hazardous Waste	Solid	76	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Non RCRA Hazardous Waste	Liquid	15	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029

TABLE B
WASTE SHIPMENT SUMMARY TABLE

SECOND QUARTER 2021
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	DESTINATION
Hazardous Waste Corrosive Solid, Basic, Inorganic	Solid	105	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Non Hazardous, Non D.O.T. Regulated Material	Solid	60	Y	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Waste Management - Antelope Valley LF 1200 W. City Ranch Road Palmdale, CA 93551
Non Hazardous, Non D.O.T. Regulated Material	Solid	364	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	Tri-State Motor Transit Co. 17235 N 75th Ave., Suite D175 Glendale, AZ 85308	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Non Hazardous, Non D.O.T. Regulated Material	Solid	6,815	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Grassy Mountain LLC 3 Miles East 7 Miles North of Knolls Grantsville, UT 84029
Non Hazardous Waste	Liquid	30,000	G	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058	n/a	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058
Hazardous Waste	Solid	30	Y	Ecology Control Industries	n/a	US Ecology Beatty US Hwy 95, 11 Miles South of Beatty Beatty, NV 89003
Hazardous Waste	Liquid	100,000	G	Ecology Control Industries	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Non RCRA Hazardous Waste	Solid	11	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 D.O.T. Regulated Radioactive Material	Solid	111,900	P	MP Environmental Services	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Non D.O.T. Regulated Radioactive Material	Solid	1,622,380	P	Hitman Transport Services, Inc. 1560 Bear Creek Road Oak Ridge, TN 37830	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Hazardous Waste, Radioactive Material, Excepted Package	Liquid	160	G	MP Environmental Services	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Hazardous Waste, Radioactive Material, Excepted Package	Liquid	1,300	P	MP Environmental Services	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029

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

APPENDIX C

Second Quarter 2021 Discharge Monitoring Data Summary Tables

APPENDIX C

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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 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
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*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).
*II *III	Unusual problems found with the data that have been described in Section II, “sample management”, or Section III, “method analysis”. The number following the asterisk (*) will indicated the validation report section where a description of the problem can be found.
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
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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 (CaCO3).
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
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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
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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.

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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 ug/L and 3.93 lbs/day at OF001,002,011,018 and 0.24 lbs/day at OF008.
(b)	Based on Order No. R4-2015-0033, page 17, footnote 7, sampling event is a wet discharge and the NPDES Permit Limit for cadmium is 3.1 ug/L and 4.91 lbs/day at OF001,002,011,018 and 3.05 lbs/day at OF008.
(c)	Based on Order No. R4-2015-0033, page 16, footnote 1, sampled during wet weather flow. The effluent limitations for total suspended solids and/or settleable solids are not applicable for discharges during wet weather.
(d)	Based on Order No. R4-2015-0033, page 16, footnote 1, sampled during dry weather flow. The effluent limitations for total suspended solids and/or settleable solids are applicable for discharges during dry weather.
(e)	Based on Order No. R4-2015-0033, page 17, footnote 8, sampling event is a dry discharge and the NPDES Permit Limit for selenium is 5 ug/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 ug/L and 8.06 lbs/day.
(g)	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. During the First Quarter 2020, various metals reverted back to annual sampling but may have continued to be analyzed due to laboratory or field error.
(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)	Reserved.
(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.
(q)	Minimum level not met due to laboratory error.

ARROYO SIMI
DISCHARGE MONITORING DATA SUMMARY TABLE

SECOND QUARTER 2021
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

April 1 through June 30, 2021

				4/14/2021 07:30		
ANALYTE	**UNITS**	**DAILY MAXIMUM PERMIT LIMIT**	**SAMPLE FREQUENCY**	**SAMPLE TYPE**	**RESULT**	**LABORATORY/ VALIDATION QUALIFIER**
POLLUTANTS WITH LIMITS						
4,4'-DDD	µg/L	0.0014	1/Quarter	Grab	ND < 0.00080	U
4,4'-DDE	µg/L	0.001	1/Quarter	Grab	0.00068	NJ (DNQ, *III)
4,4'-DDT	µg/L	0.001	1/Quarter	Grab	ND < 0.0016	U
Aroclor 1016	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	U
Aroclor 1221	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	U
Aroclor 1232	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	U
Aroclor 1242	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	U
Aroclor 1248	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	U
Aroclor 1254	µg/L	0.0003	1/Quarter	Grab	ND < 0.017	U
Aroclor 1260	µg/L	0.0003	1/Quarter	Grab	ND < 0.017	U
Chlordane	µg/L	0.001	1/Quarter	Grab	ND < 0.0065	U
Chlorpyrifos	µg/L	0.02	1/Quarter	Grab	ND < 0.0069	U
Diazinon	µg/L	0.16	1/Quarter	Grab	ND < 0.0052	U
Dieldrin	µg/L	0.0002	1/Quarter	Grab	0.0015	J (*III)
E. coli	MPN/100 mL	235	1/Year	Grab	ANR	ANR
pH (Field)	s.u.	6.5-8.5	1/Quarter	Grab	6.78	*
Toxaphene	µg/L	0.0003	1/Quarter	Grab	ND < 0.013	U
POLLUTANTS WITHOUT LIMITS						
Hardness (as CaCO3)	mg/L	-	1/Quarter	Grab	620	--
Priority Pollutants	NA	-	1/5 Years	ANR	ANR	ANR
Temperature (Field)	Deg F	-	1/Quarter	Grab	58.3	*
TCDD - Equivalents	µg/L	-	1/Year	ANR	ANR	ANR
Total Suspended Solids	mg/L	-	1/Year	ANR	ANR	ANR
Water Velocity	ft/sec	-	1/Quarter	Meas	0	*

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

ARROYO SIMI, SEDIMENT
DISCHARGE MONITORING DATA SUMMARY TABLE

SECOND QUARTER 2021
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

April 1 through June 30, 2021

				4/14/2021 08:00		
ANALYTE	**UNITS**	**DAILY MAXIMUM PERMIT LIMIT**	**SAMPLE FREQUENCY**	**SAMPLE TYPE**	**RESULT**	**LABORATORY/ VALIDATION QUALIFIER**
POLLUTANTS WITH LIMITS						
4,4'-DDD	µg/g	0.002	1/Year	Grab	0.00048	J (DNQ, *III)
4,4'-DDE	µg/g	0.0014	1/Year	Grab	0.011	--
4,4'-DDT	µg/g	0.0003	1/Year	Grab	ND < 0.000093	U
Aroclor 1016	µg/g	0.12	1/Year	Grab	ND < 0.010	U
Aroclor 1221	µg/g	0.12	1/Year	Grab	ND < 0.010	U
Aroclor 1232	µg/g	0.12	1/Year	Grab	ND < 0.010	U
Aroclor 1242	µg/g	0.12	1/Year	Grab	ND < 0.010	U
Aroclor 1248	µg/g	0.12	1/Year	Grab	ND < 0.010	U
Aroclor 1254	µg/g	0.12	1/Year	Grab	ND < 0.0066	U
Aroclor 1260	µg/g	0.12	1/Year	Grab	ND < 0.0066	U
Chlordane	µg/g	0.0033	1/Year	Grab	0.0027	NJ (DNQ, *III)
Dieldrin	µg/g	0.0002	1/Year	Grab	ND < 0.000065	U
Toxaphene	µg/g	0.0006	1/Year	Grab	ND < 0.0051	U
POLLUTANTS WITHOUT LIMITS						
Bivalve Embryo Toxicity (Mytilus edulis)	% Normal/Alive	-	1/Year	Grab	100	--
Conductivity (Field)	µmhos/cm	-	1/Year	Grab	2,060	*
Dissolved Oxygen (Field)	mg/L	-	1/Year	Grab	5.86	*
Percent Moisture	%	-	1/Year	Grab	22.6	*
pH (Field)	s.u.	-	1/Year	Grab	6.78	*
Sediment Toxicity (Eohaustorius estuarius)	% Survival	-	1/Year	Grab	100	--
Temperature (Field)	Deg F	-	1/Year	Grab	58.3	*
Total Ammonia	mg/kg	-	1/Year	Grab	4.54	J (DNQ)
Total Organic Carbon	mg/kg	-	1/Year	Grab	910	J (DNQ)
Water Velocity	ft/sec	-	1/Year	Meas	0	*
PARTICLE SIZE DISTRIBUTION						
Clay (<0.00391 mm)	%	-	1/Year	Grab	0.13	*
Coarse Sand (0.5 mm to 1 mm)	%	-	1/Year	Grab	38.98	*
Fine Sand (0.125 mm to 0.25 mm)	%	-	1/Year	Grab	1.75	*
Gravel (greater than 2mm)	%	-	1/Year	Grab	26.62	*
Medium Sand (0.25 mm to 0.5 mm)	%	-	1/Year	Grab	9.91	*
Silt (0.00391 mm to 0.0625 mm)	%	-	1/Year	Grab	0.64	*
Total Silt and Clay (0 mm to 0.0626 mm)	%	-	1/Year	Grab	0.77	*
Very Coarse Sand (1 mm to 2 mm)	%	-	1/Year	Grab	21.52	*
Very Fine Sand (0.0625 mm to 0.125 mm)	%	-	1/Year	Grab	0.45	*

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

APPENDIX D

Second Quarter 2021 Permit Limit Exceedances and/or Non-Compliance Summary

APPENDIX D

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TABLE D
SUMMARY OF PERMIT LIMIT EXCEEDANCES AND/OR NON-COMPLIANCE

SECOND QUARTER 2021
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

April 1 through June 30, 2021

DAILY MAXIMUM BENCHMARK EXCEEDANCES AND/OR NON-COMPLIANCE							
LOCATION	**SAMPLE DATE**	**SAMPLE TYPE**	**ANALYTE**	**DAILY MAXIMUM PERMIT LIMIT**	**DAILY MAXIMUM RESULT**	**UNITS**	**LABORATORY/ VALIDATION QUALIFIER**
Arroyo Simi, Water	04/14/2021	Grab	Dieldrin	0.0002	0.0015	µg/L	J (*III)
Arroyo Simi, Sediment	04/14/2021	Grab	4,4'-DDE	0.0014	0.011	µg/g	--

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

APPENDIX E

Second Quarter 2021 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports

APPENDIX E

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Section No.

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 570-56285-1

Prepared for

Haley & Aldrich, Inc.

600 South Meyer Avenue, Suite 100

Tucson, Arizona 85701

26 May 2021

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TABLES

I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^X Project No.: 1272.003D.04

Sample Delivery Group: 570-56285-1

Project Manager: Katherine Miller

Matrix: Water

QC Level: II; IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Matrix	Collection	Method
ARROYO_SIMI_20210414_GRAB	570-56285-1/1D14038-01	W	4/14/2021 7:30:00 AM	E608.3, SM2340, E525.2

II. SAMPLE MANAGEMENT

According to the case narratives, Login Sample Receipt Checklists, and the chains-of-custody (COC) provided by the laboratories for sample delivery group (SDG) 570-56285-1:

- The laboratories received the sample in this SDG on ice and within the temperature limits of <6 degrees Celsius (°C) and >0°C.
- Field and laboratory personnel signed and dated the COCs.
- The COCs to Weck and Eurofins Calscience LLC Lincoln indicated the sample ID was Arroyo_Simi_20210412_Grab and Arroyo_Simi_20210412_Grab_Extra. Sample dates were listed as 4/14/2021 07:30 and 4/13/2021 07:30. Data in the data packages from Eurofins Calscience Irvine, Eurofins Calscience LLC Lincoln and Weck, identify the sample IDs as Arroyo_Simi_20210412_Grab and Arroyo_Simi_20210412_Grab_Extra; however, the EDD indicates the sample IDs as Arroyo_Simi_20210414_Grab and Arroyo_Simi_20210414_Grab_Extra. A revision to the report issued 5/28/2021 indicates that the sample names should be Arroyo_Simi_20210414_Grab and Arroyo_Simi_20210414_Grab_Extra. The Eurofins raw data also corrects the IDs but the Eurofins case narratives still reference the incorrect IDs. The Weck COCs acknowledge the change to the samples IDs.
- The samples were transferred from Eurofins Calscience Irvine to Eurofins Calscience Lincoln LLC for analysis of Methods 608.3. Samples were dropped at Weck Laboratories directly from the field for the analysis of Method 525.2 – chlorpyrifos and diazinon.
- According to the Login Sample Receipt Checklists custody seals were present upon receipt at Eurofins TestAmerica Irvine but were absent upon receipt at Eurofins Calscience Lincoln LLC; however, no evidence of tampering was noted.
- Other that temperature upon receipt, no receipt information was provided by Weck.

TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	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.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.

Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
$	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. EPA METHOD 608.3 –PESTICIDES AND PCBS

E. Wessling of MEC[X] reviewed the SDG on June 1, 2021

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC[X] Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 1), EPA Method 608.3* and the *National Functional Guidelines for Superfund Organic Methods Data Review* (2017).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The sample was extracted within seven days of collection and analyzed within 40 days of extraction.

III.2. CALIBRATION

Calibration data were not evaluated at a Stage II validation level.

III.3. QUALITY CONTROL SAMPLES

III.3.1. *METHOD BLANKS*

Target compounds were not detected in the method blanks above the MDL.

III.3.2. *LABORATORY CONTROL SAMPLES*

LCS/LCSD recoveries and RPDs were within the laboratory control limits for pesticides. Toxaphene and chlordane were not spiked into the pesticide LCS/LCSD samples. The PCB LCSD and RPDs were within the laboratory control limits for Aroclor 1016 and Aroclor 1260. No qualification was necessary.

III.3.3. *SURROGATE RECOVERY*

Pesticide surrogate tetrachloro-m-xylene (TCMX) was recovered within the laboratory control limits of 20-139% in the site sample and PCB surrogates TCMX and decachlorobiphenyl (DCB) was recovered within the laboratory control limits of 20-139% and 20-154%, respectively.

III.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were performed on the sample in this SDG for the pesticides. Recoveries and RPDs were within laboratory limits. Toxaphene and chlordane were not spiked in the pesticide MS/MSD samples. MEC[X] evaluated method accuracy and precision based on the associated LCS/LCSD results.

III.4. FIELD QC SAMPLES

MEC[X] evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC[X] used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

III.4.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

III.4.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

III.5. Compound Identification

Compound identification was verified at a Stage 4 validation level. The laboratory analyzed for seven Aroclors and six pesticide target compounds by EPA Method 608.3.

III.6. Compound Quantification and Reported Detection Limits

Compound quantification was verified at a Stage 4 validation level. PCB Aroclors were not detected in the sample. Dieldrin and 4,4'-DDE were reported in the sample. Reported nondetects are valid to the reporting limit. The sample did not require dilution. Detects between the MDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit.

The intercolumn comparison of the detects were greater than 40% for each detect. Dieldrin (99% D) was qualified as estimated (J) and 4,4'-DDE (171% D) was flagged as estimated and tentatively identified (NJ) for the intercolumn %D exceedances.

IV. EPA METHOD 525.2 — Chlorpyrifos and Diazinon

E. Wessling of MEC^X reviewed the SDG on April 13, 2021

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Semivolatile Organics* (DVP-3, Rev. 1), *EPA Method 525.2* and the *National Functional Guidelines for Superfund Organic Methods Data Review* (2017).

IV.1. Holding Times

The extraction holding time of 24-hours from collection for diazinon was met. The sample was analyzed within 30 days of extraction.

IV.2. GC/MS Tuning and Calibration

Tuning and calibration criteria were not evaluated at a Stage II validation level.

IV.3. Quality Control Samples

IV.3.1. *Method Blanks*

Target compounds were not detected in the method blank.

IV.3.2. *Laboratory Control Samples*

LCS recoveries were 95% (diazinon) and 90.6% (chlorpyrifos) and deemed acceptable by the reviewer.

IV.3.3. *Surrogate Recovery*

Surrogate recovery was 76.7% (Arroyo_Simi_20210414_Grab) and was deemed acceptable by the reviewer.

IV.3.4. *Matrix Spike/Matrix Spike Duplicate*

MS/MSD analyses were performed on the sample in this SDG. Recoveries and RPDs were deemed acceptable by the reviewer.

IV.4. FIELD QC SAMPLES

MEC^X evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

IV.4.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

IV.4.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

IV.5. INTERNAL STANDARDS PERFORMANCE

Sample internal standard recoveries were within 70-130% of the CCV and 50-150% of the average ICAL IS concentration.

IV.6. COMPOUND IDENTIFICATION

Compound identification was not verified at a Stage II validation level. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. The requested target compounds were not reported above the MDL in the sample.

IV.7. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was not verified at a Stage II validation level. Reported nondetects are valid to the reporting limit. The sample did not require dilution.

IV.8. SYSTEM PERFORMANCE

System performance was not evaluated at a Stage II validation level.

V. METHOD SM2340—HARDNESS

M. Hilchey of MEC^X reviewed the SDG on May 26, 2021.

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 1), Standard Methods for the Examination of Water and Wastewater 2340* and the *National Functional Guidelines for Inorganic Superfund Data Review* (2017).

V.1. HOLDING TIMES

The QAPP holding time, six months for hardness, was met.

V.2. CALIBRATION

Instrument calibration review is not performed at Level II validation. ICP-AES CRQL recoveries were within the laboratory control limits of 50-150%. Initial calibration verification recoveries were within QAPP control limits of 95-105%. Continuing calibration verification recoveries were within QAPP control limits of 90-110%.

V.3. QUALITY CONTROL SAMPLES

V.3.1. *METHOD BLANKS*

The method blanks and calibration blanks, as applicable, had no detection for target analytes.

V.3.2. *LABORATORY CONTROL SAMPLES*

Laboratory control sample recoveries were within the QAPP control limits of 85-115%.

V.3.3. *LABORATORY DUPLICATES*

Laboratory duplicate analysis was not performed on the sample in this SDG.

V.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were performed on the sample in this SDG. QAPP acceptance limits were met for recoveries and RPDs.

V.4. SAMPLE RESULT VERIFICATION

Sample result verification is not performed at Level II validation. Reported nondetects are valid to the MDL.

V.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

V.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

V.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 570562851

Analysis Method E525.2

Sample Name ARROYO_SIMI_20210414_GRAB **Matrix Type:** W **Result Type:** TRG

Sample Date: 4/14/2021 7:30:00 AM **Validation Level:** 9

Lab Sample Name: 1D14038-01

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	N	2921-88-2	ND	0.010	0.0069	ug/L	U	U	--
Diazinon	N	333-41-5	ND	0.010	0.0052	ug/L	U	U	--

Analysis Method E608.3

Sample Name ARROYO_SIMI_20210414_GRAB **Matrix Type:** W **Result Type:** TRG

Sample Date: 4/14/2021 7:30:00 AM **Validation Level:** 9

Lab Sample Name: 570-56285-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
4,4'-DDD	N	72-54-8	ND	0.0013	0.00080	ug/L	U	U	--
4,4'-DDE	N	72-55-9	0.00068	0.0013	0.00050	ug/L	J,DXPI	NJ	DNQ, *III
4,4'-DDT	N	50-29-3	ND	0.0033	0.0016	ug/L	U	U	--
Aroclor-1016 (PCB-1016)	N	12674-11-2	ND	0.10	0.039	ug/L	U	U	--
Aroclor-1221 (PCB-1221)	N	11104-28-2	ND	0.10	0.039	ug/L	U	U	--
Aroclor-1232 (PCB-1232)	N	11141-16-5	ND	0.10	0.039	ug/L	U	U	--
Aroclor-1242 (PCB-1242)	N	53469-21-9	ND	0.10	0.039	ug/L	U	U	--
Aroclor-1248 (PCB-1248)	N	12672-29-6	ND	0.10	0.039	ug/L	U	U	--
Aroclor-1254 (PCB-1254)	N	11097-69-1	ND	0.10	0.017	ug/L	U	U	--
Aroclor-1260 (PCB-1260)	N	11096-82-5	ND	0.10	0.017	ug/L	U	U	--
Chlordane	N	57-74-9	ND	0.010	0.0065	ug/L	U	U	--
Dieldrin	N	60-57-1	0.0015	0.0013	0.00050	ug/L	PI	J	*III
Toxaphene	N	8001-35-2	ND	0.10	0.013	ug/L	U	U	--

Analysis Method SM2340

Sample Name ARROYO_SIMI_20210414_GRAB **Matrix Type:** W **Result Type:** TRG

Sample Date: 4/14/2021 7:30:00 AM **Validation Level:** 9

Lab Sample Name: 570-56285-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	T	HARDNESSCACO3	620	0.33	0.17	mg/L			--

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-56285-1
Client Project/Site: Quarterly Arroyo Simi-Frontier Park Dry
Revision: 4

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:
5/28/2021 10:48:51 AM

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

Table of Contents

Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
PI	Primary and confirm results varied by > than 40% RPD

Glossary

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

Job ID: 570-56285-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-56285-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 4/27/2021. The report (revision 4) is being revised due to: The report was revised to remove the Ca/Mg results.

Report revision history
Revision 1 - 5/11/2021 - Reason - The sample IDs were revised to match the chain of custody..

Revision 2 - 5/25/2021 - Reason - The level 2 and EDD files were revised to remove the Ca/Mg results.

Receipt
The samples were received on 4/14/2021 11:55 AM. 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 3.1º C.

Receipt Exceptions

The Weck Laboratories report was revised to correct target analyte list and units required for the project at the clients request.

The sample IDs were revised to match the chain of custody.

The sample IDs were revised to match the chain of custody.

The level 2 and EDD files were revised to remove the Ca/Mg results

The report was revised to remove the Ca/Mg results

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

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

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

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

Detection Summary

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Client Sample ID: Arroyo_Simi_20210414_Grab
Lab Sample ID: 570-56285-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDE	0.00068	J,DX PI	0.0013	0.00050	ug/L	1		608.3	Total/NA
Dieldrin	0.0015	PI	0.0013	0.00050	ug/L	1		608.3	Total/NA
Hardness, as CaCO3	620		0.33	0.17	mg/L	1		SM 2340B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Method: 608.3 - Organochlorine Pesticides in Water

Client Sample ID: Arroyo_Simi_20210414_Grab
Lab Sample ID: 570-56285-1
Date Collected: 04/14/21 07:30
Matrix: Water
Date Received: 04/14/21 11:55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.010	0.0065	ug/L		04/20/21 14:15	04/22/21 12:04	1
4,4'-DDD	ND		0.0013	0.00080	ug/L		04/20/21 14:15	04/22/21 12:04	1
4,4'-DDE	**0.00068**	**J,DX PI**	0.0013	0.00050	ug/L		04/20/21 14:15	04/22/21 12:04	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		04/20/21 14:15	04/22/21 12:04	1
Dieldrin	**0.0015**	**PI**	0.0013	0.00050	ug/L		04/20/21 14:15	04/22/21 12:04	1
Toxaphene	ND		0.10	0.013	ug/L		04/20/21 14:15	04/22/21 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*20 - 139*	*04/20/21 14:15*	*04/22/21 12:04*	*1*

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

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

Client Sample ID: Arroyo_Simi_20210414_Grab
Lab Sample ID: 570-56285-1
Date Collected: 04/14/21 07:30
Matrix: Water
Date Received: 04/14/21 11:55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 13:29	1
Aroclor 1221	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 13:29	1
Aroclor 1232	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 13:29	1
Aroclor 1242	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 13:29	1
Aroclor 1248	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 13:29	1
Aroclor 1254	ND		0.10	0.017	ug/L		04/20/21 14:15	04/21/21 13:29	1
Aroclor 1260	ND		0.10	0.017	ug/L		04/20/21 14:15	04/21/21 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene (Surr)	*60*		*20 - 139*	*04/20/21 14:15*	*04/21/21 13:29*	*1*
DCB Decachlorobiphenyl (Surr)	*88*		*20 - 154*	*04/20/21 14:15*	*04/21/21 13:29*	*1*

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

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

Client Sample ID: Arroyo_Simi_20210414_Grab
Lab Sample ID: 570-56285-1
Date Collected: 04/14/21 07:30
Matrix: Water
Date Received: 04/14/21 11:55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness, as CaCO3	620		0.33	0.17	mg/L			04/18/21 17:59	1

Surrogate Summary

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

Job ID: 570-56285-1

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)
570-56285-1	Arroyo_Simi_20210414_Grab	54
570-56285-1 MS	Arroyo_Simi_20210414_Grab	49 PI
570-56285-1 MSD	Arroyo_Simi_20210414_Grab	61
LCS 570-144632/2-A	Lab Control Sample	74
LCSD 570-144632/3-A	Lab Control Sample Dup	67
MB 570-144632/1-A	Method Blank	77

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)
570-56285-1	Arroyo_Simi_20210414_Grab	60	88
LCS 570-144632/4-A	Lab Control Sample	67	70
LCSD 570-144632/5-A	Lab Control Sample Dup	54	70
MB 570-144632/1-A	Method Blank	73	76

Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)
DCB = DCB Decachlorobiphenyl (Surr)

Method: 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 570-144632/1-A
Matrix: Water
Analysis Batch: 144943

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 144632

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.010	0.0065	ug/L		04/20/21 14:15	04/21/21 23:16	1
4,4'-DDD	ND		0.0013	0.00080	ug/L		04/20/21 14:15	04/21/21 23:16	1
4,4'-DDE	ND		0.0013	0.00050	ug/L		04/20/21 14:15	04/21/21 23:16	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		04/20/21 14:15	04/21/21 23:16	1
Dieldrin	ND		0.0013	0.00050	ug/L		04/20/21 14:15	04/21/21 23:16	1
Toxaphene	ND		0.10	0.013	ug/L		04/20/21 14:15	04/21/21 23:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*77*		*20 - 139*	*04/20/21 14:15*	*04/21/21 23:16*	*1*

Lab Sample ID: LCS 570-144632/2-A
Matrix: Water
Analysis Batch: 144943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 144632

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD			0.0333	0.0217		ug/L		65	31 - 141		
4,4'-DDE			0.0333	0.0200		ug/L		60	30 - 145		
4,4'-DDT			0.0333	0.0231		ug/L		69	25 - 160		
Dieldrin			0.0333	0.0201		ug/L		60	36 - 146		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*74*		*20 - 139*

Lab Sample ID: LCSD 570-144632/3-A
Matrix: Water
Analysis Batch: 144943

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 144632

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.0333	0.0224		ug/L		67	31 - 141	3	39
4,4'-DDE			0.0333	0.0200		ug/L		60	30 - 145	0	35
4,4'-DDT			0.0333	0.0235		ug/L		71	25 - 160	2	42
Dieldrin			0.0333	0.0209		ug/L		63	36 - 146	4	49

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*67*		*20 - 139*

Lab Sample ID: 570-56285-1 MS
Matrix: Water
Analysis Batch: 144943

Client Sample ID: Arroyo_Simi_20210414_Grab
Prep Type: Total/NA
Prep Batch: 144632

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		0.0333	0.0217		ug/L		65	31 - 141		
4,4'-DDE	0.00068	J,DX PI	0.0333	0.0302	PI	ug/L		89	30 - 145		
4,4'-DDT	ND		0.0333	0.0286		ug/L		86	25 - 160		
Dieldrin	0.0015	PI	0.0333	0.0249		ug/L		70	36 - 146		

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: 570-56285-1 MS — **Client Sample ID: Arroyo_Simi_20210414_Grab**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144943 — **Prep Batch: 144632**

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	*49*	*PI*	*20 - 139*

Lab Sample ID: 570-56285-1 MSD — **Client Sample ID: Arroyo_Simi_20210414_Grab**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144943 — **Prep Batch: 144632**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	ND		0.0333	0.0225		ug/L		68	31 - 141	4	39
4,4'-DDE	0.00068	J,DX PI	0.0333	0.0319		ug/L		94	30 - 145	5	35
4,4'-DDT	ND		0.0333	0.0323		ug/L		97	25 - 160	12	42
Dieldrin	0.0015	PI	0.0333	0.0280		ug/L		80	36 - 146	12	49

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	*61*		*20 - 139*

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

Lab Sample ID: MB 570-144632/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144880 — **Prep Batch: 144632**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 12:35	1
Aroclor 1221	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 12:35	1
Aroclor 1232	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 12:35	1
Aroclor 1242	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 12:35	1
Aroclor 1248	ND		0.10	0.039	ug/L		04/20/21 14:15	04/21/21 12:35	1
Aroclor 1254	ND		0.10	0.017	ug/L		04/20/21 14:15	04/21/21 12:35	1
Aroclor 1260	ND		0.10	0.017	ug/L		04/20/21 14:15	04/21/21 12:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	*73*		*20 - 139*	*04/20/21 14:15*	*04/21/21 12:35*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*20 - 154*	*04/20/21 14:15*	*04/21/21 12:35*	*1*

Lab Sample ID: LCS 570-144632/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144880 — **Prep Batch: 144632**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor 1016			0.133	0.171		ug/L		128	50 - 140		
Aroclor 1260			0.133	0.151		ug/L		113	8 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	*67*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*70*		*20 - 154*

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

Lab Sample ID: LCSD 570-144632/5-A
Matrix: Water
Analysis Batch: 144880

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 144632

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016			0.133	0.148		ug/L		111	50 - 140	14	36
Aroclor 1260			0.133	0.154		ug/L		115	8 - 140	2	38

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene (Surr)	*54*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*70*		*20 - 154*

QC Association Summary

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

Job ID: 570-56285-1

GC Semi VOA

Prep Batch: 144632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56285-1	Arroyo_Simi_20210414_Grab	Total/NA	Water	608	
MB 570-144632/1-A	Method Blank	Total/NA	Water	608	
LCS 570-144632/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 570-144632/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 570-144632/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 570-144632/5-A	Lab Control Sample Dup	Total/NA	Water	608	
570-56285-1 MS	Arroyo_Simi_20210414_Grab	Total/NA	Water	608	
570-56285-1 MSD	Arroyo_Simi_20210414_Grab	Total/NA	Water	608	

Analysis Batch: 144880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56285-1	Arroyo_Simi_20210414_Grab	Total/NA	Water	608.3	144632
MB 570-144632/1-A	Method Blank	Total/NA	Water	608.3	144632
LCS 570-144632/4-A	Lab Control Sample	Total/NA	Water	608.3	144632
LCSD 570-144632/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	144632

Analysis Batch: 144943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56285-1	Arroyo_Simi_20210414_Grab	Total/NA	Water	608.3	144632
MB 570-144632/1-A	Method Blank	Total/NA	Water	608.3	144632
LCS 570-144632/2-A	Lab Control Sample	Total/NA	Water	608.3	144632
LCSD 570-144632/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	144632
570-56285-1 MS	Arroyo_Simi_20210414_Grab	Total/NA	Water	608.3	144632
570-56285-1 MSD	Arroyo_Simi_20210414_Grab	Total/NA	Water	608.3	144632

Metals

Analysis Batch: 644285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56285-1	Arroyo_Simi_20210414_Grab	Total Recoverable	Water	SM 2340B	

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Client Sample ID: Arroyo_Simi_20210414_Grab
Lab Sample ID: 570-56285-1

Date Collected: 04/14/21 07:30
Matrix: Water
Date Received: 04/14/21 11:55

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	144632	04/20/21 14:15	OAJ3	ECL 1
Total/NA	Analysis	608.3		1			144943	04/22/21 12:04	UHHN	ECL 1
	Instrument ID: GC44									
Total/NA	Prep	608			1500 mL	1 mL	144632	04/20/21 14:15	OAJ3	ECL 1
Total/NA	Analysis	608.3		1			144880	04/21/21 13:29	UHHN	ECL 1
	Instrument ID: GC58									
Total Recoverable	Analysis	SM 2340B		1			644285	04/18/21 17:59	P1R	TAL IRV
	Instrument ID: NOEQUIP									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Laboratory: Eurofins Calscience LLC

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0161	11-19-21
California	Los Angeles County Sanitation Districts	10109	09-30-21
California	SCAQMD LAP	17LA0919	11-30-21
California	State	2944	09-30-21
Guam	State	20-003R	10-31-20 *
Nevada	State	CA00111	07-31-21
Oregon	NELAP	CA300001	01-30-22
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Haley & Aldrich, Inc.
Job ID: 570-56285-1
Project/Site: Quarterly Arroyo Simi-Frontier Park Dry

Method	Method Description	Protocol	Laboratory
608.3	Organochlorine Pesticides in Water	40CFR136A	ECL 1
608.3	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	ECL 1
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL IRV
Subcontract	Weck- 525.2 - Diaznon and Chlorpyrifos	None	Weck Lab
608	Liquid-Liquid Extraction (Separatory Funnel)	40CFR136A	ECL 1

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494
TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022
Weck Lab = Weck Laboratories, Inc., 14859 E. Clark Avenue, City of Industry, CA 91745

Sample Summary

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

Job ID: 570-56285-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-56285-1	Arroyo_Simi_20210414_Grab	Water	04/14/21 07:30	04/14/21 11:55	

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 1D14038

Project: 570-56285-2

Attn: Virendra Patel

Client: Eurofins Calscience - Garden Grove
7440 Lincoln Way
Garden Grove, CA 92841-1432

Report Date: 5/22/2021
Received Date: 4/14/2021
Turnaround Time: Normal
Phones: (714) 895-5494
Fax: (714) 894-7501
P.O. #: 570-56285-2
Billing Code:

Dear Virendra Patel,

Enclosed are the results of analyses for samples received 4/14/21 with the Chain-of-Custody document. The samples were received in good condition, at 3.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Case Narrative

SUPP report generated to correct sample ID and compound list per client request. BG 5/22/21

Sample Results

Sample: Arroyo_Simi_20210414_Grab (570-56285-1) — Sampled: 04/14/21 7:30 by Client
1D14038-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 525.2M			**Instr:** GCMS13				
Batch ID: W1D0752 **Preparation:** EPA 525.2/SPE			**Prepared:** 04/14/21 13:39			**Analyst:** EFC	
Chlorpyrifos	ND	6.9	10	ng/l	1	04/21/21	
Diazinon	ND	5.2	10	ng/l	1	04/21/21	
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*77%*		*76-128*	*Conc: 383*		*04/21/21*	
Triphenyl phosphate	*135%*		*40-163*	*Conc: 677*		*04/21/21*	

Sample: Arroyo_Simi_20210414_Grab_Extra (570-56285-2) — Sampled: 04/14/21 7:30 by Client
1D14038-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 525.2M			**Instr:** GCMS13				
Batch ID: W1D0752 **Preparation:** EPA 525.2/SPE			**Prepared:** 04/14/21 13:39			**Analyst:** EFC	
Chlorpyrifos	ND	6.9	10	ng/l	1	04/21/21	
Diazinon	ND	5.2	10	ng/l	1	04/21/21	
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*82%*		*76-128*	*Conc: 411*		*04/21/21*	
Triphenyl phosphate	*152%*		*40-163*	*Conc: 760*		*04/21/21*	

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www.wecklabs.com

Quality Control Results

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Blank (W1D0752-BLK1)					**Prepared: 04/14/21**	**Analyzed: 04/21/21**					
Chlorpyrifos	ND	6.9	10	ng/l							
Diazinon	ND	5.2	10	ng/l							
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*466*			*ng/l*	*500*		*93*	*76-128*			
Triphenyl phosphate	*650*			*ng/l*	*500*		*130*	*40-163*			
LCS (W1D0752-BS1)					**Prepared: 04/14/21**	**Analyzed: 04/21/21**					
Chlorpyrifos	45.3	6.9	10	ng/l	50.0		91	37-169			
Diazinon	47.5	5.2	10	ng/l	50.0		95	43-152			
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*441*			*ng/l*	*500*		*88*	*76-128*			
Triphenyl phosphate	*641*			*ng/l*	*500*		*128*	*40-163*			
Matrix Spike (W1D0752-MS1)	**Source: 1D14038-01**				**Prepared: 04/14/21**	**Analyzed: 04/21/21**					
Chlorpyrifos	40.3	6.9	10	ng/l	50.0	*ND*	81	37-168			
Diazinon	44.4	5.2	10	ng/l	50.0	*ND*	89	36-153			
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*449*			*ng/l*	*500*		*90*	*76-128*			
Triphenyl phosphate	*740*			*ng/l*	*500*		*148*	*40-163*			
Matrix Spike Dup (W1D0752-MSD1)	**Source: 1D14038-01**				**Prepared: 04/14/21**	**Analyzed: 04/21/21**					
Chlorpyrifos	44.2	6.9	10	ng/l	50.0	*ND*	88	37-168	9	30	
Diazinon	49.4	5.2	10	ng/l	50.0	*ND*	99	36-153	11	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*476*			*ng/l*	*500*		*95*	*76-128*			
Triphenyl phosphate	*747*			*ng/l*	*500*		*149*	*40-163*			

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www.wecklabs.com

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
%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:

Brandon Gee For Regina M. Giancola
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • ISO17025 ANAB #L2457.01 • LACSD #10143 • NJ-DEP #CA015

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.

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www.wecklabs.com

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record

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eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Virendra	Carrier Tracking No(s):	COC No: 570-94467.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Weck Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 570-56285-2
Address: 14859 E. Clark Avenue, ,	Due Date Requested:			
City: City of Industry	TAT Requested (days): 10 days TAT			
State, Zip: CA, 91745				
Phone:	PO #:			
Email:	WO #:			
Project Name: Quarterly Arroyo Simi-Frontier Park Dry	Project #: 570-56285			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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 - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Weck- 525.2 - Diaznon and Chlorpyrifos)	SUB (Weck- 525.2 - Diaznon and Chlorpyrifos) (Hold)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Arroyo_Simi_20210412_Grab (570-56285-1)	4/14/21	07:30 Pacific		Water			X		2	525.2- 24 hour Ext Hold Time for Diaznon and Chlorpyrifos level IV package needed.
Arroyo_Simi_20210412_Grab (570-56285-1MS)	4/14/21	07:30 Pacific	MS	Water			X		2	525.2- 24 hour Ext Hold Time for Diaznon and Chlorpyrifos level IV package needed.
Arroyo_Simi_20210412_Grab (570-56285-1MSD)	4/14/21	07:30 Pacific	MSD	Water			X		2	525.2- 24 hour Ext Hold Time for Diaznon and Chlorpyrifos level IV package needed.
Arroyo_Simi_20210412_Grab_Extra (570-56285-2)	4/14/21	07:30 Pacific		Water				X	2	525.2- 24 hour Ext Hold Time for Diaznon and Chlorpyrifos level IV package needed.

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

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

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

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

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record 414038

C570-56285

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Virendra	Carrier Tracking No(s):
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California
Company: Weck Laboratories, Inc.		Accreditations Required (See note): State Program - California	
Address: 14859 E. Clark Avenue, ,	Due Date Requested:	Analysis Requested	
City: City of Industry	TAT Requested (days): 10 days TAT		
State, Zip: CA, 91745			
Phone:	PO #:		
Email:	WO #:		
Project Name: Quarterly Arroyo Simi-Frontier Park Dry	Project #: 570-56285		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Weck- 525.2 - Diaznon and Chlorpyrifos)	SUB (Weck- 525.2 - Diaznon and Chlorpyrifos) (Hold)
			Preservation Code:					
Arroyo_Simi_20210412_Grab (570-56285-1)	4/14/21	07:30 Pacific		Water			X	
Arroyo_Simi_20210412_Grab (570-56285-1MS)	4/14/21	07:30 Pacific	MS	Water			X	
Arroyo_Simi_20210412_Grab (570-56285-1MSD)	4/14/21	07:30 Pacific	MSD	Water			X	
Arroyo_Simi_20210412_Grab_Extra (570-56285-2)	4/14/21	07:30 Pacific		Water				X

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain 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 accredit attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are ret
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ A
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date:	Time: Method of Shipment:
Relinquished by: Date/Time:	Company Received by: Date/Time:

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record 1d14038 *C570-56285*

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Virendra	Carrier Tracking No(s):
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California
Company: Weck Laboratories, Inc.		Accreditations Required (See note): State Program - California	
Address: 14859 E. Clark Avenue,	Due Date Requested:	Analysis Requested	
City: City of Industry	TAT Requested (days): 10 days TAT		
State, Zip: CA, 91745			
Phone:	PO #:		
Email:	WO #:		
Project Name: Quarterly Arroyo Simi-Frontier Park Dry	Project #: 570-56285		
Site:	SSOW#:		

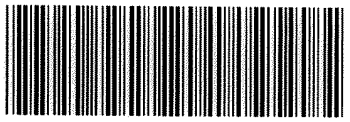
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Weck- 525.2 - Diazon and Chlorpyrifos)	SUB (Weck- 525.2 - Diazon and Chlorpyrifos) (Hold)
			Preservation Code:					
Arroyo_Simi_20210412_Grab (570-56285-1)	4/13/21	07:30 Pacific		Water			X	
Arroyo_Simi_20210412_Grab (570-56285-1MS)	4/13/21	07:30 Pacific	MS	Water			X	
Arroyo_Simi_20210412_Grab (570-56285-1MSD)	4/13/21	07:30 Pacific	MSD	Water			X	
Arroyo_Simi_20210412_Grab_Extra (570-56285-2)	4/13/21	07:30 Pacific		Water				X

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-o 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 accreditat attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are reta*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *A*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:
Relinquished by:	Date/Time: Company Received by: Date/Time:

Eurofins Calscience Irvine

CHAIN OF CUSTODY FORM



570-56285 Chain of Custody

Loc: 570

56285

Q Q Q

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

Eurofins Calscience Irvine Contact: Christian Bondoc
17461 Derian Ave Suite #100
Irvine CA 92614
Tel: 949-260-3218

Project:
Boeing-SSFL NPDES
Permit 2015
Quarterly Arroyo Simi-Frontier Park
Dry Weather

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc. its subsidiaries and affiliates. and TestAmerica Laboratories Inc.

Project Manager: Katherine Miller
520.289 8606, 520 904 6944 (cell)

Sampler: Dan Smith

Field Manager: Mark Dominick
978.234.5033, 818.599 0702 (cell)

Sample Description	Sample I D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	ANALYSIS REQUIRED: Hardness as $CaCO_3$ 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)					Comments
Arroyo Simi	Arroyo_Simi_20210414_Grab	4/14/2021 0730	WS	250 mL Poly	3	HNO_3	100	Yes	X							
			WS	1L Glass Amber	6	None	275	Yes		X						Extract within 24-Hours of sampling at Weck Labs
			WS	1L Glass Amber	6	None	285	Yes			X					
	Arroyo_Simi_20210414_Grab_Extra	4/14/2021 0730	WS	1L Glass Amber	2	~~None~~ HCl	275	No		H						Hold
			WS	1L Glass Amber	2	None	285	No			H					Hold

Field Readings | Meter serial #V07300V8

Field Readings (Include units)

Time of Readings: 0714

pH 6.78 pH unit

Temp 58.3 °C/(F)

Velocity 0.0 ft/sec

Field readings QC

Checked by

Date/Time: 4-14-2021/0715

Legend Q=Quarterly

Relinquished By	Date/Time	Company	Received By	Date/Time
	4-14-2021/1010	H;A	EC1	04/14/21 1010
	04/14/21 1230	EC1		04/14/21 1230

Turn-around time: (Check)
24 Hour: ____ 72 Hour: ____ 10 Day: X
48 Hour: ____ 5 Day: ____ Normal: ____

Sample Integrity (Check)
Intact: ____ On Ice: ____

Store samples for 6 months

Data Requirements. (Check)
No Level IV: ____ All Level IV: X

2019-2020 Rainy Season
Version 2

2.7/31 25

5/28/2021 (Rev. 4)

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler	Lab PM: Patel, Virendra	Carrier Tracking No(s):	COC No: 570-94616.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note): State Program California		Job #: 570-56285-1
Address: 17461 Derian Ave, Suite 100	Due Date Requested: 4/22/2021			
City: Irvine	TAT Requested (days):			
State, Zip: CA, 92614-5817				
Phone: 949-261 1022(Tel) 949-260-3297(Fax)	PO #:			
Email:	WO #:			
Project Name: Quarterly Arroyo Simi-Frontier Park Dry	Project #: 44024446			
Site:	SSOW#:			

Preservation Codes

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	EDA	Z	other (specify)

Other:

Analysis Requested

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM2340B/Auto_TotalRec (MOD) Local Method	200.7/200.2 Calcium & Magnesium	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Arroyo_Simi_20210412_Grab (570-56285-1)	4/13/21	07:30 Pacific		Water			X	X	1	
Arroyo_Simi_20210412_Grab (570-56285-1MS)	4/13/21	07:30 Pacific	MS	Water			X	X	1	
Arroyo_Simi_20210412_Grab (570-56285-1MSD)	4/13/21	07:30 Pacific	MSD	Water			X	X	1	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	04/14/21 1830	EC	[signature]	4/14/21 1930	EC + RU
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 2.8/3.0 IR 93

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-56285-1

Login Number: 56285
List Number: 1
Creator: Patel, Virendra

List Source: Eurofins Calscience LLC

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

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-56285-1

Login Number: 56285
List Number: 2
Creator: Ornelas, Olga

List Source: Eurofins Calscience Irvine
List Creation: 04/14/21 07:48 PM

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

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 570-56288-1

Prepared for

Haley & Aldrich, Inc.

600 South Meyer Avenue, Suite 100

Tucson, Arizona 85701

9 June 2021

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TABLES

I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^X Project No.: 1272.003D.04

Sample Delivery Group: 570-56288-1

Project Manager: Katherine Miller

Matrix: Sediment

QC Level: IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Matrix	Collection	Method
Arroyo_Simi-Sed_20210414	570-56288-1	SE	4/13/2021 8:00:00 AM	SM4500-NH3D, SW8081A, SW8082, SW9060

II. SAMPLE MANAGEMENT

According to the case narratives, Login Sample Receipt Checklists, and the chains-of-custody (COC) provided by the laboratories for sample delivery group (SDG) 570-56288-1:

- The laboratories received the sample in this SDG on ice and within the temperature limits of <6 degrees Celsius (°C) and >0°C.
- Field and/or laboratory personnel signed and dated the appropriate original and transfer COCs.
- The sample was transferred from Eurofins Calscience Irvine to Eurofins Calscience LLC Lincoln (ECL) for analysis of Methods 8081A and 8082. The sample was transferred from Eurofins Calscience Irvine to Eurofins Calscience Seattle for analysis of Method 9060.
- According to the Login Sample Receipt Checklists custody seals were present upon receipt at Eurofins TestAmerica ECL but were absent upon receipt at Eurofins Irvine and Eurofins Seattle; however, no evidence of tampering was noted.

TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	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.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.

Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
$	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. EPA METHOD SW8081A AND SW8082–PESTICIDES AND PCBS

L. Calvin of MEC[X] reviewed the SDG on June 15, 2021

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC[X] Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 1), EPA Methods 8081A, 8082* and the *National Functional Guidelines for Superfund Organic Methods Data Review* (2017).

III.1. HOLDING TIMES

Extraction and analytical holding times were met. The sample was extracted within seven days of collection and analyzed within 40 days of extraction.

III.2. CALIBRATION

Calibration criteria affecting sample data were met. Initial calibration %RSDs were within the control limit of ≤20%. ICV and CCV %Ds were within ≤15% on the primary column. For pesticides, one or more peaks for multi-component toxaphene had %Ds with low responses on the confirmation column; however, review indicated the nondetect sample result reported from the primary column was not affected.

III.3. QUALITY CONTROL SAMPLES

III.3.1. *METHOD BLANKS*

Target compounds were not detected in the method blanks above the MDL.

III.3.2. *LABORATORY CONTROL SAMPLES*

LCS/LCSD recoveries and RPDs were within the laboratory control limits for pesticides. Toxaphene and chlordane were not spiked into the pesticide LCS/LCSD samples. The PCB LCS/LCSD recoveries and RPDs were within the laboratory control limits for Aroclor 1016 and Aroclor 1260.

III.3.3. *SURROGATE RECOVERY*

Pesticide surrogate tetrachloro-m-xylene (TCMX) was recovered within the laboratory control limits of 20-139% in the site sample and PCB surrogates TCMX and decachlorobiphenyl (DCB) were recovered within the laboratory control limits of 20-139% and 20-154%, respectively.

III.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were performed on the sample in this SDG for both pesticides and PCBs. For pesticides, target compound 4,4'-DDE was detected above the linear range of the calibration in the undiluted analyses of the parent sample, MS and MSD; therefore, recoveries and the RPD were not evaluated. Remaining recoveries and RPDs were within laboratory control limits. Toxaphene and chlordane were not spiked in the pesticide MS/MSD samples. The PCB MSD had a recovery above the control limits of 20-180% for Aroclor 1016 (188%). Qualifications were not assigned for the single outlier not occurring in both the MS and MSD; however, the RPD exceeded the control limit of ≤40% for Aroclor 1016 (93%). As the parent sample had no Aroclor detects, no qualification was necessary.

III.4. FIELD QC SAMPLES

MEC[X] evaluated field QC samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC[X] used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

III.4.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

III.4.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

III.5. COMPOUND IDENTIFICATION

Compound identification was verified at a Stage 4 validation level. Review of the sample chromatograms and retention times indicated no issues with target compound identification. The laboratory analyzed for six pesticide target compounds by EPA Method 8081A and for seven Aroclors by EPA Method 8082.

III.6. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified at a Stage 4 validation level. PCB Aroclors were not detected in the sample. Pesticide target compounds chlordane, 4,4'-DDD and 4,4'-DDE were reported in the sample. Reported nondetects are valid to the reporting limit. Detects between the MDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit.

The pesticide sample required a 5× dilution to report 4,4'-DDE within the linear range of the calibration. The intercolumn RPDs exceeded 40% for 4,4'-DDD (43.9%) and chlordane (112%). The result for 4,4'-DDD was qualified as estimated (J) and chlordane was qualified as estimated and tentatively identified (NJ).

IV. METHODS SM4500-NH3 D AND SW9060—AMMONIA AS N AND TOC

M. Hilchey of MEC^X reviewed the SDG on June 9, 2021.

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 1), EPA Method 9060A, Standard Methods for the Examination of Water and Wastewater 45010 NH3 D* and the *National Functional Guidelines for Inorganic Superfund Data Review* (2017).

IV.1. HOLDING TIMES

The QAPP holding times, 28 days for both methods, were met.

IV.2. CALIBRATION

The initial calibration correlation coefficient (r) values for ammonia and TOC were ≥0.995. All initial and continuing calibration recoveries were within 90-110%

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. *METHOD BLANKS*

The method blanks and calibration blanks had no detections for target analytes.

IV.3.2. *LABORATORY CONTROL SAMPLES*

Laboratory control sample and laboratory control sample duplicate recoveries were within the QAPP control limits of 90-110%. RPDs were ≤20%.

IV.3.3. *LABORATORY DUPLICATES*

Laboratory duplicate analysis was not performed on the sample in this SDG.

IV.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were performed on the sample in this SDG for ammonia as N. QAPP acceptance limits were met for recoveries and RPDs. MS/MSD analyses were not performed on the sample in this SDG for TOC.

IV.4. SAMPLE RESULT VERIFICATION

Calculations were verified and the sample results reported on the sample results summary were verified against the raw data. No transcription errors or calculation errors were noted. Although the method requires quadruplicate analyses for TOC, the laboratory performed duplicate analyses. No data were qualified due to this circumstance. Detects between the MDL and the RL were qualified as estimated (J) and coded with DNQ to comply with the NPDES permit. Reported nondetects are valid to the MDL.

IV.5. FIELD QC SAMPLES

MEC^X evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC^X used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

IV.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

IV.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 570562881

Analysis Method SM4500-NH3D

Sample Name Arroyo_Simi-Sed_20210414 **Matrix Type:** SE **Result Type:** TRG

Sample Date: 4/13/2021 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 570-56288-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Ammonia (as N)	N	7664-41-7N	4.54	12.9	2.58	mg/kg	J,DX	J	DNQ

Analysis Method SW8081A

Sample Name Arroyo_Simi-Sed_20210414 **Matrix Type:** SE **Result Type:** TRG

Sample Date: 4/13/2021 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 570-56288-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
4,4'-DDD	N	72-54-8	0.48	1.3	0.25	ug/kg	J,DXPI	J	DNQ, *III
4,4'-DDE	N	72-55-9	11	6.4	0.69	ug/kg		=	--
4,4'-DDT	N	50-29-3	ND	1.3	0.093	ug/kg	U	U	--
Chlordane	N	57-74-9	2.7	6.4	0.61	ug/kg	J,DXPI	NJ	DNQ, *III
Dieldrin	N	60-57-1	ND	0.26	0.065	ug/kg	U	U	--
Toxaphene	N	8001-35-2	ND	6.4	5.1	ug/kg	U	U	--

Analysis Method SW8082

Sample Name Arroyo_Simi-Sed_20210414 **Matrix Type:** SE **Result Type:** TRG

Sample Date: 4/13/2021 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 570-56288-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016 (PCB-1016)	N	12674-11-2	ND	13	10	ug/kg	U	U	--
Aroclor-1221 (PCB-1221)	N	11104-28-2	ND	13	10	ug/kg	U	U	--
Aroclor-1232 (PCB-1232)	N	11141-16-5	ND	13	10	ug/kg	U	U	--
Aroclor-1242 (PCB-1242)	N	53469-21-9	ND	13	10	ug/kg	U	U	--
Aroclor-1248 (PCB-1248)	N	12672-29-6	ND	13	10	ug/kg	U	U	--
Aroclor-1254 (PCB-1254)	N	11097-69-1	ND	13	6.6	ug/kg	U	U	--
Aroclor-1260 (PCB-1260)	N	11096-82-5	ND	13	6.6	ug/kg	U	U	--

Analysis Method SW9060

Sample Name Arroyo_Simi-Sed_20210414 **Matrix Type:** SE **Result Type:** TRG

Sample Date: 4/13/2021 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 570-56288-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
TOC Average Duplicates	N	TOCAVGD	910	2000	97	mg/kg	J,DX	J	DNQ

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-56288-1
Laboratory SDG: Annual Sediment Arroyo Frontier Park
Client Project/Site: Boeing SSFL NPDES Permit 2015
Revision: 1

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:
6/15/2021 5:35:53 PM

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

Table of Contents

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
LM	MS and/or MSD above acceptance limits. See Blank Spike (LCS)
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS)
PI	Primary and confirm results varied by > than 40% RPD

General Chemistry

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.
¤	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

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

Job ID: 570-56288-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-56288-1

Comments
No additional comments.

Receipt
The samples were received on 4/14/2021 12:05 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 3.4º C.

Receipt Exceptions

The client requested dry weight correction for EPA 8081A and EPA 8082 results.

GC Semi VOA
Method 8081A: Due to the high concentration of < 4,4'-DDE>, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 570-143537 and analytical batch 570-144355 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8081A: The continuing calibration verification (CCV) associated with 570-144645 recovered high and outside the control limits for < 4,4'-DDT and DCB Decachlorobiphenyl (Surr)> on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCV 570-144645/7).

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

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

Organic Prep
Method 3546: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: Arroyo_Simi-Sed_20210414 (570-56288-1), Arroyo_Simi-Sed_20210414 (570-56288-1[MS]) and Arroyo_Simi-Sed_20210414 (570-56288-1[MSD]). The reagent lot number used was: 1449578

Method 3546: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-143537 and 570-143537. LCS/LCSD were performed to meet QC requirements.

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.
Job ID: 570-56288-1
Project/Site: Boeing SSFL NPDES Permit 2015
SDG: Annual Sediment Arroyo Frontier Park

Client Sample ID: Arroyo_Simi-Sed_20210414
Lab Sample ID: 570-56288-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDD	0.48	J,DX PI	1.3	0.25	ug/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	2.7	J,DX PI	6.4	0.61	ug/Kg	1	☼	8081A	Total/NA
4,4'-DDE - DL	11		6.4	0.69	ug/Kg	5	☼	8081A	Total/NA
Total Organic Carbon - Average Dup	910	J,DX	2000	97	mg/Kg	1		9060	Total/NA
Ammonia (as N)	4.54	J,DX	12.9	2.58	mg/Kg	1	☼	SM 4500 NH3 D	Total/NA
Clay(less than 0.00391 mm)	0.13		0.01	0.01	%	1		D4464	Total/NA
Coarse Sand (0.5mm to 1mm)	38.98		0.01	0.01	%	1		D4464	Total/NA
Fine Sand (0.125 to 0.25mm)	1.75		0.01	0.01	%	1		D4464	Total/NA
Gravel (greater than 2 mm)	26.62		0.01	0.01	%	1		D4464	Total/NA
Medium Sand (0.25 to 0.5 mm)	9.91		0.01	0.01	%	1		D4464	Total/NA
Silt (0.00391 to 0.0625mm)	0.64		0.01	0.01	%	1		D4464	Total/NA
Total Silt and Clay (0 to 0.0626mm)	0.77		0.01	0.01	%	1		D4464	Total/NA
Very Coarse Sand (1 to 2mm)	21.52		0.01	0.01	%	1		D4464	Total/NA
Very Fine Sand (0.0625 to 0.125 mm)	0.45		0.01	0.01	%	1		D4464	Total/NA

This Detection Summary does not include radiochemical test results.

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: Arroyo_Simi-Sed_20210414
Date Collected: 04/13/21 08:00
Date Received: 04/14/21 12:05

Lab Sample ID: 570-56288-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	**0.48**	**J,DX PI**	1.3	0.25	ug/Kg	☼	04/15/21 13:46	04/20/21 12:38	1
4,4'-DDT	ND		1.3	0.093	ug/Kg	☼	04/15/21 13:46	04/20/21 12:38	1
Chlordane (technical)	**2.7**	**J,DX PI**	6.4	0.61	ug/Kg	☼	04/15/21 13:46	04/20/21 12:38	1
Dieldrin	ND		0.26	0.065	ug/Kg	☼	04/15/21 13:46	04/20/21 12:38	1
Toxaphene	ND		6.4	5.1	ug/Kg	☼	04/15/21 13:46	04/20/21 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*79*		*27 - 176*	*04/15/21 13:46*	*04/20/21 12:38*	*1*
Tetrachloro-m-xylene	*104*		*20 - 163*	*04/15/21 13:46*	*04/20/21 12:38*	*1*

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

Client Sample ID: Arroyo_Simi-Sed_20210414
Date Collected: 04/13/21 08:00
Date Received: 04/14/21 12:05

Lab Sample ID: 570-56288-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	11		6.4	0.69	ug/Kg	☼	04/15/21 13:46	04/20/21 17:46	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*79*		*27 - 176*	*04/15/21 13:46*	*04/20/21 17:46*	*5*
Tetrachloro-m-xylene	*74*		*20 - 163*	*04/15/21 13:46*	*04/20/21 17:46*	*5*

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

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

Client Sample ID: Arroyo_Simi-Sed_20210414
Date Collected: 04/13/21 08:00
Date Received: 04/14/21 12:05

Lab Sample ID: 570-56288-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	ND		13	10	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1
Aroclor-1221	ND		13	10	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1
Aroclor-1232	ND		13	10	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1
Aroclor-1242	ND		13	10	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1
Aroclor-1248	ND		13	10	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1
Aroclor-1254	ND		13	6.6	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1
Aroclor-1260	ND		13	6.6	ug/Kg	☼	04/15/21 13:46	04/20/21 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*79*		*20 - 155*	*04/15/21 13:46*	*04/20/21 03:08*	*1*
Tetrachloro-m-xylene (Surr)	*83*		*25 - 126*	*04/15/21 13:46*	*04/20/21 03:08*	*1*

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

General Chemistry

Client Sample ID: Arroyo_Simi-Sed_20210414
Date Collected: 04/13/21 08:00
Date Received: 04/14/21 12:05

Lab Sample ID: 570-56288-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	910	J,DX	2000	97	mg/Kg			04/22/21 16:24	1
Ammonia (as N)	4.54	J,DX	12.9	2.58	mg/Kg	☼	04/19/21 05:00	04/19/21 07:03	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.6		0.1	0.1	%			04/15/21 20:24	1
Percent Solids	77.4		0.1	0.1	%			04/15/21 20:24	1

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

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

Client Sample ID: Arroyo_Simi-Sed_20210414
Date Collected: 04/13/21 08:00
Date Received: 04/14/21 12:05

Lab Sample ID: 570-56288-1
Matrix: Solid

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Clay(less than 0.00391 mm)	0.13		0.01	0.01	%			04/21/21 15:58	1
Coarse Sand (0.5mm to 1mm)	38.98		0.01	0.01	%			04/21/21 15:58	1
Fine Sand (0.125 to 0.25mm)	1.75		0.01	0.01	%			04/21/21 15:58	1
Gravel (greater than 2 mm)	26.62		0.01	0.01	%			04/21/21 15:58	1
Medium Sand (0.25 to 0.5 mm)	9.91		0.01	0.01	%			04/21/21 15:58	1
Silt (0.00391 to 0.0625mm)	0.64		0.01	0.01	%			04/21/21 15:58	1
Total Silt and Clay (0 to 0.0626mm)	0.77		0.01	0.01	%			04/21/21 15:58	1
Very Coarse Sand (1 to 2mm)	21.52		0.01	0.01	%			04/21/21 15:58	1
Very Fine Sand (0.0625 to 0.125 mm)	0.45		0.01	0.01	%			04/21/21 15:58	1

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

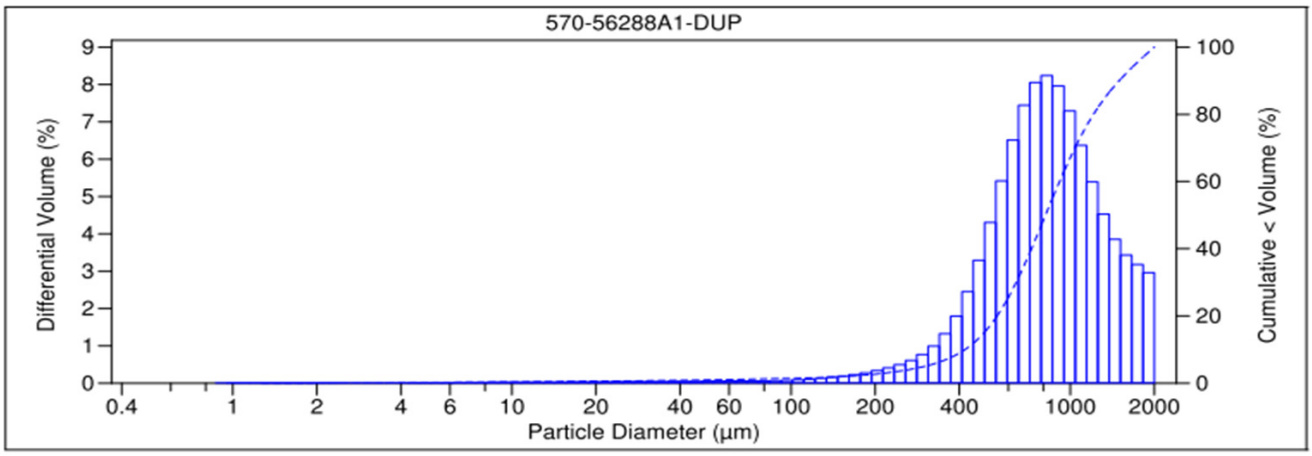
Haley & Aldrich

Date Sampled:	04/13/21
Date Received:	04/14/21
Work Order No:	570-56288
Date Analyzed:	04/21/21
Method:	ASTM D4464M

Project: Boeing-SSFL NPDES

Sample ID	Depth ft	Description	Mean Grain Size mm
Arroyo_Simi-Sed_20210414		Very Coarse Sand	1.606

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
24.10	25.00	39.02	9.07	1.55	0.41	0.70	0.14	0.85



V 3.0

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

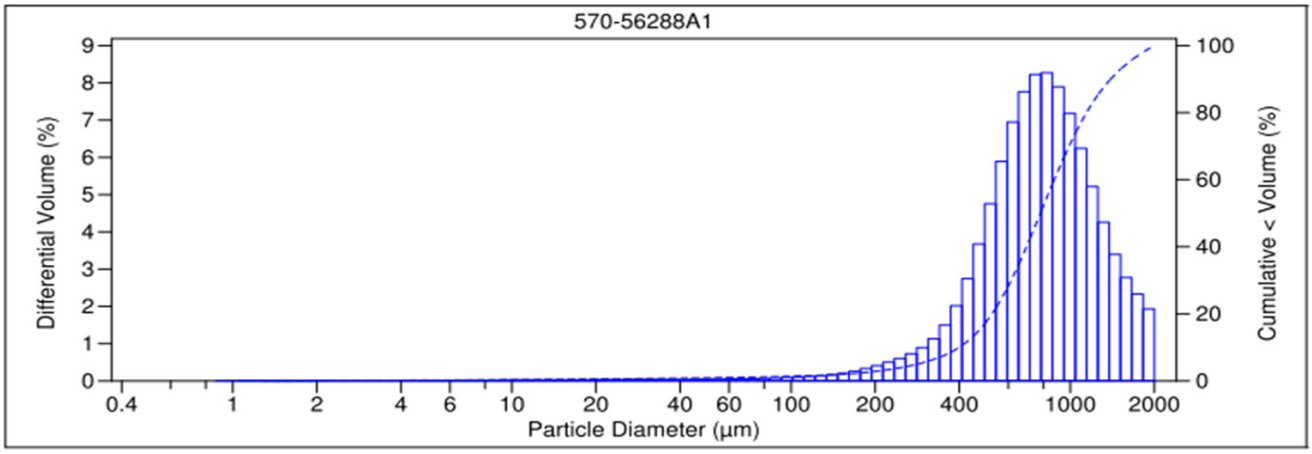
Haley & Aldrich

Date Sampled:	04/13/21
Date Received:	04/14/21
Work Order No:	570-56288
Date Analyzed:	04/21/21
Method:	ASTM D4464M

Project: Boeing-SSFL NPDES

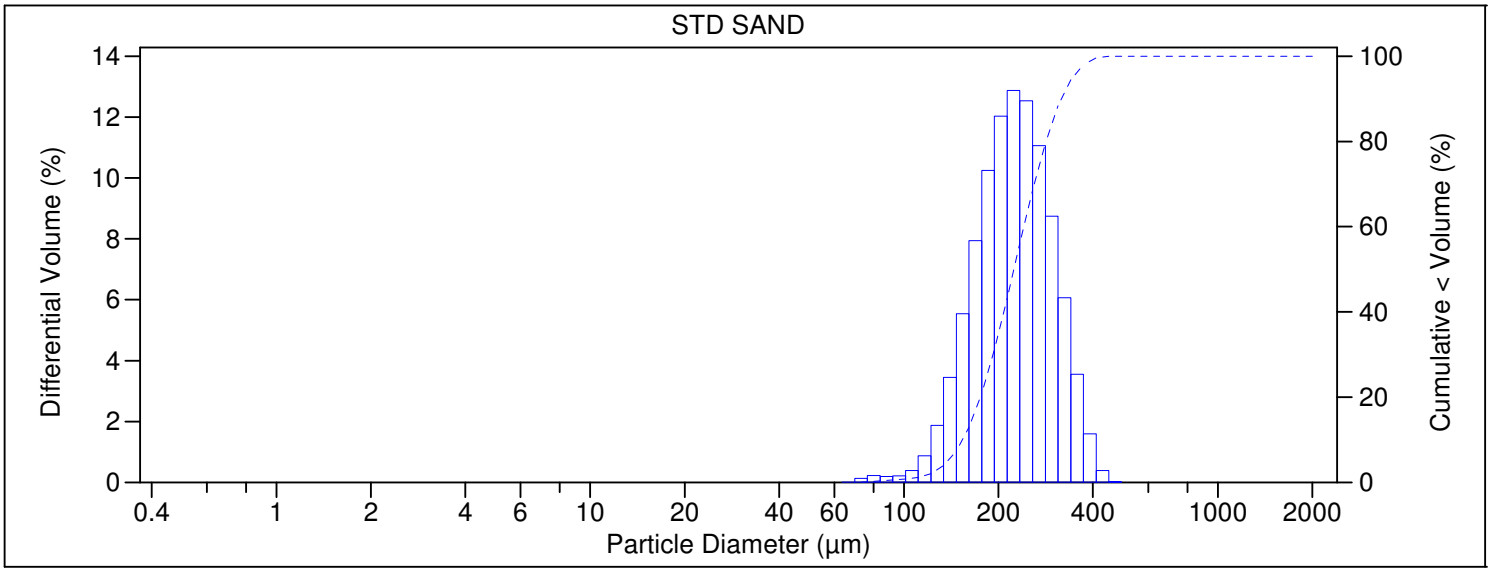
Sample ID	Depth ft	Description	Mean Grain Size mm
Arroyo_Simi-Sed_20210414		Very Coarse Sand	1.639

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
26.62	21.52	38.98	9.91	1.75	0.45	0.64	0.13	0.77



V 3.0

File name:	C:\LS13320\STD SAND_21 Apr 2021_16.07.47.$ls		
	STD SAND_21 Apr 2021_16.07.47.$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	C4LT		
Run number:	3		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	1048388		
Optical model:	Fraunhofer.rf780d		
Residual:	0.81%		
LS 13 320	Aqueous Liquid Module		
Start time:	16:06 21 Apr 2021	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic) STD SAND_21 Apr 2021_16.07.47.$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%		
Mean:	230.2 µm	S.D.:	63.18 µm
Median:	224.3 µm	Variance:	3992 µm^2
Mean/Median ratio:	1.026	Skewness:	0.427 Right skewed
Mode:	223.4 µm	Kurtosis:	-0.052 Platykurtic

d_{10}: 153.6 µm d_{50}: 224.3 µm d_{90}: 317.7 µm

Folk and Ward Statistics (Phi)

Mean:	2.16	Median:	2.16	Deviation:	0.41
Skewness:	0.05	Kurtosis:	0.97		

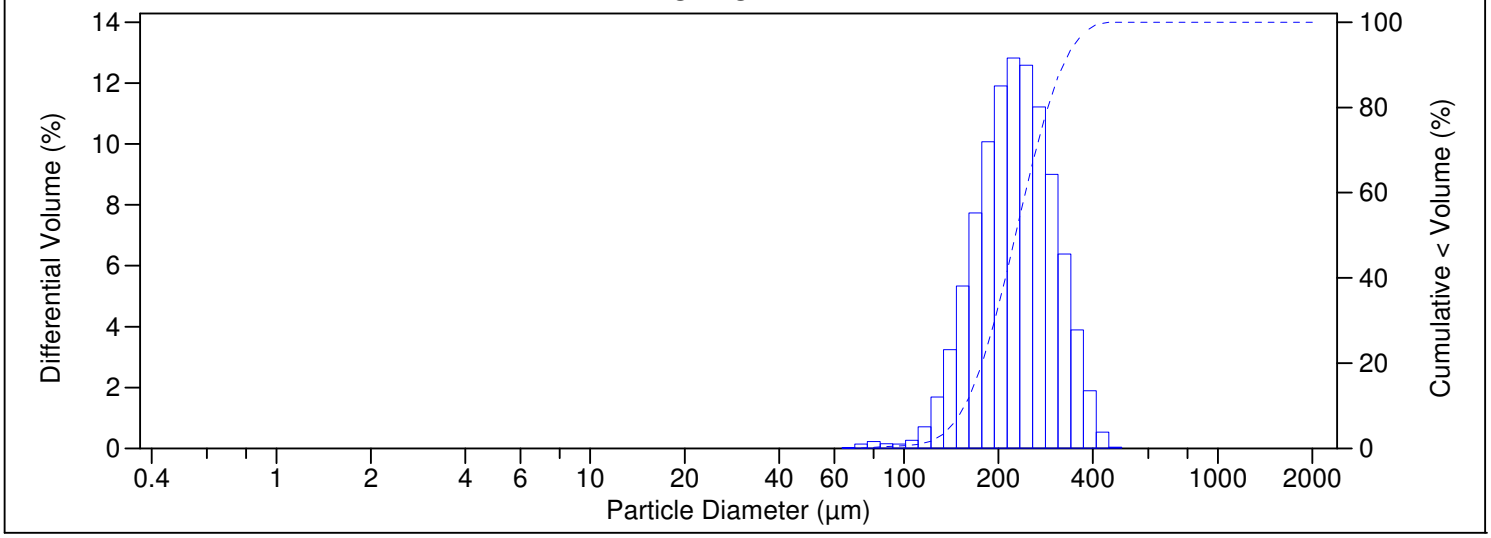
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
137.7 µm	167.3 µm	183.9 µm	208.2 µm	224.3 µm	271.6 µm	295.8 µm	345.1 µm

Particle Diameter µm	STD SAND _21 Apr 2021_16.07 .47.$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.57
125	62.2
250	35.2
500	0
1000	0
2000	

STD SAND_21 Apr 2021_16.07.47.$ls

Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.014		
1.047	0	69.62	0.14		
1.149	0	76.43	0.23		
1.261	0	83.90	0.20		
1.385	0	92.10	0.22		
1.520	0	101.1	0.39		
1.669	0	111.0	0.88		
1.832	0	121.8	1.88		
2.011	0	133.7	3.45		
2.208	0	146.8	5.54		
2.423	0	161.2	7.94		
2.660	0	176.9	10.3		
2.920	0	194.2	12.0		
3.206	0	213.2	12.9		
3.519	0	234.1	12.5		
3.863	0	256.9	11.1		
4.241	0	282.1	8.75		
4.656	0	309.6	6.06		
5.111	0	339.9	3.55		
5.611	0	373.1	1.59		
6.159	0	409.6	0.39		
6.761	0	449.7	0.024		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

File name:	C:\LS13320\STD SAND_21 Apr 2021_16.24.06.$ls		
	STD SAND_21 Apr 2021_16.24.06.$ls		
File ID:	STD SAND		
Sample ID:	STD SAND		
Operator:	C4LT		
Run number:	5		
	Control Sample		
Comment 1:	ASTM D4464M , LPSA 1		
Comment 2:	1048388		
Optical model:	Fraunhofer.rf780d		
Residual:	1.38%		
LS 13 320	Aqueous Liquid Module		
Start time:	16:22 21 Apr 2021	Run length:	60 seconds
Pump speed:	49		
Obscuration:	10%		
Fluid:	Water		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic) STD SAND_21 Apr 2021_16.24.06.$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%		
Mean:	233.3 µm	S.D.:	64.01 µm
Median:	226.8 µm	Variance:	4097 µm^2
Mean/Median ratio:	1.028	Skewness:	0.453 Right skewed
Mode:	223.4 µm	Kurtosis:	-0.038 Platykurtic

d_{10}: 156.0 µm d_{50}: 226.8 µm d_{90}: 322.6 µm

Folk and Ward Statistics (Phi)

Mean:	2.15	Median:	2.14	Deviation:	0.41
Skewness:	0.03	Kurtosis:	0.97		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
140.4 µm	169.5 µm	186.1 µm	210.6 µm	226.8 µm	274.8 µm	299.7 µm	351.5 µm

Particle Diameter µm	STD SAND _21 Apr 2021_16.24 .06.$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	2.11
125	61.1
250	36.8
500	0
1000	0
2000	

STD SAND_21 Apr 2021_16.24.06.$ls

Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	24.95	0	1660	0
0.412	0	27.39	0	1822	0
0.452	0	30.07	0	2000	
0.496	0	33.01	0		
0.545	0	36.24	0		
0.598	0	39.78	0		
0.657	0	43.67	0		
0.721	0	47.94	0		
0.791	0	52.63	0		
0.869	0	57.77	0		
0.954	0	63.42	0.016		
1.047	0	69.62	0.15		
1.149	0	76.43	0.23		
1.261	0	83.90	0.16		
1.385	0	92.10	0.14		
1.520	0	101.1	0.27		
1.669	0	111.0	0.71		
1.832	0	121.8	1.69		
2.011	0	133.7	3.24		
2.208	0	146.8	5.33		
2.423	0	161.2	7.73		
2.660	0	176.9	10.1		
2.920	0	194.2	11.9		
3.206	0	213.2	12.8		
3.519	0	234.1	12.6		
3.863	0	256.9	11.2		
4.241	0	282.1	9.00		
4.656	0	309.6	6.39		
5.111	0	339.9	3.89		
5.611	0	373.1	1.90		
6.159	0	409.6	0.53		
6.761	0	449.7	0.037		
7.422	0	493.6	0		
8.148	0	541.9	0		
8.944	0	594.9	0		
9.819	0	653.0	0		
10.78	0	716.9	0		
11.83	0	786.9	0		
12.99	0	863.9	0		
14.26	0	948.3	0		
15.65	0	1041	0		
17.18	0	1143	0		
18.86	0	1255	0		
20.71	0	1377	0		
22.73	0	1512	0		

Surrogate Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(27-176)	(20-163)
570-56288-1	Arroyo_Simi-Sed_20210414	79	104
570-56288-1 - DL	Arroyo_Simi-Sed_20210414	79	74
570-56288-1 MS	Arroyo_Simi-Sed_20210414	93	118
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	84	104
LCS 570-143537/2-A	Lab Control Sample	90	89
LCSD 570-143537/3-A	Lab Control Sample Dup	89	88
MB 570-143537/1-A	Method Blank	92	94

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(20-155)	(25-126)
570-56288-1	Arroyo_Simi-Sed_20210414	79	83
570-56288-1 MS	Arroyo_Simi-Sed_20210414	88	92
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	101	98
LCS 570-143537/4-A	Lab Control Sample	104	103
LCSD 570-143537/5-A	Lab Control Sample Dup	106	105
MB 570-143537/1-A	Method Blank	106	104

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 570-143537/1-A
Matrix: Solid
Analysis Batch: 144355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 143537

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.0	0.20	ug/Kg		04/15/21 13:45	04/20/21 01:27	1
4,4'-DDE	ND		1.0	0.11	ug/Kg		04/15/21 13:45	04/20/21 01:27	1
4,4'-DDT	ND		1.0	0.072	ug/Kg		04/15/21 13:45	04/20/21 01:27	1
Chlordane (technical)	ND		5.0	0.47	ug/Kg		04/15/21 13:45	04/20/21 01:27	1
Dieldrin	ND		0.20	0.051	ug/Kg		04/15/21 13:45	04/20/21 01:27	1
Toxaphene	ND		5.0	3.9	ug/Kg		04/15/21 13:45	04/20/21 01:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*92*		*27 - 176*	*04/15/21 13:45*	*04/20/21 01:27*	*1*
Tetrachloro-m-xylene	*94*		*20 - 163*	*04/15/21 13:45*	*04/20/21 01:27*	*1*

Lab Sample ID: LCS 570-143537/2-A
Matrix: Solid
Analysis Batch: 144355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 143537

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	5.00	4.79		ug/Kg		96	41 - 140
4,4'-DDE	5.00	4.47		ug/Kg		89	46 - 132
4,4'-DDT	5.00	5.23		ug/Kg		105	40 - 136
cis-Chlordane	5.00	4.21		ug/Kg		84	42 - 128
Dieldrin	5.00	4.33		ug/Kg		87	40 - 130
trans-Chlordane	5.00	4.00	PI	ug/Kg		80	20 - 166

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*27 - 176*
Tetrachloro-m-xylene	*89*		*20 - 163*

Lab Sample ID: LCSD 570-143537/3-A
Matrix: Solid
Analysis Batch: 144355

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 143537

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	5.00	4.80		ug/Kg		96	41 - 140	0	22
4,4'-DDE	5.00	4.57		ug/Kg		91	46 - 132	2	20
4,4'-DDT	5.00	5.28		ug/Kg		106	40 - 136	1	21
cis-Chlordane	5.00	4.35		ug/Kg		87	42 - 128	3	20
Dieldrin	5.00	4.45		ug/Kg		89	40 - 130	3	21
trans-Chlordane	5.00	5.81		ug/Kg		116	20 - 166	37	44

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*89*		*27 - 176*
Tetrachloro-m-xylene	*88*		*20 - 163*

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

Lab Sample ID: 570-56288-1 MS
Matrix: Solid
Analysis Batch: 144355

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA
Prep Batch: 143537

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.48	J,DX PI	6.44	6.43		ug/Kg	☼	93	13 - 178
4,4'-DDE	13	EY	6.44	8.81	LN	ug/Kg	☼	-61	10 - 174
4,4'-DDT	ND		6.44	2.82		ug/Kg	☼	44	10 - 169
cis-Chlordane	ND		6.44	5.89		ug/Kg	☼	92	10 - 153
Dieldrin	ND		6.44	5.72		ug/Kg	☼	89	34 - 127
trans-Chlordane	0.094	J,DX PI BA	6.44	5.57	PI	ug/Kg	☼	85	17 - 152

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*93*		*27 - 176*
Tetrachloro-m-xylene	*118*		*20 - 163*

Lab Sample ID: 570-56288-1 MSD
Matrix: Solid
Analysis Batch: 144355

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA
Prep Batch: 143537

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.48	J,DX PI	6.44	5.99		ug/Kg	☼	86	13 - 178	7	40
4,4'-DDE	13	EY	6.44	7.71	LN	ug/Kg	☼	-78	10 - 174	13	40
4,4'-DDT	ND		6.44	2.02		ug/Kg	☼	31	10 - 169	33	40
cis-Chlordane	ND		6.44	5.34		ug/Kg	☼	83	10 - 153	10	40
Dieldrin	ND		6.44	5.27		ug/Kg	☼	82	34 - 127	8	40
trans-Chlordane	0.094	J,DX PI BA	6.44	5.08	PI	ug/Kg	☼	77	17 - 152	9	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*84*		*27 - 176*
Tetrachloro-m-xylene	*104*		*20 - 163*

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

Lab Sample ID: MB 570-143537/1-A
Matrix: Solid
Analysis Batch: 144235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 143537

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	ND		10	7.8	ug/Kg		04/15/21 13:45	04/19/21 12:30	1
Aroclor-1221	ND		10	7.8	ug/Kg		04/15/21 13:45	04/19/21 12:30	1
Aroclor-1232	ND		10	7.8	ug/Kg		04/15/21 13:45	04/19/21 12:30	1
Aroclor-1242	ND		10	7.8	ug/Kg		04/15/21 13:45	04/19/21 12:30	1
Aroclor-1248	ND		10	7.8	ug/Kg		04/15/21 13:45	04/19/21 12:30	1
Aroclor-1254	ND		10	5.1	ug/Kg		04/15/21 13:45	04/19/21 12:30	1
Aroclor-1260	ND		10	5.1	ug/Kg		04/15/21 13:45	04/19/21 12:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*106*		*20 - 155*	*04/15/21 13:45*	*04/19/21 12:30*	*1*
Tetrachloro-m-xylene (Surr)	*104*		*25 - 126*	*04/15/21 13:45*	*04/19/21 12:30*	*1*

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

Lab Sample ID: LCS 570-143537/4-A
Matrix: Solid
Analysis Batch: 144235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 143537

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			20.0	23.8		ug/Kg		119	50 - 150		
Aroclor-1260			20.0	24.7		ug/Kg		124	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*104*		*20 - 155*
Tetrachloro-m-xylene (Surr)	*103*		*25 - 126*

Lab Sample ID: LCSD 570-143537/5-A
Matrix: Solid
Analysis Batch: 144235

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 143537

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016			20.0	21.9		ug/Kg		110	50 - 150	8	30
Aroclor-1260			20.0	22.7		ug/Kg		114	50 - 150	9	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*106*		*20 - 155*
Tetrachloro-m-xylene (Surr)	*105*		*25 - 126*

Lab Sample ID: 570-56288-1 MS
Matrix: Solid
Analysis Batch: 144235

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA
Prep Batch: 143537

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016	ND		25.7	39.9		ug/Kg	☼	155	20 - 180		
Aroclor-1260	ND		25.7	22.9		ug/Kg	☼	89	20 - 180		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*88*		*20 - 155*
Tetrachloro-m-xylene (Surr)	*92*		*25 - 126*

Lab Sample ID: 570-56288-1 MSD
Matrix: Solid
Analysis Batch: 144235

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA
Prep Batch: 143537

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	ND		25.7	48.4	LM	ug/Kg	☼	188	20 - 180	19	40
Aroclor-1260	ND		25.7	32.3	PI	ug/Kg	☼	126	20 - 180	34	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*101*		*20 - 155*
Tetrachloro-m-xylene (Surr)	*98*		*25 - 126*

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-354926/5
Matrix: Solid
Analysis Batch: 354926

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	97	mg/Kg			04/22/21 15:04	1

Lab Sample ID: LCS 580-354926/6
Matrix: Solid
Analysis Batch: 354926

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	120000	121000		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 580-354926/7
Matrix: Solid
Analysis Batch: 354926

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	120000	120000		mg/Kg		100	80 - 120	0	20

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-644295/2-A
Matrix: Solid
Analysis Batch: 644309

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 644295

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		10.0	2.00	mg/Kg		04/19/21 05:00	04/19/21 07:03	1

Lab Sample ID: LCS 440-644295/1-A
Matrix: Solid
Analysis Batch: 644309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 644295

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	50.0	46.63		mg/Kg		93	85 - 115

Lab Sample ID: 570-56288-1 MS
Matrix: Solid
Analysis Batch: 644309

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA
Prep Batch: 644295

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	4.54	J,DX	64.6	62.74		mg/Kg	☼	90	75 - 125

Lab Sample ID: 570-56288-1 MSD
Matrix: Solid
Analysis Batch: 644309

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA
Prep Batch: 644295

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	4.54	J,DX	64.6	60.24		mg/Kg	☼	86	75 - 125	4	15

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

Lab Sample ID: 570-56288-1 DU
Matrix: Solid
Analysis Batch: 144991

Client Sample ID: Arroyo_Simi-Sed_20210414
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Clay(less than 0.00391 mm)	0.13			0.14		%				7	20
Coarse Sand (0.5mm to 1mm)	38.98			39.02		%				0.1	20
Fine Sand (0.125 to 0.25mm)	1.75			1.55		%				12	20
Gravel (greater than 2 mm)	26.62			24.10		%				10	20
Medium Sand (0.25 to 0.5 mm)	9.91			9.07		%				9	20
Silt (0.00391 to 0.0625mm)	0.64			0.70		%				9	20
Total Silt and Clay (0 to 0.0626mm)	0.77			0.85		%				10	20
Very Coarse Sand (1 to 2mm)	21.52			25.00		%				15	20
Very Fine Sand (0.0625 to 0.125 mm)	0.45			0.41		%				9	20

GC Semi VOA

Prep Batch: 143537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	3546	
570-56288-1 - DL	Arroyo_Simi-Sed_20210414	Total/NA	Solid	3546	
MB 570-143537/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-143537/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 570-143537/4-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-143537/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
LCSD 570-143537/5-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-56288-1 MS	Arroyo_Simi-Sed_20210414	Total/NA	Solid	3546	
570-56288-1 MS	Arroyo_Simi-Sed_20210414	Total/NA	Solid	3546	
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	Total/NA	Solid	3546	
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	Total/NA	Solid	3546	

Analysis Batch: 144235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8082	143537
MB 570-143537/1-A	Method Blank	Total/NA	Solid	8082	143537
LCS 570-143537/4-A	Lab Control Sample	Total/NA	Solid	8082	143537
LCSD 570-143537/5-A	Lab Control Sample Dup	Total/NA	Solid	8082	143537
570-56288-1 MS	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8082	143537
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8082	143537

Analysis Batch: 144355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8081A	143537
MB 570-143537/1-A	Method Blank	Total/NA	Solid	8081A	143537
LCS 570-143537/2-A	Lab Control Sample	Total/NA	Solid	8081A	143537
LCSD 570-143537/3-A	Lab Control Sample Dup	Total/NA	Solid	8081A	143537
570-56288-1 MS	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8081A	143537
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8081A	143537

Analysis Batch: 144645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1 - DL	Arroyo_Simi-Sed_20210414	Total/NA	Solid	8081A	143537

General Chemistry

Analysis Batch: 354926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	9060	
MB 580-354926/5	Method Blank	Total/NA	Solid	9060	
LCS 580-354926/6	Lab Control Sample	Total/NA	Solid	9060	
LCSD 580-354926/7	Lab Control Sample Dup	Total/NA	Solid	9060	

Analysis Batch: 644143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	Moisture	

Prep Batch: 644295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	SM 4500 NH3 B	
MB 440-644295/2-A	Method Blank	Total/NA	Solid	SM 4500 NH3 B	

General Chemistry (Continued)

Prep Batch: 644295 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-644295/1-A	Lab Control Sample	Total/NA	Solid	SM 4500 NH3 B	
570-56288-1 MS	Arroyo_Simi-Sed_20210414	Total/NA	Solid	SM 4500 NH3 B	
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	Total/NA	Solid	SM 4500 NH3 B	

Analysis Batch: 644309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	SM 4500 NH3 D	644295
MB 440-644295/2-A	Method Blank	Total/NA	Solid	SM 4500 NH3 D	644295
LCS 440-644295/1-A	Lab Control Sample	Total/NA	Solid	SM 4500 NH3 D	644295
570-56288-1 MS	Arroyo_Simi-Sed_20210414	Total/NA	Solid	SM 4500 NH3 D	644295
570-56288-1 MSD	Arroyo_Simi-Sed_20210414	Total/NA	Solid	SM 4500 NH3 D	644295

Geotechnical

Analysis Batch: 144991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-56288-1	Arroyo_Simi-Sed_20210414	Total/NA	Solid	D4464	
LCS 570-144991/3	Lab Control Sample	Total/NA	Solid	D4464	
LCSD 570-144991/5	Lab Control Sample Dup	Total/NA	Solid	D4464	
570-56288-1 DU	Arroyo_Simi-Sed_20210414	Total/NA	Solid	D4464	

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

Client Sample ID: Arroyo_Simi-Sed_20210414

Date Collected: 04/13/21 08:00
Date Received: 04/14/21 12:05

Lab Sample ID: 570-56288-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.06 g	2 mL	143537	04/15/21 13:46	F7UI	ECL 1
Total/NA	Analysis	8081A		1			144355	04/20/21 12:38	UHHN	ECL 1
	Instrument ID: GC44									
Total/NA	Prep	3546	DL		20.06 g	2 mL	143537	04/15/21 13:46	F7UI	ECL 1
Total/NA	Analysis	8081A	DL	5			144645	04/20/21 17:46	UHHN	ECL 1
	Instrument ID: GC44									
Total/NA	Prep	3546			20.06 g	2 mL	143537	04/15/21 13:46	F7UI	ECL 1
Total/NA	Analysis	8082		1			144235	04/20/21 03:08	UHHN	ECL 1
	Instrument ID: GC58									
Total/NA	Analysis	9060		1			354926	04/22/21 16:24	FCG	FGS SEA
	Instrument ID: TAC105									
Total/NA	Analysis	Moisture		1			644143	04/15/21 20:24	ZL7L	TAL IRV
	Instrument ID: NOEQUIP									
Total/NA	Prep	SM 4500 NH3 B			2.5008 g	50 mL	644295	04/19/21 05:00	YO8L	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			644309	04/19/21 07:03	YO8L	TAL IRV
	Instrument ID: pH20									
Total/NA	Analysis	D4464		1			144991	04/21/21 15:58	C4LT	ECL 1
	Instrument ID: NOEQUIP									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

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

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 570-56288-1
Project/Site: Boeing SSFL NPDES Permit 2015
SDG: Annual Sediment Arroyo Frontier Park

Laboratory: Eurofins Calscience LLC

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0161	11-19-21
California	Los Angeles County Sanitation Districts	10109	09-30-21
California	SCAQMD LAP	17LA0919	11-30-21
California	State	2944	09-30-21
Guam	State	20-003R	10-31-20 *
Nevada	State	CA00111	07-31-21
Oregon	NELAP	CA300001	01-30-22
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	05-19-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids
SM 4500 NH3 D	SM 4500 NH3 B	Solid	Ammonia (as N)

Laboratory: Eurofins FGS, Seattle

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	05-06-21
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	Dept. of Energy	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2954	06-30-21
Florida	NELAP	E87575	07-30-21
Kentucky (WW)	State	KY98042	12-31-21
Louisiana	NELAP	03073	06-30-21
Maine	State	2020012	05-02-22
Montana (UST)	State	NA	04-14-27
New Jersey	NELAP	WA014	06-30-21
New York	NELAP	11662	04-01-22
Oregon	NELAP	WA100007	11-05-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-20-00031	02-10-23
Washington	State	C788	07-13-21
Wisconsin	State	399133460	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

Method	Method Description	Protocol	Laboratory
8081A	Organochlorine Pesticides (GC)	SW846	ECL 1
8082	Polychlorinated Biphenyls (PCBs) (GC)	SW846	ECL 1
9060	Organic Carbon, Total (TOC)	SW846	FGS SEA
Moisture	Percent Moisture	EPA	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	ECL 1
3546	Microwave Extraction (Low Level)	SW846	ECL 1
SM 4500 NH3 B	Distillation, Ammonia	SM	TAL IRV

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

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

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

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

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-1
SDG: Annual Sediment Arroyo Frontier Park

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-56288-1	Arroyo_Simi-Sed_20210414	Solid	04/13/21 08:00	04/14/21 12:05	

Patel, Virendra

From: Elizabeth Wessling <elizabeth.wessling@mecx.net>
Sent: Tuesday, June 15, 2021 4:31 PM
To: Patel, Virendra
Cc: Katherine Miller - Haley & Aldrich (KMiller@haleyaldrich.com); Barr, Anastasia; Kim Schultz
Subject: NPDES Arroyo Frontier Park Sediment Sampling SDGs 570-56288-1 and 570-56288-2

EXTERNAL EMAIL*

Virendra:
The data for the sediments for the 8081 and 8082 analyses were reported on an “as-received” basis rather than a “dry-weight” basis.
Can you please revise the reports for these two method to have the results reported on a “dry weight” basis based upon the percent moisture as analyzed at as TA-Irvine?
This data is due to our client tomorrow so any priority you can assign this task would be appreciated.

Thank you
Elizabeth
Elizabeth Wessling
Senior Vice President, MEC^{X}, Inc.

Mobile 303.881.6816
Office 713.585.7000 ext. 7020
12269 East Vassar Drive, Aurora, CO 80014
elizabeth.wessling@mecx.net
www.mecx.net

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax. 714-894-7501

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Virendra	Carrier Tracking No(s):	COC No: 570-94552 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Frontier Global Sciences LLC		Accreditations Required (See note): State Program - California		Job #: 570-56288-1
Address: 5755 8th Street East, ,	Due Date Requested: 4/26/2021			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 425-420-9210(Fax)	PO #:			
Email:	WO #:			
Project Name: Boeing SSFL NPDES Permit 2015	Project #: 44024446			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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 - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060/ Standard Soil TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Arroyo_Simi-Sed_20210414 (570-56288-1)	4/13/21	08.00 Pacific		Solid			X	1	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/14/21 1525	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

Eurofins Calscience Irvine

CHAIN OF CUSTODY FORM

570-56288 Chain of Custody

Loc 570
56288

VO730040

Client Name/Address	Project	Field Readings	Meter serial #
Haley & Aldrich 5333 Miss on Center Rd Suite 300 San Diego CA 92108	Project Boeing-SSFL NPDES Permit 2015 **Annual Sediment Arroyo Simi-Frontier Park**	**Field readings. (Include units)** Time of readings 0714 pH 6.79 pH unit Temp 58.3 °C/F DO 5.86 mg/L Conductivity 2060 µmhos/cm Velocity 0.0 ft/sec **Field readings QC** Checked by: Date/Time: 4-14-2021/0715	
Eurofins Calscience Irvine Contact Christian Bondoc 17461 Derian Ave Suite #100 Irvine CA 92614 Tel 949-260-3218			
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc. its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)		
Sampler Dan Smith	Field Manager: Mark Dominick 978.234.5033 818 599 0702 (cell)		

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	ANALYSIS REQUIRED A	A	A	A	A	A	A	A	Comments
									Total Ammonia (SM4500-NH3-D)	Total Organic Carbon (9060)	PCBs (SW8082)	Chlordane Dieldrin, Toxaphene, 4,4-DDD, 4,4-DDE 4,4-DDT (SW8081A)	48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas) (EPAR-95/136) ABC Labs in Ventura CA	Chronic 10-day echaustorius estuarius Toxicity (EPA/600/R-94/025) ABC Labs in Ventura CA	% Moisture (2540G)	Particle Size Distribution (D422M)	
Arroyo Simi	Arroyo_Sim -Sed_20210414	4/14/2021 0800	SE	9 oz Jar	3	None	165	Yes	X								
			SE	9 oz Jar	1	None	248	No		X							
			SE	9 oz Jar	3	None	280	Yes			X						
			SE	9 oz Jar	3	None	290	Yes				X					
			SE	1L wide mouth Plastic	3	None	295	No					X				Deliver to ABC Labs in Ventura, CA *
			SE	1L wide mouth Plastic	4	4°C in the Dark	300	No						X			Keep sample in cooler in the dark until delivered to ABC Labs *
			SE	9 oz Jar	1	None	305	No							X		
			SE	9 oz Jar	1	None	310	No								X	

* - Hand delivered directly to ABC Labs by H.A personnel

Legend A=Annual

Relinquished By	Date/Time:	Company:	Received By	Date/Time:
	4-14-2021/1010	H.A		04/14/21 1010
Relinquished By	Date/Time:	Company:	Received By	Date/Time:
	04/14/21 1230	EC1		04/14/21 1230
Relinquished By	Date/Time:	Company:	Received By	Date/Time:

Turn-around time: (Check)
24 Hour ___ 72 Hour ___ 10 Day: X
48 Hour ___ 5 Day: ___ Normal: ___

Sample Integrity: (Check)
Intact: ___ On Ice: ___
Store samples for 6 months.
Data Requirements: (Check)
No Level ___ All Level IV: X

3.0/3.4 SCS

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler	Lab PM: Patel, Virendra	Carrier Tracking No(s):	COC No: 570-94616.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note): State Program California		Job #: 570-56288-1
Address: 17461 Derian Ave, Suite 100,	Due Date Requested: 4/16/2021			
City: Irvine	TAT Requested (days):			
State, Zip: CA, 92614-5817				
Phone: 949-261 1022(Tel) 949-260-3297(Fax)	PO #:			
Email:	WO #:			
Project Name: Boeing SSFL NPDES Permit 2015	Project #: 44024446			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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	EDA	Z	other (specify)

Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500NH3_D/SM4500NH3_B (MOD) Ammonia	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
Arroyo_Simi-Sed_20210414 (570-56288-1)	4/13/21	08:00 Pacific		Solid			X	X	3	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II III IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	04/14/21 1930	EC	[signature]	4/14/21 1930	EC-IRV
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 2 8/3 0 IR 93

Ver: 11/01/2020

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Virendra	Carrier Tracking No(s):	COC No: 570-94552.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Frontier Global Sciences LLC		Accreditations Required (See note): State Program - California		Job #: 570-56288-1
Address: 5755 8th Street East,	Due Date Requested: 4/26/2021			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 425-420-9210(Fax)	PO #:			
Email:	WO #:			
Project Name: Boeing SSFL NPDES Permit 2015	Project #: 44024446			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060/ Standard Soil TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Arroyo_Simi-Sed_20210414 (570-56288-1)	4/13/21	08:00 Pacific		Solid			X	1	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		4/14/21 1525		Tom Blank	4/15/21 0940	EFGS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: A1 0.0 /0.5

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-56288-1
SDG Number: Annual Sediment Arroyo Frontier Park

Login Number: 56288
List Number: 1
Creator: Patel, Virendra

List Source: Eurofins Calscience LLC

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

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-56288-1
SDG Number: Annual Sediment Arroyo Frontier Park

Login Number: 56288
List Number: 2
Creator: Ornelas, Olga

List Source: Eurofins Calscience Irvine
List Creation: 04/14/21 07:48 PM

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

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-56288-1
SDG Number: Annual Sediment Arroyo Frontier Park

Login Number: 56288
List Number: 3
Creator: Vallelunga, Diana L

List Source: Eurofins FGS, Seattle
List Creation: 04/15/21 05:56 PM

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

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 570-56288-2

Prepared for

Haley & Aldrich, Inc.

600 South Meyer Avenue, Suite 100

Tucson, Arizona 85701

10 June 2021

TABLE OF CONTENTS

TABLES

I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^X Project No.: 1272.003D.04

Sample Delivery Group: 570-56288-2

Project Manager: Katherine Miller

Matrix: Sediment

QC Level: IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

Laboratory: TestAmerica-Irvine

TABLE 1 - SAMPLE IDENTIFICATION

Sample Name	Lab Sample Name	Matrix	Collection	Method
Arroyo_Simi-Sed_20210414	570-56288-2	SE	4/13/2021 8:00:00 AM	EPA/600/R-94/025, EPA/600/R-95/136

II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklist, and the chain-of-custody (COC) provided by the laboratory for sample delivery group (SDG) 570-56288-2:

- The sample was hand-delivered to Aquatic Bioassay Consulting laboratories (ABC) at 58.3°F. Cooling had begun, and associated sample results were not qualified.
- Field and laboratory personnel signed and dated the COC.
- The sample was hand-delivered directly from the field to ABC for analysis of Methods EPA/600/R-94/025 and EPA/600/R-95/136.

TABLE 2 - DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For dioxins or PCB congeners, the associated value is the quantitation limit or the estimated detection limit.	The analyte was analyzed for but was not detected above the reported sample quantitation limit. For perchlorate, the associated value is the sample detection limit or the quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.	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.	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analyte has been "tentatively identified" or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

TABLE 3 - REASON CODE REFERENCE

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	The sequence or number of standards used for the calibration was incorrect.
C	Calibration percent relative standard deviation (%RSD) or percent deviation (%D) were noncompliant, or coefficient of determination (r^2) was <0.990.	Correlation coefficient (r) was <0.995.
R	Calibration relative response factor (RRF) was <0.05.	Percent recovery (%R) for calibration was outside control limits.
B	The analyte was detected in an associated blank as well as in the sample.	The analyte was detected in an associated blank as well as in the sample.
L	Laboratory control sample (LCS) or /LCS duplicate (LCSD) %R was outside the control limits.	LCS or LCSD %R was outside the control limits.
L1	LCS/LCSD relative percent difference (RPD) was outside the control limit.	LCS/LCSD RPD was outside the control limit.
Q	Matrix spike/matrix spike duplicate (MS/MSD) %R was outside control limits.	MS or MSD %R was outside the control limit.
Q1	MS/MSD RPD was outside the control limit.	MS/MSD RPD was outside the control limit.
E	Result was reported as an estimated maximum possible concentration (EMPC).	Laboratory duplicate RPD was outside the control limit.
I	Internal standard recovery was outside control limits.	Inductively coupled plasma (ICP) interference check standard (ICSA/ICSAB) result was outside control limits.
I1	Not applicable.	ICP mass spectrometer (ICPMS) internal standard recovery was outside control limits.
A	Not applicable.	Serial dilution %D was outside control limits.
M	Tuning (BFB or DFTPP) was not compliant.	ICPMS tune was not compliant.
T	The analyte was detected in an associated trip blank as well as in the sample.	Not applicable.

Reason Code	Organic	Inorganic
+	False positive – reported compound was not present.	False positive – reported compound was not present.
-	False negative – compound was present but not reported.	False negative – compound was present but not reported.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	Field duplicate RPD was outside the control limit.	Field duplicate RPD was outside the control limit.
$	The reviewer corrected the reported result and/or other information.	The reviewer corrected the reported result and/or other information.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis was not used because another more technically sound analysis was available.	The analysis was not used because another more technically sound analysis was available.
P	Instrument performance not compliant.	Post digestion spike recovery was outside of control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Other problems identified in the data are described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

IV. METHOD EPA/600/R-94/025 AND EPA/600/R-95/136—SEDIMENT AND CHRONIC TOXICITY

M. Hilchey of MEC[X] reviewed the SDG on June 10, 2021.

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC[X] Data Validation Procedure for General Minerals (DVP-6, Rev. 1),* EPA/600/R-94/025 and EPA/600/R-95/136 and the *National Functional Guidelines for Inorganic Superfund Data Review* (2017).

IV.1. HOLDING TIMES

The QAPP holding time of less than 14 days for sediments for both methods, was met.

IV.2. CALIBRATION

Instruments were calibrated as per the manufacturer requirements and standard reference toxicant testing was performed to verify culture health and sensitivity.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. *METHOD BLANKS*

The tests met the negative control criteria of the laboratory and methods.

IV.3.2. *LABORATORY CONTROL SAMPLES*

The positive control criteria were met.

IV.3.3. *LABORATORY DUPLICATES*

Laboratory duplicate analyses were not performed on the sample in this SDG.

IV.3.4. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses are not applicable to these methods.

IV.4. SAMPLE RESULT VERIFICATION

The sample results reported on the sample results summary were verified against the raw data. No transcription errors or calculation errors were noted. Method detection limits and reporting limits are not reported for these methods.

IV.5. FIELD QC SAMPLES

MEC[X] evaluated field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC[X] used the remaining detects to evaluate the associated site sample. Findings associated with field QC samples are summarized below.

IV.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

Field blank or equipment blank samples were not identified for this SDG.

IV.5.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 570562882

Analysis Method EPA/600/R-94/025

Sample Name Arroyo_Simi-Sed_20210414 **Matrix Type:** SE **Result Type:** TRG

Sample Date: 4/13/2021 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 570-56288-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Sediment toxicity (chronic 10-day eohaustorius estuarius toxicity)	N	SEDTOX10DAY	100			% SURV		=	--

Analysis Method EPA/600/R-95/136

Sample Name Arroyo_Simi-Sed_20210414 **Matrix Type:** SE **Result Type:** TRG

Sample Date: 4/13/2021 8:00:00 AM **Validation Level:** 9

Lab Sample Name: 570-56288-2

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chronic Toxicity, Mytilus	N	CHRTOXMYTILUS	100			% SURV		=	--

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-56288-2
Laboratory SDG: Annual Sediment Arroyo Frontier Park
Client Project/Site: Boeing SSFL NPDES Permit 2015

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:
5/13/2021 4:05:06 PM

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

Table of Contents

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-2
SDG: Annual Sediment Arroyo Frontier Park

Glossary

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

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-2
SDG: Annual Sediment Arroyo Frontier Park

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

Protocol References:

None = None

Laboratory References:

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

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Permit 2015

Job ID: 570-56288-2
SDG: Annual Sediment Arroyo Frontier Park

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-56288-1	Arroyo_Simi-Sed_20210414	Solid	04/13/21 08:00	04/14/21 12:05	

aquatic bioassay & consulting laboratories, inc

May 13, 2021

Ms. Virendra Patel
Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841

Dear Ms. Patel;

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

CLIENT:	Eurofins Calscience LLC
SAMPLE I.D.:	Arroyo_ Simi-Sed _20210414 (570-56288-1)
DATE RECEIVED:	4/15/2021
ABC LAB. NO.:	CSE0421.444

***Eohaustorius estuarius* 10 Day Survival Sediment Bioassay**

Percent Survival = 100.00% Survival

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Report Date: 13 May-21 14:47 (p 1 of 1)
Test Code/ID: CSE0421.444e / 08-2777-4931

Eohaustorius 10-d Survival and Reburial Sediment Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	04-3204-5338	**Test Type:**	Survival-Reburial	**Analyst:**	Joe Freas
Start Date:	20 Apr-21 13:00	**Protocol:**	EPA/600/R-94/025 (1994)	**Diluent:**	Laboratory Seawater
Ending Date:	30 Apr-21 13:00	**Species:**	Eohaustorius estuarius	**Brine:**	Not Applicable
Test Length:	10d 0h	**Taxon:**	Malacostraca	**Source:**	Northwestern Aquatic Scien **Age:**
Sample ID:	18-7664-0807	**Code:**	CSE0421.444e	**Project:**	Boring-SSFL NPDES Permit 2015
Sample Date:	14 Apr-21 08:00	**Material:**	Sediment	**Source:**	Bioassay Report
Receipt Date:	15 Apr-21 10:30	**CAS (PC):**		**Station:**	Arroyo_Simi-Sed_20210414 (570-562
Sample Age:	6d 5h	**Client:**	Eurofins Calscience		

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
03-5387-7428	Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
03-5387-7428	Survival Rate	Control Resp	0.99	0.9	>>	Yes	Passes Criteria

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	5	0.9900	0.9622	1.0180	0.9500	1.0000	0.0100	0.0224	2.26%	0.00%
100		5	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	-1.01%

Survival Rate Detail — MD5: FD32F7A092EF4F1DF493DF6F4D087317

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	0.9500	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	19/20	20/20	20/20	20/20	20/20
100		20/20	20/20	20/20	20/20	20/20

CETIS Analytical Report

Report Date: 13 May-21 14:47 (p 1 of 2)
Test Code/ID: CSE0421.444e / 08-2777-4931

Eohaustorius 10-d Survival and Reburial Sediment Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	03-5387-7428	Endpoint:	Survival Rate	CETIS Version:	CETISv1.9.7
Analyzed:	13 May-21 14:28	Analysis:	Nonparametric-Two Sample	Status Level:	1
Edit Date:	13 May-21 13:38	MD5 Hash:	FD32F7A092EF4F1DF493DF6F4D087317	Editor ID:	000-066-201-4
Batch ID:	04-3204-5338	Test Type:	Survival-Reburial	Analyst:	Joe Freas
Start Date:	20 Apr-21 13:00	Protocol:	EPA/600/R-94/025 (1994)	Diluent:	Laboratory Seawater
Ending Date:	30 Apr-21 13:00	Species:	Eohaustorius estuarius	Brine:	Not Applicable
Test Length:	10d 0h	Taxon:	Malacostraca	Source:	Northwestern Aquatic Scien Age:
Sample ID:	18-7664-0807	Code:	CSE0421.444e	Project:	Boring-SSFL NPDES Permit 2015
Sample Date:	14 Apr-21 08:00	Material:	Sediment	Source:	Bioassay Report
Receipt Date:	15 Apr-21 10:30	CAS (PC):		Station:	Arroyo_Simi-Sed_20210414 (570-562
Sample Age:	6d 5h	Client:	Eurofins Calscience		

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed survival rate endpoint	2.12%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		100	30	---	1	8	Exact	1.0000	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.99	0.9	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0012877	0.0012877	1	1	0.3466	Non-Significant Effect
Error	0.0103014	0.0012877	8			
Total	0.0115891		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	7.111	11.26	0.0285	Equal Variances
	Mod Levene Equality of Variance Test	1	13.75	0.3559	Equal Variances
	Variance Ratio F Test				Indeterminate
Distribution	Anderson-Darling A2 Test	1.796	3.878	<1.0E-05	Non-Normal Distribution
	D'Agostino Skewness Test	3.335	2.576	0.0009	Non-Normal Distribution
	Kolmogorov-Smirnov D Test	0.4	0.3025	6.1E-05	Non-Normal Distribution
	Shapiro-Wilk W Normality Test	0.6247	0.7411	0.0001	Non-Normal Distribution

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	5	0.9900	0.9622	1.0000		0.9500	1.0000	0.0100	2.26%	0.00%
100		5	1.0000	1.0000	1.0000		1.0000	1.0000	0.0000	0.00%	-1.01%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	5	1.4360	1.3730	1.4990		1.3450	1.4590	0.0227	3.53%	0.00%
100		5	1.4590	1.4580	1.4590		1.4590	1.4590	0.0000	0.00%	-1.58%

Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	0.9500	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	1.3450	1.4590	1.4590	1.4590	1.4590
100		1.4590	1.4590	1.4590	1.4590	1.4590

Eohaustorius 10-d Survival and Reburial Sediment Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	03-5387-7428	**Endpoint:**	Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	13 May-21 14:28	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	13 May-21 13:38	**MD5 Hash:**	FD32F7A092EF4F1DF493DF6F4D087317	**Editor ID:**	000-066-201-4

CETIS Measurement Report

Report Date: 13 May-21 14:47 (p 1 of 1)
Test Code/ID: CSE0421.444e / 08-2777-4931

Eohaustorius 10-d Survival and Reburial Sediment Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	04-3204-5338	**Test Type:**	Survival-Reburial	**Analyst:**	Joe Freas
Start Date:	20 Apr-21 13:00	**Protocol:**	EPA/600/R-94/025 (1994)	**Diluent:**	Laboratory Seawater
Ending Date:	30 Apr-21 13:00	**Species:**	Eohaustorius estuarius	**Brine:**	Not Applicable
Test Length:	10d 0h	**Taxon:**	Malacostraca	**Source:**	Northwestern Aquatic Scien **Age:**
Sample ID:	18-7664-0807	**Code:**	CSE0421.444e	**Project:**	Boring-SSFL NPDES Permit 2015
Sample Date:	14 Apr-21 08:00	**Material:**	Sediment	**Source:**	Bioassay Report
Receipt Date:	15 Apr-21 10:30	**CAS (PC):**		**Station:**	Arroyo_Simi-Sed_20210414 (570-562
Sample Age:	6d 5h	**Client:**	Eurofins Calscience		

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	9.45	3.732	15.17	9	9.9	0.3182	0.6364	6.73%	0
100		2	10	8.729	11.27	9.9	10.1	0.07072	0.1414	1.41%	0
Overall		4	9.725	8.941	10.51	9	10.1	0.2462	0.4924	5.06%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	7.95	7.315	8.585	7.9	8	0.03535	0.0707	0.89%	0
100		2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0
Overall		4	7.925	7.845	8.005	7.9	8	0.025	0.05	0.63%	0 (0%)

Salinity-ppt

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	25	-38.53	88.53	20	30	3.536	7.071	28.28%	0
100		2	20	20	20	20	20	0	0	0.00%	0
Overall		4	22.5	14.54	30.46	20	30	2.5	5	22.22%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
100		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
Overall		4	14.85	14.76	14.94	14.8	14.9	0.02887	0.05773	0.39%	0 (0%)

aquatic bioassay & consulting laboratories, inc

May 13, 2021

Ms. Virendra Patel
Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841

Dear Ms. Patel:

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

CLIENT:	Eurofins Calscience LLC
SAMPLE I.D.:	Arroyo_Simi-Sed_20210414 (570-56288-1)
DATE RECEIVED:	4/15/2021
ABC LAB. NO.:	CSE0421.444

CHRONIC MYTILUS SEDIMENT WATER INTERFACE BIOASSAY

NOEC	=	100.00 %
TUc	=	1.00
EC25	=	>100.00 %
EC50	=	>100.00 %

Yours very truly,

A. Scott Johnson
Laboratory Director

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

CETIS Summary Report

Report Date: 13 May-21 14:47 (p 1 of 1)
Test Code/ID: CSE0421.444mn / 03-0668-5507

Mussel Shell Development Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	11-8837-0959	**Test Type:**	Development-Survival	**Analyst:**	Joe Freas
Start Date:	19 Apr-21 14:00	**Protocol:**	EPA/600/R-95/136 (1995)	**Diluent:**	Laboratory Water
Ending Date:	21 Apr-21 14:00	**Species:**	Mytilus galloprovincialis	**Brine:**	
Test Length:	48h	**Taxon:**	Bivalvia	**Source:**	Carlsbad Aquafarms CA **Age:**
Sample ID:	02-8413-5111	**Code:**	CSE0421.444m	**Project:**	Boeing-SSFL NPDES Permit 2015
Sample Date:	14 Apr-21 08:00	**Material:**	Sediment	**Source:**	Bioassay Report
Receipt Date:	15 Apr-21 10:30	**CAS (PC):**		**Station:**	Arroyo_Simi-Sed_20210414 (570-562
Sample Age:	5d 6h	**Client:**	Eurofins Calscience		

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
14-0343-2624	Combined Proportion Norma	Equal Variance t Two-Sample Test	0.5717	100% passed combined proportion normal	1

Test Acceptability

				TAC Limits			
Analysis ID	Endpoint	Attribute	Test Stat	Lower	Upper	Overlap	Decision
14-0343-2624	Combined Proportion Norma	PMSD	0.009979	<<	0.25	No	Passes Criteria

Combined Proportion Normal Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	5	0.9886	0.9788	0.9985	0.9763	0.9953	0.0035	0.0079	0.80%	0.00%
100		5	0.9896	0.9808	0.9983	0.9810	1.0000	0.0031	0.0070	0.71%	-0.10%

Combined Proportion Normal Detail MD5: 28359BDFB29AC7A3D17F34AD03EA2D10

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	0.9858	0.9763	0.9953	0.9905	0.9953
100		0.9905	1.0000	0.9810	0.9905	0.9858

Combined Proportion Normal Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	208/211	206/211	210/211	209/211	210/211
100		209/211	211/211	207/211	209/211	208/211

CETIS Analytical Report

Mussel Shell Development Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	14-0343-2624	**Endpoint:**	Combined Proportion Normal	**CETIS Version:**	CETISv1.9.7
Analyzed:	13 May-21 14:34	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	13 May-21 14:33	**MD5 Hash:**	28359BDFB29AC7A3D17F34AD03EA2D10	**Editor ID:**	000-066-201-4
Batch ID:	11-8837-0959	**Test Type:**	Development-Survival	**Analyst:**	Joe Freas
Start Date:	19 Apr-21 14:00	**Protocol:**	EPA/600/R-95/136 (1995)	**Diluent:**	Laboratory Water
Ending Date:	21 Apr-21 14:00	**Species:**	Mytilus galloprovincialis	**Brine:**	
Test Length:	48h	**Taxon:**	Bivalvia	**Source:**	Carlsbad Aquafarms CA **Age:**
Sample ID:	02-8413-5111	**Code:**	CSE0421.444m	**Project:**	Boeing-SSFL NPDES Permit 2015
Sample Date:	14 Apr-21 08:00	**Material:**	Sediment	**Source:**	Bioassay Report
Receipt Date:	15 Apr-21 10:30	**CAS (PC):**		**Station:**	Arroyo_Simi-Sed_20210414 (570-562
Sample Age:	5d 6h	**Client:**	Eurofins Calscience		

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed combined proportion normal endpoint	1.00%

Equal Variance t Two-Sample Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		100	-0.1867	1.86	0.044	8	CDF	0.5717	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
PMSD	0.009979	<<	0.25	No	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	4.964E-05	4.964E-05	1	0.03486	0.8565	Non-Significant Effect
Error	0.0113938	0.0014242	8			
Total	0.0114435		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Levene Equality of Variance Test	0.04033	11.26	0.8458	Equal Variances
	Mod Levene Equality of Variance Test	0.02896	13.75	0.8705	Equal Variances
	Variance Ratio F Test	1.158	23.15	0.8905	Equal Variances
Distribution	Anderson-Darling A2 Test	0.231	3.878	0.8338	Normal Distribution
	D'Agostino Skewness Test	0.4267	2.576	0.6696	Normal Distribution
	Kolmogorov-Smirnov D Test	0.1512	0.3025	0.9274	Normal Distribution
	Shapiro-Wilk W Normality Test	0.9696	0.7411	0.8875	Normal Distribution

Combined Proportion Normal Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	5	0.9886	0.9788	0.9985	0.9905	0.9763	0.9953	0.0035	0.80%	0.00%
100		5	0.9896	0.9808	0.9983	0.9905	0.9810	1.0000	0.0031	0.71%	-0.10%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	5	1.4690	1.4240	1.5140	1.4730	1.4160	1.5020	0.0163	2.47%	0.00%
100		5	1.4730	1.4250	1.5220	1.4730	1.4330	1.5360	0.0175	2.65%	-0.30%

Combined Proportion Normal Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	0.9858	0.9763	0.9953	0.9905	0.9953
100		0.9905	1.0000	0.9810	0.9905	0.9858

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	N	1.4510	1.4160	1.5020	1.4730	1.5020
100		1.4730	1.5360	1.4330	1.4730	1.4510

Mussel Shell Development Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	14-0343-2624	**Endpoint:**	Combined Proportion Normal	**CETIS Version:**	CETISv1.9.7
Analyzed:	13 May-21 14:34	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	13 May-21 14:33	**MD5 Hash:**	28359BDFB29AC7A3D17F34AD03EA2D10	**Editor ID:**	000-066-201-4

CETIS Measurement Report

Mussel Shell Development Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	11-8837-0959	**Test Type:**	Development-Survival	**Analyst:**	Joe Freas
Start Date:	19 Apr-21 14:00	**Protocol:**	EPA/600/R-95/136 (1995)	**Diluent:**	Laboratory Water
Ending Date:	21 Apr-21 14:00	**Species:**	Mytilus galloprovincialis	**Brine:**	
Test Length:	48h	**Taxon:**	Bivalvia	**Source:**	Carlsbad Aquafarms CA **Age:**
Sample ID:	02-8413-5111	**Code:**	CSE0421.444m	**Project:**	Boeing-SSFL NPDES Permit 2015
Sample Date:	14 Apr-21 08:00	**Material:**	Sediment	**Source:**	Bioassay Report
Receipt Date:	15 Apr-21 10:30	**CAS (PC):**		**Station:**	Arroyo_Simi-Sed_20210414 (570-562
Sample Age:	5d 6h	**Client:**	Eurofins Calscience		

Dissolved Oxygen-mg/L

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	9.75	7.844	11.66	9.6	9.9	0.1061	0.2121	2.18%	0
100		2	9.85	9.215	10.49	9.8	9.9	0.03535	0.0707	0.72%	0
Overall		4	9.8	9.575	10.03	9.6	9.9	0.07071	0.1414	1.44%	0 (0%)

pH-Units

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	7.8	6.529	9.071	7.7	7.9	0.07071	0.1414	1.81%	0
100		2	7.9	7.884	7.916	7.9	7.9	0	0	0.00%	0
Overall		4	7.85	7.691	8.009	7.7	7.9	0.05	0.1	1.27%	0 (0%)

Salinity-ppt

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	34	34	34	34	34	0	0	0.00%	0
100		2	34	34	34	34	34	0	0	0.00%	0
Overall		4	34	34	34	34	34	0	0	0.00%	0 (0%)

Temperature-°C

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	N	2	14.8	14.78	14.82	14.8	14.8	0	0	0.00%	0
100		2	14.85	14.21	15.49	14.8	14.9	0.03539	0.07077	0.48%	0
Overall		4	14.83	14.75	14.9	14.8	14.9	0.025	0.05	0.34%	0 (0%)

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax: 714-894-7501

Chain of Custody Record

C570-56288

5/13/2021

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Virendra	Carrier Tracking No(s):	COC No: 570-94472.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Virendra.Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Aquatic Bioassay		Accreditations Required (See note): State Program - California		Job #: 570-56288-2
Address: 29 North Olive Street, ,	Due Date Requested:			
City: Ventura	TAT Requested (days): 10 days Standard TAT			
State, Zip: CA, 93001				
Phone:	PO #:			
Email:	WO #:			
Project Name: Boeing SSFL NPDES Permit 2015	Project #: 570-56288			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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 - EDA	Z - other (specify)

Other:

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)	SUB (Bioassay-Chronic 10day eohaustorius)/ Bioassay-Chronic 10day eohaustorius	SUB (48-hour Bivalve Embryo toxicity)/ 48-hour Bivalve Embryo toxicity	Special Instructions/Note:
Arroyo_Simi-Sed_20210414 (570-56288-1)	4/14/21	08:00 Pacific		Solid	X	X	sub to Aquatic Bioassay Consultants-send 4 1 liter wide mouth plastic containers

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

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

Ver: 11/01/2020

Eurofins Calscience Irvine

CHAIN OF CUSTODY FORM

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

Eurofins Calscience Irvine Contact: Christian Bondoc
17461 Derian Ave Suite #100
Irvine CA 92614
Tel: 949-260-3218

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.

Sampler: Dan Smith

Project:
Boeing-SSFL NPDES
Permit 2015
Annual Sediment Arroyo Simi-Frontier Park

Project Manager: Katherine Miller
520.289.8606, 520.904.6944 (cell)

Field Manager: Mark Dominick
978.234.5033, 818.599.0702 (cell)

Field Readings | Meter serial #: V0 7300 ivD

Field readings: (Include units)
Time of readings: 0714
pH: 6.78 pH unit
Temp: 58.3 °C/F
DO: 5.86 mg/L
Conductivity: 2060 µmhos/cm
Velocity: 0.0 ft/sec
Field readings QC
Checked by: [signature]
Date/Time: 4-14-2021 / 0715

ANALYSIS REQUIRED (all A)

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	Total Ammonia (SM4500-NH3-D)	Total Organic Carbon (9060)	PCBs (SW8082)	Chlordane, Dieldrin, Toxaphene, 4,4-DDD, 4,4-DDE, 4,4-DDT (SW8081A)	48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas) (EPAR-95/136) ABC Labs in Ventura, CA	Chronic 10-day eohaustorius estuarius Toxicity (EPA/600/R-94/025) ABC Labs in Ventura, CA	% Moisture (2540G)	Particle Size Distribution (D422M)	Comments
Arroyo Simi	Arroyo_Simi-Sed_20210414	4/14/2021 / 0800	SE	9 oz Jar	3	None	165	Yes	X								
			SE	9 oz Jar	1	None	246	No		X							
			SE	9 oz Jar	3	None	280	Yes			X						
			SE	9 oz Jar	3	None	290	Yes				X					
			SE	1L wide mouth Plastic	3	None	295	No					X				Deliver to ABC Labs in Ventura, CA *
			SE	1L wide mouth Plastic	4	4°C in the Dark	300	No						X			Keep sample in cooler in the dark until delivered to ABC Labs *
			SE	9 oz Jar	1	None	305	No							X		
			SE	9 oz Jar	1	None	310	No								X	

* - Hand delivered directly to ABC Labs by H:A personnel. This COC used for ABC samples only.

Legend: A=Annual

Relinquished By	Date/Time	Company	Received By	Date/Time
[signature]	4-14-2021 / 1140	H:A	Victor [signature]	4-14-21 1140

Turn-around time: (Check)
24 Hour: _ 72 Hour: _ 10 Day: X
48 Hour: _ 5 Day: _ Normal: _

Sample Integrity: (Check)
Intact: _ On Ice: _
Store samples for 6 months.
Data Requirements: (Check)
No Level _ All Level IV: X

5/13/2021

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Phone: 714-895-5494 Fax. 714-894-7501

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler	Lab PM: Patel, Virendra	Carrier Tracking No(s)	COC No: 570-94552 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Virendra Patel@eurofinset.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Frontier Global Sciences LLC		Accreditations Required (See note): State Program - California		Job #: 570-56288-1
Address: 5755 8th Street East, ,	Due Date Requested: 4/26/2021			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 425-420-9210(Fax)	PO #:			
Email:	WO #:			
Project Name: Boeing SSFL NPDES Permit 2015	Project #: 44024446			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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 - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060/ Standard Soil TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Arroyo_Simi-Sed_20210414 (570-56288-1)	4/13/21	08.00 Pacific		Solid			X	1	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/14/21 1525	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

5/13/2021

Eurofins Calscience Irvine

CHAIN OF CUSTODY FORM

570-56288 Chain of Custody

Loc 570
56288

VO730040

Client Name/Address	Project	Field Readings	Meter serial #
Haley & Aldrich 5333 Miss on Center Rd Suite 300 San Diego CA 92108	Project Boeing-SSFL NPDES Permit 2015 **Annual Sediment Arroyo Simi-Frontier Park**	**Field readings. (include units)** Time of readings 0714 pH 6.79 pH unit Temp 58.3 °C/F DO 5.86 mg/L Conductivity 2060 µmhos/cm Velocity 0.0 ft/sec **Field readings QC** Checked by: MD Date/Time: 4-14-2021/0715	
Eurofins Calscience Irvine Contact Christian Bondoc 17461 Derian Ave Suite #100 Irvine CA 92614 Tel 949-260-3218			
TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2019-22-TestAmerica by and between Haley & Aldrich, Inc. its subsidiaries and affiliates, and TestAmerica Laboratories Inc.	Project Manager: Katherine Miller 520.289.8606, 520.904.6944 (cell)		
Sampler Dan Smith	Field Manager: Mark Dominick 978.234.5033 818 599 0702 (cell)		

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	ANALYSIS REQUIRED: Total Ammonia (SM4500-NH3-D)	Total Organic Carbon (9060)	PCBs (SW8082)	Chlordane, Dieldrin, Toxaphene, 4,4-DDD, 4,4-DDE, 4,4-DDT (SW8081A)	48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas) (EPAR-95/136) ABC Labs in Ventura CA	Chronic 10-day echaustorius estuarius Toxicity (EPA/600/R-94/025) ABC Labs in Ventura CA	% Moisture (2540G)	Particle Size Distribution (D422M)	Comments
Arroyo Simi	Arroyo_Sim -Sed_20210414	4/14/2021 0800	SE	9 oz Jar	3	None	165	Yes	X								
			SE	9 oz Jar	1	None	248	No		X							
			SE	9 oz Jar	3	None	280	Yes			X						
			SE	9 oz Jar	3	None	290	Yes				X					
			SE	1L wide mouth Plastic	3	None	295	No					X				Deliver to ABC Labs in Ventura, CA *
			SE	1L wide mouth Plastic	4	4°C in the Dark	300	No						X			Keep sample in cooler in the dark until delivered to ABC Labs *
			SE	9 oz Jar	1	None	305	No							X		
			SE	9 oz Jar	1	None	310	No								X	

* - Hand delivered directly to ABC Labs by H.A personnel

Legend A=Annual

Relinquished By	Date/Time:	Company:	Received By	Date/Time:
	4-14-2021/1010	H.A		04/14/21 1010
	04/14/21 1230	EC1		04/14/21 1230

Turn-around time: (Check)
24 Hour 72 Hour ___ 10 Day: X
48 Hour 5 Day: ___ Normal: ___

Sample Integrity: (Check)
Intact: _ On Ice: ___
Store samples for 6 months.
Data Requirements: (Check)
No Level All Level IV: X

3.0/3.4 SCS

5/13/2021

2019-2020 Rainy Season
Version 2

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 570-56288-2
SDG Number: Annual Sediment Arroyo Frontier Park

Login Number: 56288
List Number: 1
Creator: Patel, Virendra

List Source: Eurofins Calscience

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

APPENDIX F

Annual Comprehensive Site Compliance Evaluation Report

APPENDIX F

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Appendix F – Annual Comprehensive Site Compliance Evaluation Report,
Reporting Year July 1, 2020 – June 30, 2021

APPENDIX F

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT
REPORTING YEAR JULY 1, 2020 – JUNE 30, 2021

This Annual Comprehensive Site Compliance Evaluation Report (Annual Evaluation) was prepared for The Boeing Company (Boeing) Santa Susana Field Laboratory (Site), located in Simi Hills, Ventura County, California in general accordance with Attachment G (Section IX.D.) of the Site's Waste Discharge Requirements (National Pollutant Discharge Elimination System [NPDES] Permit No. CA0001309, CI No. 6027). This Report evaluates compliance with the Site-Wide Stormwater Pollution Prevention Plan (SWPPP) during reporting year July 1, 2020, through June 30, 2021. The Annual Evaluation was conducted between April 19 – 20 and 26 – 29, 2021 by Mark Dominick, PG, QSD of Haley & Aldrich, Inc.

The Inspector observed minor amounts of sediment delivered or accumulated around sediment control Best Management Practices (BMP) due to the areas upstream from most of the BMPs being well-vegetated with a diversity of plants.

REVIEW OF VISUAL OBSERVATIONS RECORDS AND SAMPLING AND ANALYSIS RESULTS

For reporting year July 1, 2020, through June 30, 2021, the Inspector reviewed all inspection forms during the Annual Evaluation, up to March 2021, that documented inspections/visual observations. All inspection forms that were completed for the reporting year after the Annual Evaluation were reviewed by June 30, 2021; each inspection form was complete or revised as needed. A process exists and has been implemented for non-compliance items to be properly evaluated and corrected.

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

POTENTIAL POLLUTANT SOURCE VISUAL INSPECTION

For reporting year July 1, 2020, through June 30, 2021, the Inspector conducted visual inspections at the Site during the Annual Evaluation at buildings, equipment, and surrounding areas to evaluate the status of existing potential pollutant sources. Areas where known potential pollutants exist have BMPs implemented to minimize and/or eliminate the potential for pollutant releases. No additional areas were identified that require additional BMPs.

BEST MANAGEMENT PRACTICE REVIEW

For reporting year July 1, 2020, through June 30, 2021, the Inspector reviewed and evaluated the structural and non-structural BMPs at the Site during the Annual Evaluation. The Inspector determined the BMPs were adequate, properly implemented, required minor maintenance, and in compliance with the SWPPP and BMP plan. The onsite evaluation did result in recommendations which the Inspector identified on the inspection forms and verified that the corrective actions were completed prior to the issuance of the Second Quarter DMR or scheduled to be completed during the Third Quarter of 2021.

SWPPP REVISIONS AND SCHEDULE

The Los Angeles Regional Water Quality Control Board (Regional Board) adopted the 2015 NPDES Permit No. R4-2015-0033 on February 12, 2015, effective April 1, 2015, to revise the existing 2010 NPDES Permit No. R4-2010-0090. A revised SWPPP was submitted on June 30, 2016, to the Regional Board in accordance with the terms of the new 2015 Permit. The most recent Site-wide SWPPP was updated in accordance with the terms of the 2015 Permit and submitted to the Regional Board on December 17, 2020, as version 7. Version 8 of the SWPPP will be completed in the fall 2021 based on observations made during the Annual Evaluation and include the following revisions:

- Updated text to Santa Susana Site Areas (Section 2.3);
- Updated text to Surface Water Drainages (Section 2.4.1);
- Updated text to Santa Susana Site Maps of Active Areas (Section 2.6);

- Updated text to Significant Materials and Potential Sources (Sections 2.8.1.1 and 2.8.1.4);
- Updated text to Dust and Particulate Generating Activities (Section 2.8.2);
- Updated text to Interim Soil Removal Actions (Section 2.8.6.2);
- Updated text to Material Handling and Storage (Section 4.1.3);
- Added text to New BMPs to be Implemented (Section 4.3);
- Updated text to the Sampling and Analysis Plan section;
- Updated text to the References (Section 6);
- Updated figures;
- Updated Significant Materials Inventory (Appendix C);
- Updated Spill Prevention and Response Plan (Appendix E); and
- Updated inspection forms (Appendix F).

NON-COMPLIANCE INCIDENTS AND CORRECTIVE ACTIONS TAKEN

As part of the Annual Evaluation, the Inspector reviewed the non-compliance issues (Permit Limit exceedances) discussed in the DMRs and reviewed the corrective actions during the evaluation period. The Inspector has determined that the corrective actions were appropriate and have been completed. During the onsite portion of the annual evaluation, minor recommendations were made to Boeing and the Inspector has determined that the recommendations were either completed prior to the issuance of the Second Quarter DMR or scheduled to be completed during the Third Quarter of 2021.

CERTIFICATION

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

APPENDIX G

Annual Bioassessment Sampling Results

APPENDIX G

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Date: May 14th, 2021

To: Katherine Miller
Haley & Aldrich
600 South Meyer Avenue, Suite 100
Tucson, AZ 85701-2554

From: Scott Johnson
Laboratory Director
Aquatic Bioassay and Consulting Laboratories
29 N. Olive St.
Ventura, CA 93001

RE: BIOASSESSMENT SAMPLING FOR THE BOEING COMPANY AT THE SANTA SUSANA FIELD LABORATORY (2021)

The Bioassessment Sampling and Analysis Plan for The Boeing Company at the Santa Susana Field Laboratory (SSFL) specifies that spring/summer bioassessment sampling occur from four to six weeks following the last major storm event of the 2021 rain season. This time period was established by, and is included in, the state-wide bioassessment protocols established by the State of California's Surface Water Ambient Monitoring Program (SWAMP 2016). Flowing water through a stream reach over this period of time is necessary for the aquatic benthic macroinvertebrate (BMI) community that might reside there to become established and ensures that valid BMI samples will be collected.

The 2020 to 2021 rain year was characterized by below average rainfall amounts. Between July 2020 and April 2021, a total of 4.53 inches of rain fell on the SSFL property. The last significant rainfall occurred in March (total = 1.19 inches) (Figure 1). On April 28th, 2021, 45 days following the last significant rainfall (0.21 inches) on March 15th, the two NPDES permitted sites on the SSFL were visited by Aquatic Bioassay and Consulting Laboratory Biologists to determine if bioassessment samples could be collected. Neither SSFL-001 nor SSFL-006 had flow and both were completely dry across their entire reaches (see photos).

If you have any questions regarding this memo or future sampling plans, please contact me directly.

Sincerely,

Scott Johnson
Laboratory Director
805 643 5621 x 11
scott@aquaticbioassay.com

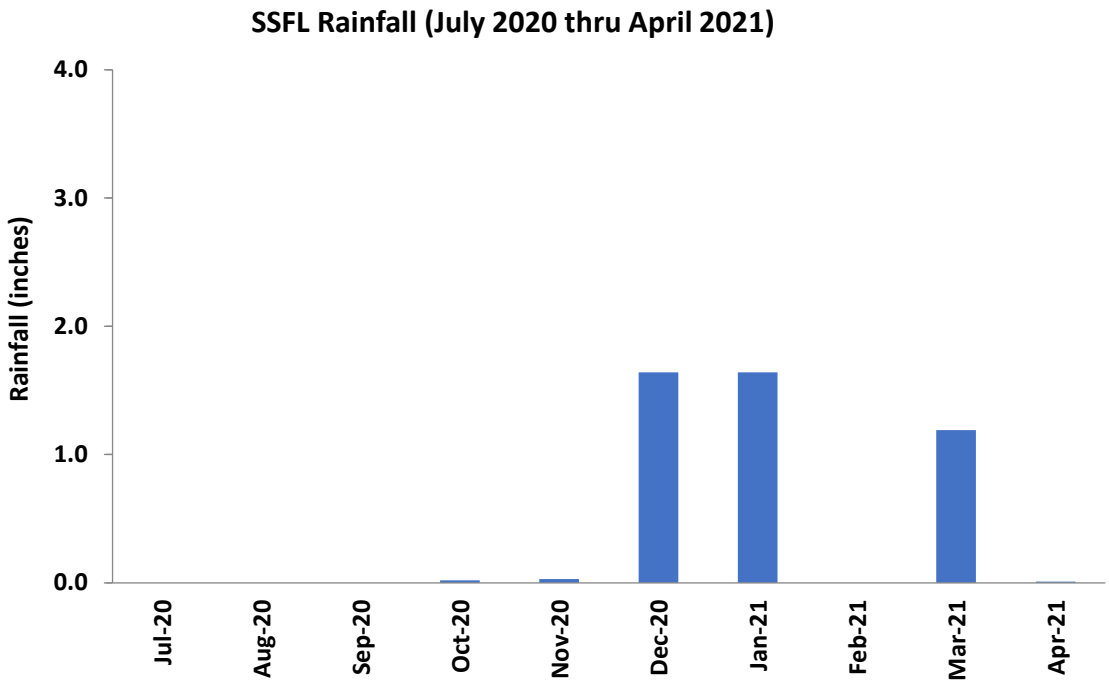

Figure 1. Rainfall (inches) measured July 2020 through April 2021 at SSFL.

Figure 2. Photos taken downstream and upstream of each permitted discharge point from the SSFL property (April 2021).

SSFL-001, downstream

SSFL-001, upstream

SSFL-006, downstream

SSFL-006, upstream