The Boeing Company
Santa Susana Field Laboratory
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Via Email to losangeles@waterboards.ca.gov

February 12, 2021

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

Subject: Fourth Quarter 2020 NPDES Discharge Monitoring Report
Compliance File CI-6027 and NPDES No. CA0001309
Santa Susana Field Laboratory
Ventura County, California

The Boeing Company (Boeing) hereby submits this Discharge Monitoring Report (DMR) for the Santa Susana Field Laboratory (Santa Susana Site) for the period of October 1 through December 31, 2020 (Fourth Quarter 2020). 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 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

FOURTH QUARTER 2020 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 Fourth Quarter 2020. Table I summarizes the Fourth Quarter 2020 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 Fourth Quarter 2020 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 Fourth Quarter 2020 activities at the stormwater treatment system (SWTS) at Outfall 011.
- **Stormwater Treatment System at Outfall 018 Activities:** This section summarizes the Fourth Quarter 2020 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 Fourth Quarter 2020, 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 Fourth Quarter 2020 by outfall location.
- **Figure 1** shows the stormwater collection and conveyance system, the Bell Creek Receiving Water sampling location (RSW-001, Outfall 002), and Santa Susana Site features; **Figure 2** shows the Arroyo Simi Receiving Water sampling location (RSW 002, Frontier Park) and upstream monitoring location.
- **Appendix A** summarizes the rainfall measured at the Santa Susana Site during the Fourth Quarter 2020.
- **Appendix B** tabulates waste shipments during the Fourth Quarter 2020.
- **Appendix C** presents chemical analytical results from the Fourth Quarter 2020 stormwater and/or receiving water sample discharge monitoring in tabular form by outfall locations, constituents evaluated (analytes), sample dates, and data validation qualifiers.
- **Appendix D** contains copies of the laboratory analytical reports, chain-of-custody forms, and data validation reports (if validation was performed).

DISCHARGE AND SAMPLE COLLECTION SUMMARY

The Santa Susana Site had one qualifying rain event during the Fourth Quarter 2020 that measured greater than 0.1 inch of rainfall within a 24-hour period and was preceded by at least 72 hours of dry weather (Appendix A). Automated flow-weighted composite samplers (autosamplers) were set in preparation for all 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.

One quarterly offsite receiving water sample was collected at the Arroyo Simi location (RSW-002, Frontier Park; see Figure 2).

Table I summarizes the Fourth Quarter 2020 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 Fourth Quarter 2020

Date	Outfall/Location	Sample Frequency	Sample Type
12/17/2020	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Quarterly Surface Water	Grab

All analyses were conducted at analytical laboratories certified by the State Water Resources Control Board (SWRCB) for such analyses (i.e., all have current certification from the Environmental Laboratory Accreditation Program [ELAP] established by the California Environmental Laboratory Improvement Act) or have been approved by the SWRCB Executive Officer in accordance with current U.S. Environmental Protection Agency (EPA) guideline procedures or as specified in the NPDES Permit. Laboratory analytical reports, including validation reports and notes (if validation was performed), are included in Appendix D. Attachment H of the NPDES Permit presents the SWRCB's minimum levels laboratories are expected to achieve for reporting and determining compliance with NPDES Permit Limits. The analytical laboratory achieved these minimum levels in the Fourth Quarter 2020 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, the reporting limit was used to determine compliance.

RECEIVING WATER SURVEYS

The receiving water monitoring program required by the 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 Fourth Quarter 2020, Outfalls 002, 008, and 009 did not discharge, thus, no receiving water surveys were conducted.

SUMMARY OF EXCEEDANCES AND/OR NON-COMPLIANCE

No surface water discharges occurred from the Santa Susana Site during Fourth Quarter 2020. As such, there are no onsite compliance issues to report for this period. Additionally, in the quarterly surface water sample collected at Arroyo Simi sampling location (RSW-002, Frontier Park) in Simi Valley, no constituents exceeded receiving water limits.

STORMWATER TREATMENT SYSTEM AT OUTFALL 011 ACTIVITIES

The SWTS located near R-1 Pond is situated to discharge through Outfall 011. Maintenance items were completed in the Fourth Quarter 2020 as follows:

- Removed non-functioning submersible pump in the sump and installed two new submersible pumps.
- Installed new chemical compatible pressure gauges in the potassium permanganate skid.
- Installed a check valve on the GAC bypass line.
- Repositioned the sodium hydroxide tank to allow access to the drain valve and to ensure all connections are located in secondary containment.
- Removed the ACTIFLO controlled sodium hydroxide chemical skid.
- Fabricated and installed new chemical lines with drain lines and mounting plate for the sodium hydroxide pumps.
- Installed a glove rack in all chemical skids.
- Replaced the belts on the microsand pumps.
- Hydrotested the entire system and coated the Sand Filters with potassium permanganate in preparation of system operation.
- Replaced the HMI screen for ACTIFLO.
- Applied epoxy to the rust spots on the floor of the Supernatant Tank.
- Installed a new pH controller on ACTIFLO.
- Replaced the damage hose clamp on the drain port of the hydrochloric acid tank.
- Performed weed abatement around the intake structure.
- Trimmed the limbs of the oak tree overhanging the electrical conduits.

The SWTS did not operate in the Fourth Quarter 2020.

STORMWATER TREATMENT SYSTEM AT OUTFALL 018 ACTIVITIES

The SWTS located at Silvernale Pond discharges through Outfall 018. Maintenance items were completed in the Fourth Quarter 2020 as follows:

- Removed dried sediment from the Weir Tanks as part of end of season cleanup.
- Raised the instrument panel for the OC Tank to allow for easier operation.
- Rebuilt the spare drop-in unit for P-101.
- Installed a pipe support for SWTS 018 discharge at the Y Intersection below Silvernale Pond.
- Relocated the unused water lines in front of system driveway to allow easier access to placing dewatering bins for Screw Press Operation.
- Replaced the belts on the microsand pumps.
- Replaced the damaged air lines for the backwash solenoids.

- Repaired the shaft for P-106 and rebuilt the pump.
- Replaced the frozen iron valves on the Backwash pump with (2) new stainless steel valves.
- Hydrotested the back end of the system, replaced several Victaulic fittings and gaskets on the Sand Filters.
- Coasted the Sand Filters with potassium permanganate in preparation of system operation.
- Replaced a cracked flange in ChemBox 4.
- Installed a new mixer motor in the potassium permanganate tank.
- Painted the Satellite Accumulation Shed and the Polymer Skid.

The SWTS did not operate in the Fourth Quarter 2020.

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 Fourth Quarter 2020.

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 Fourth Quarter 2020 by outfall or BMP location.

TABLE III: Additional Fourth Quarter 2020 BMP Activities

Outfall or BMP Location	BMP Activities During Fourth Quarter 2020
001	Removed a rusty angle iron pipe support over drainage channel.
002	Installed wattles at the base gravel lot.
006	Installed wattles around the new DOE wells; performed brush clearance along conveyance lines.
007	Installed a new felt pathway to allow safe access to the floats.
004, 005, 007, 010, and 011	Inspected the oil level, the belts and greased all fittings for the conveyance pumps.
011	Installed a new UV-rated corrugated cover for the media bed.
Perimeter Pond	Installed a new 10" check valve on the Charles King pump line at Perimeter Pond; performed weed abatement along conveyance line to allow for a fire break; and installed a new voltage transient suppressor for the flow meter.
Area I	Installed new wattles at the Bioswale inlets and at the fence along the hazardous waste storage yard; installed new wattles in the Upper Parking Lot.
018/Area III	Performed brush clearance along the R-2A Pond conveyance and SWTS 018 discharge lines to create a fire break.
Roadway	Removed deteriorated wattles across from Area II Landfill and installed new wattles.
R-2A Pond	Performed brush clearance around the intakes at R-2A Pond; removed the conveyance line flow meter and sent in for repair.
005-007 Pad	Positioned boulders to prevent vehicle track-out.
Southern Bioswale	Fixed water leak in the northwest section of the Southern Bioswale.
Helipad	Performed brush clearance from around helipad totalizer and 203 Tank valving.

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 Fourth Quarter 2020, NASA maintained wattles as perimeter and linear sediment controls, maintained silt fencing, and installed gravel/riprap in areas within these sites where construction activities had been completed. A Notice of Termination (NOT) was submitted to Regional Water Quality Control Board (RWQCB) in Second Quarter 2020.

DOE-Related Activities

Demolition BMPs and stormwater activities covered by DOE's Construction SWPPP for the HWMF and RMHF areas are inspected in accordance with the Construction General Permit (CGP) (DOE, 2020a, 2020b).

Expert Panel-Related Activities

The BMP activities discussed below were performed, commenced, or completed during the Fourth Quarter 2020 in coordination with the Expert Panel.

Culvert Modifications

Twelve culvert modifications (CMs) 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 Fourth Quarter 2020 activities included:

- BMP inspections, including the culvert inlets and riprap check dams; and
- Cleaning CM basins and weir boards of debris as needed.

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 Fourth Quarter 2020 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 Fourth Quarter 2020 activities included BMP inspections, weed abatement and brush clearance along the road, and removal of debris in culvert at the top of the road.

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 Fourth Quarter 2020 activities included continued BMP inspections, clearing the areas of sediment and debris, and removal of damaged and spent fiber rolls.

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 Fourth Quarter 2020 activities included BMP inspections and sediment and debris removal in and around the media bed.

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 Fourth Quarter 2020 activities included BMP inspections and removal of damaged and spent fiber rolls.

Lower Lot Biofilter

The lower lot biofilter is a stormwater treatment BMP designed and built to capture, convey, and treat stormwater from the lower parking 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 Fourth Quarter 2020 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, and inspections of surrounding BMPs.

A total of 116,300 gallons of stormwater was pumped from the cistern to the sedimentation basin during the Fourth Quarter 2020.

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 Fourth Quarter 2020 activities included BMP inspections and accumulated sediment removal from the inlet structures.

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.

The Fourth Quarter 2020 activities included BMP inspections. 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.

NASA and Boeing BMP Monitoring-Related Activities

In addition to activities performed in coordination with the Expert Panel described above, BMP performance monitoring samples were collected in the watershed associated with Outfall 003 during the Fourth Quarter 2020. These sampling results will be reported by the Expert Panel in their 2021 Annual Report.

Northern Drainage BMPs

Boeing restored the Northern Drainage (Outfall 009) following cleanup activities performed under the Department of Toxic Substance Control (DTSC) 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. Boeing will continue to inspect the Northern Drainage BMPs annually and maintain them on an as-needed basis. No RMMP-related inspections of Northern Drainage BMPs were performed during Fourth Quarter 2020.

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.

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.

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

CERTIFICATION

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

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

Executed on the 12th of February 2021 at The Boeing Company, Seal Beach, California Site.

Sincerely,

Kim O'Rourke

Kim O'Rourke
Remediation 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 – Fourth Quarter 2020 Rainfall Data Summary
Appendix B – Fourth Quarter 2020 Waste Shipment Summary Tables
Appendix C – Fourth Quarter 2020 Discharge Monitoring Data Summary Tables
Appendix D – Fourth Quarter 2020 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports

c: Los Angeles Regional Water Quality Control Board; Attn: Mr. Duong H. Trinh
Los Angeles Regional Water Quality Control Board; Attn: Ms. Kelly Bronwyn
California Department of Toxic Substances Control; Attn: Mr. Mark Malinowski
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. 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.

4. U.S. Department of Energy, 2020b. 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, July.

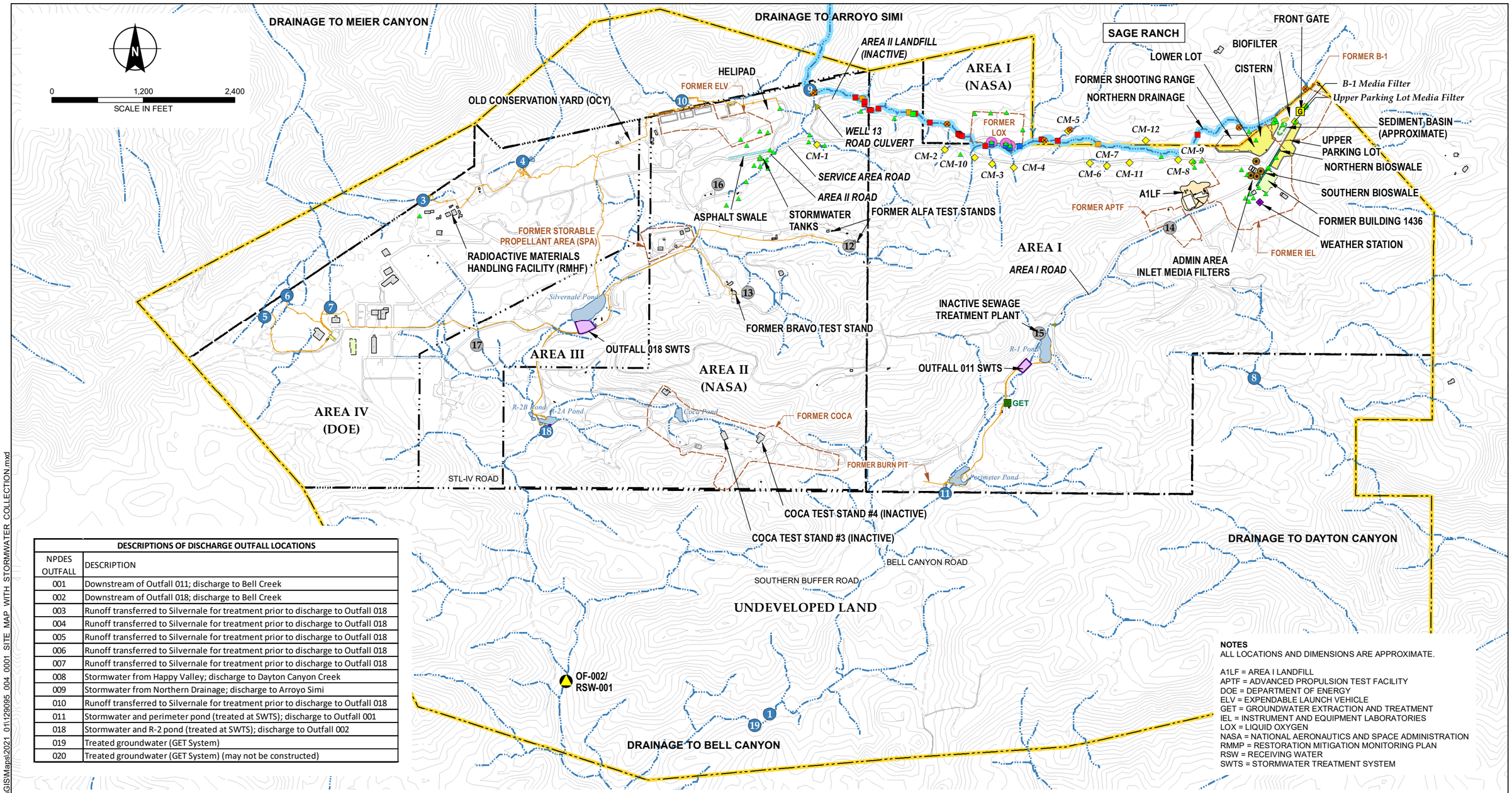
5. Geosyntec and the Expert Panel, 2020. Santa Susana Field Laboratory Site-Wide Stormwater Annual Report, 2019/20 Reporting Year, Ventura County, California (NPDES No. CA0001309, CI No.6027). 31 October.

6. 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.

7. Haley & Aldrich, Inc., 2020. Stormwater Pollution and Prevention Plan (Version 7 for Compliance with 2015 NPDES Permit). 26 September.

8. 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

LEGEND

- ACTIVE NPDES OUTFALL LOCATION (19)
- FORMER NPDES OUTFALL LOCATION (17)
- 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

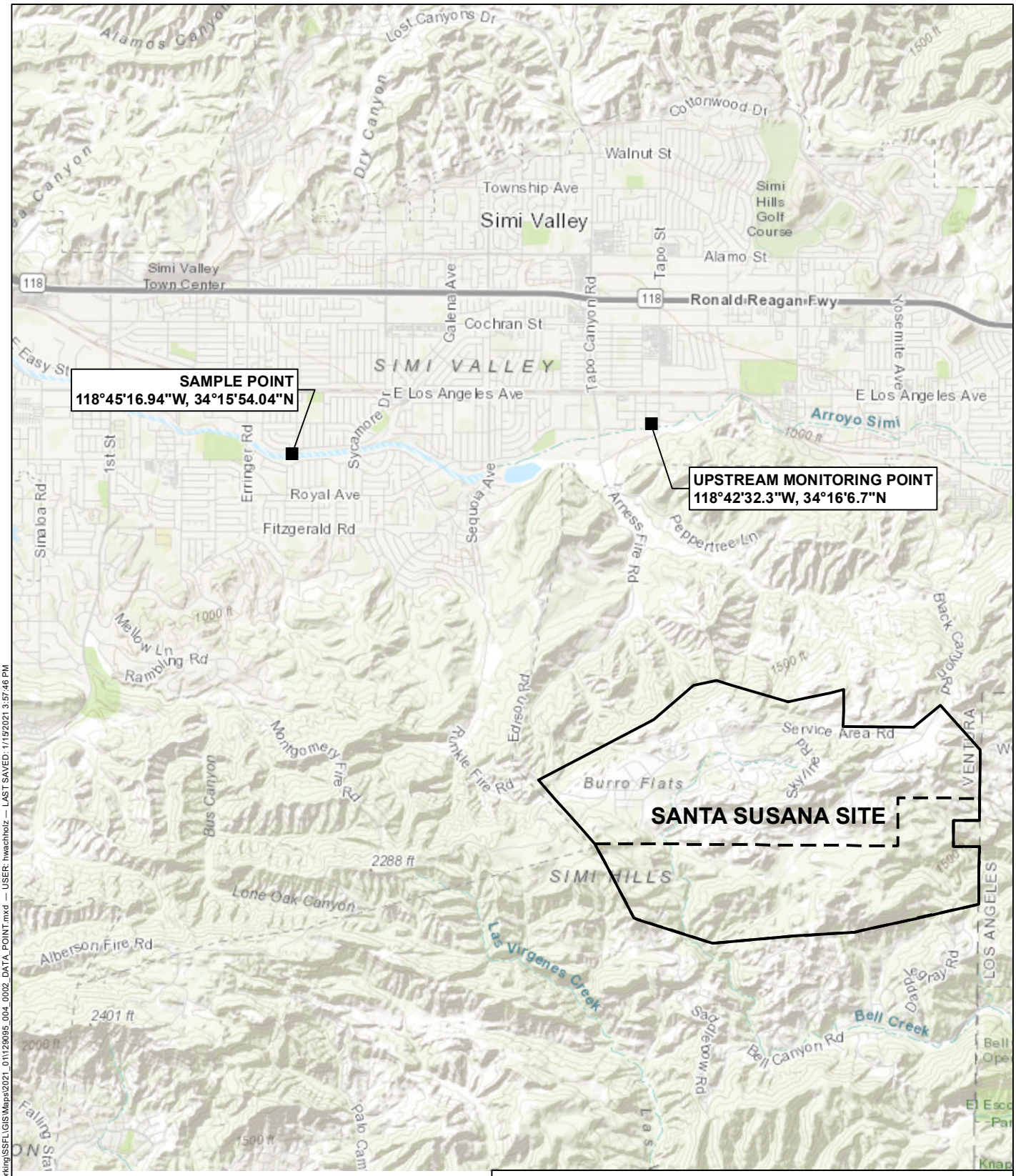
NPDES PERMIT COMPLIANCE FOURTH QUARTER 2020
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

SITE MAP WITH STORMWATER COLLECTION AND CONVEYANCE SYSTEM AND SITE FEATURES

FEBRUARY 2021

FIGURE 1

C:\Users\hwachholz\Documents\working\SSFL\GIS\Maps\2021_01\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.

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SCALE IN MILES

HALEY ALDRICH

NPDES PERMIT COMPLIANCE FOURTH QUARTER 2020
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

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

FEBRUARY 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: 1/19/2021 3:57:46 PM

APPENDIX A

Fourth Quarter 2020 Rainfall Data Summary

APPENDIX A

TABLE OF CONTENTS

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Rain
Month/Year: October 2020

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	0.01	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
E	17	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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: Rain
Month/Year: November 2020

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	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
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	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
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 calibration (November 9). For the off-line event, the rain gauge at Sage Ranch did not record rainfall on November 9 during hour 0800-0900, however field forms confirm there was no rain on November 9.

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Rain
Month/Year: December 2020

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	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
	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	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
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	0.24	0.11	0.01	0.02	0.02	0.13	0.07	0.01	0.00	0.01	0.01	0.08	0.11	0.28	0.17	0.14	0.15	0.04	0.01	0.00	0.00	0.00	0.00	0.00	1.61
	29	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	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

Flags: d = Off-line part of hour, invalid hour due to semi-annual quality assurance audit (December 3). For the off-line event, the rain gauge at Sage Ranch did not record rainfall on December 3 during hour 0800-0900, however field forms confirm there was no rain on December 3.

APPENDIX B

Fourth Quarter 2020 Waste Shipment Summary Tables

APPENDIX B

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TABLE B
WASTE SHIPMENT SUMMARY TABLE

FOURTH QUARTER 2020
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	DESTINATION
Hazardous Waste, Corrosive	Solid	46	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Aragonite LLC 11600 North Aptus Road Grantsville, UT 84029
Hazardous Waste , Flammable	Aerosols	19	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors El Dorado LLC 309 American Circle El Dorado, AR 71730
Non RCRA Hazardous Waste	Solid	38	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Aragonite LLC 11600 North Aptus Road Grantsville, UT 84029
Non RCRA Hazardous Waste	Liquid	10	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Wilmington LLC 1737 East Denni Street Wilmington, CA 90744
Hazardous Waste, Flammable	Liquid	6	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Wilmington LLC 2247 South Highway 71 Kimball, NE 69145
Hazardous Waste	Liquid	55	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Wilmington LLC 2247 South Highway 71 Kimball, NE 69145
Hazardous Waste	Solid	1,366	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Wilmington LLC 2247 South Highway 71 Kimball, NE 69145
Hazardous Waste	Liquid	12,400	G	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Non RCRA Hazardous Waste	Solid	38	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	Clean Harbors Aragonite LLC 11600 North Aptus Road Grantsville, UT 84029
Non Hazardous, Non D.O.T. Regulated Waste	Solid	24	Y	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Clean Harbors Buttonwillow LLC 2500 West Lokern Road Buttonwillow, CA 93206
Non Hazardous, Non D.O.T. Regulated Material	Liquid	55	G	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	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	31,035	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	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	Liquid	713	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	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 Waste	Solid	40	Y	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Waste Management - Antelope Valley LF 1200 W. City Ranch Road Palmdale, CA 93551
Non Hazardous Waste	Liquid	35,000	G	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058	n/a	n/a	Southwest Processors, Inc. 4120 Bandini Boulevard Vernon, CA 90058
Non Hazardous, Non D.O.T. Regulated Waste	Solid	40	Y	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	n/a	n/a	Waste Management - Antelope Valley LF 1200 W. City Ranch Road Palmdale, CA 93551
Non Hazardous, Non D.O.T. Regulated Material	Liquid	905	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	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	Liquid	1,186	P	Clean Harbors Environmental Services, Inc. 42 Longwater Drive Norwell, MA 02061	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

FOURTH QUARTER 2020
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

TYPE OF WASTE	MATRIX	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	DESTINATION
Hazardous Waste	Liquid	8,500	G	American Integrated Services	n/a	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Hazardous Waste	Solid	32	Y	American Integrated Services	n/a	n/a	US Ecology Vernon Highway 95, 11 miles South of Beatty Beatty, NV 89003
Hazardous Waste	Liquid	16,900	G	Ecology Control Industries	n/a	n/a	US Ecology Vernon 5375 South Boyle Avenue Los Angeles, CA 90058
Non Hazardous, Non D.O.T. Regulated Material	Liquid	2,950	G	American Integrated Services	n/a	n/a	Crosby and Overton, Inc. 1610 W. 17th Street Long Beach, CA 90813
Non Hazardous, Non D.O.T. Regulated Material	Solid	32	Y	American Integrated Services	n/a	n/a	Chiquita Canyon Landfill 29201 Henry Mayo Drive Castaic, CA 91384
Non-Regulated Construction Debris	Solid	99,560	P	MP Environmental Services	n/a	n/a	US Ecology, Idaho 20400 Lemley Road Grandview, ID 83624
Non-Regulated Construction Debris	Solid	70	Y	MP Environmental Services	n/a	n/a	US Ecology, Idaho 20400 Lemley Road Grandview, ID 83624
Uniform Low-Level Radioactive Waste	Solid	234,340	P	MP Environmental Services	n/a	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Uniform Low-Level Radioactive Waste	Liquid	1,980	P	MP Environmental Services	n/a	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Non D.O.T. Regulated Radioactive Material	Solid	573,260	P	MP Environmental Services	n/a	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Mixed Waste	Solid	85	P	MP Environmental Services	n/a	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Uniform Low-Level Radioactive Waste, Used Oil	Liquid	275	G	MP Environmental Services	n/a	n/a	Energy Solutions, LLC Clive Disposal Site, I-80 Exit 49 Clive, UT 84029
Uniform Low-Level Radioactive Waste, Universal Waste	Solid	383	P	MP Environmental Services	n/a	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

Fourth Quarter 2020 Discharge Monitoring Data Summary Tables

APPENDIX C

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REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
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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
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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
THE BOEING COMPANY
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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.
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.

REPORTING SUMMARY NOTES
THE BOEING COMPANY
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(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.
(r)	Reserved.

ARROYO SIMI
DISCHARGE MONITORING DATA SUMMARY TABLE

FOURTH QUARTER 2020
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

October 1 through December 31, 2020

					12/17/2020 07:25	
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	--
4,4'-DDE	µg/L	0.001	1/Quarter	Grab	ND < 0.00050	--
4,4'-DDT	µg/L	0.001	1/Quarter	Grab	ND < 0.0016	--
Aroclor 1016	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	--
Aroclor 1221	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	--
Aroclor 1232	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	--
Aroclor 1242	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	--
Aroclor 1248	µg/L	0.0003	1/Quarter	Grab	ND < 0.039	--
Aroclor 1254	µg/L	0.0003	1/Quarter	Grab	ND < 0.017	--
Aroclor 1260	µg/L	0.0003	1/Quarter	Grab	ND < 0.017	--
Chlordane	µg/L	0.001	1/Quarter	Grab	ND < 0.0065	--
Chlorpyrifos	µg/L	0.02	1/Quarter	Grab	ND < 0.0069	--
Diazinon	µg/L	0.16	1/Quarter	Grab	ND < 0.0052	--
Dieldrin	µg/L	0.0002	1/Quarter	Grab	ND < 0.00050	--
E. coli	mpn/100mL	235	1/Year	ANR	ANR	ANR
pH (Field)	s.u.	6.5-8.5	1/Quarter	Grab	7.25	*
Toxaphene	µg/L	0.0003	1/Quarter	Grab	ND < 0.013	--
POLLUTANTS WITHOUT LIMITS						
Hardness (as CaCO3)	mg/L	-	1/Quarter	Grab	640	--
Priority Pollutants	NA	-	1/5 Years	ANR	ANR	ANR
Temperature (Field)	Deg F	-	1/Quarter	Grab	51.3	*
TCDD - Equivalents	µg/L	-	1/Year	ANR	ANR	ANR
Total Suspended Solids	mg/L	-	1/Year	ANR	ANR	ANR
Water Velocity	ft/sec	-	1/Quarter	Meas	0.0	*

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

APPENDIX D

Fourth Quarter 2020 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Report

APPENDIX D

TABLE OF CONTENTS

Section No.

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-276257-1

Prepared for

Haley & Aldrich, Inc.

600 South Meyer Avenue, Suite 100

Tucson, Arizona 85701

12 January 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: 440-276257-1

Project Manager: Katherine Miller

Matrix: Surface water

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_20201217_Grab	440-276257-1	WM	12/17/2020 7:25:00 AM	E608.3, SM2340

II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists, and the chains-of-custody (COC) provided by the laboratories for sample delivery group (SDG) 440-276257-1:

- Eurofins Irvine 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.
- According to the Login Sample Receipt Checklist for Eurofins Irvine, custody seals were absent on the coolers; 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 608.3 –PESTICIDES AND PCBS

L. Calvin of MEC[X] reviewed the SDG on January 12, 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

The initial calibration %RSDs were ≤15%. The initial calibration verification (ICV) recoveries were within the control limit of ±20%, and continuing calibration verification (CCV) %Ds affecting sample data met method criteria. Several outliers not affecting sample results are noted below.

The opening CCV bracketing the pesticide sample analysis had %Ds >25% with high responses for endosulfan I (26.7%) on the primary column and endosulfan II (25.1%) on the secondary column. The closing CCV had %Ds with high responses on the secondary column for endosulfan II (32.3%) and endrin aldehyde (26.6%). As none of the %D outlier analytes were detected in the sample, no qualification was necessary. A bracketing CCV had a high %D (42.6%) for one of five toxaphene peaks on the secondary column; however, as the average %D was within the method control limit and toxaphene was not detected in the sample, no qualification was necessary.

One CCV bracketing the PCB analysis of the sample had a %D with a high response (33.2%) for one of five Aroclor 1260 peaks; however, as the average %D was within the method control limit and none of the later-eluting Aroclors were detected in the sample, no qualification was necessary.

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 respective laboratory control limits for pesticides and PCBs. Toxaphene and chlordane were not spiked into the pesticide LCS/LCSD samples.

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 surrogate decachlorobiphenyl (DCB) was recovered within the laboratory control limits of 20-154%.

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

MS/MSD analyses were performed on the sample in this SDG for pesticides. All recoveries were within the laboratory control limits; however, the MSD had consistently higher recoveries than the MS, possible due to a spiking error. As a result, all RPDs exceeded the laboratory control limits. As all recoveries were acceptable

and none of the RPD outlier analytes were detected in the parent sample, no qualifications were assigned. Toxaphene and chlordane were not spiked into the pesticide MS/MSD samples.

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. Review of the sample chromatograms and retention times indicated no issues with target compound identification. 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. The reporting limits were supported by the low point of the initial calibrations and the laboratory MDLs. Pesticides and PCB Aroclors were not detected in the sample. Reported nondetects are valid to the reporting limit. The sample did not require dilution.

IV. METHODS EPA 200.7 AND SM2340B—HARDNESS

M. Hilchey of MEC^X reviewed the SDG on January 13, 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 Metals (DVP-5, Rev. 2), EPA Method 200.7, Standard Methods for the Examination of Water and Wastewater 2340B* and the *National Functional Guidelines for Inorganic Method Data Review* (2017).

IV.1. HOLDING TIMES

The analytical holding time, six months for metals, was met.

IV.2. CALIBRATION

ICP-AES instrument calibration criteria were met for calcium and magnesium. CRQL recoveries were within the laboratory control limits of 50-150%. ICV and CCV recoveries were within NFG control limits of 90-110%.

IV.3. QUALITY CONTROL SAMPLES

IV.3.1. *METHOD BLANKS*

There were no target analyte detections in the method blank or calibration blanks.

IV.3.2. *INTERFERENCE CHECK SAMPLES:*

ICSAB recoveries were within the control limits of 80-120% or ±2× the reporting limit, whichever is greater. As the target analytes were also ICS spike analytes, interference was not evaluated.

IV.3.3. *LABORATORY CONTROL SAMPLES*

LCS/LCSD recoveries and RPDs met laboratory control limits.

IV.3.4. *LABORATORY DUPLICATES:*

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

IV.3.5. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were performed on the sample in this SDG. Recoveries and RPDs met laboratory control limits.

IV.3.6. *SERIAL DILUTION*

Serial dilution analyses were not performed.

IV.4. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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.

IV.5. 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.5.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

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

IV.5.2. *FIELD DUPLICATES*

There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: 4402762571

Analysis Method E608.3

Sample Name Arroyo_Simi_20201217_Grab **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/17/2020 7:25:00 AM **Validation Level:** 9

Lab Sample Name: 440-276257-1

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	ND	0.0013	0.00050	ug/L	U	U	--
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	ND	0.0013	0.00050	ug/L	U	U	--
Toxaphene	N	8001-35-2	ND	0.10	0.013	ug/L	U	U	--

Analysis Method SM2340

Sample Name Arroyo_Simi_20201217_Grab **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/17/2020 7:25:00 AM **Validation Level:** 9

Lab Sample Name: 440-276257-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	T	HARDNESSCACO3	640	0.33	0.17	mg/L		=	--

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-276257-1 (method 525.2)

Prepared for

Haley & Aldrich, Inc.

600 South Meyer Avenue, Suite 100

Tucson, Arizona 85701

30 January 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: 440-276257-1

Project Manager: Katherine Miller

Matrix: Surface water

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_20201217_Grab	440-276257-1	WM	12/17/2020 7:25:00 AM	525.2

II. SAMPLE MANAGEMENT

According to the case narrative, Login Sample Receipt Checklists, and the chains-of-custody (COC) provided by the laboratories for sample delivery group (SDG) 440-276257-1:

- Eurofins Irvine received the sample in this SDG on ice and within the temperature limits of <6 degrees Celsius (°C) and >0°C. The temperature was not recorded upon receipt at Weck Laboratories, although the Sample Receiving Checklist noted the samples were on received on ice.
- Field and laboratory personnel signed and dated the COCs.
- According to the Login Sample Receipt Checklist for Eurofins Irvine, custody seals were absent on the coolers; however, no evidence of tampering was noted. The Sample Receiving Checklist from Weck did not indicate whether custody seals were present.

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. EPA METHOD 525.2 — CHLORPYRIFOS AND DIAZINON

L. Calvin of MEC[X] reviewed the SDG on September 16, 2020

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 as verified from the laboratory raw data although the EDD noted the prep date as 12/21/2020 in error. The sample was analyzed within 30 days of extraction.

IV.2. GC/MS TUNING AND CALIBRATION

As the analysis was acquired in SIM mode, tuning was not applicable.

Calibration criteria were met. The initial calibration average RRFs were ≥0.05 and %RSDs ≤30% or r^2 ≥0.990. The continuing calibration RRFs were ≥0.05 and recoveries were within the method control limits of 70-130%.

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/LCSD recoveries were within the laboratory control limits and RPDs were within the control limit of ≤30%.

IV.3.3. *SURROGATE RECOVERY*

Surrogate recoveries were within the laboratory control limits of 76-128% for 1,3-dimethyl-2-nitrobenzene. The recovery was above the control limits of 40-163% for triphenyl phosphate (174%); however, as the sample had no detects, no qualification was necessary.

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

MS/MSD analyses were not performed on the sample in this SDG. Method accuracy was evaluated based upon the associated LCS results.

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 ±30% of the most recent CCV internal standard areas.

IV.6. COMPOUND IDENTIFICATION

Compound identification was verified at Level IV. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. The requested target compounds were not detected above the MDL in the sample.

IV.7. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified at Level IV. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit. The sample did not require dilution.

IV.8. SYSTEM PERFORMANCE

Evaluation indicated no issues with system performance.

Validated Sample Result Forms: 4402762571

Analysis Method E525.2M

Sample Name Arroyo_Simi_20201217_Grab **Matrix Type:** WM **Result Type:** TRG

Sample Date: 12/17/2020 7:25:00 AM **Validation Level:** 9

Lab Sample Name: 440-276257-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	N	2921-88-2	ND	10	6.9	ng/L	U	U	--
Diazinon	N	333-41-5	ND	10	5.2	ng/L	U	U	--

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-276257-1
Client Project/Site: Quarterly Arroyo Simi-Frontier Park

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

Attn: Katherine Miller

Authorized for release by:
1/5/2021 11:08:56 AM

Christian Bondoc, Project Manager I
(949)260-3218
Christian.Bondoc@Eurofinset.com

Table of Contents

Sample Summary

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

Job ID: 440-276257-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-276257-1	Arroyo_Simi_20201217_Grab	Water	12/17/20 07:25	12/17/20 18:30	

Case Narrative

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

Job ID: 440-276257-1

Job ID: 440-276257-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-276257-1

Comments
Insufficent sample volume to run MS/MSD on 608-PCBs

Receipt
The samples were received on 12/17/2020 6:30 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4º C.

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

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

Subcontract non-Sister
See attached subcontract report.

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

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

Client Sample ID: Arroyo_Simi_20201217_Grab
Lab Sample ID: 440-276257-1

Date Collected: 12/17/20 07:25
Matrix: Water
Date Received: 12/17/20 18:30

Method: 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.010	0.0065	ug/L		12/23/20 10:17	12/29/20 03:50	1
4,4'-DDD	ND		0.0013	0.00080	ug/L		12/23/20 10:17	12/29/20 03:50	1
4,4'-DDE	ND		0.0013	0.00050	ug/L		12/23/20 10:17	12/29/20 03:50	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		12/23/20 10:17	12/29/20 03:50	1
Dieldrin	ND		0.0013	0.00050	ug/L		12/23/20 10:17	12/29/20 03:50	1
Toxaphene	ND		0.10	0.013	ug/L		12/23/20 10:17	12/29/20 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*20 - 139*	*12/23/20 10:17*	*12/29/20 03:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.039	ug/L		12/23/20 10:17	12/29/20 00:20	1
Aroclor 1221	ND		0.10	0.039	ug/L		12/23/20 10:17	12/29/20 00:20	1
Aroclor 1232	ND		0.10	0.039	ug/L		12/23/20 10:17	12/29/20 00:20	1
Aroclor 1242	ND		0.10	0.039	ug/L		12/23/20 10:17	12/29/20 00:20	1
Aroclor 1248	ND		0.10	0.039	ug/L		12/23/20 10:17	12/29/20 00:20	1
Aroclor 1254	ND		0.10	0.017	ug/L		12/23/20 10:17	12/29/20 00:20	1
Aroclor 1260	ND		0.10	0.017	ug/L		12/23/20 10:17	12/29/20 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene (Surr)	*76*		*20 - 139*	*12/23/20 10:17*	*12/29/20 00:20*	*1*
DCB Decachlorobiphenyl (Surr)	*105*	*PI*	*20 - 154*	*12/23/20 10:17*	*12/29/20 00:20*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness, as CaCO3	**640**		0.33	0.17	mg/L			12/22/20 15:26	1

Method Summary

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

Job ID: 440-276257-1

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-Diazinon 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

Lab Chronicle

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

Job ID: 440-276257-1

Client Sample ID: Arroyo_Simi_20201217_Grab
Date Collected: 12/17/20 07:25
Date Received: 12/17/20 18:30

Lab Sample ID: 440-276257-1
Matrix: Water

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	118424	12/23/20 10:17	OAJ3	ECL 1
Total/NA	Analysis	608.3		1			118877	12/29/20 03:50	UHHN	ECL 1
Total/NA	Prep	608			1500 mL	1 mL	118424	12/23/20 10:17	OAJ3	ECL 1
Total/NA	Analysis	608.3		1			118866	12/29/20 00:20	UHHN	ECL 1
Total Recoverable	Analysis	SM 2340B		1			634016	12/22/20 15:26	P1R	TAL IRV

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

Method: 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 570-118424/1-A
Matrix: Water
Analysis Batch: 118877

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.010	0.0065	ug/L		12/23/20 10:16	12/29/20 01:28	1
4,4'-DDD	ND		0.0013	0.00080	ug/L		12/23/20 10:16	12/29/20 01:28	1
4,4'-DDE	ND		0.0013	0.00050	ug/L		12/23/20 10:16	12/29/20 01:28	1
4,4'-DDT	ND		0.0033	0.0016	ug/L		12/23/20 10:16	12/29/20 01:28	1
Dieldrin	ND		0.0013	0.00050	ug/L		12/23/20 10:16	12/29/20 01:28	1
Toxaphene	ND		0.10	0.013	ug/L		12/23/20 10:16	12/29/20 01:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*96*		*20 - 139*	*12/23/20 10:16*	*12/29/20 01:28*	*1*

Lab Sample ID: LCS 570-118424/2-A
Matrix: Water
Analysis Batch: 118877

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118424

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD			0.0333	0.0281		ug/L		84	31 - 141		
4,4'-DDE			0.0333	0.0253		ug/L		76	30 - 145		
4,4'-DDT			0.0333	0.0272		ug/L		82	25 - 160		
Dieldrin			0.0333	0.0279		ug/L		84	36 - 146		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*116*		*20 - 139*

Lab Sample ID: LCSD 570-118424/3-A
Matrix: Water
Analysis Batch: 118877

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118424

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.0333	0.0279		ug/L		84	31 - 141	1	39
4,4'-DDE			0.0333	0.0250		ug/L		75	30 - 145	1	35
4,4'-DDT			0.0333	0.0270		ug/L		81	25 - 160	1	42
Dieldrin			0.0333	0.0276		ug/L		83	36 - 146	1	49

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*112*		*20 - 139*

Lab Sample ID: 440-276257-1 MS
Matrix: Water
Analysis Batch: 118877

Client Sample ID: Arroyo_Simi_20201217_Grab
Prep Type: Total/NA
Prep Batch: 118424

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDD	ND		0.0333	0.0179		ug/L		54	31 - 141		
4,4'-DDE	ND		0.0333	0.0152		ug/L		46	30 - 145		
4,4'-DDT	ND		0.0333	0.0156		ug/L		47	25 - 160		
Dieldrin	ND		0.0333	0.0140		ug/L		42	36 - 146		

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: 440-276257-1 MS
Matrix: Water
Analysis Batch: 118877

Client Sample ID: Arroyo_Simi_20201217_Grab
Prep Type: Total/NA
Prep Batch: 118424

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	*42*		*20 - 139*

Lab Sample ID: 440-276257-1 MSD
Matrix: Water
Analysis Batch: 118877

Client Sample ID: Arroyo_Simi_20201217_Grab
Prep Type: Total/NA
Prep Batch: 118424

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	0.0297	BA	ug/L		89	31 - 141	50	39
4,4'-DDE	ND		0.0333	0.0288	BA	ug/L		86	30 - 145	62	35
4,4'-DDT	ND		0.0333	0.0312	BA	ug/L		94	25 - 160	67	42
Dieldrin	ND		0.0333	0.0255	BA	ug/L		77	36 - 146	58	49

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	*62*		*20 - 139*

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

Lab Sample ID: MB 570-118424/1-A
Matrix: Water
Analysis Batch: 118866

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.10	0.039	ug/L		12/23/20 10:16	12/28/20 22:26	1
Aroclor 1221	ND		0.10	0.039	ug/L		12/23/20 10:16	12/28/20 22:26	1
Aroclor 1232	ND		0.10	0.039	ug/L		12/23/20 10:16	12/28/20 22:26	1
Aroclor 1242	ND		0.10	0.039	ug/L		12/23/20 10:16	12/28/20 22:26	1
Aroclor 1248	ND		0.10	0.039	ug/L		12/23/20 10:16	12/28/20 22:26	1
Aroclor 1254	ND		0.10	0.017	ug/L		12/23/20 10:16	12/28/20 22:26	1
Aroclor 1260	ND		0.10	0.017	ug/L		12/23/20 10:16	12/28/20 22:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	*68*		*20 - 139*	*12/23/20 10:16*	*12/28/20 22:26*	*1*
DCB Decachlorobiphenyl (Surr)	*64*		*20 - 154*	*12/23/20 10:16*	*12/28/20 22:26*	*1*

Lab Sample ID: LCS 570-118424/4-A
Matrix: Water
Analysis Batch: 118866

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118424

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor 1016			0.133	0.165		ug/L		124	50 - 140		
Aroclor 1260			0.133	0.164		ug/L		123	8 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	*78*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*68*		*20 - 154*

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

Lab Sample ID: LCSD 570-118424/5-A
Matrix: Water
Analysis Batch: 118866

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118424

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016			0.133	0.149		ug/L		112	50 - 140	10	36
Aroclor 1260			0.133	0.173		ug/L		130	8 - 140	6	38

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene (Surr)	*81*		*20 - 139*
DCB Decachlorobiphenyl (Surr)	*71*		*20 - 154*

QC Association Summary

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

Job ID: 440-276257-1

GC Semi VOA

Prep Batch: 118424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-276257-1	Arroyo_Simi_20201217_Grab	Total/NA	Water	608	
MB 570-118424/1-A	Method Blank	Total/NA	Water	608	
LCS 570-118424/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 570-118424/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 570-118424/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 570-118424/5-A	Lab Control Sample Dup	Total/NA	Water	608	
440-276257-1 MS	Arroyo_Simi_20201217_Grab	Total/NA	Water	608	
440-276257-1 MSD	Arroyo_Simi_20201217_Grab	Total/NA	Water	608	

Analysis Batch: 118866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-276257-1	Arroyo_Simi_20201217_Grab	Total/NA	Water	608.3	118424
MB 570-118424/1-A	Method Blank	Total/NA	Water	608.3	118424
LCS 570-118424/4-A	Lab Control Sample	Total/NA	Water	608.3	118424
LCSD 570-118424/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	118424

Analysis Batch: 118877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-276257-1	Arroyo_Simi_20201217_Grab	Total/NA	Water	608.3	118424
MB 570-118424/1-A	Method Blank	Total/NA	Water	608.3	118424
LCS 570-118424/2-A	Lab Control Sample	Total/NA	Water	608.3	118424
LCSD 570-118424/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	118424
440-276257-1 MS	Arroyo_Simi_20201217_Grab	Total/NA	Water	608.3	118424
440-276257-1 MSD	Arroyo_Simi_20201217_Grab	Total/NA	Water	608.3	118424

Metals

Analysis Batch: 634016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-276257-1	Arroyo_Simi_20201217_Grab	Total Recoverable	Water	SM 2340B	

Definitions/Glossary

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

Job ID: 440-276257-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
BA	Relative percent difference out of control
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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 440-276257-1
Project/Site: Quarterly Arroyo Simi-Frontier Park

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	06-30-21

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
SM 2340B		Water	Hardness, as CaCO3

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
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	01-29-21
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

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

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0L17034

Project: Quarterly Arroyo Simi-Frontier Park Dry Weather

Attn: TestAmerica, Irvine

Client: Eurofins Calscience - Irvine
17461 Derian Ave, Suite 100
Irvine, CA 92614

Report Date: 12/29/2020
Received Date: 12/17/2020
Turnaround Time: 1 workday
Phones: (949) 261-1022
Fax: (949) 260-3297
P.O. #:
Billing Code:

Dear TestAmerica, Irvine,

Enclosed are the results of analyses for samples received 12/17/20 with the Chain-of-Custody document. The samples were received in good condition, at 1.3 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: Arroyo_Simi_20201217_Grab
0L17034-01 (Water)

Sampled: 12/17/20 7:25 by Dan Smith

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 525.2M			**Instr:** GCMS13				
Batch ID: W0L0956 **Preparation:** EPA 525.2/SPE			**Prepared:** 12/17/20 12:45				**Analyst:** EFC
Chlorpyrifos	ND	6.9	10	ng/l	1	12/21/20	
Diazinon	ND	5.2	10	ng/l	1	12/21/20	
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*96%*		*76-128*	*Conc: 480*		*12/21/20*	
Triphenyl phosphate	*174%*		*40-163*	*Conc: 871*		*12/21/20*	*S-11*

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
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 (W0L0956-BLK1)					**Prepared: 12/17/20**	**Analyzed: 12/22/20**					
Chlorpyrifos	ND	6.9	10	ng/l							
Diazinon	ND	5.2	10	ng/l							
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*553*			*ng/l*	*500*		*111*	*76-128*			
Triphenyl phosphate	*1240*			*ng/l*	*500*		*247*	*40-163*			*S-11*
LCS (W0L0956-BS1)					**Prepared: 12/17/20**	**Analyzed: 12/21/20**					
Chlorpyrifos	56.8	6.9	10	ng/l	50.0		114	37-169			
Diazinon	49.4	5.2	10	ng/l	50.0		99	43-152			
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*528*			*ng/l*	*500*		*106*	*76-128*			
Triphenyl phosphate	*792*			*ng/l*	*500*		*158*	*40-163*			
LCS Dup (W0L0956-BSD1)					**Prepared: 12/17/20**	**Analyzed: 12/21/20**					
Chlorpyrifos	58.2	6.9	10	ng/l	50.0		116	37-169	2	30	
Diazinon	52.2	5.2	10	ng/l	50.0		104	43-152	5	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*559*			*ng/l*	*500*		*112*	*76-128*			
Triphenyl phosphate	*793*			*ng/l*	*500*		*159*	*40-163*			

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Notes and Definitions

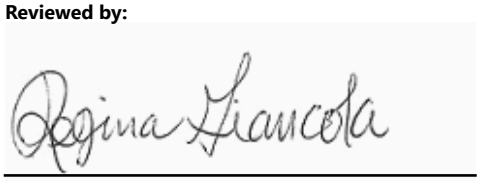
Item	Definition
J	Estimated conc. detected <MRL and >MDL.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of 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

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:



Regina M. Giancola
Project Manager

DoD-ISO ANAB # • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • 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.

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
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CHAIN OF CUSTODY FORM

Q Q Q

Client Name/Address: Haley & Aldrich, 5333 Mission Center Rd Suite 300, San Diego, CA 92108	Project: Boeing-SSFL NPDES Permit 2015 **Quarterly Arroyo Simi-Frontier Park Dry Weather**	ANALYSIS REQUIRED	Field Readings	Meter serial # V4JC0VKT
Eurofins Calscience Irvine Contact: Christian Bondoc, 17461 Derian Ave Suite #100, Irvine CA 92614, Tel: 949-260-3218			Field Readings: (Include units) Time of Readings: 0710	
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)		pH 7.25 pH unit; Temp 57.3 °C/°F; Velocity 0.0 ft/sec	
Sampler: Dan Smith	Field Manager: Mark Dominick 978.234.5033, 818.599.0702 (cell)		Field readings QC Checked by: MD; Date/Time: 12-17-2020/0710	

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	Hardness as $CaCO_3$, Recoverable (SM2340B)	Chlorpyrifos, Diazinon (E525.2)	Pesticides: Chlordane, 4,4-DDD, 4,4-DDE, 4,4-DDT, Dieldrin, Toxaphene + PCBs only (E608)	Comments
Arroyo Simi	Arroyo_Simi_20201217_Grab	12/17/2020 0725	WS	250 mL Poly	3	HNO_3	100	Yes	X			
			WS	1L Glass Amber	6	None	275	Yes				
			WS	1L Glass Amber	6	None	285	Yes			X	
	Arroyo_Simi_20201217_Grab_Extra	12/17/2020 0725	WS	1L Glass Amber	2	None	275	No		H		Hold
			WS	1L Glass Amber	2	None	285	No			H	Hold

12/17/20

440-276257 Chain of Custody

Legend: Q=Quarterly

Relinquished By	Date/Time:	Company:	Received By	Date/Time:	Company:
Mark Dominick	12/17/2020 1010	H:A		10:10	EC-IRV
	12-17-20 11:43	EC-IRV		12-17-20 11:43	
	12-17-20 18:30	EC-IRV	Olga Oinekas	12/17/20 1830	EC-IRV

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

Sample Integrity: (Check)
Intact: X On Ice: X 1.3°C PB30

Store samples for 6 months.

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

2.6/2.4 112-93 EO.1KU

Eurofins Calscience Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone 949-261-1022 Fax 949-260-3297

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bondoc Christian M	Carrier Tracking No(s)	COC No.: 440-165086 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Christian Bondoc@Eurofinset com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Calscience LLC		Accreditations Required (See note): State Program - California		Job #: 440-276257-1
Address: 7440 Lincoln Way, ,	Due Date Requested: 1/4/2021			
City: Garden Grove	TAT Requested (days):			
State, Zip: CA, 92841				
Phone: 714-895-5494(Tel) 714-894-7501(Fax)	PO #:			
Email:	WO #			
Project Name: Quaterly Arroyo Simi-Frontier Park	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)	608.3_Pest_LL/608_Prep_LL 608LL Pesticidet-PP list	608 3_PCB_LL/608_Prep_PCB_LL Low Level Routine PCB List	Total Number of containers	Special Instructions/Note:
			Preservation Code							
Arroyo_Simi_20201217_Grab (440-276257-1)	12/17/20	07 25 Pacific		Water			X	X	2	
Arroyo_Simi_20201217_Grab (440-276257-1MS)	12/17/20	07 25 Pacific	MS	Water			X	X	2	
Arroyo_Simi_20201217_Grab (440-276257-1MSD)	12/17/20	07 25 Pacific	MSD	Water			X	X	2	

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

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	12/18/20 0820	ECRC		12/18/2020 0820	CAL EC1
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		2.7/1.9 SC6

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-276257-1

Login Number: 276257
List Number: 1
Creator: Escalante, Maria I

List Source: Eurofins Irvine

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.	N/A	Not present
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?	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.	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: 440-276257-1

Login Number: 276257
List Number: 2
Creator: Rivera, Isaac

List Source: Eurofins Calscience
List Creation: 12/18/20 01:24 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.	N/A	Not present
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	1.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	