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Via Email to losangeles@waterboards.ca.gov

February 15, 2018
In reply refer to SHEA-115816

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

Subject: Fourth Quarter 2017 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 1 October through 31 December 2017 (Fourth Quarter 2017). This DMR was prepared as required by and in accordance with National Pollutant Discharge Elimination System Permit No. CA0001309 (NPDES Permit) issued by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) in 2015 and under the regulatory oversight of the Regional Board.

Hard copies of this DMR are available to the public at California State University at Northridge Library; Simi Valley Library; and the Platt Branch of the Los Angeles Library. An electronic version of this DMR is located at:

http://www.boeing.com/principles/environment/santa-susana/monitoring-reports.page

FOURTH QUARTER 2017 DMR CONTENTS

This DMR includes the following sections and appendices:

- **Discharge Summary:** This section describes the number of rain events, number of samples collected, sample dates, and sample locations during the Fourth Quarter 2017. Table I summarizes the Fourth Quarter 2017 sampling record by outfall, location, and sample type collected per the requirements of the NPDES Permit.
- **Fourth Quarter 2017 Summary of Non-Compliance:** This section summarizes the sample results that exceeded NPDES Permit limits, daily maximum benchmark limits, and receiving water limits in the Fourth Quarter 2017.
- **Fourth Quarter 2017 Santa Susana Site Stormwater Pollution Prevention Plan (SWPPP)/Best Management Practices (BMP) Activities:** This section presents the Santa Susana Site SWPPP activities and BMPs related to demolition, the BMP Plan, the Northern Drainage, and other activities implemented in the Fourth Quarter 2017. Table II summarizes specific BMP activities by outfall location.
- **Data Validation and Quality Control:** This section discusses data validation results and any laboratory or field corrective actions.
- **Figure 1** shows the stormwater collection conveyance system and Santa Susana Site features; **Figure 2** shows the Arroyo Simi Receiving Water (RSW-002, Frontier Park) sampling location.
- **Appendix A** summarizes the rainfall measured during the Fourth Quarter 2017 at the Santa Susana Site.

- **Appendix B** tabulates waste shipment details.
- **Appendix C** presents chemical analytical results of the Fourth Quarter 2017 stormwater and/or receiving water samples in tabular form by outfall location, 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.

DISCHARGE SUMMARY

The Santa Susana Site experienced zero qualifying rain events that produced greater than 0.1 inch of rainfall within a 24-hour period and was preceded by at least 72 hours of dry weather during the Fourth Quarter 2017 (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 nor was there any change 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). Receiving water surveys are performed (monthly) and survey observations are reported when Outfalls 001, 002, 008, 009, 011, or 018 discharge. None of the specified Outfalls discharged during the reporting period.

Table I summarizes the Fourth Quarter 2017 sampling record by outfall/location, sample frequency, and sample type collected per NPDES Permit requirements.

TABLE I: Sampling Record during the Fourth Quarter 2017

Date	Outfall/Location	Sample Frequency	Sample Type
12/19/2017	Arroyo Simi Receiving Water (RSW-002, Frontier Park)	Quarterly	Grab

All analyses were conducted at analytical laboratories certified for such analyses by the State Water Resources Control Board (i.e., all have current certification from the Environmental Laboratory Accreditation Program [ELAP] established by the California Environmental Laboratory Improvement Act) or approved by the State Water Resources Control Board Executive Officer and in accordance with current USEPA guideline procedure or as specified in NPDES Permit.

FOURTH QUARTER 2017 SUMMARY OF NON-COMPLIANCE

No surface water discharges occurred from the Santa Susana Site during Fourth Quarter 2017. As such, there are no onsite compliance issues to report for this period. Additionally, in the quarterly sample collected at the Arroyo Simi receiving water location (RSW-002, Frontier Park), no constituents exceeded receiving water limits. All Fourth Quarter 2017 samples were therefore in full compliance with the NPDES Permit.

FOURTH QUARTER 2017 SANTA SUSANA SITE SWPPP/BMP ACTIVITIES

Boeing implemented significant SWPPP- and BMP-related activities to assist in improving stormwater quality and compliance at the Santa Susana Site. Table II summarizes the activities completed during the Fourth Quarter 2017 by outfall. In addition to SWPPP-related activities, specific BMP projects, which are discussed in sections below Table II, included: Outfall 008/009 BMPs; BMP Plan-related BMPs; Northern Drainage BMPs; and Outfall 001/002 BMPs.

TABLE II: Boeing's Fourth Quarter 2017 BMP Activities

OUTFALL (Location)	BMP ACTIVITIES DURING FOURTH QUARTER 2017
001 (South Slope)	Conducted erosion, 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. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter and replaced the tape monthly. Painted the rusted exterior of the flowmeter box.
002 (South Slope)	Conducted erosion, 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. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter and replaced the tape monthly. Painted the rusted exterior of the flowmeter box.
003 (Radioactive Material Handling Facility)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter and replaced the tape monthly. Conducted maintenance inspections of structural BMPs, including the flow-through structure and stormwater conveyance and retention systems.
004 (Sodium Reactor Experiment Area)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter and replaced the tape monthly. Conducted maintenance inspections of the structural BMPs, including the flow-through structure and stormwater conveyance system. Replaced silt fence and the filter fabric.
005 (Sodium Burn Pit 1)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall for sediment/debris. Checked the sample box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Conducted maintenance inspections of the stormwater conveyance and retention systems.
006 (Sodium Burn Pit 2)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked sample box and flow meter control box for the presence of debris and/or animals. Cleaned sample box and the outfall area and performed weed abatement as needed. Reset flow meter and replaced the tape monthly. Conducted maintenance inspections

OUTFALL (Location)	BMP ACTIVITIES DURING FOURTH QUARTER 2017
	of the structural BMPs, including the flow-through structure and stormwater conveyance system.
007 (Building 100)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall for sediment/debris. Checked the sample box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Conducted maintenance inspections of the stormwater conveyance and retention systems.
008 (Happy Valley)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter and replaced the tape monthly.

OUTFALL (Location)	BMP ACTIVITIES DURING FOURTH QUARTER 2017
009 (WS-13 Drainage)	Outfall BMPs: Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter and replaced the tape monthly. Modified 200 feet of communication cable to route from the flow meter to the autosampler to improve safety by allowing the Technician to access the flow meter without crossing the drainage channel. Painted steps yellow to improve safety. Lower Lot BMP: Inspected the Sedimentation Basin, Biofilter, and Cistern areas. Upper Parking Lot BMP: Performed maintenance inspection of media filter near the parking lot. Front Gate: Performed maintenance inspection of area near the front gate. Former Building 1436 (B1436) Detention Bioswales: Performed maintenance inspection of bioswale surface area, including hydroseeded area and fiber rolls. B-1 Area: Performed maintenance inspection of BMPs along the slope and within drainage. Culvert Modifications: Performed maintenance inspection of BMPs. Inspected the culvert inlets and rip-rap check dams. At CM-1 a road runoff diversion was constructed to treat additional stormwater. Former Shooting Range: Installed BMPs at the Former Shooting Range including hydroseeding, plantings, fiber rolls, water bar and silt fence. Performed maintenance inspection of BMPs. Well 13 Road: Performed maintenance inspection of BMPs near the culvert. Sandbag berms were reinforced and increased in height. A curb was installed at the top of the Well 13 Road to divert water from the road into CM-1.
010 (Building 203)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter monthly. Conducted maintenance inspections of structural BMPs, including the flow-through structure and stormwater conveyance and retention systems. Installed permanent lighting to improve safety.

OUTFALL (Location)	BMP ACTIVITIES DURING FOURTH QUARTER 2017
011 (Perimeter Pond)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and weir for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter monthly. Conducted maintenance inspections of structural BMPs, including the flow-through structure and stormwater conveyance system. Painted the rusted exterior of the flowmeter box. Updated the suction and discharge pipe on Charles King backup pump from a 4-inch flex line to a 6-inch hard line pipe to increase the flow rate and durability of material. Painted the rusted exterior of the flowmeter box. Stormwater Treatment System 011: Continue repairs and updates to the system in preparation of possible use during the upcoming rainy season.
018 (R-2 Pond Spillway)	Conducted erosion and sediment control inspections and performed maintenance around the perimeter of the outfall, the drainage/watershed, and areas of disturbance or sparse vegetation. Inspected the outfall and flume for sediment/debris. Checked the sample box and flow meter control box for the presence of debris and/or animals. Cleaned the sample box and the outfall area and performed weed abatement as needed. Reset the flow meter monthly. Conducted maintenance inspections of the structural BMPs, including the flow-through structure and conveyance system. Stormwater Treatment System 018: Performed coating of the sand vessels with $KMNO_4$ and verified dosing using HACH kit testing. System is currently in a state of readiness for operation.
019 (Area I Groundwater Extraction and Treatment [GET] System)	The GET system has not operated since April 2013 and no pumping or discharge has occurred; therefore, no NPDES Permit sampling was performed at the Area I GET System in the Fourth Quarter 2017. Conducted maintenance inspections of the structural BMPs.
RSW-002 (Arroyo Simi – Frontier Park)	Collected the quarterly receiving water sample at the Arroyo Simi – Frontier Park location.

OTHER BMP ACTIVITIES

BMP observations and maintenance inspections were conducted in conformance with the Site-Wide SWPPP (Haley & Aldrich, 2017) at and around the former active test stands Alfa and Bravo and former Advanced Propulsion Test Facility.

NASA-RELATED ACTIVITIES

Demolition activities covered by NASA's Construction SWPPP for the Alfa and Bravo Test Stand Areas (dated 16 May 2017) were inspected in accordance with the Construction General Permit (CGP). During the Fourth Quarter 2017, NASA performed planned demolition activities in the Alfa and Bravo Test Stand Areas. NASA placed wattles as linear sediment controls, installed silt fencing, and hydroseeded areas within these sites where construction activities had been completed.

Stormwater control activities covered by NASA's Construction SWPPP for the Delta Test Stand Area (dated 21 February 2017) were inspected in accordance with the CGP. During the Fourth Quarter 2017, NASA performed planned demolition activities in the Delta Test Stand Area. BMPs including wattles and hydroseed were placed within these sites where construction activities had been completed.

NASA performed BMP maintenance at locations within Area II. Maintenance activities in addition to those cited above included replacing sandbags.

DOE-RELATED ACTIVITIES

DOE inspected the sediment fencing installed in the vicinity of well DD-141 and well DD-143 during the Fourth Quarter 2017 to evaluate its effectiveness at preventing soil erosion. Sediment fencing was installed near DD-141 to prevent sediment from entering the drainage north of the Building 56 Landfill Area and near DD-143 to prevent sediment from entering the drainage upgradient from Outfall 003.

SITE-WIDE WORKPLAN AND ANNUAL REPORT

The Expert Panel submitted a Site-Wide Stormwater Work Plan and 2014/15 Annual Report (2015 Work Plan) in September 2015 (Geosyntec and the Expert Panel, 2015a) on behalf of Boeing to meet the requirements of the NPDES Permit (Order No. R4-2015-0033)[1]. The 2015 Work Plan, intended for an implementation period of a 5-year permit cycle, is applicable to all outfalls and presents the NPDES Permit monitoring results and BMP-related activities to be performed and reported on a yearly basis. The 2015 Work Plan also carried over the maintenance and monitoring of BMPs originally recommended in the 2010 BMP Plan for the Outfall 008 and 009 Watersheds (MWH *et al*., 2010) and BMP Plan Addenda (Geosyntec and the Expert Panel, 2011; Geosyntec and the Expert Panel, 2012; Geosyntec and the Expert Panel, 2013; and Geosyntec and the Expert Panel, 2014), as well as those reported in the Interim Source Removal Actions (ISRA) Performance Monitoring and BMP Monitoring Reports for Outfalls 008 and 009 Watersheds submitted to the Regional Board for each rainy season from 2010 through 2015 (MWH, 2010; MWH *et al*., 2011; MWH *et al*., 2012; MWH *et al*., 2013; MWH *et al*., 2014, and MWH *et al*., 2015).

The 2015 Work Plan is designed to assess the effectiveness of BMPs/treatment control implementation measures based on surface water samples collected at outfalls and supplemented by monitoring data. A memorandum developed by Geosyntec Consultants for Boeing and the Expert Panel was incorporated into the 2015 Work Plan to summarize the evaluation of stormwater BMP opportunities along the Service Area Road. Subsequent to Geosyntec's memorandum, Boeing conducted surveys along the Service Area Road and completed additional design iterations to support diverting surface flow from the roadway to existing culvert modifications and maximize the capture area. BMP implementation was planned for and was initiated in early 2017 (Geosyntec and the Expert Panel, 2015b). The 2015 Work Plan also includes recommended non-industrial sources special studies intended to help identify sources of lead and dioxins within the Outfall 009 watershed. The special studies involve vacuum sampling pavement solids, pan sampling atmospheric deposition solids, soil sampling around treated wood poles,

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

and sediment and stormwater sampling at multiple locations along the Northern Drainage. No sampling for the various studies was conducted in the Fourth Quarter 2017 due to lack of rainfall. The 2016/2017 Annual Report was submitted to the Regional Board in October 2017 (Geosyntec and the Expert Panel, 2017).

OUTFALL 008/009 BMP PLAN-RELATED ACTIVITIES

The BMP activities discussed below were performed, commenced, or completed during the Fourth Quarter 2017 in coordination with the Expert Panel.

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 runoff 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 2017 activities included inspections of the BMPs.

Lower Lot Biofilter

The lower lot biofilter is a stormwater treatment BMP designed and built to capture, convey, and treat stormwater runoff 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 2017 activities included inspections to verify that the sedimentation basin and biofilter were free of sediment and debris, checks of the Cistern area and pump, and inspections of surrounding BMPs. No stormwater was pumped from the Cistern to the sedimentation basin during the Fourth Quarter 2017.

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. 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 sand bag berm was placed across the ELV asphalt swale, to divert runoff from directly discharging to the Northern Drainage to instead flow toward CM-1 for treatment. The Fourth Quarter 2017 activities included inspections of the BMPs.

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. A sandbag berm was also placed upstream of the inlet closest to the lower lot to increase the settling of solids. The Fourth Quarter 2017 activities included inspections of the BMPs.

Road Runoff Diversion to CM-3

The construction of a new Service Area road runoff diversion to CM-3 was completed during the Second Quarter 2017. This BMP included a new curb installed on the north side of the road meant to convey flow to a new drop inlet and trench under the road, which then directs the collected runoff to CM-3 for treatment before entering the Northern Drainage. The Fourth Quarter 2017 activities included inspections of the BMPs.

Road Runoff Diversion to CM-1

The construction of a new road runoff diversion to CM-1 was completed during Fourth Quarter 2017. In addition, the rip-rap berm was increased in height to treat the additional road runoff.

Well 13 Road North

The sandbag berms located near the culvert inlet and downgradient of the hydroseeded area were reinforced and increased in height during Fourth Quarter 2017.

Upper Parking Lot Media Filter

The 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, designed to treat runoff from parts of the parking lot, as well as parts of the adjacent Entrance Road. The Fourth Quarter 2017 activities included inspections of the BMPs.

Creosote Treated Wood Poles

During Fourth Quarter 2017 all creosote treated wood poles had fiber roll installed around the base of the pole.

Former Shooting Range

Prior to the Fourth Quarter 2017, existing BMPs at the Former Shooting Range consisted of:

- Slope stabilization measures (i.e., vegetation planting areas)
- Rip-rap berms along the Northern Drainage
- A culvert maintenance media filter
- Fiber rolls
- Sandbag berm
- Silt fencing
- Constructed water bar across the trail
- Three check structures on the Northern trail
- Sandbags with straw wattles
- A check structure at the dissipater

Fourth Quarter 2017 activities included continuing the installation of BMPs and inspections of the BMPs. BMPs installed in the vicinity of the Former Shooting Range included:

- Hydroseeding
- Plantings
- Placement of additional fiber rolls
- Constructed water bar across the trail
- Repairing and extending the existing silt fence

NORTHERN DRAINAGE BMPS

Boeing restored the Northern Drainage following cleanup activities performed under the oversight of the Department of Toxic Substances Control (DTSC) and in accordance with the requirements of Regional Board's Cleanup and Abatement Order No. R4-2007-0054 (Regional Board, 2007). The restoration and mitigation activities proposed in the Northern Drainage Restoration, Mitigation, and Monitoring Plan (RMMP)[2] 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. Successful restoration and mitigation of the Northern Drainage per the success criteria of the RMMP were documented in the fifth and final annual mitigation monitoring report submitted in December 2017. Based on the success of the project, Boeing requested that the Regional Board provide written notice stating that Boeing has complied with all terms of the Cleanup and Abatement Order and Boeing's obligations under the Order are terminated.

OUTFALL 001/002 BMP PLAN-RELATED ACTIVITIES

Boeing submitted a BMP Compliance Report discussing activities to reduce or eliminate the benchmark exceedances for the Outfall 001 and 002 drainages to the Regional Board on June 16, 2017 (Boeing 2017). The BMP activities below were completed during the Third Quarter 2017 in coordination with the Expert Panel:

- Boeing attempted to identify and map areas of poor vegetation and bare soil within the Outfalls 001 and 002 watersheds, however, all areas were deemed to be well vegetated;
- Boeing cleaned the downstream end of the culvert on the north side of Spur Road of migrated gravel within the pipe and at the outlet; and
- Boeing installed rip-rap to stabilize an area where a gully was forming adjacent to a roadway.

During the Fourth Quarter 2017 the BMPs mentioned above were maintained and inspected for possible upgrades. Additionally, the flow meter box near Outfall 001 and the battery box near Outfall 002 were painted with epoxy paint to reduce the potential impact of direct runoff on rusted metal.

Boeing and the Expert Panel will continue to monitor BMP effectiveness on a regular basis and research alternative/new technologies to reduce sediment loading in the Outfalls 001 and 002 drainages. In 2018, the frequency of iron and manganese at Outfall 001 and iron at Outfall 002 will be increased to once per discharge until four consecutive sample results demonstrate compliance per the NPDES Permit.

REASONABLE POTENTIAL ANALYSIS

No surface water discharges occurred from the Santa Susana Site during Fourth Quarter 2017; therefore, no data were generated, and no reasonable potential analysis was performed.

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

DATA VALIDATION AND QUALITY CONTROL

In accordance with current federal and state Environmental Protection Agency guidelines and procedures, or as specified in the NPDES Monitoring and Reporting Program, samples were analyzed at a State of California-certified laboratory. Data validation was performed on the analytical results and quality control elements were found to be within acceptable limits for the analytical methods reported, except as noted on the analytical summary tables. Measures were implemented by the analytical laboratory to monitor and/or evaluate low level detections, analyze for interferences, and ensure that cross-contamination did not occur. Laboratory analytical reports, including validation reports and notes, are included in Appendix D.

Attachment H of the NPDES Permit presents the State Board'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 2017 except when reporting limits were above the minimum levels (generally due to matrix). In cases where the NPDES Permit limit was less than the reporting limit and minimum level, the reporting limit was used to determine compliance.

CONCLUSIONS

Boeing continues 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 sustainable erosion control/restoration measures and continuing our collaboration with the Expert Panel.

FACILITY CONTACT

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

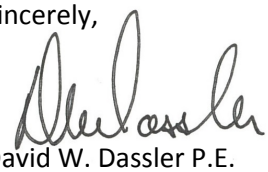
CERTIFICATION

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

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

Executed on the 15th of February 2018 at The Boeing Company, Santa Susana Site.

Sincerely,



David W. Dassler P.E.
Remediation Program Manager
Environment, Health & Safety

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
Appendix A – Fourth Quarter 2017 Rainfall Data Summary
Appendix B – Fourth Quarter 2017 Waste Shipment Summary Tables
Appendix C – Fourth Quarter 2017 Discharge Monitoring Data Summary Tables
Appendix D – Fourth Quarter 2017 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports

cc: Ms. Cassandra Owens, RWQCB
Mr. Mark Malinowski, DTSC
California State University – Northridge, Library
Simi Valley Library
Los Angeles Library, Platt Branch

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8. Geosyntec and the Expert Panel, 2015a. Site-Wide Stormwater Work Plan and 2014/15 Annual Report, Santa Susana Field Laboratory, Ventura County, California (NPDES No. CA0001309, CI No.6027). October 07.

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10. Geosyntec and the Expert Panel, 2017. Santa Susana Field Laboratory Site-Wide Stormwater Annual Report 2016/2017 Reporting Year. October 31.

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California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027; and California Water Code §13304 Order; No. CA0001309, CI No. 1111, Site ID No. 2040109). July 29.

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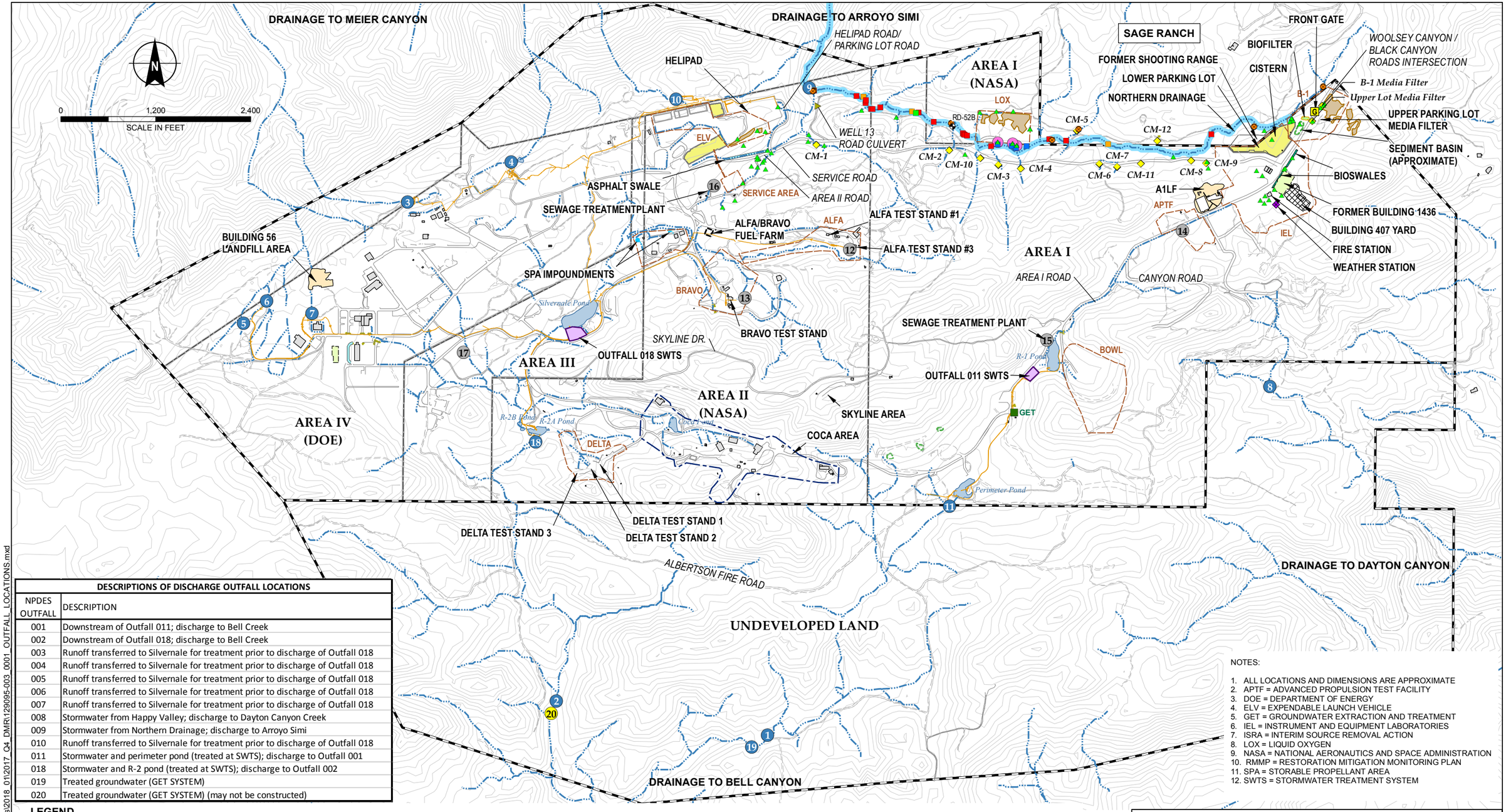
16. MWH Americas, Inc., Santa Susana Site Surface Water Expert Panel, and Geosyntec Consultants, 2013. ISRA Performance Monitoring and BMP Monitoring for the Outfalls 008 and 009 Watersheds, 2012/2013 Rainy Season, The Boeing Company, Santa Susana Field Laboratory, Ventura County, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027; and California Water Code §13304 Order; No. CA0001309, CI No. 1111, Site ID No. 2040109). August 30.

17. MWH Americas, Inc., Santa Susana Site Surface Water Expert Panel, and Geosyntec Consultants, 2014. ISRA Performance Monitoring and BMP Monitoring for the Outfalls 008 and 009 Watersheds, 2013/2014 Rainy Season, Santa Susana Field Laboratory, Ventura County, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027; and California Water Code Section 13304 Order; NPDES No. CA0001309, CI No. 1111, Site ID No. 2040109). August 29.

18. MWH Americas, Inc., Santa Susana Site Surface Water Expert Panel, and Geosyntec Consultants, 2015. ISRA Performance Monitoring and BMP Monitoring for the Outfalls 008 and 009 Watersheds, 2014/2015 Rainy Season, Santa Susana Field Laboratory, Ventura County, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027; and California Water Code Section 13304 Order; NPDES No. CA0001309, CI No. 1111, Site ID No. 2040109). August 28.



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 of Outfall 018
004	Runoff transferred to Silvernale for treatment prior to discharge of Outfall 018
005	Runoff transferred to Silvernale for treatment prior to discharge of Outfall 018
006	Runoff transferred to Silvernale for treatment prior to discharge of Outfall 018
007	Runoff transferred to Silvernale for treatment prior to discharge of 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 of 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:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. APTF = ADVANCED PROPULSION TEST FACILITY
3. DOE = DEPARTMENT OF ENERGY
4. ELV = EXPENDABLE LAUNCH VEHICLE
5. GET = GROUNDWATER EXTRACTION AND TREATMENT
6. IEL = INSTRUMENT AND EQUIPMENT LABORATORIES
7. ISRA = INTERIM SOURCE REMOVAL ACTION
8. LOX = LIQUID OXYGEN
9. NASA = NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
10. RMMP = RESTORATION MITIGATION MONITORING PLAN
11. SPA = STORABLE PROPELLANT AREA
12. SWTS = STORMWATER TREATMENT SYSTEM

LEGEND

- ACTIVE NPDES OUTFALL LOCATION
- FORMER NPDES OUTFALL LOCATION
- POSSIBLE FUTURE NPDES OUTFALL LOCATION
- SLOPE DRAIN DISCHARGE POINT TO NORTHERN DRAINAGE
- CM-12 CULVERT MODIFICATION
- GROUNDWATER MONITORING WELL
- BMP MONITORING LOCATION
- SPECIAL STUDIES LOCATION
- GET SYSTEM
- STORMWATER TREATMENT SYSTEM
- IEL 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
- ASPHALT SWALE
- PAVED ROAD
- DIRT ROAD
- STORMWATER CONVEYANCE PIPELINE WITH FLOW DIRECTION
- 25' ELEVATION CONTOUR
- ISRA EXCAVATION BOUNDARY
- VEHICLE PARKING AREA
- BIOFILTER
- BIOSWALE
- SEDIMENT BASIN
- NORTHERN DRAINAGE
- 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 2017
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

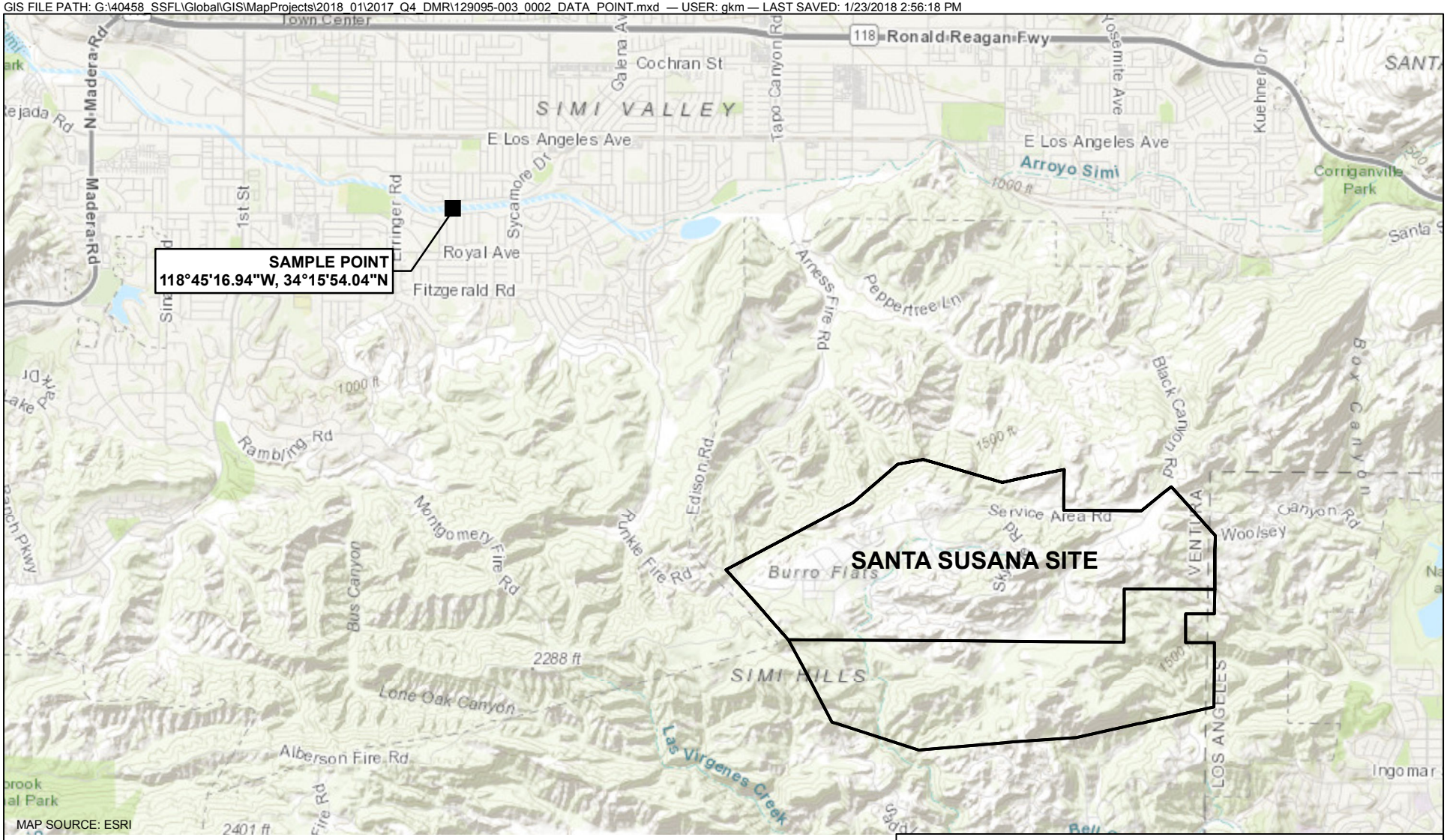
SITE MAP WITH STORMWATER COLLECTION AND CONVEYANCE SYSTEM AND SITE FEATURES

FEBRUARY 2018

FIGURE 1

G:\40458_SSFL\Global\GIS\MapProjects\2018_01\2017_Q4_DMR\129095-003_0001_OUTFALL_LOCATIONS.mxd

GIS FILE PATH: G:\40458_SSFL\Global\GIS\MapProjects\2018_01\2017_Q4_DMR\129095-003_0002_DATA_POINT.mxd — USER: gkm — LAST SAVED: 1/23/2018 2:56:18 PM



NOTE

THE SAMPLE POINT IS FOR QUARTERLY WATER QUALITY AND ANNUAL SEDIMENT SAMPLING.

N

0 0.5 1
Miles

HALEY ALDRICH

NPDES PERMIT COMPLIANCE FOURTH QUARTER 2017
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

ARROYO SIMI RECEIVING WATER (RSW-002, FRONTIER PARK) SAMPLING LOCATION

FEBRUARY 2018

FIGURE 2

APPENDIX A

Fourth Quarter 2017 Rainfall Data Summary

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Rain
Month/Year: October 2017

HOUR OF THE DAY, PACIFIC STANDARD TIME

	HR-BEG	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	HR-END	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	DAY																									Total
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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 2017

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	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	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	d	d	d	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Flags: d = Off-line part of hour, invalid hour due to semi-annual audit. For the off-line event, the rain gauge at the former Building 436 confirmed that no rainfall was recorded during hours 07:00-08:00 and 09:00-10:00, and the Sage Ranch rain gauge confirmed that no rainfall was recorded during hour 08:00-09:00.

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Rain
Month/Year: December 2017

HOUR OF THE DAY, PACIFIC STANDARD TIME

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

APPENDIX B

Fourth Quarter 2017 Waste Shipment Summary Tables

TABLE B
LIQUID WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
10/4/2017	011149764FLE	HAZARDOUS WASTE, LIQUID, (TRICHLOROETHYLENE)	1,016	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	Tri-State Motor Transit Co. 8141 E 7th St. Joplin, MO 64801	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	n/a	Clean Harbors Aragonite 11600 North Aptus Rd. Grantsville, UT 84029	Boeing
		HAZARDOUS WASTE, LIQUID, (TRICHLOROETHYLENE)	2,046	P						Boeing
	011149766FLE	NON-RCRA HAZARDOUS WASTE, LIQUIDS (WATER, POTASSIUM PERMANGANATE)	60	P				R&R Trucking 302 Thunder Rd. Jasper, MO 64841	Clean Harbors Environmental Services 2247 South Hwy 71 Kimball, NE 69145	Boeing
	NH1704909625	NON HAZARDOUS, NON D.O.T. REGULATED, (WATER)	18	P		n/a	n/a	n/a	Clean Harbors Buttonwillow 2500 West Lokern Rd. Buttonwillow, CA 93206	Boeing
10/18/2017	NH1704909689	NON HAZARDOUS, NON D.O.T. REGULATED, (WATER)	386	P						Boeing
11/1/2017	011142128FLE	NON-RCRA HAZARDOUS WASTE, LIQUIDS, (NON PCB BALLASTS)	21	P		Tri-State Motor Transit Co. 8141 E 7th St. Joplin, MO 64801	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061		Clean Harbors Aragonite 11600 North Aptus Rd. Grantsville, UT 84029	Boeing
	011142129FLE	NON-RCRA HAZARDOUS WASTE, LIQUIDS, (POLYMER, MINERAL OIL)	140	P		n/a	n/a		Clean Harbors Wilmington 737 East Denni St. Wilmington, CA 90744	Boeing
		NON-RCRA HAZARDOUS WASTE, LIQUIDS, (OIL, WATER)	7	P						Boeing
		NON-RCRA HAZARDOUS WASTE, LIQUIDS MIXTURE, (WATER[%])	10	P						Boeing
11/3/2017	1705547672	NON HAZARDOUS, NON D.O.T. REGULATED, (WATER)	10,040	P	O. C. Vacuum 5900 Cherry Ave Long Beach, CA 90805				Southwest Processors 4120 Bandini Blvd. Vernon, CA 90058	Boeing
11/29/2017	011550942FLE	HAZARDOUS WASTE, LIQUID, (TRICHLOROETHYLENE)	139	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061				Clean Harbors Aragonite 11600 North Aptus Rd. Grantsville, UT 84029	Boeing
12/11/2017	016163177JJK	HAZARDOUS WASTE, LIQUID, (TRICHLOROETHYLENE)	55	G	EnviroServe 10633 Ruchti Rd. South Gate, CA 90283				US Ecology Vernon 5375 South Boyle Ave. Vernon, CA 90058	NASA
12/22/2017	018138767JJK	WASTE KEROSENE	55	G	WM Enviroserv 10633 Ruchti Rd. South Gate, CA 90280				Clean Harbors Wilmington 1737 East Denni St. Wilmington, CA 90745	NASA

TABLE B
LIQUID WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
10/3/2017	17125	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G	Southwest Processors 4120 Bandini Blvd. Vernon, CA 90058	n/a	n/a	n/a	Southwest Processors 4120 Bandini Blvd. Vernon, CA 90058	Boeing
	17126	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G						Boeing
10/17/2017	17210	FLUSH WATER WITH TRACE SEWAGE, (HOLDING TANK)	5,000	G						Boeing
	17212	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G						Boeing
10/31/2017	17280	FLUSH WATER WITH TRACE SEWAGE, (HOLDING TANK)	5,000	G						Boeing
	17281	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G						Boeing
11/14/2017	17348	FLUSH WATER WITH TRACE SEWAGE, (HOLDING TANK)	5,000	G						Boeing
	17349	FLUSH WATER WITH TRACE SEWAGE, (HOLDING TANK)	5,000	G						Boeing
11/28/2017	17404	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G						Boeing
	17405	FLUSH WATER WITH TRACE SEWAGE, (HOLDING TANK)	5,000	G						Boeing
12/12/2017	17476	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER, HOLDING TANK)	5,000	G						Boeing
	17477	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G						Boeing
12/19/2017	17511	FLUSH WATER WITH TRACE SEWAGE, (CLARIFIER)	5,000	G						Boeing

Notes:
P = Pounds
G = Gallons
K= Kilograms
n/a = Not Applicable

TABLE B
SOLID WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
10/2/2017	011149741FLE	HAZARDOUS WASTE, SOLID (PLASTIC, TCE)	100	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	Tri-State Motor Transit Co. 8141 E 7th St. Joplin, MO 64801	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	R&R Trucking 302 Thunder Rd. Jasper, MO 64841	Clean Harbors Environmental Services 2247 South Hwy 71 Kimball, NE 69145	Boeing
	017361770JJK	ASBESTOS	80	Y	J Torres Co. 5810 S. Union Ave. Bakersfield, CA 93307	n/a	n/a	n/a	Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
10/3/2017	017361771JJK	ASBESTOS	80	Y						NASA
	017362029JJK	HAZARDOUS WASTE, SOLID, (TCE)	18	T	Espinosa M Trucking 1127 Meadows St. West Covina, CA 91792					NASA
	017362030JJK	HAZARDOUS WASTE, SOLID, (TCE)	20	T	Alamito Trucking 10869 Roxbury Ave. Bloomington, CA 92316					NASA
	017362031JJK	HAZARDOUS WASTE, SOLID, (TCE)	20	T	S V Trucking 9243 Camulos Ave. Montclair, CA 91763					NASA
	017362032JJK	HAZARDOUS WASTE, SOLID, (TCE)	20	T	Pirate Trucking 7400 Whitewood Dr. Fontana, CA 92336					NASA
	017362033JJK	HAZARDOUS WASTE, SOLID, (TCE)	20	T	R. Flores Trucking Inc. 5228 Stine Rd. Bakersfield, CA 93313					NASA
	017362034JJK	HAZARDOUS WASTE, SOLID, (TCE)	21	T	Villanueva Trucking 14035 Rosedale Hwy Bakersfield, CA 93312					NASA
10/4/2017	011149764FLE	HAZARDOUS WASTE, SOLID, (BENZENE, ALCOHOL, ACETONE)	5	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	Tri-State Motor Transit Co. 8141 E 7th St. Joplin, MO 64801	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061		Clean Harbors Aragonite 11600 North Aptus Rd. Grantsville, UT 84029	Boeing
		NON-RCRA HAZARDOUS WASTE, SOLIDS, (DEBRIS, SULFURIC ACID)	20	P						Boeing
	011149765FLE	CORROSIVE SOLID, BASIC, INORGANIC, (SODIUM HYDROXIDE)	23	P		n/a	n/a		Clean Harbors Wilmington 737 East Denni St. Wilmington, CA 90744	Boeing
	017362035JJK	HAZARDOUS WASTE, SOLID, (TCE)	19	T	Espinosa M Trucking 1127 Meadows St. West Covina, CA 91792				Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
	017362036JJK	HAZARDOUS WASTE, SOLID, (TCE)	21	T	Alamito Trucking 10869 Roxbury Ave. Bloomington, CA 92316					NASA
	017362037JJK	HAZARDOUS WASTE, SOLID, (TCE)	22	T	Pirate Trucking 7400 Whitewood Dr. Fontana, CA 92336					NASA
	017362038JJK	HAZARDOUS WASTE, SOLID, (TCE)	21	T	R. Flores Trucking Inc. 5228 Stine Rd. Bakersfield, CA 93313					NASA

TABLE B
SOLID WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
10/4/2017 (cont.)	017362039JJK	HAZARDOUS WASTE, SOLID, (TCE)	21	T	Villanueva Trucking 14035 Rosedale Hwy Bakersfield, CA 93312	n/a	n/a	n/a	Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
	017362040JJK	HAZARDOUS WASTE, SOLID, (TCE)	21	T	S V Trucking 9243 Camulos Ave. Montclair, CA 91763					NASA
10/5/2017	017362041JJK	HAZARDOUS WASTE, SOLID, (TCE)	19	T	Espinosa M Trucking 1127 Meadows St. West Covina, CA 91792				Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
	017362042JJK	HAZARDOUS WASTE, SOLID, (TCE)	20	T	Alamito Trucking 10869 Roxbury Ave. Bloomington, CA 92316					NASA
	017362043JJK	HAZARDOUS WASTE, SOLID, (TCE)	24	T	Pirate Trucking 7400 Whitewood Dr. Fontana, CA 92336					NASA
10/10/2017	1705035488-3	NON-HAZARDOUS, NON D.O.T. REGULATED, (CONSTRUCTION DEBRIS)	6,960	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061				Waste Management Antelope Valley Recycling & Disposal Facility 1200 West City Ranch Rd. Palmdale, CA 93551	Boeing
	NH1705035488-2	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	15,020	P						Boeing
10/11/2017	NH1705035488-1	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	11,400	P						Boeing
11/1/2017	011142129FLE	HAZARDOUS WASTE, SOLID, (TRICHLOROETHYLENE)	12	P					Clean Harbors Wilmington 737 East Denni St. Wilmington, CA 90744	Boeing
	NH1705432586	UN2800, BATTERIES, WET, NON-SPILLABLE, 8 (UNIVERSAL WASTE - BATTERIES)	5	P						Boeing
		BATTERIES, DRY, SEALED, N.O.S. (ALKALINE BATTERIES), UNIVERSAL WASTE	26	P						Boeing
		UNIVERSAL WASTE, (ELECTRONIC DEVICES)	402	P						Boeing
11/6/2017	NH1705498705E	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y					Waste Management Antelope Valley Recycling & Disposal Facility 1200 West City Ranch Rd. Palmdale, CA 93551	Boeing
	NH1705498705F	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y						Boeing
	NH1705498705G	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y						Boeing
	NH1705498705H	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y						Boeing

TABLE B
SOLID WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
11/7/2017	NH1705498705A	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	n/a	n/a	n/a	Waste Management Antelope Valley Recycling & Disposal Facility 1200 West City Ranch Rd. Palmdale, CA 93551	Boeing
	NH1705498705B	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y						Boeing
	NH1705498705C	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y						Boeing
	NH1705498705D	NON HAZARDOUS, NON D.O.T. REGULATED, (DEBRIS, SOIL)	20	Y						Boeing
11/29/2017	NH1705934288	NON HAZARDOUS, NON D.O.T. REGULATED MATERIAL, (DEBRIS)	11,180	P					Clean Harbors Grassy Mountain 3 miles E, 7 miles N of Knolls, UT 81083	Boeing
	011550942FLE	HAZARDOUS WASTE SOLID, (TRICHLOROETHYLENE)	58	P					Clean Harbors Aragonite 11600 North Aptus Rd. Grantsville, UT 84029	Boeing
		WASTE LABPACK MATERIAL SHIPPING NAME WILL VARY SEE PACKING SLIP (COBALT CHLORIDE DESSICANT BEADS)	12	P						Boeing
		WASTE LABPACK MATERIAL SHIPPING NAME WILL VARY SEE PACKING SLIP (HCl, H2SO4)	13	P						Boeing
12/4/2017	017361772JJK	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, (ARSENIC)	20	Y	Patriot Environmental Services 508 East E st. Wilmington, CA 90744				Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
12/13/2017	011551166FLE	WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID (LEAD)	614	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061				Clean Harbors Aragonite 11600 North Aptus Rd. Grantsville, UT 84029	Boeing
	011551167FLE	NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS, OIL)	10	P					Clean Harbors Wilmington 737 East Denni St. Wilmington, CA 90744	Boeing
12/19/2017	018138619JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	21	T	Giosand Environmental Transportation 36622 Rose St. Palmdale, CA 93552				Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
	018138620JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	21	T	AM TransportatIon 15309 Fonthill Ave. Lawndale, CA 90260					NASA
	018138621JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	20	T	J Torres Co. Inc. 5810 S. Union Ave. Bakersfield, CA 93307					NASA
	018138622JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	19	T						NASA

TABLE B
SOLID WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
12/20/2017	011551199FLE	NON RCRA HAZARDOUS WASTE, SOLID, (CHROMIUM, LEAD)	20	Y	Knight Enterprises 7005 Etter St Bakersfield, CA 93308	n/a	n/a	n/a	Clean Harbors Buttonwillow 2500 West Lokern Rd. Buttonwillow, CA 93206	Boeing
	011551200FLE	NON RCRA HAZARDOUS WASTE, SOLID, (CHROMIUM, LEAD)	20	Y						Boeing
	018138623JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	21	T	Giosand Environmental Transportation 36622 Rose St. Palmdale, CA 93552				Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
	018138624JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	22	T	AM TransportatIon 15309 Fonthill Ave. Lawndale, CA 90260					NASA
	018138625JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	18	T	J Torres Co. 5810 S. Union Ave. Bakersfield, CA 93307					NASA
	018138626JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	19	T						NASA
12/21/2017	018138627JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	21	T	AM TransportatIon 15309 Fonthill Ave. Lawndale, CA 90260				Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA
	018138628JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	20	T	J Torres Co. 5810 S. Union Ave. Bakersfield, CA 93307					NASA
	018138629JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	20	T						NASA
	018138630JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	22	T	Giosand Environmental Transportation 36622 Rose St. Palmdale, CA 93552					NASA
12/22/2017	010790812JJK	NON RCRA HAZARDOUS WASTE, SOLID, (CONCRETE)	22	T	Towers Environmental 5810 A S Union Ave. Bakersfield, CA 93307					NASA
	018138767JJK	WASTE KEROSENE, (SOIL)	385	P	WM Enviroserv 10633 Ruchti Rd. South Gate, CA 90280				Clean Harbors Wilmington 1737 East Denni St. Wilmington, CA 90745	NASA
	018138768JJK	NON RCRA HAZARDOUS WASTE, SOLID, (SOIL)	425	P					Chemical Waste Management 35251 Old Skyline Rd. Kettleman City, CA 93239	NASA

Notes:
P = Pounds
G = Gallons
K = Kilos
Y = Yards
T = Tons
n/a = Not Applicable

TABLE B
FLAMMABLE WASTE SHIPMENTS

FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF WASTE	QTY.	UNITS	TRANSPORTER 1	TRANSPORTER 2	TRANSPORTER 3	TRANSPORTER 4	DESTINATION	GENERATOR
12/13/2017	011551167FLE	WASTE AEROSOLS, FLAMMABLE	14	P	Clean Harbors Environmental Services 42 Longwater Dr. Norwell, MA 02061	n/a	n/a	n/a	Clean Harbors Wilmington 737 East Denni St. Wilmington, CA 90744	Boeing

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

APPENDIX C

Fourth Quarter 2017 Discharge Monitoring Data Summary Tables

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

Notes:

1. TCDD 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 DNQ, as specified on Page 26 of the NPDES permit.

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^{o}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 reported with the same number of significant figures as the Daily Maximum Benchmark Limits, Daily Maximum Permit Limits, or receiving water limits.

5. Priority pollutants at RSW-002 (Arroyo Simi) scheduled for 2018.

6. All of the following abbreviations and/or notes may not occur on every table.

-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 counting 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 permit limit established for daily maximum or monthly average.
<(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 permit.
*1	Improper preservation of sample.
*2	The inductively coupled plasma (ICP)/Matrix Spike (MS) 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.

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

*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 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 %RSD (relative standard deviation) or %D (difference) were noncompliant.
Comp	Composite sample type.
C5	Calibration verification %R (recovery) 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.
F	The analyte was detected in an associated field blank (FB) or equipment blank (EB) as well as in the sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
ft/sec	Feet per second.
G	Gallons.
gpd	Gallons per day.
H	Holding time was exceeded.

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

Hardness	Equivalent of calcium carbonate (CaCO3).
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 (MQL), but > than MDL.
K	The sample dilution's set-up did not meet the oxygen depletion criteria of at least 2 mg/l; therefore, the reported result is an estimated value only.
L	Laboratory control sample %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 %R was below the method control limits.
LBS/DAY	Pounds per day.
LCS	Laboratory control standard.
LCSD	Laboratory control standard duplicate.
LQ	LCS/LCSD recovery above method control limits.
M1	MS and/or MSD were above the acceptance limits due to sample matrix interference.
M2	The MS and/or MS duplicate were below the acceptance limits due to sample matrix interference.
Max	Maximum.
MB	Analyte present in the method blank.
MDA/MDC	Minimum detectable activity/minimum detectable concentration.
MDL	Method Detection Limit.
Meas	Measure sample type.
MFL	Million fibers per liter.
MGD	Million gallons per day.
MHA	Due to high level of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.
mg/L	Milligrams per liter.
mg/kg	Milligrams per kilogram.
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 permit limit established for the constituent and/or outfall.
ND	Analyte not detected.

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

NM	Not measured or determined or MDAs are not calculated as there is no statistical method for combining MDAs.
NTU	Nephelometric turbidity unit.
P	Pounds.
pCi/L	PicoCuries per liter.
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 recovery outside of control limits.
Q1	MS/MSD RPD was outside the control limit.
R	As a validation qualifier, results are rejected; the presence or absence of analyte cannot be verified.
R	(reason code in parentheses) %R for calibration not within control limits.
RL	Laboratory reporting limit.
RL-1	Reporting limit raised due to sample matrix effects.
RPD	Relative percent difference.
%R	Percent recovery.
%RSD	Percent relative standard deviation.
% survival	Percent survival.
S	Surrogate recovery was outside control limits.
s.u.	Standard Unit.
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin.
TEQ	Toxic equivalent.
T	Presumed contamination, as indicated by a detect in the trip blank.
U	Result not detected.
µg/L (ug/L)	Micrograms per liter.
µg/kg (ug/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 settable 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.

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

(1)	Based on the 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 permit.
(4.0)3.1/-	Represents (Dry Weather Limit) Wet Weather Limit / Monthly Average Limit.
(3)	Secondary Maximum Contaminant Level.
(4)	The drinking water maximum contaminant level of 3.00E-05 ug/L is for the dioxin congener 2,3,7,8-TCDD. TCDD TEQ w/out DNQ Values is the sum of the products of the detected dioxin congener concentration multiplied by that congener's TEF and BEF. There are 17 dioxin congeners.
(a)	Based on ORDER NO. R4-2015-0033 page 17 Footnote 7, sampling event is a dry discharge. Effluent limitations for Cadmium are not applicable for discharges during dry weather.
(b)	Based on ORDER NO. R4-2015-0033 page 17 Footnote 7, sampling event is a wet discharge. Effluent limitations for Cadmium are applicable for discharges during wet weather.
(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 settable 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 settable 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. Effluent limitations for Selenium are applicable for discharges during dry weather discharges.
(f)	Based on ORDER NO. R4-2015-0033 page 17 Footnote 8, sampling event is a wet discharge. Effluent limitations for Selenium are not applicable for discharges during wet weather.

ARROYO SIMI RECEIVING WATER (RSW-002, FRONTIER PARK) SAMPLING LOCATION
FOURTH QUARTER 2017 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

October 1 through December 31, 2017

				12/19/2017 09:10		
ANALYTE	**UNITS**	**Permit Limit Daily Max/Monthly Avg**	**SAMPLE FREQUENCY**	**SAMPLE TYPE**	**RESULT**	**VALIDATION QUALIFIER**
POLLUTANTS WITH LIMITS						
4,4'-DDD	µg/L	0.0014/-	1/Quarter	Grab	ND < 0.0042	*
4,4'-DDE	µg/L	0.001/-	1/Quarter	Grab	ND < 0.0032	*
4,4'-DDT	µg/L	0.001/-	1/Quarter	Grab	ND < 0.0042	*
Aroclor 1016	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.11	U
Aroclor 1221	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.11	U
Aroclor 1232	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.11	U
Aroclor 1242	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.11	U
Aroclor 1248	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.11	U
Aroclor 1254	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.11	UJ (C)
Aroclor 1260	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.16	UJ (C)
Chlordane	µg/L	0.001/-	1/Quarter	Grab	ND < 0.085	*
Chlorpyrifos	µg/L	0.02/-	1/Quarter	Grab	ND < 0.0069	U
Diazinon	µg/L	0.16/-	1/Quarter	Grab	ND < 0.0052	UJ (H)
Dieldrin	µg/L	0.0002/-	1/Quarter	Grab	ND < 0.0021	*
E. Coli	MPN/100 ml	235/-	1/Year	ANR	ANR	ANR
pH (Field)	s.u.	6.5-8.5/-	1/Quarter	Grab	7.16	*
Toxaphene	µg/L	0.0003/-	1/Quarter	Grab	ND < 0.26	*
POLLUTANTS WITHOUT LIMITS						
Hardness (as CaCO3)	mg/L	-/-	1/Quarter	Grab	730	--
Priority Polluntants	NA	-/-	1/5 Years	ANR	ANR	ANR
Temperature (Field)	deg F	-/-	1/Quarter	Grab	61.18	*
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	*
ADDITIONAL POLLUTANTS						
Conductivity (Field)	mS/cm	-/-	Additional/Discharge	Grab	2.14	*
Dissolved Oxygen (Field)	mg/L	-/-	Additional/Discharge	Grab	8.99	*

See Reporting Summary Notes for abbreviations, definitions, and other explanations for the data presented.

APPENDIX D

Fourth Quarter 2017 Analytical Laboratory Reports, Chain of Custody Forms, and Validation Reports

APPENDIX D

TABLE OF CONTENTS

Section No.

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-198770-1

Prepared for

Haley & Aldrich, Inc.

600 South Meyer Avenue, Suite 100

Tucson, Arizona 85701

January 18, 2018

MEC^X, Inc.
8864 Interchange Drive
Houston, Texas 77054

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TABLES

I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract: 40458-078 and 40458-083

MEC^X Project No.: 1272.003H.01

Sample Delivery Group: 440-198770-1

Project Manager: Katherine Miller

Matrix: 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	Sub Lab Sample ID	Matrix	Collection	Method
Arroyo_Simi_20171219_Grab	440-198770-1	N/A	Water	12/19/2017 9:10:00 AM	E525.2, E608, SM2340

II. SAMPLE MANAGEMENT

According to the case narrative, sample condition upon receipt form and the chains-of-custody (COCs) provided by the laboratories for sample delivery group (SDG) 440-198770-1:

- The laboratories received the sample in this SDG on ice and within the temperature limits of ≤6 degrees Celsius (°C) and >0°C.
- The laboratories received the sample containers intact and properly preserved, as applicable.
- Extra sample volume was placed on a Hold status on the original COC.
- Field and laboratory personnel signed and dated the COCs.
- Custody seals were not present upon receipt at TA-Irvine; however, no evidence of tampering was noted. Lancaster's receipt documentation log indicated the shipping container was sealed; however, a custody seal was not present. Weck Laboratories did not provide further receipt information.
- Minor corrections to the COC were initialed but not dated.
- The Method 608 PCBs analysis was subcontracted to Lancaster Laboratories.
- The Method 525.2 analysis was subcontracted to Weck Laboratories.

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. METHOD ANALYSES – 608 PCBS

L. Calvin of MEC[X] reviewed the SDG on January 18, 2018

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*, and the *National Functional Guidelines for Superfund Organic Methods Data Review* (2014).

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 had %RSDs of ≤10% or r^2 of ≥0.990 on the secondary analytical column. Five of six peaks for Aroclors 1254 and 1260 had %RSDs marginally above 10% on the primary column; therefore, the nondetects for both Aroclors were qualified as estimated (UJ) in the sample, Arroyo_Simi_20171219_Grab. The initial calibration verification (ICV) and continuing calibration verification (CCV) %Ds were within the control limit of ≤15%.

III.3. QUALITY CONTROL SAMPLES

III.3.1. *METHOD BLANKS*

Target compounds were not detected in method blank.

III.3.2. *LABORATORY CONTROL SAMPLES*

Recoveries were within the laboratory control limits of 60-117% for Aroclor 1016 and 57-134% for Aroclor 1260. RPDs were within the control limit of ≤30%.

III.3.3. *SURROGATE RECOVERY*

PCB surrogate decachlorobiphenyl (DCB) was recovered within the laboratory control limits of 10-148%, in the site sample.

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

MS/MSD analyses were not performed on the sample in this SDG. MEC[X] evaluated method accuracy and precision based on the LCS/LCSD results.

III.4. FIELD QC SAMPLES

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

III.4.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

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

III.4.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

III.5. COMPOUND IDENTIFICATION

Compound identification was verified. Review of the sample chromatograms and retention times indicated no issues with target compound identification. The laboratory analyzed for seven Aroclors by Method 608.

III.6. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified. 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.

III.7. SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance.

IV. EPA METHODS 525.2— SEMIVOLATILE ORGANIC COMPOUNDS (SVOCS)

L. Calvin of MEC^X reviewed the SDG on January 18, 2018

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* (2014).

IV.1. HOLDING TIMES

Analytical holding times were met; however, the water sample was extracted approximately three hours past the holding time of within 24 hours of collection. A notation on the COC and the case narrative for this SDG indicated the sample could be extracted past the holding time, but as soon as possible upon receipt, per client request. The nondetect result for diazinon was qualified as estimated with a potential low bias (UJ) in the sample, Arroyo_Simi_20171219_Grab. 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 QC 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*

The recoveries were within the laboratory control limits of 37-169% for chlorpyrifos and 43-152% for diazinon.

IV.3.3. *SURROGATE RECOVERY*

Surrogate recoveries were within the laboratory control limits.

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

MS/MSD analyses were performed on the sample, Arroyo_Simi_20171219_Grab, in this SDG. Recoveries and RPDs were within the laboratory control limits of 37-168% for chlorpyrifos and 36-153% for diazinon.

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

The internal standard area counts were within the method control limits established by the continuing calibration standards of ±30% for areas and ±10 seconds for retention times.

IV.6. COMPOUND IDENTIFICATION

Compound identification was verified. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. Review of the sample chromatogram, retention times, and ion chromatograms indicated no problems with target compound identification.

IV.7. COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified. 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. TENTATIVELY IDENTIFIED COMPOUNDS (TICS)

The laboratory did not report TICs for this SDG.

IV.9. SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance.

V. METHOD SM2340B—HARDNESS

Marcia Hilchey of MEC^X reviewed the SDG on January 21, 2018

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 2), Standard Method 2340B,* and the *National Functional Guidelines for Inorganic Superfund Data Review* (2014).

V.1. HOLDING TIMES

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

V.2. CALIBRATION

ICP 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%.

V.3. QUALITY CONTROL SAMPLES

V.3.1. *METHOD BLANKS*

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

V.3.2. *INTERFERENCE CHECK SAMPLES:*

ICS recoveries were within the control limits of 80-120% or ±2× the reporting limit, whichever is greater. As the target analytes utilized in the calculation of hardness were spiked interferents, the sample was not assessed for matrix interference.

V.3.3. *LABORATORY CONTROL SAMPLES*

Laboratory control sample recoveries were within the laboratory control limits.

V.3.4. *LABORATORY DUPLICATES*

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

V.3.5. *MATRIX SPIKE/MATRIX SPIKE DUPLICATE*

MS/MSD analyses were performed on the sample in this SDG. MS/MSD results were assessed when the parent sample results were <4x the spike concentration. The parent result exceeded the spike concentration by >4x for both target analytes.

V.4. SERIAL DILUTION

No serial dilution analysis was performed on the sample in this SDG.

V.5. SAMPLE RESULT VERIFICATION

Calculations were verified and the sample results reported on the sample results summary were verified against the raw data. No transcription errors or calculation errors were noted.

V.6. FIELD QC SAMPLES

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

V.6.1. *FIELD BLANKS AND EQUIPMENT BLANKS*

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

V.6.2. *FIELD DUPLICATES*

Field duplicate samples were not identified in this SDG.

Validated Sample Result Forms: 4401987701

Analysis Method E525.2

Sample Name Arroyo_Simi_20171219_Grab **Matrix Type:** W **Result Type:** TRG

Sample Date: 12/19/2017 9:10:00 AM **Validation Level:** 8

Lab Sample Name: 440-198770-1

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

Analysis Method E608

Sample Name Arroyo_Simi_20171219_Grab **Matrix Type:** W **Result Type:** TRG

Sample Date: 12/19/2017 9:10:00 AM **Validation Level:** 8

Lab Sample Name: 440-198770-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aroclor-1016 (PCB-1016)	N	12674-11-2		0.53	0.11	ug/L	U	U	
Aroclor-1221 (PCB-1221)	N	11104-28-2		0.53	0.11	ug/L	U	U	
Aroclor-1232 (PCB-1232)	N	11141-16-5		0.53	0.11	ug/L	U	U	
Aroclor-1242 (PCB-1242)	N	53469-21-9		0.11	0.11	ug/L	U	U	
Aroclor-1248 (PCB-1248)	N	12672-29-6		0.53	0.11	ug/L	U	U	
Aroclor-1254 (PCB-1254)	N	11097-69-1		0.53	0.11	ug/L	U	UJ	C
Aroclor-1260 (PCB-1260)	N	11096-82-5		0.53	0.16	ug/L	U	UJ	C

Analysis Method SM2340

Sample Name Arroyo_Simi_20171219_Grab **Matrix Type:** W **Result Type:** TRG

Sample Date: 12/19/2017 9:10:00 AM **Validation Level:** 8

Lab Sample Name: 440-198770-1

Analyte	Fraction:	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	T	HARDNESSCACO3	730	0.33	0.17	mg/L			

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-198770-1
Client Project/Site: Quarterly Arroyo Simi-Frontier Park
Revision: 1

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

Attn: Katherine Miller

Authorized for release by:
1/26/2018 5:38:59 PM

Urvashi Patel, Manager of Project Management
(949)261-1022
urvashi.patel@testamericainc.com

I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.

Urvashi Patel
Manager of Project Management
1/26/2018 5:38:59 PM

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-198770-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-198770-1	Arroyo_Simi_20171219_Grab	Water	12/19/17 09:10	12/19/17 13:10

Case Narrative

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

TestAmerica Job ID: 440-198770-1

Job ID: 440-198770-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-198770-1

Comments
Client requested that Total PCB be removed from subcontract report. Revison created to report with revised subcontract data.

Receipt
The samples were received on 12/19/2017 1:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

GC Semi VOA
Method(s) 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-448246 and analytical batch 440-448566.The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.(LCS 440-448246/2-A)

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

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

Subcontract Work
Method 608_LL-PCB- Lancaster Labs: This method was subcontracted to Lancaster Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report.

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_20171219_Grab
Date Collected: 12/19/17 09:10
Date Received: 12/19/17 13:10

Lab Sample ID: 440-198770-1
Matrix: Water

Method: 608 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.11	0.085	ug/L		12/22/17 06:30	12/26/17 13:42	1
Dieldrin	ND		0.0053	0.0021	ug/L		12/22/17 06:30	12/26/17 13:42	1
Toxaphene	ND		0.53	0.26	ug/L		12/22/17 06:30	12/26/17 13:42	1
4,4'-DDD	ND		0.0053	0.0042	ug/L		12/22/17 06:30	12/26/17 13:42	1
4,4'-DDE	ND		0.0053	0.0032	ug/L		12/22/17 06:30	12/26/17 13:42	1
4,4'-DDT	ND		0.011	0.0042	ug/L		12/22/17 06:30	12/26/17 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*10 - 150*	*12/22/17 06:30*	*12/26/17 13:42*	*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	**730**		0.33	0.17	mg/L			12/27/17 12:31	1

Method Summary

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

TestAmerica Job ID: 440-198770-1

Method	Method Description	Protocol	Laboratory
608	Organochlorine Pesticides in Water	40CFR136A	TAL IRV
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL IRV
608_LL-PCB-Lancaster Labs	General Sub Contract Method	NONE	SC0103
Weck-525.2-Diazinon and Chlorpyrifos	General Sub Contract Method	NONE	Weck Lab

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:

SC0103 = Eurofins Lancaster Laboratories Env LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300
TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022
Weck Lab = Weck Laboratories, Inc., 14859 East Clark Avenue, City of Industry, CA 917451396

Lab Chronicle

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

TestAmerica Job ID: 440-198770-1

Client Sample ID: Arroyo_Simi_20171219_Grab
Date Collected: 12/19/17 09:10
Date Received: 12/19/17 13:10

Lab Sample ID: 440-198770-1
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			945 mL	2 mL	448246	12/22/17 06:30	L2A	TAL IRV
Total/NA	Analysis	608		1			448566	12/26/17 13:42	JM	TAL IRV
Total Recoverable	Analysis	SM 2340B		1			448800	12/27/17 12:31	A1S	TAL IRV

Laboratory References:

SC0103 = Eurofins Lancaster Laboratories Env LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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

Weck Lab = Weck Laboratories, Inc., 14859 East Clark Avenue, City of Industry, CA 917451396

Method: 608 - Organochlorine Pesticides in Water

Lab Sample ID: MB 440-448246/1-A
Matrix: Water
Analysis Batch: 448566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 448246

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.10	0.080	ug/L		12/22/17 06:30	12/26/17 12:28	1
Dieldrin	ND		0.0050	0.0020	ug/L		12/22/17 06:30	12/26/17 12:28	1
Toxaphene	ND		0.50	0.25	ug/L		12/22/17 06:30	12/26/17 12:28	1
4,4'-DDD	ND		0.0050	0.0040	ug/L		12/22/17 06:30	12/26/17 12:28	1
4,4'-DDE	ND		0.0050	0.0030	ug/L		12/22/17 06:30	12/26/17 12:28	1
4,4'-DDT	ND		0.010	0.0040	ug/L		12/22/17 06:30	12/26/17 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*10 - 150*	*12/22/17 06:30*	*12/26/17 12:28*	*1*

Lab Sample ID: LCS 440-448246/2-A
Matrix: Water
Analysis Batch: 448566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 448246

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dieldrin			0.200	0.223		ug/L		111	36 - 146		
4,4'-DDD			0.200	0.241		ug/L		121	31 - 141		
4,4'-DDE			0.200	0.214		ug/L		107	30 - 145		
4,4'-DDT			0.200	0.235		ug/L		117	25 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*85*		*10 - 150*

Lab Sample ID: LCSD 440-448246/3-A
Matrix: Water
Analysis Batch: 448566

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 448246

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dieldrin			0.200	0.219		ug/L		109	36 - 146	2	35
4,4'-DDD			0.200	0.237		ug/L		119	31 - 141	2	35
4,4'-DDE			0.200	0.208		ug/L		104	30 - 145	3	35
4,4'-DDT			0.200	0.233		ug/L		116	25 - 150	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*84*		*10 - 150*

QC Association Summary

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

TestAmerica Job ID: 440-198770-1

GC Semi VOA

Prep Batch: 448246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-198770-1	Arroyo_Simi_20171219_Grab	Total/NA	Water	608	
MB 440-448246/1-A	Method Blank	Total/NA	Water	608	
LCS 440-448246/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 440-448246/3-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 448566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-198770-1	Arroyo_Simi_20171219_Grab	Total/NA	Water	608	448246
MB 440-448246/1-A	Method Blank	Total/NA	Water	608	448246
LCS 440-448246/2-A	Lab Control Sample	Total/NA	Water	608	448246
LCSD 440-448246/3-A	Lab Control Sample Dup	Total/NA	Water	608	448246

Metals

Analysis Batch: 448800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-198770-1	Arroyo_Simi_20171219_Grab	Total Recoverable	Water	SM 2340B	

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

TestAmerica Job ID: 440-198770-1

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Accreditation/Certification Summary

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

TestAmerica Job ID: 440-198770-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-18

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record

7L20015

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Urvashi	Carrier Tracking No(s):	COC No: 440-117469.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: urvashi.patel@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: Weck Laboratories, Inc.		Accreditations Required (See note): State Program - California		Job #: 440-198770-1
Address: 14859 East Clark Avenue, ,	Due Date Requested: 1/2/2018			
City: City of Industry	TAT Requested (days):			
State, Zip: CA, 917451396				
Phone:	PO #:			
Email:	WO #:			
Project Name: Boeing NPDES SSFL outfalls	Project #: 44009879			
Site:	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Weck-525.2-Diazinon and Chlorpyrifos) Weck-525.2-Diazinon and Chlorpyrifos	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Arroyo_Simi_20171219_Grab (440-198770-1)	12/19/17	09:10 Pacific		Water			X		Deliver same day as pick up -24 hour hold time for 525.2 -2 cmpds!!
									* OK to extract past 24 hours, ASAP

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

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

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	12-20-17 11:11	Tal	Tanghman	12/20/17 1111	Weck
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.8 ~

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 7L20015

Project: 440-198770-1

Attn: Urvashi Patel

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

Report Date: 12/27/2017

Received Date: 12/20/2017

Turnaround Time: 1 workday

Phones: (949) 261-1022

Fax: (949) 260-3297

P.O. #:

Billing Code:

Dear Urvashi Patel,

Enclosed are the results of analyses for samples received 12/20/17 with the Chain-of-Custody document. The samples were received in good condition, at 2.8 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Case Narrative

ok to extract past 24 hours per Urvashi-RG 12/20

Sample Results

Sample: Arroyo_Simi_20171219_Grab(440-198770-1) Sampled: 12/19/17 9:10 by Client

7L20015-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: EPA 525.2M **Batch ID:** W7L1076 **Instr:** GCMS13 **Prepared:** 12/20/17 12:02 **Analyst:** EFC							
Chlorpyrifos	ND	6.9	10	ng/l	1	12/27/17 03:19	
Diazinon	ND	5.2	10	ng/l	1	12/27/17 03:19	
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*97%*		*76-128*	*Conc: 487*		*12/27/17 03:19*	
Triphenyl phosphate	*112%*		*40-163*	*Conc: 562*		*12/27/17 03:19*	

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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 (W7L1076-BLK1)					**Prepared: 12/20/17 Analyzed: 12/27/17**						
Chlorpyrifos	ND	6.9	10	ng/l							
Diazinon	ND	5.2	10	ng/l							
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene			*495*	*ng/l*	*500*		*99*	*76-128*			
Triphenyl phosphate			*480*	*ng/l*	*500*		*96*	*40-163*			
LCS (W7L1076-BS1)					**Prepared: 12/20/17 Analyzed: 12/27/17**						
Chlorpyrifos	59.0	6.9	10	ng/l	50.0		118	37-169			
Diazinon	47.3	5.2	10	ng/l	50.0		95	43-152			
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene			*504*	*ng/l*	*500*		*101*	*76-128*			
Triphenyl phosphate			*605*	*ng/l*	*500*		*121*	*40-163*			
Matrix Spike (W7L1076-MS1)	**Source: 7L20015-01**				**Prepared: 12/20/17 Analyzed: 12/27/17**						
Chlorpyrifos	77.5	6.9	10	ng/l	50.0	ND	155	37-168			
Diazinon	53.2	5.2	10	ng/l	50.0	ND	106	36-153			
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene			*531*	*ng/l*	*500*		*106*	*76-128*			
Triphenyl phosphate			*699*	*ng/l*	*500*		*140*	*40-163*			
Matrix Spike Dup (W7L1076-MSD1)	**Source: 7L20015-01**				**Prepared: 12/20/17 Analyzed: 12/27/17**						
Chlorpyrifos	70.8	6.9	10	ng/l	50.0	ND	142	37-168	9	30	
Diazinon	46.5	5.2	10	ng/l	50.0	ND	93	36-153	14	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene			*517*	*ng/l*	*500*		*103*	*76-128*			
Triphenyl phosphate			*610*	*ng/l*	*500*		*122*	*40-163*			

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Notes and Definitions

Item	Definition
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.
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
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) and Detection Limit for Reporting (DLR)
MDA	Minimum Detectable Activity
NR	Not Reportable
TIC	Tentatively Identified Compound (TIC) using mass spectrometry. The reported concentration is relative concentration based on the nearest internal standard. If the library search produces no matches at, or above 85%, the compound is reported as unknown.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.
An Absence of Total Coliform meets the drinking water standards as established by the California State Water Resources Control Board (SWRCB)
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 MIS 002.

Reviewed by:

Regina Giancola
Project Manager

DoD-ELAP #L2457 • ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH # • ISO 17025 #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.

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eurofins | Lancaster Laboratories Environmental

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Test America
17461 Derian Ave
Suite #100
Irvine CA 92614

Report Date: January 24, 2018 12:00

Project: Boeing NPDES SSFL Outfalls

Account #: 41440
Group Number: 1889974
SDG: SSF06
PO Number: 440-198770-1
State of Sample Origin: CA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Test America Attn: Urvashi Patel

Respectfully Submitted,

Kay Hower

(717) 556-7364

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REVISED

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
Arroyo_Simi_20171219_Grab(440-198770-1) Grab Water	12/19/2017 09:10	9381731

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

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Sample Description: Arroyo_Simi_20171219_Grab(440-198770-1) Grab Water
Boeing NPDES SSFL Outfalls

Project Name: Boeing NPDES SSFL Outfalls

Submittal Date/Time: 12/21/2017 11:55
Collection Date/Time: 12/19/2017 09:10
SDG#: SSF06-01

Test America
ELLE Sample #: WW 9381731
ELLE Group #: 1889974
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608**		ug/l	ug/l	ug/l	
06030	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
06030	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
06030	PCB-1232	11141-16-5	N.D. D1	0.11	0.53	1
06030	PCB-1242	53469-21-9	N.D. D1	0.11	0.53	1
06030	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
06030	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
06030	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06030	PCBs in Water by 608	EPA 608	1	173560018A	01/02/2018 23:16	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608	1	173560018A	12/22/2017 16:36	Kate E Lutte	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Test America
Reported: 01/24/2018 12:00

Group Number: 1889974

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 173560018A	Sample number(s): 9381731		
PCB-1016	N.D.	0.10	0.50
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.10	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 173560018A	Sample number(s): 9381731								
PCB-1016	5.01	4.48	5.01	4.46	89	89	60-117	0	30
PCB-1260	5.01	5.11	5.01	5.27	102	105	57-134	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: PCBs in Water by 608
Batch number: 173560018A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9381731	86	98	80	90
Blank	83	111	75	104
LCS	78	107	75	95
LCSD	78	67	77	65

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: Test America
Reported: 01/24/2018 12:00

Group Number: 1889974

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: PCBs in Water by 608
Batch number: 173560018A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

A# 41440 G# 1889974 S# 9381731

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Patel, Urvashi	Carrier Tracking No(s):	COC No: 440-117486.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: urvashi.patel@testamericainc.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note): State Program - California		Job #: 440-198770-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 1/2/2018			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: Boeing NPDES SSFL outfalls	Project #: 44009879			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (608_LL-PCB- Lancaster Labs)/ 608_LL-PCB-Lancaster Labs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Arroyo_Simi_20171219_Grab (440-198770-1)	12/19/17	09:10 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	12/20/17 @ 1700	STL			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	12-21-17 1155	ELLE

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
~~Yes~~ No		2.8°C

EXS 12-21-17

Client: Test America

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/21/2017 11:55
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8 943) at 15:12 on 12/21/2017

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	2.8	IR	Wet	Y	Loose/Bag	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Test America

CHAIN OF CUSTODY FORM

Client Name/Address:
Haley & Aldrich
9040 Friars Road Suite 220
San Diego, CA 92108-5860

Test America Contact: Urvashi Patel
17461 Derian Ave Suite #100
Irvine CA 92614
Tel 949-260-3269
Cell 949-333-9055

TestAmerica's services under this CoC shall be performed in accordance with the T&Cs within Blanket Service Agreement# 2015-18-TestAmerica by and between Haley & Aldrich, Inc., its subsidiaries and affiliates, and TestAmerica Laboratories Inc.

Sampler: Dan Smith

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

Project Manager: Katherine Miller
520.289.8606, 520.904.6944 (cell)

Field Manager: Mark Dominick
818.350.7312, 818.599.0702 (cell)

ANALYSIS REQUIRED

Sample Description	Sample I.D.	Sampling Date/Time	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	MS/MSD	Hardness as CaCO3, 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_20171219_Grab	12/19/2017 0910	WS	250 mL Poly	1	HNO_3	100	Yes No	X							
			WS	1L Glass Amber	2	HCl	275	Yes No		X						Extract within 24-Hours of sampling.
			WS	1L Glass Amber	2	None	285	Yes No			X					
	Arroyo_Simi_20171219_Grab_Extra	12/19/2017 0916	WS	1L Glass Amber	2	HCl	275	No		H						Hold
			WS	1L Glass Amber	2	None	285	No			H					Hold

DB DB

Field Readings | Meter serial #

Field Readings: (Include units)

Time of Readings:

pH 7.16 pH unit
Temp 16.2 °C/°F

DO = 8.99 mg/L
COND. = 2.44 ms/cm
velocity = 0.0 ft/s

Field readings QC
Checked by: DB
Date/Time: 09.20

Comments

440-198770 Chain of Custody

Relinquished By	Date/Time:	Company:	Received By	Date/Time:
DB	12/19/17 10:45AM	H&A		12/19/17 1045
	12/19/17 1310	TA		12/19/17 1310

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

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

12/19/17

Page 26 of 27

1/26/2018 (Rev. 1)

3.4/2.7 IR-SC6

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-198770-1

Login Number: 198770
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica 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	