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

Via FedEx

May 03, 2016
In reply refer to SHEA-115469

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

Subject: Revision 1, Second Quarter 2015 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 Revision 1 of the Discharge Monitoring Report (DMR) for the Santa Susana Field Laboratory (Santa Susana Site) for the period of 1 April through 30 June 2015 (Second Quarter 2015). This DMR was prepared as required by and in accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001309 (Permit) and under regulatory oversight of the Los Angeles Regional Water Quality Control Board (Regional Board). The Regional Board issued a revised permit on 23 February 2015 with an effective date of 01 April 2015 (Order R4-2015-0033). Included are summary tables of best management practices (BMPs), stormwater sample analytical results, rainfall quantities, liquid waste shipments, and laboratory analytical reports for stormwater samples.

This revision includes the Bioassessment Monitoring Report which addresses the NPDES Permit requirement to conduct spring/summer bioassessment sampling following the last major storm event of the 2015 rain season. Due to insufficient flow when the bioassessment was conducted, bioassessment samples were not collected. Discussion of the bioassessment monitoring and the Bioassessment Monitoring Report were not included in the Second Quarter 2015 DMR. Bioassessment monitoring is discussed at the end of this revised DMR and the Bioassessment Monitoring Report is included as Appendix E. No other corrections were required for the Second Quarter 2015 DMR.

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

SECOND QUARTER 2015 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 Second Quarter 2015. Table I summarizes the Second Quarter 2015 sampling record by outfall, location, and sample type collected per the requirements of the NPDES Permit.

- **Second Quarter 2015 Summary of Compliance:** This section summarizes the sample results that exceeded NPDES Permit limits in Second Quarter 2015.
- **Second Quarter 2015 Santa Susana Site-wide Stormwater Pollution Prevention Plan (SWPPP)/BMP Activities:** This section presents the Santa Susana Site SWPPP activities and BMPs related to demolition, Interim Source Removal Actions (ISRA), the BMP Plan, Northern Drainage, and other activities implemented in Second Quarter 2015. 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.
- **Appendix A** summarizes measured Second Quarter 2015 precipitation at the Santa Susana Site.
- **Appendix B** tabulates liquid waste shipment details.
- **Appendix C** presents chemical analytical results of Second Quarter 2015 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 laboratory analytical reports, chains of custody, and data validation reports.
- **Appendix E** contains the Bioassessment Monitoring Report.
- **Figure 1** shows site features and **Figure 2** shows the Arroyo Simi – Frontier Park (RSW-002) sampling location.

DISCHARGE SUMMARY

The Santa Susana Site experienced one qualifying rain event 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 Second Quarter 2015 (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. One offsite surface water sample was collected at the Arroyo Simi – Frontier Park location in Simi Valley (RSW-002). Table I summarizes the Second Quarter 2015 sampling record by outfall, location and sample type collected, per NPDES Permit requirements.

TABLE I: Sampling Record during Second Quarter 2015

Date	Outfall/Location	Sample Frequency	Sample Type
5/14/2015	Arroyo Simi Frontier Park (RSW-002)	Quarterly	Grab

The sample was submitted to and analyzed by TestAmerica Laboratories, Inc., a California-certified analytical laboratory in Irvine, per the NPDES Permit requirements.

SECOND QUARTER 2015 SUMMARY OF COMPLIANCE

No surface water discharges occurred from the Santa Susana Site during Second Quarter 2015. As such, there are no onsite compliance issues to report for this period. Additionally, in the quarterly sample collected at Arroyo Simi sample location RSW-002 in Simi Valley, no constituents exceeded receiving water limits. All Second Quarter 2015 samples were therefore in full compliance with the NPDES Permit.

SECOND QUARTER 2015 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 that were completed during Second Quarter 2015 by outfall number. In addition to SWPPP-related activities, specific BMP projects included: demolition-related BMPs; Outfall 008/009 ISRA BMPs; BMP Plan-related BMPs; and Northern Drainage BMPs.

TABLE II: Boeing's Second Quarter 2015 BMP Activities

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2015
001 (South Slope below 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 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 tape on a monthly basis.
002 (South Slope below R-2 Ponds)	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 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 tape on a monthly basis. *Monitoring Well RS-40 Access Road BMPs*: Monitoring well RS-40 is within the watershed for Outfall 002. Conducted inspection of rolling dips, water bars and a riprap apron/berm along the access road.
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 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 tape on a monthly basis. Conducted maintenance inspections of structural BMPs, including the flow-through structure and stormwater conveyance and retention systems. Installed wire mesh over open piping in the media bed.
005 (Former Sodium Disposal Facility – 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 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 tape on a monthly basis. Conducted maintenance inspections of the structural BMPs, including the flow-through structure and stormwater conveyance system. Installed wire mesh over open piping in the media bed.

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2015
006 (Former Sodium Disposal Facility - 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 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 tape on a monthly basis. Conducted maintenance inspections 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 sample box for the presence of debris and/or animals. Cleaned sample box and the outfall area and performed weed abatement as needed. Conducted maintenance inspections of the stormwater conveyance and retention systems. Replaced worn felt liner.
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 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 tape on a monthly basis.
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 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 tape on a monthly basis. *Restoration, Monitoring and Mitigation Plan (RMMP) BMPs:* Performed weeding in the Northern Drainage in April and June 2015. The annual mitigation monitoring was performed in Second Quarter 2015. *Biofilter:* Inspected sedimentation basin, biofilter, and cistern. *Former B1436 Area:* Performed maintenance inspection of bioswale surface area, including hydroseeded area and fiber rolls. Improved sandbag berms along the northern and eastern perimeter of the former B1436 area. Installed a concrete curb along the southern end of the northern bioswale. *B-1 Area:* Performed maintenance inspection of BMPs along slope and within drainage.

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2015
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 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 tape on a monthly basis. Conducted maintenance inspections of structural BMPs, including the flow-through structure and stormwater conveyance and retention systems. Installed wire mesh over open piping in the media bed. Removed cut logs from fallen tree.
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 outfall and weir 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 tape on a monthly basis. Conducted maintenance inspections of structural BMPs, including the flow-through structure and stormwater conveyance system.
018 (R-2 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 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 tape on a monthly basis. Conducted maintenance inspections of the structural BMPs, including the flow-through structure and conveyance system.
019 (Area I Groundwater Extraction and Treatment [GET] System)	The GET system has not been in operation since April 2013 and no pumping or discharge has occurred. Therefore, no NPDES sampling was performed in Second Quarter 2015 at the Area I GET System. Conducted maintenance inspections of the structural BMPs. Cleaned dissipater screen as needed.
RSW-002 (Arroyo Simi – Frontier Park)	Collected quarterly receiving water samples at the Arroyo Simi – Frontier Park location. Conducted monthly receiving water inspections.

OTHER BMP ACTIVITIES

BMP observations, inspections, and maintenance activities were conducted in conformance with the site wide SWPPP at and around the former active test stands Alfa and Bravo, and Advanced Propulsion Test Facility (APTF).

NASA DEMOLITION-RELATED ACTIVITIES

Demolition activities covered by NASA's Construction SWPPP (dated March 4, 2015) are inspected in accordance with the Construction General Permit (CGP). During the Second Quarter 2015, NASA placed temporary BMPs (sand bags and wattles) in the Employee Parking Lot near the Fire Station during asphalt removal activities, installed BMPs (sand bags and wattles) around B2206 and B2207, and installed temporary BMPs (sand bags and wattles) at the Expendable Launch Vehicle (ELV) areas. Demolition activities are anticipated to continue through March 2016.

OUTFALL 008/009 ISRA AND BMP PLAN-RELATED ACTIVITIES

ISRA soil removal within the Outfall 008 watershed was completed in 2009, and ISRA soil removal conducted within the Outfall 009 watershed was completed in Fourth Quarter 2013. In January 2014, the Phase III ISRA Implementation Report for 2011 to 2013 Activities was submitted to the Regional Board (MWH, 2014)[1]. Performance monitoring was conducted at Phase III ISRA areas and the results and recommendations were presented in annual rainy season summary reports. Since ISRA remedial activities were initiated, progress reports were provided to the Regional Board on a quarterly basis. Now that ISRA activities are complete, Boeing requested a change from quarterly to annual BMP progress reporting in the Third Quarter 2014 Progress Report for June 21, 2014 – September 26, 2014 Activity, Interim Source Removal Action (ISRA) and Best Management Practices (BMP) Plan (Boeing, 2014). The Regional Board approved this request in an October 10, 2014 letter to Boeing (Regional Board, 2014). Future BMP progress will be reported in the annual rainy season reports.

The Expert Panel prepared BMP plans and submittals on behalf of NASA and Boeing to meet Outfall 008/009 permit limits/benchmarks established in the NPDES Permit (Order No. R4-2004-0090)[2]. The 2010 BMP Plan outlined a strategy for subarea sampling, statistical analysis of lab results, and ranking of locations for treatment control prioritization. Annual reports have been submitted including summary and evaluation of the previous year's monitoring results, and development of new general BMP recommendations. Annual BMP Plan addenda have also been submitted to provide conceptual design details and proposed implementation schedules for the following year. The following list identifies the BMP Plan and addenda that have been submitted to the Regional Board, with each document currently located on Boeing's Santa Susana Site web page under Outfall 008/009 ISRA- and BMP-related activities[3]:

- 2010 BMP Plan Outfalls 008 and 009 BMP Watersheds (MWH et al., 2010);
- 2011 BMP Plan Addendum (Geosyntec and the Expert Panel, 2011);
- 2012 BMP Plan Addendum (Geosyntec and the Expert Panel, 2012);
- 2013 BMP Plan Addendum (Geosyntec and the Expert Panel, 2013); and
- 2014 BMP Plan Addendum (Geosyntec and the Expert Panel, 2014).

Completed Expert Panel-recommended BMPs are discussed in the ISRA Performance Monitoring and BMP Monitoring Report for Outfalls 008 and 009 Watersheds submitted to the Regional Board for each rainy season (MWH, 2010; MWH et al., 2011; MWH et al., 2012; MWH et al., 2013; and MWH et al., 2014). The final annual rainy season report under the 2010 BMP Plan will be submitted in August 2015.

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[1] Available at: http://www.boeing.com/principles/environment/santa-susana/interim-source-removal.page
[2] Available at: http://www.boeing.com/principles/environment/santa-susana/permits.page
[3] Available at: http://www.boeing.com/principles/environment/santa-susana/interim-source-removal.page

The BMP activities discussed below were performed, commenced, or completed during Second Quarter 2015 in coordination with the Expert Panel.

Former Building 1436 Detention Bioswales

Two detention bioswales were constructed at former Building 1436 following demolition 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 this stormwater to the lower lot biofilter for treatment. Second Quarter 2015 activities included inspections of the bioswales and hydroseeded areas. Sandbags along the northern and eastern perimeter of the former B1436 area were covered with filter fabric and secured with rip rap. In June 2015, a concrete curb was installed to modify the overflow level at the southern end of the northern bioswale.

Biofilter

The biofilter is a stormwater treatment BMP designed and built to capture, convey, and treat stormwater runoff from the lower parking lot and former Instrument and Equipment Laboratories (IEL) watershed. A treatment BMP at the lower parking lot was first proposed in the 2010 BMP Plan (MWH et al., 2010). The biofilter consists of a 30,000-gallon cistern, a stormwater conveyance line, a sedimentation basin, and a media biofilter. Construction activities were completed on March 15, 2013; a Regional Board and public tour of the completed biofilter was conducted on March 20, 2013.

Second Quarter 2015 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. A total of approximately 8,600 gallons of stormwater were pumped from the cistern to the sedimentation basin during the Second Quarter 2015 rain events.

Second Quarter 2015 NASA and Boeing ISRA Activities

Boeing continues to submit progress reports to Regional Board staff[4]. In addition to activities performed in coordination with the Expert Panel, the ISRA/BMP Plan-related activities performed for Outfalls 008/009 during Second Quarter 2015 included the following:

- A BMP performance monitoring sample was collected at the following location:
  - Northern Vegetated Bioswale (Former B1436 Area);
- Inspection of BMPs at ISRA Performance Monitoring and BMP Monitoring locations and surrounding areas; and
- Installation and inspection of temporary BMPs at the Area I Former Liquid Oxygen Plant (LOX) and slope drain discharge points to the Northern Drainage. The LOX sandbag berm was extended to the west. In addition, filter fabric was placed on top of the sandbags and fiber rolls, secured with stakes, were installed along the north side of the sandbag berm. Gravel and sandbags were also placed around the inlet of the slope drains to reduce underflow of ponded water.

[4] Available at: http://www.boeing.com/principles/environment/santa-susana/interim-source-removal.page

Northern Drainage BMPs

Boeing has actively worked to restore the Northern Drainage following cleanup activities performed under the oversight of the DTSC and in accordance with the requirements of Regional Board Cleanup and Abatement Order No. R4-2007-0054 (RWQCB, 2007). The restoration and mitigation activities proposed in the Northern Drainage Restoration, Mitigation, and Monitoring Plan (RMMP)[5] were implemented beginning in 2012. In accordance with the RMMP, regular maintenance, monitoring, and reporting have been implemented in the Northern Drainage since 2012 for the stream's plant biology and geomorphology. Biological activities include botanical and California Rapid Assessment Method surveys, plant watering only during periods of excessive heat, and weeding of non-native species. Geomorphic activities include stabilization measure inspections, physical surveying, facies mapping, photographic surveying, annual stream walks, as-needed maintenance, and annual geomorphic monitoring reports. Activities performed in Second Quarter 2015 included two weeding events (in April and June), annual mitigation/planting monitoring, and review of geomorphic monitoring data for Water Year 2015.

REASONABLE POTENTIAL ANALYSIS

No surface water discharges occurred from the Santa Susana Site and no new surface water discharge data became available during Second Quarter 2015. A reasonable potential analysis was therefore not triggered and reasonable potential analysis tables are not included in this report.

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, chemical and radiological analyses of water samples were completed 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.

BIOASSESSMENT MONITORING

A bioassessment review was conducted on 29 April 2015 to evaluate water quality conditions in Bell Canyon and Meier Canyon at the Santa Susana Site in accordance with NPDES Permit requirements. The methods, procedures, and results of the bioassessment are detailed in the Bioassessment Monitoring Report included in Appendix E. Note that there was insufficient water flow to conduct the bioassessment sampling in 2015.

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

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. Paul Costa of Boeing at (818) 466-8778.

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 3rd of May 2016 at The Boeing Company, Santa Susana Site.

Sincerely,

David Dassler
Southwest Remediation Manager
The Boeing Company

Enclosures:

References
Figure 1 - Site Map with Stormwater Collection, Conveyance System, and Site Features
Figure 2 - Arroyo Simi – Frontier Park (RSW-002) Sampling Location
Appendix A - Second Quarter 2015 Rainfall Data Summary
Appendix B - Second Quarter 2015 Liquid Waste Shipment Summary Table
Appendix C - Second Quarter 2015 Discharge Monitoring Data Summary Tables
Appendix D - Second Quarter 2015 Analytical Laboratory Report, Chain of Custody, and Validation Report
Appendix E – Bioassessment Monitoring Report

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

REFERENCES

1. Boeing, 2014. Third Quarter 2014 Progress Report for June 21, 2014 – September 26, 2014 Activity, Interim Source Removal Action (ISRA) and Best Management Practices (BMP) Plan, The Boeing Company, Santa Susana Field Laboratory, Ventura County, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027). October 1.

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

3. California Regional Water Quality Control Board, 2014. Approval of Yearly Submittal of Interim Source Removal Action (ISRA) Progress Reports, The Boeing Company, Santa Susana Field Laboratory (NPDES No. CA0001309). October 10.

4. Geosyntec and the Expert Panel, 2011. 2011 BMP Plan Addendum, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027). September 28.

5. Geosyntec and the Expert Panel, 2012. 2012 BMP Plan Addendum, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No.6027). September 28.

6. Geosyntec and the Expert Panel, 2013. 2013 BMP Plan Addendum, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No.6027). September 30.

7. Geosyntec and the Expert Panel, 2014. 2014 BMP Plan Addendum to the October 2010 Santa Susana Site Outfalls 008/009 Watersheds BMP Plan, Santa Susana Field Laboratory, Ventura County, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No.6027). September 30.

8. MWH Americas, Inc., and Flow Science, 2006. Reasonable Potential Analysis Methodology Technical Memo- Version 1, Final, Santa Susana Field Laboratory, Ventura County, California. April 28.

9. MWH, 2010. ISRA Performance Monitoring for Outfalls 008 and 009 Watersheds, 2009-2010 Rainy Season, Santa Susana Field Laboratory, Ventura County, California (NPDES No. CA0001309; CI No. 6027; SCP No. 1111; Site ID No. 2040109; and California Water Code §13304 Order). June 30.

10. MWH, 2014. Interim Source Removal Action (ISRA) Phase III Implementation Report – 2011-2013 Activities, The Boeing Company, Santa Susana Field Laboratory, Ventura County, California (California Water Code §13304, Order No. CA0001309, CI No. 6027, SCP No. 1111, Site ID No. 2040109). January 14.

11. MWH Americas, Inc., Santa Susana Field Laboratory Stormwater Expert Panel, Geosyntec Consultants, Haley & Aldrich, Inc., and CH2M Hill, 2010. Best Management Practices (BMP) Plan, Outfalls 008 and 009 Watersheds, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027). October 14.

12. MWH Americas, Inc., Santa Susana Site Surface Water Expert Panel, Geosyntec Consultants, and Haley & Aldrich, Inc., 2011. ISRA Performance Monitoring and Potential BMP Subarea

Monitoring for the Outfalls 008 and 009 Watersheds, 2010/2011 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). July 29.

13. MWH Americas, Inc., Santa Susana Site Surface Water Expert Panel, and Geosyntec Consultants, 2012. ISRA Performance Monitoring and Potential BMP Subarea Monitoring for the Outfalls 008 and 009 Watersheds, 2011/2012 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 31.

14. 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.

15. 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.

From:	Quidilla, Clarita@Waterboards on behalf of WB-RB4-losangeles
To:	Casas, Jonathan R
Subject:	RE: Revision 1, Second Quarter 2015 NPDES Discharge Monitoring Report Compliance File CI-6027 and NPDES No. CA0001309, Santa Susana Field Laboratory
Date:	Thursday, May 12, 2016 7:49:37 AM

The Los Angeles Regional Water Quality Control Board has received your electronic submittal

Thank you

From: Casas, Jonathan R [mailto:jonathan.r.casas2@boeing.com]
Sent: Wednesday, May 11, 2016 4:26 PM
To: WB-RB4-losangeles; Owens, Cassandra@Waterboards; Malinowski, Mark@DTSC
Cc: Costa, Paul J; Miller, Katherine
Subject: Revision 1, Second Quarter 2015 NPDES Discharge Monitoring Report Compliance File CI-6027 and NPDES No. CA0001309, Santa Susana Field Laboratory

Hello,

Please find attached the Second Quarter 2015 NPDES DMR for SSFL.

Jonathan Casas
The Boeing Company
(818) 466-8741
jonathan.r.casas2@boeing.com

DRAINAGE TO MEIER CANYON

DRAINAGE TO ARROYO SIMI

DRAINAGE TO DAYTON CANYON

DRAINAGE TO BELL CANYON

UNDEVELOPED LAND

AREA IV (DOE)

AREA III

AREA II (NASA)

AREA I (NASA)

AREA I

SPA AREA

ELV ISRA AREAS

LOX ISRA AREAS

LOWER PARKING LOT

BIOFILTER

B-1 ISRA AREAS

B-1 Media Filter

BIOSWALES

FORMER BUILDING 1436

WEATHER STATION

OUTFALL 018 WATER TREATMENT SYSTEM

OUTFALL 011 WATER TREATMENT SYSTEM

ACCESS ROAD BMPs

RS-40

GET

Silvernale Pond

R-2A Pond

R-2B Pond

EV Pond

Perimeter Pond

CM-1 CM-2 CM-3 CM-4 CM-5 CM-6 CM-8 CM-9 CM-10 CM-11 CM-12

N

0 1,200 2,400

SCALE IN FEET

DESCRIPTIONS OF DISCHARGE OUTFALL LOCATIONS

NPDES OUTFALL	DESCRIPTION
001	Stormwater, South Slope
002	Stormwater, South Slope
003	Stormwater, Radioactive Material Handling Facility
004	Stormwater, Sodium Reactor Experiment Area
005	Stormwater, Sodium Burn Pit 1
006	Stormwater, Sodium Burn Pit 2
007	Stormwater, Building 100
008	Stormwater, Happy Valley
009	Stormwater, WS-13 Drainage (Northern Drainage)
010	Stormwater, Building 203
011	Stormwater, Perimeter Pond (Treated at SWTS)
012	Stormwater, Alfa Test Stand (Removed from permit)
013	Stormwater, Bravo Test Stand (Removed from permit)
014	Stormwater, Advanced Propulsion Test Facility (Removed from permit)
015	STP-1 (Removed from permit)
016	STP-2 (Removed from permit)
017	STP-3 (Removed from permit)
018	Stormwater, R-2 Pond Spillway (Treated at SWTS)
019	Treated Groundwater (GET System)
020	Treated Groundwater (GET System) (may not be constructed)

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. DOE = DEPARTMENT OF ENERGY
3. ELV = EXPANDABLE LAUNCH VEHICLE
4. ISRA = INTERIM SOURCE REMOVAL ACTION
5. LOX = LIQUID OXYGEN
6. NASA = NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
7. RMMP = RESTORATION MITIGATION MONITORING PLAN
8. SPA = STORABLE PROPELLANT AREA
9. SWTS = STORM WATER TREATMENT SYSTEM

LEGEND

- ACTIVE NPDES OUTFALL LOCATION
- FORMER NPDES OUTFALL LOCATION
- POSSIBLE FUTURE NPDES OUTFALL LOCATION
- SLOPE DRAIN DISCHARGE POINT TO NORTHERN DRANAGE
- CULVERT MODIFICATION
- ISRA PERFORMANCE MONITORING LOCATION
- BMP MONITORING LOCATION
- GROUNDWATER MONITORING WELL LOCATION
- GROUNDWATER EXTRACTION AND TREATMENT (GET) SYSTEM
- STORMWATER TREATMENT SYSTEM

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
- DIRT ROAD
- PAVED ROAD
- STORMWATER CONVEYANCE PIPELINE WITH FLOW DIRECTION
- 25' ELELVATION CONTOUR
- ACTUAL ISRA EXCAVATION BOUNDARY
- BIOFILTER
- BIOSWALE
- SURFACE WATER POND
- EXISTING BUILDING/STRUCTURE
- SANTA SUSANA SITE PROPERTY BOUNDARY
- ADMINISTRATIVE AREA BOUNDARY

HALEY ALDRICH

NPDES PERMIT COMPLIANCE SECOND QUARTER 2015
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

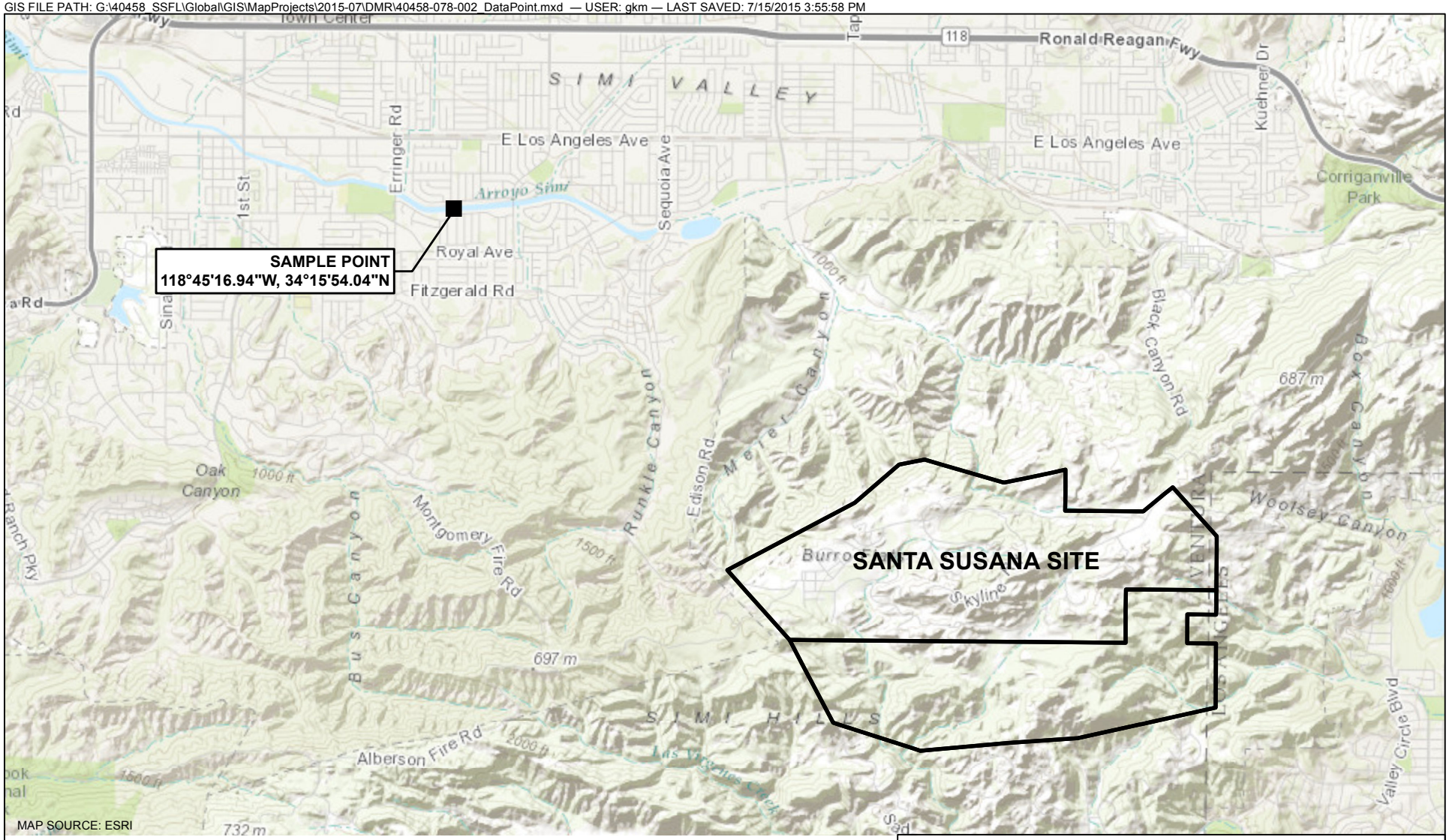
SITE MAP WITH STORMWATER COLLECTION AND CONVEYANCE SYSTEM, AND SITE FEATURES

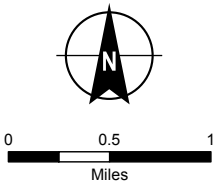
SCALE: AS SHOWN
AUGUST 2015

FIGURE 1

G:\40458_SSFL\Global\GIS\MapProjects\2015-07\DMR\40458-078-001-OutfallLocations.mxd

GIS FILE PATH: G:\40458_SSFL\Global\GIS\MapProjects\2015-07\DMR\40458-078-002_DataPoint.mxd — USER: gkm — LAST SAVED: 7/15/2015 3:55:58 PM





HALEY ALDRICH

NPDES PERMIT COMPLIANCE SECOND QUARTER 2015
DISCHARGE MONITORING REPORT
THE BOEING COMPANY
VENTURA COUNTY, CALIFORNIA

ARROYO SIMI-FRONTIER PARK (RSW-002) SAMPLING LOCATION

AUGUST 2015

FIGURE 2

APPENDIX A

Second Quarter 2015 Rainfall Data Summary

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Rain
Month/Year: April 2015

HOUR OF THE DAY

DAY OF THE MONTH	Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	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	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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

TABLE A
DAILY RAINFALL SUMMARY

THE BOEING COMPANY
NPDES PERMIT CA0001309

Station: AREA 1
Parameter: Rain
Month/Year: May 2015

HOUR OF THE DAY

DAY OF THE MONTH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	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
8	0.00	0.00	0.05	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	0.06
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
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
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
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	0.01	0.00	0.01	0.00	0.01	0.00	0.06	0.30	0.01	0.01	0.00	0.00	0.00	0.41
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
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
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
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
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
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
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
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: June 2015

HOUR OF THE DAY

DAY OF THE MONTH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	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
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
9	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
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	0.01	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	0.01
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
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
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
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
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
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	INV	0.00p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Flags: p = Power failure, invalid hour

INV = Negative under range, invalid hour. Malfunction in the sensor produced an erroneous rainfall measurement of <0.

APPENDIX B

Second Quarter 2015 Liquid Waste Shipment Summary Table

TABLE B
LIQUID WASTE SHIPMENTS

SECOND QUARTER 2015 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
4/1/2015	010392676JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	19	P	Clean Harbors Environmental Services Inc.	Clean Harbors - Aragonite LLC 11600 North Aptus Road, Grantsville, UT 34029
4/1/2015	010392677JJK	HAZARDOUS WASTE LIQUID (ARSENIC, CHROMIUM)	497	P		
4/9/2015	010392678JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	36	P		
4/9/2015	Z0902	NON HAZARDOUS LIQUID (WATER)	1408	P		
4/22/2015	Z1018	NON HAZARDOUS LIQUID (WATER)	489	P		
4/22/2015	010392680JJK	WASTE FLAMMABLE LIQUID (BENZENE, OIL)	105	P		
		WASTE CORROSIVE LIQUID (SODIUM HYDROXIDE, SODIUM CYANIDE)	18	P		
		HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	2226	P		
		WASTE NITRIC ACID, OTHER THAN RED FUMING, WITH AT LEAST 65 PERCENT, BUT NOT MORE THAN 70 PERCENT NITRIC ACID (NITRIC ACID)	7	P		
		HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	788	P		
		NON RCRA HAZARDOUS WASTE LIQUIDS (IRON REAGENT, WATER)	8	P		
		NON RCRA HAZARDOUS WASTE LIQUIDS (NON PCB BALLASTS)	8	P		
4/22/2015	014080107JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G	Environmental Recovery Services, Inc.	Evoqua Water Technologies LLC 5375 South Boyle Avenue, Los Angeles, CA 90058
4/28/2015	014080108JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
4/28/2015	014073648JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/5/2015	014499845JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/5/2015	014499840JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/6/2015	014499842JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/7/2015	014499843JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/7/2015	014499844JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/7/2015	010392684JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	35	P	Clean Harbors Environmental Services Inc.	Clean Harbors - Aragonite LLC 11600 North Aptus Road, Grantsville, UT 34029
5/8/2015	014499626JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G	Environmental Recovery Services, Inc.	Evoqua Water Technologies LLC 5375 South Boyle Avenue, Los Angeles, CA 90058
5/8/2015	014499627JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/12/2015	014499623JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/12/2015	014499624JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/13/2015	014499625JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		

TABLE B
LIQUID WASTE SHIPMENTS

SECOND QUARTER 2015 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
5/13/2015	014073650JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G	Environmental Recovery Services, Inc.	Evoqua Water Technologies LLC 5375 South Boyle Avenue, Los Angeles, CA 90058
5/13/2015	010392685JJK	HAZARDOUS WASTE LIQUID (LEAD, MERCURY)	173	P	Clean Harbors Environmental Services Inc.	Clean Harbors - Aragonite LLC 11600 North Aptus Road, Grantsville, UT 34029
5/13/2015	Z1235	NON HAZARDOUS LIQUID (WATER)	272	P		
5/14/2015	014073649JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G	Environmental Recovery Services, Inc.	Evoqua Water Technologies LLC 5375 South Boyle Avenue, Los Angeles, CA 90058
5/15/2015	014499849JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/18/2015	014500286JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/20/2015	014500287JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/20/2015	014500289JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/21/2015	014500288JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/26/2015	014500290JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/28/2015	014500292JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
5/28/2015	008020756FLE	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	2072	P	Clean Harbors Environmental Services Inc.	Clean Harbors - Aragonite LLC 11600 North Aptus Road, Grantsville, UT 34029
		NON RCRA HAZARDOUS WASTE LIQUIDS (INSECTICIDE)	9	P		
5/28/2015	008020757FLE	NON RCRA HAZARDOUS WASTE LIQUIDS (OIL, WATER)	5	P		
5/28/2015	Z1360	NON HAZARDOUS LIQUID (WATER)	630	P		
		NON HAZARDOUS LIQUID (WATER)	55	G		
		NON HAZARDOUS LIQUID (WATER)	177	P		
6/4/2015	Z1438	NON REGULATED MATERIAL (STORM WATER-GROUND WATER)	5000	G	Nexeo Solutions	Southwest Processors Inc. 4120 Bandini Blvd. Vernon, CA 90058
6/11/2015	014500291JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G	Environmental Recovery Services, Inc.	Evoqua Water Technologies LLC 5375 South Boyle Avenue, Los Angeles, CA 90058
6/17/2015	014500293JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
6/17/2015	014500294JJK	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	5000	G		
6/17/2015	008020880FLE	WASTE POTASSIUM PERMANGANATE	12231	P	Clean Harbors Environmental Services Inc.	Clean Harbors - Aragonite LLC 11600 North Aptus Road, Grantsville, UT 34029
6/17/2015	Z1556	NON HAZARDOUS LIQUID (WATER)	139	P		

TABLE B
LIQUID WASTE SHIPMENTS

SECOND QUARTER 2015 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

DATE SHIPPED	MANIFEST OR JOB TRACKING NUMBER	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
4/7/2015	36479	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G	Southwest Processors Inc. 4120 Bandini Blvd. Vernon, CA 90058	LACSD
4/7/2015	36480	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
4/14/2015	36512	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
4/14/2015	36513	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
4/21/2015	36537	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
4/21/2015	36538	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
4/28/2015	36569	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
4/28/2015	36570	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/5/2015	36719	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/5/2015	36720	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/12/2015	36748	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/12/2015	36749	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/19/2015	36781	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/19/2015	36782	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/26/2015	36803	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
5/26/2015	36804	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
6/2/2015	36640	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
6/16/2015	12429/36692	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
6/16/2015	12664/36693	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
6/30/2015	12731/35758	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		
6/30/2015	12732/35759	WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT (STP #1)	5000	G		

Notes:
P = Pounds
G = Gallons

APPENDIX C

Second Quarter 2015 Discharge Monitoring Data Summary Tables

SECOND QUARTER 2015
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. All of the following abbreviations and/or notes may not occur on every table.

4. 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.

-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.
$	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 DL, MDL, or 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 ICP/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
*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.)
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 or %D were noncompliant
Comp	Composite sample type
C5	Calibration verification %R was outside method control limits
CEs/100 ml	cell equivalents per 100 milliliters
D	The analysis with this flag should not be used because another more technically sound analysis is available
%D	percent difference between the initial and continuing calibration relative response factors
deg 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
ft/sec	feet per second
G	gallons
H	holding time was exceeded
I	ICP interference check solution results were unsatisfactory
J	estimated value, result lower than the detection limit
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.
L2	the laboratory control sample %R was below the method control limits
L	laboratory control sample %R was outside control limits
lbs/day	Pounds per day
LOD	limit of detection

SECOND QUARTER 2015
REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

LQ	LCS/LCSD recovery above method control limits
M1	matrix spike (MS) and/or MS duplicate 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
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
NA	not applicable; no permit limit established for the constituent and/or outfall or MDAs are not calculated as there is no statistical method for combining MDAs
ND	analyte value less than the LOD or MDL
NM	not measured or determined
NTU	nephelometric turbidity unit
P	pounds
pCi/L	picoCuries per liter
Q	matrix spike recovery outside of control limits
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
%RSD	percent relative standard deviation
% survival	percent survival
S	surrogate recovery was outside control limits
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TEQ	toxic equivalent
T	presumed contamination, as indicated by a detect in the trip blank
TU_c	toxicity units (chronic)
U	result not detected
µg/L	micrograms per liter
µg/kg	micrograms per kilogram
UJ	result not detected at the estimated reporting limit
umhos/cm	micromhos per centimeter

SECOND QUARTER 2015
REPORTING SUMMARY NOTES
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

WHO TEF	World Health Organization toxic equivalency factor
w/out	without
^	analysis not completed due to hold time exceedence 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 inches of rainfall in a 24-hour period. No more than one sample per week need be obtained during extended periods of rainfall or the discharge of collected stormwater. A storm event must be preceded by at least 72 hours of dry weather.
(1)	Based on the 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 toxicity equivalency factor (TEF) and bioaccumulation equivalency factor (BEF). There are 17 dioxin congeners.

ARROYO SIMI (FRONTIER PARK RECEIVING WATER)

SECOND QUARTER 2015 REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309

April 1 through June 30, 2015

,

				5/14/2015		
ANALYTE	**UNITS**	**Permit Limit Daily Max/Monthly Avg**	**SAMPLE FREQUENCY**	**SAMPLE TYPE**	**RESULT**	**VALIDATION QUALIFIER**
POLLUTANTS WITH LIMITS						
4,4'-DDD	ug/L	0.0014/-	1/Quarter	Grab	ND < 0.0038	U
4,4'-DDE	ug/L	0.001/-	1/Quarter	Grab	ND < 0.0028	U
4,4'-DDT	ug/L	0.001/-	1/Quarter	Grab	ND < 0.0038	U
Aroclor 1016	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Aroclor 1221	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Aroclor 1232	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Aroclor 1242	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Aroclor 1248	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Aroclor 1254	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Aroclor 1260	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
Chlordane	ug/L	0.001/-	1/Quarter	Grab	ND < 0.075	U
Chlorpyrifos	ug/L	0.02/-	1/Quarter	Grab	ND < 0.53	U
Diazinon	ug/L	0.16/-	1/Quarter	Grab	ND < 0.13	U
Dieldrin	ug/L	0.0002/-	1/Quarter	Grab	0.0036	J (DNQ, *III)
E. Coli	MPN/100 ml	235/-	1/Year	ANR	ANR	ANR
pH (Field)	pH units	6.5-8.5/-	1/Quarter	Grab	7.47	*
Toxaphene	ug/L	0.0003/-	1/Quarter	Grab	ND < 0.24	U
POLLUTANTS WITHOUT LIMITS						
Hardness as CaCO3, Total	mg/L	-/-	1/Quarter	Grab	690	--
Temperature (Field)	deg F	-/-	1/Quarter	Grab	58.96	*
Total Suspended Solids	mg/L	-/-	1/Year	ANR	ANR	ANR
Water Velocity	ft/sec	-/-	1/Quarter	Grab	0.1	*

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

APPENDIX D

Second Quarter 2015 Analytical Laboratory Report,
Chain of Custody, and Validation Report

APPENDIX D

TABLE OF CONTENTS

Section No.

DATA VALIDATION REPORT

Haley & Aldrich Boeing SSFL Stormwater

SAMPLE DELIVERY GROUP: 440-109823-1

Prepared by

MEC^X
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Haley & Aldrich Boeing SSFL Stormwater
Contract Task Order:	1272.003H.01 001
Sample Delivery Group:	440-109823-1
Project Manager:	K. 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 Name*	*Matrix*	*Collection*	*Method*
ArroyoSimi_20150514	440-109823-1	N/A	Water	5/14/2015 9:15:00 AM	E525.2, E608, SM2340

II. Sample Management

Anomalies regarding sample management were not observed, with minor exceptions noted below. The sample in this sample delivery group (SDG) was received at the laboratory on ice and within the temperature limits of <6°C but >0°C. According to the case narrative for this SDG, the sample containers were received intact and properly preserved, as applicable. A correction to the courier's relinquish time was made by overwriting the original entry. This correction was not initialed or dated. The chain-of-custody (COC) was appropriately signed and dated by field and laboratory personnel. Custody seals were not utilized as the sample was delivered to the laboratory by courier.

The sample identifier listed on the COC was ArroyoSimi_2015. The sample was logged per protocol as ArroyoSimi_20150514 to include the sampling date.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Reason Code Reference Table

Reason Code	Organic	Inorganic
H	Holding time was exceeded.	Holding time was exceeded.
S	Surrogate recovery was outside control limits.	Not applicable.
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.
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.
*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

A. EPA METHOD 200.7 and Standard Method SM2340B—Hardness

Reviewed By: M. Cherny
Date Reviewed: June 8, 2015

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Method 200.7, Standard Method for the Examination of Water and Wastewater Method 2340B,* and the *National Functional Guidelines for Inorganic Data Review* (2014).

- Holding Times: The analytical holding time, six months, was met.

- Calibration: The ICV and CCV recoveries were within the control limits of 90-110%. Although the CRI recovery for magnesium was above the control limit, magnesium was detected in the site sample at a magnitude of >10× the reporting limit; therefore, it was the reviewer's professional opinion the ICV/CCV recoveries more representative of the sample. The remaining CRI recovery was within the control limits of 70-130%.

- Blanks: The method blank and CCBs had no detects affecting sample results.

- Interference Check Samples: Recoveries were within 80-120%.

- Laboratory Control Samples (LCS): The recoveries were within the method control limits of 85-115%.

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

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): MS/MSD analyses were performed on the sample in this SDG for calcium and magnesium. As the sample results were more than 4× the spike amount, the results were not assessed. MEC^X evaluated method accuracy based on LCS results.

- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects between the method detection limit and the reporting limit were qualified as estimated (J) and coded with DNQ in order to comply with the NPDES permit. Reported nondetects are valid to the method detection limit (MDL).

- 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.

    - Field Blanks and Equipment Blanks: Field blank or equipment blank samples were not identified for this SDG.

    - Field Duplicates: Field duplicate samples were not identified in this SDG.

B. EPA METHOD 525.2—Semivolatile Organic Compounds (SVOCs)

Reviewed By: L. Calvin
Date Reviewed: June 8, 2015

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. 0), EPA Method 525.2*, and the *National Functional Guidelines for Organic Methods Data Review* (2014).

- Holding Times: The sample was extracted within 24 hours of collection, as required for diazinon, and analyzed within 30 days of extraction.

- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.

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

- Blanks: The method blank had no target compound detects.

- Laboratory Control Sample/LCS Duplicate (LCS/LCSD): The recoveries and RPDs were within laboratory-established control limits.

- Surrogate Recovery: The surrogates were recovered within the control limits of 70-130%.

- 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 LCS/LCSD results.

- 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.

- Field Blanks and Equipment Blanks: Field blank or equipment blank samples were not identified for this SDG.

- Field Duplicates: Field duplicate samples were not identified in this SDG.

- Internal Standards Performance: The internal standard area counts were within the method control limits established by the continuing calibration standards of ±30%. The retention times were within ±30 seconds.

- 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 spectra indicated no problems with target compound identification.

- 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. Results reported below the reporting limit were qualified as estimated (J) and coded with DNQ in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this analysis.

- System Performance: Review of the raw data indicated no problems with system performance.

C. EPA METHOD 608—Pesticides and PCBs

Reviewed By: P. Meeks, L. Calvin
Date Reviewed: June 8, 2015

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0), EPA Method 608*, and the *National Functional Guidelines for Organic Methods Data Review* (2014).

- 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.

- Calibration: The initial calibrations had %RSDs of ≤10% or r^2 of ≥0.990 on both analytical columns. Two chlordane peaks in the ICV had primary column %Ds (21.0%, 18.2%) exceeding the control limit; however, as the %Ds were associated with high recoveries and the compound was not detected in the site sample, no qualifications were applied. The toxaphene closing CCV had a %D of -18.3% on the secondary column; however, as there was no primary column detect to confirm, no qualification was applied. The remaining ICVs and CCVs bracketing the sample analyses had %Ds within the control limit of ≤15%. The breakdown totals for endrin and 4,4'-DDT were ≤15%.

- Blanks: The method blanks had no target compound detects.

- Laboratory Control Samples: Recoveries and RPDs were within the laboratory-established control limits. Chlordane and toxaphene were not spiked in the pesticide LCS/LCSD.

- Surrogate Recovery: Pesticide surrogate tetrachloro-m-xylene (TCMX) and PCB surrogate decachlorobiphenyl (DCB) were recovered within the laboratory control limits of 10-139% and 29-115%, respectively.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample from this SDG. MEC^X evaluated method accuracy and precision based on LCS/LCSD results.

- 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.

    - Field Blanks and Equipment Blanks: Field blank or equipment blank samples were not identified for this SDG.

    - Field Duplicates: Field duplicate samples were not identified in this SDG.

- Compound Identification: Compound identification was verified. Review of the sample chromatograms and retention times indicated no problems with target compound identification. The laboratory analyzed for select pesticides and seven Aroclors by Method 608.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibrations and the laboratory MDLs. Results reported below the reporting limit were qualified as estimated (J) and coded with DNQ in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.

  The intercolumn RPD for dieldrin exceeded the guidance of ≤ 25%; therefore, dieldrin was qualified as an estimated detect, (J).

Validated Sample Result Forms: 4401098231

Analysis Method E525.2

Sample Name ArroyoSimi_20150514 **Matrix Type:** WS **Result Type:** TRG

Sample Date: 5/14/2015 9:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-109823-1

Analyte	Fraction	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	N	2921-88-2		1.1	0.53	ug/L	U	U	
Diazinon	N	333-41-5		0.26	0.13	ug/L	U	U	

Analysis Method E608

Sample Name ArroyoSimi_20150514 **Matrix Type:** WS **Result Type:** TRG

Sample Date: 5/14/2015 9:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-109823-1

Analyte	Fraction	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
4,4'-DDD	N	72-54-8		0.0047	0.0038	ug/L	U	U	
4,4'-DDE	N	72-55-9		0.0047	0.0028	ug/L	U	U	
4,4'-DDT	N	50-29-3		0.0094	0.0038	ug/L	U	U	
Aroclor-1016 (PCB-1016)	N	12674-11-2		0.47	0.24	ug/L	U	U	
Aroclor-1221 (PCB-1221)	N	11104-28-2		0.47	0.24	ug/L	U	U	
Aroclor-1232 (PCB-1232)	N	11141-16-5		0.47	0.24	ug/L	U	U	
Aroclor-1242 (PCB-1242)	N	53469-21-9		0.47	0.24	ug/L	U	U	
Aroclor-1248 (PCB-1248)	N	12672-29-6		0.47	0.24	ug/L	U	U	
Aroclor-1254 (PCB-1254)	N	11097-69-1		0.47	0.24	ug/L	U	U	
Aroclor-1260 (PCB-1260)	N	11096-82-5		0.47	0.24	ug/L	U	U	
Chlordane	N	57-74-9		0.094	0.075	ug/L	U	U	
Dieldrin	N	60-57-1	0.0036	0.0047	0.0019	ug/L	J,DXPI	J	DNQ, *III
Toxaphene	N	8001-35-2		0.47	0.24	ug/L	U	U	

Analysis Method SM2340

Sample Name ArroyoSimi_20150514 **Matrix Type:** WS **Result Type:** TRG

Sample Date: 5/14/2015 9:15:00 AM **Validation Level:** 8

Lab Sample Name: 440-109823-1

Analyte	Fraction	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	T	HARDNESSCACO3	690	0.33	0.17	mg/L			

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 440-109823-1
Client Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

For:
Haley & Aldrich, Inc.
5333 Mission Center Road
Suite 300
San Diego, California 92108

Attn: Nancy Gardiner

Debby Wilson

Authorized for release by:
5/29/2015 2:03:44 PM

Debby Wilson, Manager of Project Management
(949)261-1022
debby.wilson@testamericainc.com

Table of Contents

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

TestAmerica Job ID: 440-109823-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-109823-1	ArroyoSimi_20150514	Water	05/14/15 09:15	05/14/15 17:50

Job ID: 440-109823-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-109823-1

Comments
No additional comments.

Receipt
The sample was received on 5/14/2015 5:50 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

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

GC Semi VOA
Method(s) 608: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 256530. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.(LCS 440-256530/4-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.

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

Client Sample ID: ArroyoSimi_20150514

Date Collected: 05/14/15 09:15
Date Received: 05/14/15 17:50

Lab Sample ID: 440-109823-1

Matrix: Water

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.1	0.53	ug/L		05/14/15 14:00	05/16/15 06:04	1
Diazinon	ND		0.26	0.13	ug/L		05/14/15 14:00	05/16/15 06:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dimethyl-2-nitrobenzene	*90*		*70 - 130*	*05/14/15 14:00*	*05/16/15 06:04*	*1*
Perylene-d12	*89*		*70 - 130*	*05/14/15 14:00*	*05/16/15 06:04*	*1*
Triphenylphosphate	*109*		*70 - 130*	*05/14/15 14:00*	*05/16/15 06:04*	*1*

Method: 608 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.094	0.075	ug/L		05/21/15 09:03	05/21/15 20:09	1
Dieldrin	**0.0036**	**J,DX PI**	0.0047	0.0019	ug/L		05/21/15 09:03	05/21/15 20:09	1
Toxaphene	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 20:09	1
4,4'-DDD	ND		0.0047	0.0038	ug/L		05/21/15 09:03	05/21/15 20:09	1
4,4'-DDE	ND		0.0047	0.0028	ug/L		05/21/15 09:03	05/21/15 20:09	1
4,4'-DDT	ND		0.0094	0.0038	ug/L		05/21/15 09:03	05/21/15 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*10 - 139*	*05/21/15 09:03*	*05/21/15 20:09*	*1*

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1
Aroclor 1221	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1
Aroclor 1232	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1
Aroclor 1242	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1
Aroclor 1248	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1
Aroclor 1254	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1
Aroclor 1260	ND		0.47	0.24	ug/L		05/21/15 09:03	05/21/15 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*91*		*29 - 115*	*05/21/15 09:03*	*05/21/15 19:17*	*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	**690**		0.33	0.17	mg/L			05/27/15 10:06	1

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

TestAmerica Job ID: 440-109823-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	TAL IRV
608	Organochlorine Pesticides in Water	40CFR136A	TAL IRV
608	Polychlorinated Biphenyls (PCBs) (GC)	40CFR136A	TAL IRV
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL IRV

Protocol References:

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

Laboratory References:

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

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

TestAmerica Job ID: 440-109823-1

Client Sample ID: ArroyoSimi_20150514
Date Collected: 05/14/15 09:15
Date Received: 05/14/15 17:50

Lab Sample ID: 440-109823-1
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	525.2			950 mL	1 mL	255112	05/14/15 14:00	AK	TAL IRV
Total/NA	Analysis	525.2		1	950 mL	1 mL	255447	05/16/15 06:04	GK	TAL IRV
Total/NA	Prep	608			1060 mL	2 mL	256530	05/21/15 09:03	AP	TAL IRV
Total/NA	Analysis	608		1	1060 mL	2 mL	256686	05/21/15 20:09	CN	TAL IRV
Total/NA	Prep	608			1060 mL	2 mL	256530	05/21/15 09:03	AP	TAL IRV
Total/NA	Analysis	608		1	1060 mL	2 mL	256589	05/21/15 19:17	JM	TAL IRV
Total Recoverable	Analysis	SM 2340B		1			252446	05/27/15 10:06	DT	TAL IRV

Laboratory References:

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

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-255112/1-A
Matrix: Water
Analysis Batch: 255447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255112

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.0	0.50	ug/L		05/14/15 14:00	05/15/15 19:55	1
Diazinon	ND		0.25	0.12	ug/L		05/14/15 14:00	05/15/15 19:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dimethyl-2-nitrobenzene	*88*		*70 - 130*	*05/14/15 14:00*	*05/15/15 19:55*	*1*
Perylene-d12	*93*		*70 - 130*	*05/14/15 14:00*	*05/15/15 19:55*	*1*
Triphenylphosphate	*117*		*70 - 130*	*05/14/15 14:00*	*05/15/15 19:55*	*1*

Lab Sample ID: LCS 440-255112/2-A
Matrix: Water
Analysis Batch: 255447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255112

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorpyrifos			5.00	5.18		ug/L		104	70 - 130		
Diazinon			5.00	4.63		ug/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,3-Dimethyl-2-nitrobenzene	*94*		*70 - 130*
Perylene-d12	*94*		*70 - 130*
Triphenylphosphate	*120*		*70 - 130*

Lab Sample ID: LCSD 440-255112/3-A
Matrix: Water
Analysis Batch: 255447

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 255112

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorpyrifos			5.00	5.04		ug/L		101	70 - 130	3	30
Diazinon			5.00	4.62		ug/L		92	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,3-Dimethyl-2-nitrobenzene	*109*		*70 - 130*
Perylene-d12	*95*		*70 - 130*
Triphenylphosphate	*116*		*70 - 130*

Method: 608 - Organochlorine Pesticides in Water

Lab Sample ID: MB 440-256530/1-A
Matrix: Water
Analysis Batch: 256686

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 256530

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.10	0.080	ug/L		05/21/15 09:03	05/21/15 19:13	1
Dieldrin	ND		0.0050	0.0020	ug/L		05/21/15 09:03	05/21/15 19:13	1
Toxaphene	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 19:13	1
4,4'-DDD	ND		0.0050	0.0040	ug/L		05/21/15 09:03	05/21/15 19:13	1
4,4'-DDE	ND		0.0050	0.0030	ug/L		05/21/15 09:03	05/21/15 19:13	1
4,4'-DDT	ND		0.010	0.0040	ug/L		05/21/15 09:03	05/21/15 19:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		10 - 139	05/21/15 09:03	05/21/15 19:13	1

Lab Sample ID: LCS 440-256530/2-A
Matrix: Water
Analysis Batch: 256686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 256530

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	0.200	0.175		ug/L		87	36 - 146
4,4'-DDD	0.200	0.173		ug/L		86	31 - 141
4,4'-DDE	0.200	0.164		ug/L		82	30 - 145
4,4'-DDT	0.200	0.185		ug/L		93	25 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	72		10 - 139

Lab Sample ID: LCSD 440-256530/3-A
Matrix: Water
Analysis Batch: 256686

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 256530

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dieldrin	0.200	0.178		ug/L		89	36 - 146	2	35
4,4'-DDD	0.200	0.172		ug/L		86	31 - 141	0	35
4,4'-DDE	0.200	0.172		ug/L		86	30 - 145	5	35
4,4'-DDT	0.200	0.187		ug/L		93	25 - 150	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	79		10 - 139

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 440-256530/1-A
Matrix: Water
Analysis Batch: 256589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 256530

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1
Aroclor 1221	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1
Aroclor 1232	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1
Aroclor 1242	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1
Aroclor 1248	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1
Aroclor 1254	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1
Aroclor 1260	ND		0.50	0.25	ug/L		05/21/15 09:03	05/21/15 18:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	93		29 - 115	05/21/15 09:03	05/21/15 18:32	1

Lab Sample ID: LCS 440-256530/4-A
Matrix: Water
Analysis Batch: 256589

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 256530

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	4.00	3.31		ug/L		83	50 - 115
Aroclor 1260	4.00	3.15		ug/L		79	10 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	*91*		*29 - 115*

Lab Sample ID: LCSD 440-256530/5-A
Matrix: Water
Analysis Batch: 256589

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 256530

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016			4.00	3.47		ug/L		87	50 - 115	5	30
Aroclor 1260			4.00	3.32		ug/L		83	10 - 127	5	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	*96*		*29 - 115*

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

TestAmerica Job ID: 440-109823-1

GC/MS Semi VOA

Prep Batch: 255112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109823-1	ArroyoSimi_20150514	Total/NA	Water	525.2	
LCS 440-255112/2-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 440-255112/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MB 440-255112/1-A	Method Blank	Total/NA	Water	525.2	

Analysis Batch: 255447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109823-1	ArroyoSimi_20150514	Total/NA	Water	525.2	255112
LCS 440-255112/2-A	Lab Control Sample	Total/NA	Water	525.2	255112
LCSD 440-255112/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	255112
MB 440-255112/1-A	Method Blank	Total/NA	Water	525.2	255112

GC Semi VOA

Prep Batch: 256530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109823-1	ArroyoSimi_20150514	Total/NA	Water	608	
LCS 440-256530/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 440-256530/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 440-256530/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 440-256530/5-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 440-256530/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 256589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109823-1	ArroyoSimi_20150514	Total/NA	Water	608	256530
LCS 440-256530/4-A	Lab Control Sample	Total/NA	Water	608	256530
LCSD 440-256530/5-A	Lab Control Sample Dup	Total/NA	Water	608	256530
MB 440-256530/1-A	Method Blank	Total/NA	Water	608	256530

Analysis Batch: 256686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109823-1	ArroyoSimi_20150514	Total/NA	Water	608	256530
LCS 440-256530/2-A	Lab Control Sample	Total/NA	Water	608	256530
LCSD 440-256530/3-A	Lab Control Sample Dup	Total/NA	Water	608	256530
MB 440-256530/1-A	Method Blank	Total/NA	Water	608	256530

Metals

Analysis Batch: 252446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109823-1	ArroyoSimi_20150514	Total Recoverable	Water	SM 2340B	

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

TestAmerica Job ID: 440-109823-1

Qualifiers

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Haley & Aldrich, Inc.
TestAmerica Job ID: 440-109823-1
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

* Certification renewal pending - certification considered valid.

CHAIN OF CUSTODY FORM

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

Test America Contact: Debby Wilson

Project:
Boeing-SSFL NPDES
Quarterly Arroyo Simi-Frontier Park

Project Manager: Nancy Gardiner

Phone Number:

Sampler:
B BENSON

Field Manager: Jeff Bannon
818.350.7340, 818.414.5608(cell)

Sample Description	Sample Matrix	Container Type	# of Cont.	Sample I.D.	Sampling Date/Time	Preservative	Bottle #	Hardness as CaCO3	PCBs (608)	Chlorpyrifos, Diazinon (525.2)	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT				Comments
								ANALYSIS REQUIRED							
Arroyo Simi	W	1L Poly	1	ArroyoSimi_2015	5/14/15 0915	HNO_3	1	X							
Arroyo Simi	W	1L Amber	2			None	2A, 2B		X						
Arroyo Simi	W	1L Amber	2			HCl	3A, 3B			X					
Arroyo Simi	W	1L Amber	2			None	4A, 4B				X				

Field Readings	Meter serial #
Field readings: (include units)	
Time of readings 0915	
pH 7.47 pH unit	YLJOUVKT
Temp 14.98 °C/°F	
Velocity 0.1 ft/sec	
Field readings QC	
Checked by:	
Date/Time: 5-14-15 0925	

Relinquished By	Date/Time:	Received By	Date/Time:
BRYAN BENSON	5/14/15 1200	LabTC	5/14/15 1200
Relinquished By	Date/Time:	Received By	Date/Time:
LabTC	5/14/15 17:30	JuBand	5/14/15 17:20
Relinquished By	Date/Time:	Received By	Date/Time:

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

Sample Integrity: (Check)
Intact: ✓ On Ice: ✓ 2.2/1.0 IR-71

Data Requirements: (Check)
No Level IV: __ All Level IV: ___ NPDES Level IV: _____

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 440-109823-1

Login Number: 109823
List Number: 1
Creator: Blocker, Kristina M

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.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	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	

APPENDIX E

Second Quarter 2015 Bioassessment Monitoring Report

Date: February 16th, 2016

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

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

RE: BIOASSESSMENT SAMPLING FOR THE BOEING COMPANY AT THE SANTA SUSANA FIELD LABORATORY (2015)

The Bioassessment Sampling and Analysis Plan for The Boeing Company at the Santa Susana Field Laboratory (SSFL) specifies that spring/summer bioassessment sampling occur at least four to six weeks following the last major storm event of the 2015 rain season. This time period was established by, and is included in, the state-wide bioassessment protocols established by the State of California's Surface Water Ambient Monitoring Program (SWAMP 2007). Flowing water through a stream reach over this period of time is necessary for the aquatic benthic macroinvertebrate (BMI) community that might reside there to become established and ensures that valid BMI samples will be collected.

The 2014 to 2015 rain year was characterized by extreme drought conditions with a total of 10.79 inches of rain falling between July 2014 and April 2015. The last storm with significant rainfall occurred from March 1st thru 2nd (total = 1.37 inches) with trace rain falling on March 13th (Figure 1). On April 29th, 2015, over seven weeks after the last major rain event, the two NPDES permitted sites on the SSFL were visited by Aquatic Bioassay and Consulting Laboratory Biologists to determine if bioassessment samples could be collected. Neither SSFL-001 nor SSFL-006 had flow and both were completely dry across their entire reaches (see photos).

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

Sincerely,

Scott Johnson
Laboratory Director
805 643 5621 x 11

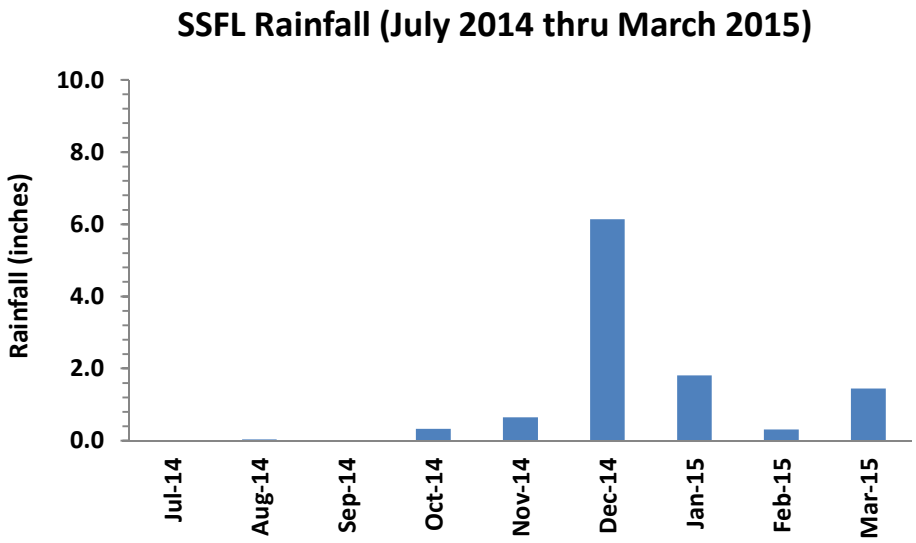


Figure 1. Rainfall (inches) measured July, 2014 thru March, 2015 on SSFL.

Figure 2. Photos taken downstream and upstream of each permitted discharge point from the SSFL property (2015).

SSFL-001, downstream

SSFL-001, upstream

SSFL-006, downstream

SSFL-006, upstream