



Via FedEx

August 15, 2013

In reply, refer to SHEA-113884

Regional Water Quality Control Board  
Los Angeles Region  
320 West 4th Street, Suite 200  
Los Angeles, CA 90013

Gentlemen:

Attention: Information Technology Unit

Reference: Compliance File CI-6027 and NPDES No. CA0001309

Subject: Second Quarter 2013 NPDES Discharge Monitoring Report  
Submittal – Santa Susana Site

The Boeing Company (Boeing) hereby submits this Discharge Monitoring Report (DMR) that includes the activities related to the Santa Susana Field Laboratory (Santa Susana Site) surface water outfalls (**Figure 1**) that occurred during the period of April 1 through June 30, 2013 (Second Quarter 2013). This DMR is 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). Included are summary tables of Best Management Practices (BMP), surface water sample analytical results, rainfall summaries, liquid waste shipment summaries, and analytical laboratory reports of surface water samples.

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/aboutus/environment/santa\\_susana/ents/monitoring\\_reports.html](http://www.boeing.com/aboutus/environment/santa_susana/ents/monitoring_reports.html)

## SECOND QUARTER 2013 DMR CONTENTS

This discharge monitoring report includes the following sections and appendices:

- **Discharge Summary:** This section describes the number of rain events, the number of samples collected, the sample date, and the sample location during the Second Quarter 2013. **Table 1** summarizes the Second Quarter 2013 sampling record by outfall, location and sample type collected per the requirements of the NPDES Permit.

- **Second Quarter 2013 Summary of Compliance:** This section provides a summary of the sample results that exceeded Permit limits in the Second Quarter 2013.
- **Second Quarter 2013 Site-wide Storm Water Pollution Prevention Plan (SWPPP)/BMP Activities:** This section presents site-wide SWPPP activities, demolition BMPs, Interim Source Removal Action (ISRA) BMPs, BMP Plan–related BMPs, Northern Drainage BMPs, and other BMP activities that were implemented in the Second Quarter 2013. **Table 2** summarizes specific BMP activities by outfall location.
- **Data Validation and Quality Control:** This section discusses the data validation results and any laboratory or field corrective actions.
- **Appendix A** provides a summary of the Second Quarter 2013 measured precipitation at the Santa Susana Site.
- **Appendix B** tabulates all sanitary waste and other liquid waste shipment details.
- **Appendix C** present chemical analytical results of the Second Quarter 2013 stormwater samples in tabular form by outfall location, constituents evaluated (analytes), sample dates, and data validation qualifiers.
- **Appendix D** contains copies of the laboratory analytical reports, chains of custody, and data validation reports.

A compilation of notes, abbreviations, and data validation codes that are used in the analytical data summary tables are included in as a flysheet in **Appendices C** through **D**.

## DISCHARGE SUMMARY

The Santa Susana Site experienced one rain event that produced greater than 0.1 inch of rainfall within a 24-hour period (see **Appendix A**). No discharges occurred at any outfalls located at the Santa Susana Site, therefore no samples were collected. One offsite stormwater sample was collected at the Arroyo Simi – Frontier Park (RSW-002) location in Simi Valley. **Table 1** summarizes the Second Quarter 2013 sampling record by outfall, location, and sample type collected per the requirements of the NPDES Permit.

Table 1: Sampling Record during the Second Quarter 2013

Date	Outfall/Location	Samples Collected (i.e., grab, composite)
6/27/2013	Arroyo Simi Frontier Park – (RSW-002) – Quarterly	Grab

All samples are submitted to and analyzed by a California-certified analytical laboratory per the NPDES Permit requirements. Below is a summary of compliance for the Second Quarter.

**SECOND QUARTER 2013 SUMMARY OF COMPLIANCE**

No surface water discharges occurred from the Santa Susana Site during the Second Quarter 2013. As such, there are no onsite compliance issues to report for this period. Additionally, no constituents were exceeded in the quarterly sample collected at the Arroyo Simi sample location RSW-002 in Simi Valley. Therefore all second quarter samples were in full compliance.

**SECOND QUARTER 2013 SITE-WIDE STORM WATER POLLUTION PREVENTION PLAN /BMP ACTIVITIES**

Boeing implemented a significant amount of SWPPP and BMP related activities that assisted in the improvement the storm water quality and compliance at SSFL. This section below describes the site wide SWPPP and specific BMP activities that were completed in the Second Quarter 2013. Table 2 below summarizes the specific BMP activities by outfall watershed that were conducted during the Second Quarter 2013. Specific BMP projects include demolition related BMPs, Outfall 008/009 ISRA BMPs, BMP Plan related BMPs, and Northern Drainage BMPs.

Table 2: Boeing’s BMP Activities during the Second Quarter 2013

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2013
001 (South Slope below Perimeter Pond)	Inspected the outfall and flume for any excess sediment/debris. Observed sediment and erosion controls around the perimeter of the outfall and Outfall 001 drainage. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Cleaned sample box and the outfall area, and performed weed abatement.
002 (South Slope below R-2 Pond)	Conducted sediment and erosion control inspections around the perimeter and at Outfall 002 drainage. Inspected outfall and flume for any excess sediment/debris. Cleaned sediment and debris from the flume and sample box. Checked flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Completed maintenance inspection and reset the automated composite sampling equipment (autosamplers). Cleaned the outfall area, and performed weed abatement.
003 Radioactive Material Handling Facility (RMHF)	Conducted sediment and erosion control inspections. Inspected flume and sample box for any excess sediment/debris. Conducted maintenance inspections of the structural BMPs, including the stormwater retention basin, and conveyance and filter systems. Checked sample box and flow meter control box

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2013
	for spiders and presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. The outfall area was cleaned and weeded, and vegetation was cleared.
004 Sodium Reactor Experiment (SRE)	Inspected the flume, outfall and liner for any excess sediment/debris. Conducted sediment and erosion control inspections near the outfall. Conducted maintenance inspections of the structural BMPs, including the stormwater retention system, and conveyance and filter systems. Completed inspection of dedicated retention tanks. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Cleaned sample box and the outfall area, and performed weed abatement.
005 Former Sodium Disposal Facility (FSDF)-1	Conducted sediment and erosion control inspections. Inspected the outfall and flume for any excess sediment/debris. Completed maintenance inspections of structural BMPs, including the conveyance and stormwater retention systems, and sediment basin liner. Completed inspection of dedicated retention tanks throughout the rainy season; cleaned pad, removed hoses, and oversaw demobilization of storm water storage tanks at the end of the quarter. Cleaned sample box and the outfall area, and performed weed abatement.
006 (FSDF-2)	Inspected the flume, outfall and liner for any excess sediment/debris. Cleaned sample box and the outfall area, and performed weed abatement along the walking trail and in the media bed. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Conducted sediment and erosion control inspections near the outfall. Completed inspection of dedicated retention tanks. Completed maintenance inspections of the structural BMPs, including the stormwater retention and filter systems.
007 (Building 100)	Conducted sediment and erosion control inspections at the perimeter of Outfall 007. Observed sediment basin liner and outfall for any excess sediment/debris or deficiencies. Cleaned sample box and the outfall area, and performed weed abatement. Completed maintenance inspections of the conveyance system, stormwater retention system, and sediment basin liner. Checked high level float/switch in sedimentation basin. Completed inspection of dedicated retention tanks.
008	Conducted sediment and erosion control inspections near the

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2013
(Happy Valley)	<p>perimeter of the outfall and within the Outfall 008 drainage. Observed the outfall and flume for any excess sediment/debris, and cleared excess sediment from the flume. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Cleaned sample box and the outfall area, and performed weed abatement.</p>
009 (WS-13 Drainage)	<p><i>Outfall BMPs:</i> Checked sample box and flow meter control box for spiders and presence of rodents/animals. Flow meter reset and tape replaced on a monthly basis. The sample box and outfall area were cleaned, and weeding was conducted.</p> <p><i>Culvert Modification (CM)-9:</i> Added rip rap to extend the east side of the berm, extended the wing wall at the culvert intake, and extended the culvert pipe 10 feet north.</p> <p><i>Restoration, Monitoring and Mitigation Plan (RMMP) BMPs:</i> Inspected plantings and pole cuttings in the Northern Drainage and replaced water replenishment cartons at each plant. Selective weeding was performed at plantings to remove invasives. Inspected structural BMPs and monitored performance during rain events.</p> <p><i>National Aeronautics and Space Administration (NASA) ISRA BMPs:</i> Temporary BMPs (sand bag berms, fiber rolls, and plastic tarps) at Expendable Launch Vehicle (ELV)-1C were maintained during ISRA implementation. Portable pump, generator, and metal plate removed from temporary sand bag Berm A. Storage tanks were drained, cleaned, and returned at the end of the rainy season. Initiated construction of permanent BMPs in the ELV channel.</p> <p><i>Lower Parking Lot BMP:</i> Conducted rainy season inspections of the BMP. Inspected plantings and implemented a watering plan. Installed entry sign at the eastern entry to the biofilter area. Installed fiber rolls to address erosion at the sediment basin and built a rip rap berm at the west end of the biofilter. Compacted fill, added gravel at the biofilter, and performed selective weeding.</p>
010 (Building 203)	<p>Conducted maintenance inspections of structural BMPs including the filter media, and conveyance and stormwater retention systems. Completed inspection of dedicated retention tanks.</p>

OUTFALL (Location)	BMP ACTIVITIES DURING SECOND QUARTER 2013
	Maintained and inspected sediment and erosion controls within areas of disturbance or sparse vegetation. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Cleaned sample box and the outfall area, and performed weed abatement.
011 (Perimeter Pond)	Conducted maintenance inspections of structural BMPs including the weir, filter media, and pump and conveyance systems. Conducted sediment and erosion control inspections at flume, drainage area, perimeter of outfall, pond and around the conveyance system. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Cleaned sample box and the outfall area, and performed weed abatement.
012 (ALFA Test Stand)	Conducted maintenance inspections of structural BMPs including pump, conveyance system and retention tank. Performed maintenance on transfer pumps. Observed condition of the sand bag berm. Inspected outfall and perimeter for presence of rodents/animals. Cleaned sample box and the outfall area, and performed weed abatement.
013 (BRAVO Test Stand)	Conducted maintenance inspections of structural BMPs including pump, conveyance system and retention tank. Observed condition of the sand bag berm. Inspected outfall and perimeter for presence of rodents/animals. Cleaned sample box and the outfall area, and performed weed abatement.
014 Advanced Propulsion Test Facility (APTF)	Conducted maintenance inspections of structural BMPs. Observed the condition and integrity of the liner and berm. Observed sediment and erosion control BMPs around outfall perimeter. Cleaned sample box and the outfall area, and performed weed abatement.
018 (R-2 Spillway)	Conducted maintenance inspections of structural BMPs including the filter media and conveyance system. Checked sample box and flow meter control box for the presence of debris and/or animals. Flow meter reset and tape replaced on a monthly basis. Cleaned sample box and the outfall area, and performed weed abatement. Implemented post-demo BMPs at B4011, B4006, L85 Area, and the former compressed gases storage facility near Silvernale Pond, including sand bags, rip rap, gravel, and fiber rolls.
019	The RD-10 pump test which commenced on March 14, 2013

<b>OUTFALL (Location)</b>	<b>BMP ACTIVITIES DURING SECOND QUARTER 2013</b>
AREA I Groundwater Extraction (GET) SYSTEM	continued until April 12, 2013. Bag filters were replaced as needed. WS-9A was not brought back on line after the completion of the RD-10 pump test per direction from the Department of Toxic Substances Control (DTSC). The system has remained off since April 14, 2013. No NPDES sampling was performed in the Second Quarter 2013 at the Area I GET System. No water was pumped or discharged from WS-9A in the Second Quarter 2013.
RSW-002 (Arroyo Simi Frontier Park)	Collected receiving water samples at Arroyo Simi – Frontier Park location. Conducted monthly receiving water inspection.

Boeing also continued to implement the individual SWPPPs during the Second Quarter 2013. As part of the implementation of the SWPPPs, BMP inspections were completed in accordance with the State of California Construction General Permit (CGP) requirements.

Efforts to plan and implement BMPs for pre- and post-soil disturbance activities for construction/demolition and ISRA areas are discussed further below. Demolition projects comprise areas of disturbed soil from recent demolition, and post-demolition restoration. ISRA areas are those subject to ongoing soil removal and/or remediation, post-remediation, and restoration activities.

#### ***Demolition-Related BMP Activities***

Previously active areas are being demolished and prepared for restoration in an effort to return the site back to its natural habitat. Demolition activities were completed at several locations at the facility. All debris, metal, concrete, and asphalt were segregated upon demolition and transported to a waste or recycling facility per Boeing's waste management plan, and in accordance with all local, state, and federal regulations. Construction BMPs were implemented before, during, and after demolition activities.

Upon completion of demolition activities, post-demolition and restoration efforts included the installation of erosion and sediment control BMPs. In the Second Quarter, post-demo BMPs, including fiber rolls and sand bags, were implemented where required. As part of the long-term BMP maintenance, the sand bags will be removed once vegetation has returned. Fiber rolls, gravel, and sand bag barriers were implemented at B4006, the L85 area, and at the former compressed gas storage facility near Silvernale Pond. Hydroseed and hydromulch will be implemented on these areas in the Third Quarter. Boeing will continue demolition activities to reduce run-off, implement BMPs to address erosion and sedimentation, and return the Santa Susana Site to its natural habitat.

### ***Outfall 008/009 ISRA and BMP Plan Related Activities***

Boeing has continued with ISRA activities in the Outfall 008 and 009 watersheds during the Second Quarter 2013 to address constituents in soil that may have contributed to NPDES Permit limit/benchmark exceedances in surface water. ISRA soil removal within Outfall 008 was completed on October 19, 2009, and ISRA soil removal conducted within Outfall 009 continued during the Second Quarter 2013. ISRA Implementation reports are submitted to the Regional Board summarizing all ISRA activities for each phase of work performed<sup>1</sup>.

The Surface Water Expert Panel (Expert Panel) has prepared BMP plans and submittals on behalf of NASA and Boeing to meet 008/009 Permit limits/benchmarks established in the NPDES Permit (Order No. R4-2010-0090). These plans are considered conceptual designs and recommendations for BMPs and were identified based on an evaluation of NPDES compliance and ISRA/BMP surface water monitoring results. The following BMP plans have been submitted to the Regional Board and are located on Boeing's Santa Susana Site webpage under Outfall 008/009 ISRA and BMP related activities<sup>2</sup>:

- 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)

All completed Expert Panel recommended BMPs are discussed in the ISRA Performance Monitoring and BMP Monitoring Report for Outfalls 008 and 009 Watersheds and submitted to the Regional Board for each rainy season (Boeing, 2012a). In addition, these BMPs have been outlined in agency biweekly meetings and special onsite site walks with the public, Regional Board, and other agencies to demonstrate Boeing and NASA's commitment to achieving the water quality requirements of the NPDES Permit.

In coordination with the Expert Panel, the following BMP activities discussed below were performed, commenced, or completed during the Second Quarter 2013.

#### **Lower Parking Lot BMP**

The Lower Parking Lot BMP is a stormwater treatment BMP that is designed and built to capture, convey, and treat stormwater runoff from the lower lot and Instrument and Equipment Laboratory (IEL) watersheds. The need for a treatment BMP at the Lower Parking Lot BMP was first proposed in the 2010 BMP Plan (MWH et al., 2010). The Lower Parking Lot

<sup>1</sup> Available at: [http://www.boeing.com/boeing/aboutus/environment/santa\\_susana/isra.page](http://www.boeing.com/boeing/aboutus/environment/santa_susana/isra.page)

<sup>2</sup> Available at: [http://www.boeing.com/boeing/aboutus/environment/santa\\_susana/isra.page](http://www.boeing.com/boeing/aboutus/environment/santa_susana/isra.page)



BMP consists of a 30,000-gallon cistern, a stormwater conveyance line, a sediment basin, and a media biofilter. Ventura County inspectors conducted building and grading inspections at various periods during the construction of the Lower Parking Lot BMP. Lower Lot BMP construction activities were completed on March 15, 2013 and a Regional Board and public tour of the completed Lower Parking Lot BMP was conducted on March 20, 2013.

In the Second Quarter 2013, a punch list of items identified by the Expert Panel during the March 20, 2013 site walk was addressed. This punch list included the installation of fiber rolls at the biofilter, and a rip rap berm at the west end of the biofilter. A large sign was installed at the eastern entrance to the biofilter area, and selective weeding was performed to remove invasive plants.

#### NASA ELV Channel BMPs

The bidding process was completed in June 2013, and construction activities for the BMPs and drainage improvements at the ELV channel commenced at the end of the Second Quarter 2013. Construction is anticipated to continue into the Third Quarter.

#### CM-9 Upgrades

CM-9 upgrades were recommended in the 2012 BMP Plan Addendum and construction of these upgrades was completed in March 2013. The purpose of these BMPs is to slow road runoff, reduce erosion along roadway slopes into the CM-9 runoff inlet, and provide additional infiltration upstream of CM-9. In the Second Quarter 2013, minor upgrades were performed at the rip rap berm and perforated conveyance pipe. These included raising the berm with additional rip rap, extending the culvert pipe to place the outlet 10 feet north upslope, and expanding the wingwall at the culvert inlet. The need for improvements to the CM-9 media filter will be further evaluated in the next rainy season.

#### Second Quarter 2013 NASA and Boeing ISRA Activities

In addition to activities performed in coordination with the Expert Panel, the following ISRA activities were performed for Outfall 008/009 during the Second Quarter 2013:

- Sampling and ISRA Implementation:
  - During two separate teleconferences, DTSC and the Regional Board agreed that soil removal activities at ISRA areas at the A2LF and ISRA areas Liquid Oxygen (LOX)-1A, LOX-1B-4, LOX-1C, and LOX-1D would be conducted by NASA under the Administrative Order on Consent (AOC) and no action would be performed as part of the ISRA program.
  - Collected soil samples along planned sidewall boundaries at ISRA areas LOX-1B-1, LOX-1B-2, and LOX-1B-3.

- Collected radiological confirmation and delineation soil samples at ISRA areas LOX-1C and LOX-1D
- Collected additional waste characterization soil samples at ISRA area ELV-1D and Ash Pile/Sewage Treatment Plant (AP/STP)-1C-2.
- Surveys, Monitoring, and Inspections:
  - Performed weekly, pre-rain event, rain event, and post-rain event SWPPP inspections at 2010 and 2011/2012 ISRA areas per the ISRA SWPPP
  - Inspected condition of plants installed within the Northern Drainage
  - Surveyed ISRA areas IEL-3, AP/STP-1C-2, ELV-1D, LOX-1B-1, LOX-1B-2, and LOX-1B-3
  - Conducted ISRA Performance Monitoring and BMP Subarea Monitoring inspections
  - Performed biological surveys of ISRA area AP/STP-1C-2
- ISRA BMPs Implemented:
  - Inspected and maintained BMPs implemented at ISRA areas at ELV and LOX

Boeing continues to conduct bi-weekly status meetings, and submit monthly and quarterly progress reports to Regional Board staff on the progress of ISRA activities and the BMP Plan<sup>3</sup>. Boeing is committed to the restoration of the ISRA areas immediately following clean-up activities and works closely with the Regional Board, DTSC, and the Expert Panel to ensure that restoration is comprehensive.

### **Northern Drainage BMPs**

Boeing has actively worked to restore the Northern Drainage following clean-up activities performed under the oversight of the DTSC and in accordance with the requirements of Regional Board Cleanup and Abatement Order (CAO) No. R4-2007-0054. The restoration and mitigation activities proposed in the RMMP plan<sup>4</sup> were implemented in 2012.

Monitoring and maintenance of plantings and pole cuttings were conducted in the Second Quarter 2013. Water replenishment cartons were implemented to provide plants with a water source for three months, and selective weeding was performed to remove invasive plants. Plant monitoring will continue for a minimum of five years and supplemental baseline geomorphic surveys will continue for two to three years depending on the need to reassess the sediment conditions in the drainage. Water replenishment cartons will be replaced until the plants are well established. Additionally, structural BMPs were inspected to evaluate condition and performance during rain events.

<sup>3</sup> Available at: [http://www.boeing.com/boeing/aboutus/environment/santa\\_susana/isra.page](http://www.boeing.com/boeing/aboutus/environment/santa_susana/isra.page)

<sup>4</sup> Available at: [http://www.boeing.com/aboutus/environment/santa\\_susana/tech\\_reports.html](http://www.boeing.com/aboutus/environment/santa_susana/tech_reports.html)

## **REASONABLE POTENTIAL ANALYSIS (RPA)**

No surface water discharges occurred from the Santa Susana Site and no new surface water discharge data became available during the Second Quarter of 2013. Therefore a reasonable potential analysis was not triggered and RPA 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 surface water discharge and receiving 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. As noted above, measures were implemented by the analytical laboratory to monitor and/or evaluate low level detections, to analyze for interferences, and to ensure that cross contamination does not occur. Laboratory analytical reports, including validation reports and notes, are included in **Appendix D**. Attachment H of the NPDES Permit issued to the Santa Susana Site presents the State Board minimum levels (MLs) for use in reporting and determining compliance with NPDES Permit limits.

The analytical laboratory achieved these MLs for this reporting period when technically possible. When elevated laboratory reporting limits (RLs) were noted, the laboratory maximum detectable limits (MDLs) remained below the State of California MLs. However, some constituents' daily MDLs in the NPDES Permit are less than their respective MLs, and less than the RL. In cases where the NPDES Permit limit is less than the RL and ML, the RL was used to determine compliance. The specific constituents that have NPDES daily maximum or monthly average Permit limits that are less than the RL and ML are: mercury, bis (2-ethylhexyl) phthalate, polychlorinated biphenyls (PCBs) (Aroclor congeners), chlordane, Dichlorodiphenyldichloroethane (DDD), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyltrichloroethane (DDT), dieldrin, toxaphene, and chlorpyrifos. These compounds were either not a required analyte or not detected above the RL in all of the surface water/receiving water samples collected during Second Quarter 2013.

## **FACILITY CONTACT**

If there are any questions regarding this DMR or its enclosures, you may contact Mr. Paul Costa at (818) 466-8778.

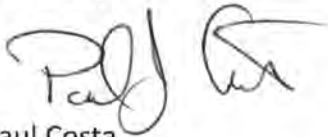
**CERTIFICATION**

I certify under penalty of law that this document and all appendices 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 a knowing violation.

Executed on the 15th of August 2013, at The Boeing Company, Santa Susana Site.

Sincerely,



Paul Costa,  
Environmental Operations and Compliance Manager  
Santa Susana Field Laboratory  
Environment, Health and Safety

LB:jrc

Figures:      1 Stormwater Drainage System and Outfall Locations

Appendices:    A Second Quarter 2013 Rainfall Data Summary  
                      B Second Quarter 2013 Liquid Waste Shipment Summary Tables  
                      C Second Quarter 2013 Summary Tables, Discharge Monitoring Data  
                      D Second Quarter 2013 Analytical Laboratory Reports, Chain-of-Custody, and  
                            Validation Reports

cc:      Ms. Cassandra Owens, Regional Water Quality Control Board  
            Mr. Rick Brausch, Department of Toxic Substances Control  
            Mr. Gerard Abrams, Department of Toxic Substances Control  
            Mr. Robert Marshall, California State University – Northridge, Library  
            Mr. Gabriel Lundeen, Simi Valley Library  
            Ms. Lynn Light, Platt Branch, Los Angeles Library

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**References Cited:**

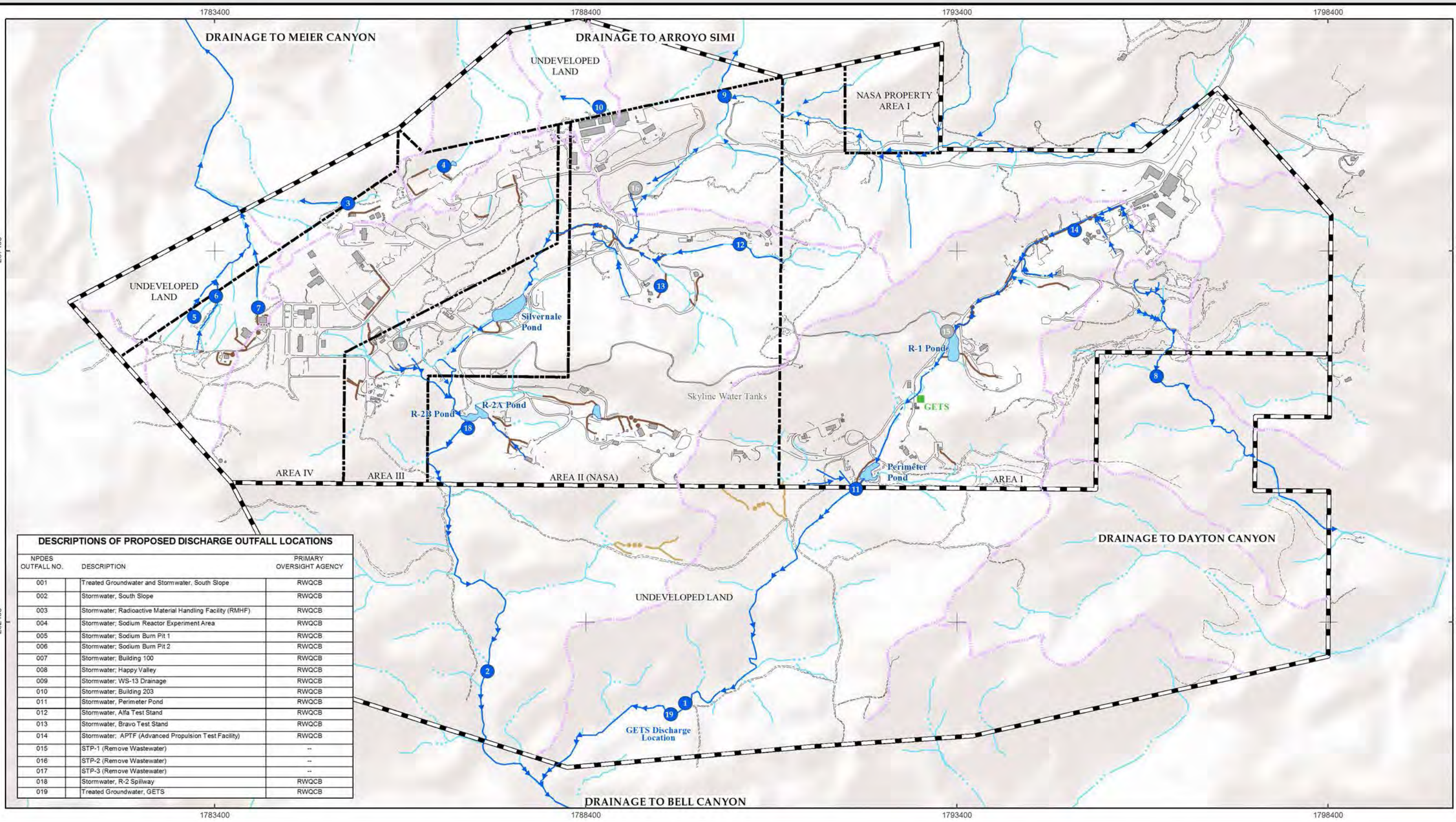
Boeing, 2012a. ISRA Performance Monitoring and Potential BMP Subarea Monitoring for the Outfalls 008 and 009 Watersheds, 2011/2012 Rainy Season, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No.6027; and California Water Code §13304 Order; No. CA0001309, CI No. 1111, Site ID No. 2040109). August 31.

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

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

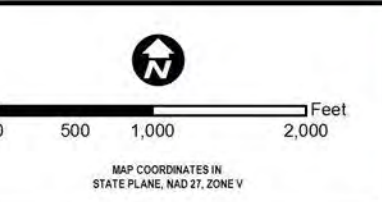
MWH Americas, Inc. et al, 2010. Best Management Practices (BMP) Plan, Outfalls 008 and 009 Watersheds, The Boeing Company, Santa Susana Field Laboratory, Canoga Park, California (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027). October 14.

## FIGURES

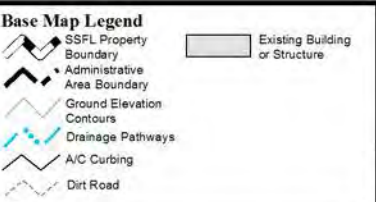


**DESCRIPTIONS OF PROPOSED DISCHARGE OUTFALL LOCATIONS**

NPDES OUTFALL NO.	DESCRIPTION	PRIMARY OVERSIGHT AGENCY
001	Treated Groundwater and Stormwater, South Slope	RWQCB
002	Stormwater, South Slope	RWQCB
003	Stormwater, Radioactive Material Handling Facility (RMHF)	RWQCB
004	Stormwater, Sodium Reactor Experiment Area	RWQCB
005	Stormwater, Sodium Burn Pit 1	RWQCB
006	Stormwater, Sodium Burn Pit 2	RWQCB
007	Stormwater, Building 100	RWQCB
008	Stormwater, Happy Valley	RWQCB
009	Stormwater, WS-13 Drainage	RWQCB
010	Stormwater, Building 203	RWQCB
011	Stormwater, Perimeter Pond	RWQCB
012	Stormwater, Alfa Test Stand	RWQCB
013	Stormwater, Bravo Test Stand	RWQCB
014	Stormwater, APTF (Advanced Propulsion Test Facility)	RWQCB
015	STP-1 (Remove Wastewater)	--
016	STP-2 (Remove Wastewater)	--
017	STP-3 (Remove Wastewater)	--
018	Stormwater, R-2 Spillway	RWQCB
019	Treated Groundwater, GETS	RWQCB



**NPDES Permit Compliance  
2nd Quarter 2013  
Discharge Monitoring Report**



APPENDIX A

SECOND QUARTER 2013 RAINFALL DATA SUMMARY







**TABLE A  
DAILY RAINFALL SUMMARY**

Station: AREA1  
Parameter: Rain  
Month/Year: June 2013

**THE BOEING COMPANY  
NPDES PERMIT NUMBER  
CA0001309**

**HOUR OF THE DAY**

Day	00	01	02	03	04	05	06	07	08	09	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	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	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	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	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	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	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	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	0.00	
D O F T H E M O N T H 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15d	0.00	0.00	0.00	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	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	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	INV	INV	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	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	0.00
28	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	0.00
29	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	0.00
30	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	INV	0.00

INV = Negative under range, invalid hour

d = Marked down, invalid hour

p = Power failure, invalid hour

APPENDIX B

SECOND QUARTER 2013 LIQUID WASTE SHIPMENTS SUMMARY  
TABLES

**TABLE B-1  
THE BOEING COMPANY  
NPDES PERMIT CA0001309  
LIQUID WASTE SHIPMENTS**

**April 2013**

DATE SHIPPED	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
4/3/2013	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	1595	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
4/10/2013	WASTE ADHESIVES CONTAINING FLAMMABLE LIQUID (PVC CEMENT)	5	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
4/10/2013	WASTE CORROSIVE LIQUIDS, TOXIC (SODIUM HYDROXIDE, SODIUM CYANIDE)	7	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
4/10/2013	WASTE CORROSIVE LIQUID, ACIDIC, INORGANIC (HYDROCHLORIC ACID, SULFURIC ACID)	7	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
4/10/2013	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	19529	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
4/10/2013	HAZARDOUS WASTE LIQUIDS (IRON REAGENT, WATER)	6	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
4/24/2013	HAZARDOUS WASTE LIQUIDS (OIL, WATER)	41	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744

**TABLE B-1  
THE BOEING COMPANY  
NPDES PERMIT CA0001309  
LIQUID WASTE SHIPMENTS**

**May 2013**

DATE SHIPPED	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
5/1/2013	WASTE ISOPROPYL ALCOHOL (ISOPROPAL ALCOHOL)	7	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/1/2013	WASTE CORROSIVE LIQUIDS, TOXIC ( SODIUM HYDROXIDE, SODIUM CYANIDE)	21	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/1/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (DEBRIS, SULFURIC ACID)	92	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/1/2013	HAZARDOUS WASTE LIQUID (CADMIUM MERCURY)	86	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Aragonite LLC 11600 North Aptus Road, Grantsville, UT 84029
5/7/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (NON-PCB BALLASTS)	1369	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/7/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (NON PCB BALLASTS)	66	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/7/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (NON PCB CAPACITORS)	48	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/7/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (NON PCB CAPACITORS)	298	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/7/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (OIL, WATER)	2208	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Buttonwillow LLC 2500 West Lokern Road, Buttonwillow, CA 93206
5/7/2013	WASTE AEROSOLS FLAMMABLE	8	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/7/2013	WASTE CORROSIVE LIQUID, ACIDIC, INORGANIC (HYDROCHLORIC ACID, SULFURIC ACID)	121	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/7/2013	WASTE SODIUM HYDROXIDE SOLUTION	26	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/15/2013	WASTE CYANIDE SOLUTIONS (POTASSIUM CYANIDE, POTASSIUM BORATE)	21	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Deer Park, LLC 2027 Independence Parkway South, La Porte, TX 77571
5/15/2013	WASTE CORROSIVE LIQUIDS, TOXIC (SODIUM HYDROXIDE, SODIUM CYANIDE)	16	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/15/2013	WASTE COMBUSTIBLE LIQUID (ANTI STATIC AGENT, CLEANING SOLUTION)	8	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/15/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (IRON REAGENT, WATER)	22	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/15/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (DEBRIS, SULFURIC ACID)	51	P	Clean Harbors Environmental Services	Clean Harbors Wilmington LLC

**TABLE B-1  
THE BOEING COMPANY  
NPDES PERMIT CA0001309  
LIQUID WASTE SHIPMENTS**

**May 2013**

DATE SHIPPED	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
				1737 East Denni Street, Wilmington, CA 90744	1737 East Denni Street, Wilmington, CA 90744
5/15/2013	WASTE NON-RCRA HAZARDOUS WASTE LIQUIDS (WATER)	11	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/22/2013	WASTE CORROSIVE LIQUIDS, TOXIC (SODIUM HYDROXIDE, SODIUM CYANIDE)	44	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/22/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (DEBRIS, SULFURIC ACID)	82	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/22/2013	WASTE FLAMMABLE LIQUIDS (ETHANOL)	5	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/22/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (NON-PCB CAPACITORS)	29	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
5/24/2013	NON-HAZARDOUS, NON D.O.T REGULATED MATERIAL (WATER)	2641	G	Nexeo Solutions, LLC	South West Treatment Systems, Inc. 4120 Bandini Blvd., Vernon, CA 90058
5/31/2013	NON-RCRA HAZARDOUS WASTE LIQUIDS (NON PCB CAPACITORS)	380	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Buttonwillow LLC 2500 West Lokern Road, Buttonwillow, CA 93206

**TABLE B-1  
THE BOEING COMPANY  
NPDES PERMIT CA0001309  
LIQUID WASTE SHIPMENTS**

**June 2013**

DATE SHIPPED	TYPE OF LIQUID	QTY.	UNITS	TRANSPORTER	DESTINATION
6/4/2013	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	3645	G	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Siemens Industry, Inc. 5375 South Boyle Avenue, Los Angeles, CA 90058
6/19/2013	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	15	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744
6/19/2013	HAZARDOUS WASTE LIQUID (TRICHLOROETHYLENE)	2271	P	Clean Harbors Environmental Services 1737 East Denni Street, Wilmington, CA 90744	Clean Harbors Wilmington LLC 1737 East Denni Street, Wilmington, CA 90744



APPENDIX C

SECOND QUARTER 2013 SUMMARY TABLES, DISCHARGE  
MONITORING DATA

**SECOND QUARTER 2013  
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 37 of the NPDES permit.
2. pH was determined with a field instrument and was noted as such. These results were not validated.
3. The NPDES monthly average permit limit for mercury of 0.05 µg/L (Outfall 019) is not achievable by the laboratory; therefore, the laboratory MDL of 0.10 µg/L was used to determine compliance.
4. All of the following abbreviations and/or notes may not occur on every table.

---

-92.9 +/-200	A negative radiochemical analytical result indicates the count rate of the sample was less than the background condition
\$	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)
*	result not validated
*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

**SECOND QUARTER 2013  
REPORTING SUMMARY NOTES  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

*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
C5	Calibration verification %R was outside method control limits
%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 then the laboratory reporting limit)
E	duplicates show poor agreement
ft/sec	feet per second
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
LOD	limit of detection
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	minimum detectable activity
MDL	method detection limit
MGD	million gallons per day

**SECOND QUARTER 2013  
REPORTING SUMMARY NOTES  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

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
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
ND	analyte value less than the LOD or MDL
NM	not measured or determined
NTU	nephelometric turbidity unit
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
S	surrogate recovery was outside control limits
TEQ	toxic equivalent
T	presumed contamination, as indicated by a detect in the trip blank
TU <sub>c</sub>	toxicity units (chronic)
U	result not detected
µg/L	micrograms per liter
UJ	result not detected at the estimated reporting limit
umhos/cm	micromhos per centimeter
WHO TEF	World Health Organization toxic equivalency factor
^	analysis not completed due to hold time exceedence or insufficient sample volume
#	Per ORDER NO. R4-2010-0090 page 23 Footnote 1. The effluent limitations for total suspended solids and settleable solids are not applicable for discharges during wet weather. During wet weather flow, a discharge event is greater than 0.1 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.
(4.0)3.1/-	Represents (Dry Weather Limit) Wet Weather Limit / Monthly Average Limit.

**ARROYO SIMI (Frontier Park Receiving Water)**

**SECOND QUARTER 2013 REPORTING SUMMARY  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY  
NPDES PERMIT CA0001309**

**April 1 through June 30, 2013**

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	6/27/2013		
			SAMPLE TYPE	RESULT	VALIDATION QUALIFIER
Water Velocity	ft/sec	-/-	Meas	0.13	*
pH (Field)	pH Units	6.5-8.5/-	Grab	7.21	*
Temperature	F	-/-	Grab	75	*
E. Coli	MPN/100 ml	235/-	ANR	ANR	ANR
Fecal Coliform	MPN/100 ml	400/-	ANR	ANR	ANR
Hardness	mg/L	-/-	Grab	660	--
4,4'-DDD	ug/L	0.0014/-	Grab	ND < 0.0038	*
4,4'-DDE	ug/L	0.001/-	Grab	ND < 0.0029	*
4,4'-DDT	ug/L	0.001/-	Grab	ND < 0.0038	*
Aroclor 1016	ug/L	0.0003/-	Grab	ND < 0.24	*
Aroclor 1221	ug/L	0.0003/-	Grab	ND < 0.24	*
Aroclor 1232	ug/L	0.0003/-	Grab	ND < 0.24	*
Aroclor 1242	ug/L	0.0003/-	Grab	ND < 0.24	*
Aroclor 1248	ug/L	0.0003/-	Grab	ND < 0.24	*
Aroclor 1254	ug/L	0.0003/-	Grab	ND < 0.24	*
Aroclor 1260	ug/L	0.0003/-	Grab	ND < 0.24	*
Chlordane	ug/L	0.001/-	Grab	ND < 0.076	*
Chlorpyrifos	ug/L	0.02/-	Grab	ND < 0.077	*
Diazinon	ug/L	0.16/-	Grab	ND < 0.096	*
Dieldrin	ug/L	0.0002/-	Grab	ND < 0.0019	*
Toxaphene	ug/L	0.0003/-	Grab	ND < 0.24	*

APPENDIX D

SECOND QUARTER 2013 ANALYTICAL LABORATORY REPORTS,  
CHAIN-OF-CUSTODY, AND VALIDATION REPORTS

**APPENDIX D**  
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## **APPENDIX D**

### **Section 1**

Arroyo Simi-Frontier Park –June 27, 2013

MEC<sup>X</sup> Data Validation Reports





# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-50360-1

Prepared by

MEC<sup>x</sup>, LP  
12269 East Vassar Drive  
Aurora, CO 80014



### I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES  
 Contract Task Order: 1261.100D.00  
 Sample Delivery Group: 440-50360-1  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 1  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Arroyo Simi	440-50360-1	N/A	Water	6/27/2013 10:45:00 AM	SM2340B

### II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at Test-America-Irvine within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered to TestAmerica-Irvine, custody seals were not utilized.



### 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.

**Qualification Code Reference Table**

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.



**Qualification Code Reference Table Cont.**

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been 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.	Unusual problems found with the data that have been 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 SM2340B—Hardness

Reviewed By: P. Meeks  
Date Reviewed: July 23, 2013

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Method 200.7*, *Standard Method 2340B*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, six months for ICP metals, was met.
- Calibration: Calibration criteria were met. All initial and continuing calibration recoveries were within 90-110%. CRDL recoveries were within the control limits of 70-130%.
- Blanks: The method blank and CCBs had no applicable detects.
- Interference Check Samples: Recoveries were within the method-established control limits.
- Blank Spikes and Laboratory Control Samples: Recoveries were within method-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG; however, as the native concentrations were more than 4x the spike amount, the result were not assessed. Method accuracy was evaluated 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either “J+” or “J-”; otherwise, bias was not indicated in the qualification. Any 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 MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC



data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicate Samples: There were no field duplicate samples identified in this SDG.

---

# Validated Sample Result Forms 440-50360-1

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*Analysis Method*    *SM 2340B*

---

**Sample Name**    Arroyo Simi                      **Matrix Type:**    Water                      **Validation Level:**    IV

**Lab Sample Name:**    440-50360-1                      **Sample Date:**    6/27/2013 10:45:00 AM

---

<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Hardness, as CaCO3	STL00009	660	0.33	0.17	mg/L			

---



## **APPENDIX D**

### **Section 2**

Arroyo Simi-Frontier Park – June 27, 2013  
Test America Analytical Laboratory Reports

# 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: 440-50360-1

Client Project/Site: Quarterly Arroyo Simi-Frontier Park

For:

MWH Americas Inc

618 Michillinda Avenue, Suite 200

Arcadia, California 91007

Attn: Bronwyn Kelly



Authorized for release by:

7/22/2013 5:43:49 PM

Debby Wilson, Project Manager I

[debby.wilson@testamericainc.com](mailto:debby.wilson@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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



---

Debby Wilson  
Project Manager I  
7/22/2013 5:43:49 PM



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# Sample Summary

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-50360-1	Arroyo Simi-FP	Water	06/27/13 10:45	06/27/13 17:30

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# Case Narrative

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

**Job ID: 440-50360-1**

**Laboratory: TestAmerica Irvine**

## Narrative

**Job Narrative  
440-50360-1**

### Comments

No additional comments.

### Receipt

The sample was received on 6/27/2013 5:30 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

### GC/MS Semi VOA

Method(s) 525.2: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 115486. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

### GC Semi VOA

Method(s) 608: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 114894. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

### Metals

Method(s) 200.7 Rev 4.4: The MRL associated with prep batch 116016 recovered above the upper limit for Ca. All the samples reported with this MRL were higher than LCS; therefore the data have been qualified and reported. Arroyo Simi-FP (440-50360-1)

No other analytical or quality issues were noted.

### Organic Prep

No analytical or quality issues were noted.

# Client Sample Results

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

**Client Sample ID: Arroyo Simi-FP**

**Lab Sample ID: 440-50360-1**

**Date Collected: 06/27/13 10:45**

**Matrix: Water**

**Date Received: 06/27/13 17:30**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diazinon	ND		0.24	0.096	ug/L		07/03/13 11:20	07/03/13 21:42	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Nitro-m-xylene	94		70 - 130				07/03/13 11:20	07/03/13 21:42	1
Triphenylphosphate	104		70 - 130				07/03/13 11:20	07/03/13 21:42	1
Perylene-d12	108		70 - 130				07/03/13 11:20	07/03/13 21:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		0.96	0.077	ug/L		07/03/13 11:21	07/03/13 22:37	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,3-Dimethyl-2-nitrobenzene	124		70 - 130				07/03/13 11:21	07/03/13 22:37	1
Perylene-d12	101		70 - 130				07/03/13 11:21	07/03/13 22:37	1
Triphenylphosphate	111		70 - 130				07/03/13 11:21	07/03/13 22:37	1

**Method: 608 - Organochlorine Pesticides in Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.095	0.076	ug/L		07/01/13 06:30	07/02/13 16:13	1
Dieldrin	ND		0.0048	0.0019	ug/L		07/01/13 06:30	07/02/13 16:13	1
Toxaphene	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 16:13	1
4,4'-DDD	ND		0.0048	0.0038	ug/L		07/01/13 06:30	07/02/13 16:13	1
4,4'-DDE	ND		0.0048	0.0029	ug/L		07/01/13 06:30	07/02/13 16:13	1
4,4'-DDT	ND		0.0095	0.0038	ug/L		07/01/13 06:30	07/02/13 16:13	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene	72		35 - 115				07/01/13 06:30	07/02/13 16:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
Aroclor 1221	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
Aroclor 1232	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
Aroclor 1242	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
Aroclor 1248	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
Aroclor 1254	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
Aroclor 1260	ND		0.48	0.24	ug/L		07/01/13 06:30	07/02/13 13:13	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
DCB Decachlorobiphenyl (Surr)	64		45 - 120				07/01/13 06:30	07/02/13 13:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness, as CaCO3	660		0.33	0.17	mg/L			07/01/13 09:44	1

# Method Summary

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	TAL IRV
525.2 UP	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: MWH Americas Inc  
 Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

**Client Sample ID: Arroyo Simi-FP**

**Lab Sample ID: 440-50360-1**

**Date Collected: 06/27/13 10:45**

**Matrix: Water**

**Date Received: 06/27/13 17:30**

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			1045 mL	1 mL	115485	07/03/13 11:20	CN	TAL IRV
Total/NA	Analysis	525.2 UP		1			115590	07/03/13 21:42	CP	TAL IRV
Total/NA	Prep	525.2			1040 mL	1 mL	115486	07/03/13 11:21	CN	TAL IRV
Total/NA	Analysis	525.2		1			115590	07/03/13 22:37	CP	TAL IRV
Total/NA	Prep	608			1050 mL	2 mL	114894	07/01/13 06:30	AC	TAL IRV
Total/NA	Analysis	608		1			115174	07/02/13 13:13	DD	TAL IRV
Total/NA	Prep	608			1050 mL	2 mL	114894	07/01/13 06:30	AC	TAL IRV
Total/NA	Analysis	608		1			115245	07/02/13 16:13	KS	TAL IRV
Total/NA	Analysis	SM 2340B		1			113532	07/01/13 09:44	FR	TAL IRV

**Laboratory References:**

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



# QC Sample Results

Client: MWH Americas Inc  
 Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

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

**Lab Sample ID: MB 440-115486/1-A**

**Matrix: Water**

**Analysis Batch: 115590**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 115486**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.0	0.080	ug/L		07/03/13 11:21	07/03/13 18:28	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,3-Dimethyl-2-nitrobenzene	107		70 - 130				07/03/13 11:21	07/03/13 18:28	1
Perylene-d12	97		70 - 130				07/03/13 11:21	07/03/13 18:28	1
Triphenylphosphate	114		70 - 130				07/03/13 11:21	07/03/13 18:28	1

**Lab Sample ID: LCS 440-115486/2-A**

**Matrix: Water**

**Analysis Batch: 115590**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 115486**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorpyrifos	5.00	5.18		ug/L		104	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1,3-Dimethyl-2-nitrobenzene	112		70 - 130				
Perylene-d12	106		70 - 130				
Triphenylphosphate	103		70 - 130				

**Lab Sample ID: LCSD 440-115486/3-A**

**Matrix: Water**

**Analysis Batch: 115590**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 115486**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorpyrifos	5.00	5.63		ug/L		113	70 - 130	8	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
1,3-Dimethyl-2-nitrobenzene	111		70 - 130						
Perylene-d12	102		70 - 130						
Triphenylphosphate	112		70 - 130						

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

**Lab Sample ID: MB 440-115485/1-A**

**Matrix: Water**

**Analysis Batch: 115590**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 115485**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diazinon	ND		0.25	0.10	ug/L		07/03/13 11:20	07/03/13 20:19	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	105		70 - 130				07/03/13 11:20	07/03/13 20:19	1
Triphenylphosphate	117		70 - 130				07/03/13 11:20	07/03/13 20:19	1
Perylene-d12	102		70 - 130				07/03/13 11:20	07/03/13 20:19	1

TestAmerica Irvine

# QC Sample Results

Client: MWH Americas Inc  
 Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

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

**Lab Sample ID: LCS 440-115485/2-A**

**Matrix: Water**

**Analysis Batch: 115590**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 115485**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diazinon	5.00	5.48		ug/L		110	70 - 130
<b>Surrogate</b>							
	<b>%Recovery</b>	<b>LCS</b>	<b>Qualifier</b>	<b>Limits</b>			
2-Nitro-m-xylene	113			70 - 130			
Triphenylphosphate	109			70 - 130			
Perylene-d12	102			70 - 130			

**Lab Sample ID: LCSD 440-115485/3-A**

**Matrix: Water**

**Analysis Batch: 115590**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 115485**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diazinon	5.00	5.68		ug/L		114	70 - 130	4	30
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>LCSD</b>	<b>Qualifier</b>	<b>Limits</b>					
2-Nitro-m-xylene	105			70 - 130					
Triphenylphosphate	102			70 - 130					
Perylene-d12	107			70 - 130					

## Method: 608 - Organochlorine Pesticides in Water

**Lab Sample ID: MB 440-114894/1-A**

**Matrix: Water**

**Analysis Batch: 115245**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 114894**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.10	0.080	ug/L		07/01/13 06:30	07/02/13 14:22	1
Dieldrin	ND		0.0050	0.0020	ug/L		07/01/13 06:30	07/02/13 14:22	1
Toxaphene	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 14:22	1
4,4'-DDD	ND		0.0050	0.0040	ug/L		07/01/13 06:30	07/02/13 14:22	1
4,4'-DDE	ND		0.0050	0.0030	ug/L		07/01/13 06:30	07/02/13 14:22	1
4,4'-DDT	ND		0.010	0.0040	ug/L		07/01/13 06:30	07/02/13 14:22	1
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>MB</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene	69			35 - 115			07/01/13 06:30	07/02/13 14:22	1

**Lab Sample ID: LCS 440-114894/2-A**

**Matrix: Water**

**Analysis Batch: 115245**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 114894**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	0.500	0.364		ug/L		73	55 - 115
4,4'-DDD	0.500	0.371		ug/L		74	55 - 120
4,4'-DDE	0.500	0.366		ug/L		73	50 - 120
4,4'-DDT	0.500	0.394		ug/L		79	55 - 120

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# QC Sample Results

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

## Method: 608 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCS 440-114894/2-A  
Matrix: Water  
Analysis Batch: 115245

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 114894

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	63		35 - 115

Lab Sample ID: LCSD 440-114894/3-A  
Matrix: Water  
Analysis Batch: 115245

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 114894

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dieldrin	0.500	0.377		ug/L		75	55 - 115	3	30
4,4'-DDD	0.500	0.380		ug/L		76	55 - 120	2	30
4,4'-DDE	0.500	0.378		ug/L		76	50 - 120	3	30
4,4'-DDT	0.500	0.403		ug/L		81	55 - 120	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	62		35 - 115

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

Lab Sample ID: MB 440-114894/1-A  
Matrix: Water  
Analysis Batch: 115174

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 114894

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1
Aroclor 1221	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1
Aroclor 1232	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1
Aroclor 1242	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1
Aroclor 1248	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1
Aroclor 1254	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1
Aroclor 1260	ND		0.50	0.25	ug/L		07/01/13 06:30	07/02/13 12:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	68		45 - 120	07/01/13 06:30	07/02/13 12:07	1

Lab Sample ID: LCS 440-114894/4-A  
Matrix: Water  
Analysis Batch: 115174

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 114894

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	4.00	2.90		ug/L		72	50 - 115
Aroclor 1260	4.00	2.91		ug/L		73	60 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	64		45 - 120

# QC Sample Results

Client: MWH Americas Inc  
 Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

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

**Lab Sample ID: LCSD 440-114894/5-A**

**Matrix: Water**

**Analysis Batch: 115174**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 114894**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016	4.00	2.92		ug/L		73	50 - 115	1	30
Aroclor 1260	4.00	2.92		ug/L		73	60 - 120	0	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	65		45 - 120

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# QC Association Summary

Client: MWH Americas Inc  
 Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

## GC/MS Semi VOA

### Prep Batch: 115485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	525.2	
LCS 440-115485/2-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 440-115485/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MB 440-115485/1-A	Method Blank	Total/NA	Water	525.2	

### Prep Batch: 115486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	525.2	
LCS 440-115486/2-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 440-115486/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MB 440-115486/1-A	Method Blank	Total/NA	Water	525.2	

### Analysis Batch: 115590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	525.2	115486
440-50360-1	Arroyo Simi-FP	Total/NA	Water	525.2 UP	115485
LCS 440-115485/2-A	Lab Control Sample	Total/NA	Water	525.2 UP	115485
LCS 440-115486/2-A	Lab Control Sample	Total/NA	Water	525.2	115486
LCSD 440-115485/3-A	Lab Control Sample Dup	Total/NA	Water	525.2 UP	115485
LCSD 440-115486/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	115486
MB 440-115485/1-A	Method Blank	Total/NA	Water	525.2 UP	115485
MB 440-115486/1-A	Method Blank	Total/NA	Water	525.2	115486

## GC Semi VOA

### Prep Batch: 114894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	608	
LCS 440-114894/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 440-114894/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 440-114894/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 440-114894/5-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 440-114894/1-A	Method Blank	Total/NA	Water	608	

### Analysis Batch: 115174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	608	114894
LCS 440-114894/4-A	Lab Control Sample	Total/NA	Water	608	114894
LCSD 440-114894/5-A	Lab Control Sample Dup	Total/NA	Water	608	114894
MB 440-114894/1-A	Method Blank	Total/NA	Water	608	114894

### Analysis Batch: 115245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	608	114894
LCS 440-114894/2-A	Lab Control Sample	Total/NA	Water	608	114894
LCSD 440-114894/3-A	Lab Control Sample Dup	Total/NA	Water	608	114894
MB 440-114894/1-A	Method Blank	Total/NA	Water	608	114894

# QC Association Summary

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

## Metals

### Analysis Batch: 113532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-50360-1	Arroyo Simi-FP	Total/NA	Water	SM 2340B	

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## Definitions/Glossary

Client: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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: MWH Americas Inc  
Project/Site: Quarterly Arroyo Simi-Frontier Park

TestAmerica Job ID: 440-50360-1

## 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	06-30-14
Arizona	State Program	9	AZ0671	10-13-13
California	LA Cty Sanitation Districts	9	10256	01-31-14
California	NELAP	9	1108CA	01-31-14
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-28-14 *
Hawaii	State Program	9	N/A	01-31-14
Nevada	State Program	9	CA015312007A	07-31-13
New Mexico	State Program	6	N/A	01-31-14
Northern Mariana Islands	State Program	9	MP0002	01-31-14
Oregon	NELAP	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-15

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Irvine

CHAIN OF CUSTODY FORM

Test America Version 7/19/2010

Client Name/Address: MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Quarterly Arroyo Simi-Frontier Park		ANALYSIS REQUIRED		Field readings: Temp = 75°F pH = 7.21 Water Velocity (Ft/second) = 4/30 Time of readings = 1000	
Test America Contact: Debby Wilson Project Manager: Bronwyn Kelly Sampler: NEAC Smith		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Hardness as CaCO <sub>3</sub>		Comments	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT
Arroyo Simi-FP	W	1L Poly	1	6/27/13 1000	HNO <sub>3</sub>	1	
Arroyo Simi-FP	W	1L Amber	2	6/27/13 1015	None	2A, 2B	
Arroyo Simi-FP	W	1L Amber	2	6/27/13 1030	HCl	3A, 3B	
Arroyo Simi-FP	W	1L Amber	2	6/27/13 1045	None	4A, 4B	
				PCBs (608)			
				Chlorpyrifos, Diazinon (525.2)			
				Extract within 36-Hours of sampling			
				440-50360 Chain of Custody			
Relinquished By: Neal Smith		Date/Time: 6/27/13 1:34:5		Received By: [Signature]		Date/Time: 6/27/13 13:45	
Relinquished By: [Signature]		Date/Time: 6/27/13 2:10pm		Received By: Neal Smith		Date/Time: 6-27-13 14:10	
Relinquished By: [Signature]		Date/Time: 6-27-13 17:30		Received By: Tim Sockelson		Date/Time: 6/27/13 17:30	
						Turn around Time: (hours) 5 Days	
						24-Hours	
						48 Hours	
						72 Hours	
						Sample Integrity (check) On Ice <input checked="" type="checkbox"/>	
						Data Requirements (check) All Level IV <input type="checkbox"/>	
						No Level IV <input type="checkbox"/>	
						NPDES Level IV <input checked="" type="checkbox"/>	



## Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-50360-1

**Login Number: 50360**

**List Number: 1**

**Creator: Freitag, Kevin R**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	Neal Smith
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	