



The Boeing Company
Santa Susana Field Laboratory
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Via FedEx

February 26, 2013

In reply, refer to SHEA-113245

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

Attention: Information Technology Unit

Gentlemen:

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

Subject: 2012 Annual NPDES Discharge Monitoring Report - The Boeing Company, Santa Susana Site, Ventura County, California

The Boeing Company (Boeing) hereby submits this annual discharge monitoring report (DMR) for the Santa Susana Field Laboratory (Santa Susana Site) for the period of January 1, 2012, through December 31, 2012. This annual DMR is a summary of the information provided for each quarterly report submittal for 2012 and includes information as required by the National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001309 (NPDES Permit). The Los Angeles Regional Water Quality Control Board (Regional Board) issued a revised permit on May 20, 2010, with an effective date of July 19, 2010 (Order R4-2010-0090).

This annual DMR provides information and data, including summary tables of surface water sample analytical results, rainfall summaries, liquid waste shipment summaries, and analytical laboratory Quality Assurance/Quality Control (QA/QC) procedures and certifications. For a more detailed description of the activities implemented by Boeing in 2012, please refer to the quarterly DMRs. This document will also be made available electronically at:

www.boeing.com/aboutus/environment/santa_susana/ents/monitoring_reports.html

Additionally, copies of this report are available at the following: California State University at Northridge Library; Simi Valley Library; and the Platt Branch, Los Angeles Library.

REPORT CONTENTS

This annual DMR summarizes analytical data collected from the permitted outfalls during 2012 and summarizes the activities related to the Storm Water Pollution Prevention Plan (SWPPP) and best management practices (BMPs) implemented across the site. This DMR includes the following:

- Site map with Outfall Locations and Stormwater Drainages (Figure 1)
- Interim Source Removal Action (ISRA) Site Location Map (Figure 2)
- Northern Drainage Restoration, Mitigation and Monitoring Plan (RMMP) Location Figure (Figure 3)
- Sitemap with 401C Permit BMP Project Locations (Figure 4)
- Site-Wide BMP Activities in 2012 (Attachment 1)
- Bioassessment Monitoring Report (Attachment 2)
- Summary of 2012 Annual Rainfall (Table 1)
- Summary of 2012 Liquid Waste Shipments (Table 2)
- Summary of 2012 Permit Limit Exceedances (Table 3)
- Outfall-specific Summary Tables and Charts of Analytical Results (Sections 1 through 6)
- Arroyo Simi (Receiving Water) Summary Tables and Charts of Analytical Results (Section 7)
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OVERVIEW OF THE 2012 REPORTING PERIOD AT SANTA SUSANA

This section presents the efforts Boeing has made and continues to make to achieve compliance with the NPDES Permit and return the Santa Susana Site to its natural habitat. It provides an overview of SWPPP activities and BMPs that have been implemented to minimize impacts to surface water and the potential for surface water permit limit exceedances.

SITE-WIDE SWPPP PLAN AND BMP ACTIVITIES FOR 2012

During 2012, Boeing continued to implement site-wide SWPPP inspections. Boeing conducted before and after storm season inspections, and monthly inspections as required by the site-wide SWPPP to identify and mitigate any on-site conditions identified that may affect the quality of storm water runoff from the Santa Susana Site in accordance with the State of California General Industrial Storm Water Permit (No. CAS000001) (General Permit) SWPPP requirements.

Site-wide BMP activities include inspection of Solid Waste Management Units (SWMUs) as per SWPPP requirements, were completed three times a year during the months of January, April and September. Site-wide activities also include the inspection of outfalls and stormwater conveyance systems. Inspection of specific BMP activities at each outfall location may include: inspections of erosion and sediment control BMPs, flume and sample box condition, flow meter calibrations, surface water catchment or sedimentation basin condition, liner integrity, filter media condition, system pump and conveyance condition, and retention tank inspection. General maintenance and housekeeping of outfalls may include removal of sediment, removal of leaf litter, filter media replacement, liner repair or replacement, implementation of additional BMPs, and weed abatement.

During 2012, Boeing continued to implement the individual construction SWPPPs inspections. BMP inspections were completed in accordance with the State of California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ; NPDES NO. CAS000002 (General Construction Permit) SWPPP requirements. During the rainy season, inspections are conducted before and after qualifying rain events, and during extended rainfall lasting longer than 24 hours as required by the General Permit. During the non-rainy season, inspections are conducted quarterly.

Construction, demolition and ISRA activities are monitored under the General Construction Permit SWPPP requirements. BMPs implemented during pre- and post-soil disturbance activities for demolition and ISRA areas are discussed in **Attachment 1** and summarized further in sections below.

Site-wide planting of Native Vegetation and Restoration

Boeing is committed in returning the Santa Susana Site to its natural habitat. In 2012, Boeing introduced over 3,000 plants and cuttings of new vegetation across the Santa Susana Site. The planting was completed in accordance with the Northern Drainage RMMP and the Surface Water Expert Panel (Expert Panel) recommendations and included: 2273 containerized plants at the Lower Lot Biofilter, 195 containerized plants and 324 willow and mulefat cuttings in the Northern Drainage, and 145 containerized plants in the B-1 area all located within the Outfall 009 watershed; and 85 mulefat cuttings were also planted at the R1 Pond. The native plants installed consisted of many species of plants but not limited to Deerweed, California Brickellbush, California Buckwheat, Elderberry, Creeping Wild Rye, Mugwort, Mulefat, Coyote Brush and various species of sage and grasses.

In addition to the reestablishment of native plant species, Boeing is committed to the restoration and rehabilitation of soil disturbance areas. Upon completion of soil disturbance areas, proper sediment and erosion control BMPs are installed, including the application of hydromulch and hydroseed which includes native seeds to enhance re-growth of native plants in disturbed soil areas.

Demolition and BMP Plan Related Activities

In 2012, demolition and restoration activities were conducted at features located at Building (B)1359, Advanced Propulsion Test Facility (APTF), and B1300 in Area I, the Environmental Effects Laboratory (EEL) and Sewage treatment Plant (STP)-III in Area III; and B4015, Area IV water tank and weather station in Area IV. Preliminary demolition activities at B4011 in Area IV began in the Fourth Quarter 2012. Demolition of B4011 is scheduled to be completed in the First Quarter 2013.

Demolition activities included the removal of concrete and metal structures, concrete slabs, debris containing metal and rebar, piping associated with utility conveyance, and asphalt road cover. All debris, metal, concrete, and asphalt was segregated upon removal and transported to a waste or recycling facility per the waste management plan and in accordance with all local, state, and federal regulations. The following activities comprised the planning and implementation of BMPs before, during and after demolition:

- Performance of pre-demolition BMP strategy planning;
- Installation of tracking controls such as truck stabilizers or rumble plates at the entrance/exit;
- Use of dust suppression and wind erosion controls;
- Stockpile management ;
- Use of a waste management plan; and
- Implementation of post-demolition BMPs, including hydromulch and hydroseed application.

These actions were performed in accordance with the NPDES permit and General Construction Permit SWPPP requirements. These BMPs were implemented in order to reduce erosion, sedimentation, and turbidity, and to continue to protect the surface waters and respective drainages. In addition, BMPs such as the application of hydromulch and hydroseed were implemented to enhance restoration. Per General Construction Permit SWPPP requirements, regular inspection schedules were completed to maintain quality and ensure compliance.

Demolition areas restored in 2012 were eligible for termination of the specific construction SWPPP opened for demolition activities. The Notice of Termination (NOT) for Component Testing Lab (CTL)-V, Canyon and CTL-III facilities restored in 2011 and 2012 were received on June 21, 2012. These areas will be regularly inspected for erosion and sedimentation and BMPs will be maintained or implemented as necessary. Boeing continues demolition activities to reduce run-off and return the Santa Susana Site to its natural habitat.

Outfalls 008/009 ISRA and BMP Plan Related Activities

Pursuant to the December 3, 2008 Section 13304 Order issued by the Regional Board, Boeing and the National Aeronautics Space Administration (NASA), in coordination with the Expert Panel, have been proceeding with ISRA activities in the Outfall 008 and 009 watersheds to address constituents that have exceeded NPDES Permit limits/benchmarks. These activities include: the Lower Parking Lot BMP; B-1 curb cut installation and the NASA ISRA areas and BMPs. A list of BMPs implemented at the Santa Susana Site is included in **Attachment 1**. A map showing the location of current and completed ISRA areas is included as **Figure 2**. The following is a brief summary of these activities as provided in the quarterly reports:

Lower Parking Lot BMP

Approval was received from Ventura County for the grading permit for the Lower Parking Lot Sediment Basin and Biofilter (Lower Lot Biofilter) Grading construction activities began on August 29, 2012 and the Regional Board and Ventura County conducted several site visits to inspect and observe construction activities. The Ventura County Building Permit Application was approved on October 26, 2012 and excavation activities began in the cistern area. The main construction of the sediment basin, biofilter and shade structure was completed in the Fourth Quarter 2012. Irrigation was installed and the placement of trees, shrubs and grasses was finished. Temporary construction BMPs were implemented during Lower Lot Biofilter construction and completion is expected in early 2013.

B-1 Curb Cut Installation

The 2012 BMP Plan Addendum recommended the installation of curb cuts with slope protections to increase the capture and conveyance of road runoff to the northern portion of the B-1 drainage. The purpose of the curb cuts is to reduce concentrated flows at the B-1 media filter and increase sedimentation in the drainage before the surface water reaches the B-1 media filter. In 2012 three 36-

inch curb cuts with slope protection were installed. In addition, three smaller 12-inch curb cuts with slope protection were installed in the planter across the street to convey road runoff that does not flow to the B-1 area to the vegetated planter area. Hydroseed was applied to the B-1 hillside to reduce the likelihood of erosion on the hillside.

NASA BMPs

Planning and design activities for the BMPs and drainage improvements at the Helipad and the ELV channel resumed in 2012. BMPs were modified at the Helipad in 2012 and additional BMPs for the ELV channel area are anticipated for installation in 2013.

ISRA-related activities included soil sampling; post-excavation topographic surveys; BMPs installation and monitoring; hydromulch and hydroseed application; native plants installation; SWPPP inspections; and performance monitoring. Additionally, Boeing communicates frequently with the Department of Toxic Substances Control (DTSC) and Regional Board to delineate planned approaches to ISRA activities and present results and supporting data pursuant to the December 3, 2008 Section 13304 Order. Boeing continues to submit monthly and quarterly progress reports to the Regional Board on the progress of the ISRA activities, including the status of any permits required for the work. For a more detailed description of 2012 ISRA activities, please refer to the quarterly DMRs. ISRA related documents can be found electronically at:

http://www.boeing.com/aboutus/environment/santa_susana/isra.html

Northern Drainage

Boeing has actively continued to protect the Northern Drainage, following the completion of work performed pursuant to the Regional Board's Cleanup and Abatement Order (CAO) No. R4-2007-0054. Boeing has completed collection of surface water samples following the cleanup completion date as required by the CAO. Therefore, no further wet weather sampling will be conducted in the Northern Drainage. The final Northern Drainage Monthly Monitoring Report (MMR) was submitted in May 2012.

Following the Certification of Completion as issued by DTSC on April 29, 2011 (DTSC, 2011) for the work performed under DTSC's 2007 Imminent and Substantial Endangerment Determination and Order and Remedial Action Order, Boeing, NASA and the Expert Panel developed a site-specific RMMP for the areas of the Northern Drainage that were subject to this Order. Boeing submitted the RMMP to the Regional Board on October 5, 2011 (Haley & Aldrich, Inc., 2011) and received permit approvals from the Regional Board, California Department of Fish and Game (CDFG), and the Los Angeles Division of United States Army Corps of Engineers (ACOE), in early July 2012.

The RMMP implementation included the installation of native plants, structural measures, bioengineering features, and application of hydroseed and hydromulch. For a more detailed description of 2012 Northern Drainage RMMP activities, please refer to the quarterly DMRs. A list of BMPs implemented at the Santa Susana Site is included in **Attachment 1**. A map showing the location of RMMP activities within the Northern Drainage is included as **Figure 3**.

Other BMP Activities

In 2012, Boeing submitted a CWA Section 401 Water Quality Certification Application to the Regional Board for the authorization to place storm water BMPs in several drainages at the Santa Susana Site. The Regional board issued the 401 Certification on November 20, 2012 and Boeing commenced field activities shortly thereafter. A list of BMPs implemented at the Santa Susana Site is included in **Attachment 1**. A map showing BMP areas at the Santa Susana Site is included as **Figure 4**.

A 2012 Annual Compliance Report for Outfall 001, Outfall 008, Outfall 011, and R2A Pond Areas was submitted to the Regional Board on December 19, 2012 (Boeing, 2012). This letter report provided information for those activities that commenced subsequent to November 20, 2012 and performed through December 14, 2012. Activities performed after December 14, 2012 will be included in the 2013 Annual Compliance Report.

Bioassessment

Per the requirements of the NPDES Permit, a bioassessment review was conducted on May 22, 2012 to evaluate the water quality conditions in Bell Canyon and Meir Canyon at the Santa Susana site. The methods, procedures and results of the bioassessment are detailed in the Bioassessment Monitoring Report and included as **Attachment 2**.

DISCHARGE STATUS

Precipitation during 2012 at Santa Susana is provided for each month of the year in **Table 1**. Surface water samples were collected when flow was observed at the designated outfall locations during storm events of greater than 0.1 inches. Surface water samples were collected from Outfalls 001, 002, 008, 009, 018, and the Arroyo Simi Receiving Water location (RSW-002) for all qualifying events from January 1 to December 31, 2012, in accordance with the NPDES Permit. Additionally, for any discharges of treated groundwater from the Groundwater Extraction Treatment System (GETS), Outfall 019 effluent treated water samples were collected in accordance with the NPDES permit upon discharge.

Figure 1 illustrates the Santa Susana Site and the locations of the outfalls. **Table A**, below, provides a summary of the 2012 sampling record by outfall/location where flow was observed and stormwater samples were collected per the requirements of the NPDES permit.

Table A. Summary of Stormwater Sampling Events

Date	Outfall/Location	Samples Collected (i.e., grab, composite)
1/23/2012	Outfall 009 (WS-13 Drainage)	Grab & Composite
2/13/2012	Outfall 019 (GETS)	Grab & Composite
2/23/2012	Arroyo Simi Receiving Water/Sediment (RSW-002)	Grab
2/28/2012	Outfall 019 (GETS)	Grab & Composite
3/8/2012	Arroyo Simi Receiving Water (RSW-002)	Grab
3/17/2012	Arroyo Simi Receiving Water (RSW-002)	Grab
3/17/2012	Outfall 009 (WS-13 Drainage)	Grab & Composite
3/25/2012	Outfall 009 (WS-13 Drainage)	Grab & Composite

Date	Outfall/Location	Samples Collected (i.e., grab, composite)
3/27/2012	Arroyo Simi Receiving Water (RSW-002)	Grab
3/27/2012	Outfall 009 (WS-13 Drainage)	Grab
3/29/2012	Outfall 019 (GETS)	Grab & Composite
4/2/2012	Arroyo Simi Receiving Water (RSW-002) Bacteria only	Grab
4/4-4/5/2012	Outfall 019 (GETS) Monthly	Grab & Composite
4/6/2012	Arroyo Simi Receiving Water (RSW-002) Bacteria only	Grab
4/10-4/11/2012	Outfall 018 (R-2 Pond)	Grab & Composite
4/11/2012	Outfall 002 (South Slope below R-2 Pond)	Grab
4/11/2012	Outfall 009 (WS-13 Drainage)	Grab & Composite
4/11/2012	Arroyo Simi Receiving Water (RSW-002) Quarterly	Grab & Composite
4/12-4/13/2012	Outfall 018 (R-2 Pond)	Grab & Composite
4/13/2012	Outfall 001 (South Slope below Perimeter Pond)	Grab & Composite
4/13/2012	Outfall 002 (South Slope below R-2 Pond)	Grab & Composite
4/13/2012	Outfall 008 (Happy Valley)	Grab & Composite
5/2-5/3/2012	Outfall 019 (GETS) Monthly	Grab & Composite
6/6-6/7/2012	Outfall 019 (GETS) Monthly	Grab & Composite
7/2-7/3/2012	Outfall 019 (GETS) Monthly	Grab & Composite
8/1-8/2/2012	Outfall 019 (GETS) Monthly	Grab & Composite
8/9/2012	Arroyo Simi Receiving Water (RSW-002) Quarterly	Grab
9/5-9/6/2012	Outfall 019 (GETS) Monthly	Grab & Composite
10/3-10/4/2012	Outfall 019 (GETS) Quarterly	Grab & Composite
11/1-11/2/2012	Outfall 019 (GETS) Monthly	Grab & Composite
11/17-11/18/2012	Arroyo Simi Receiving Water (RSW-002) Quarterly	Grab
11/17-11/18/2012	Outfall 009 (WS-13 Drainage) Semi-annual	Grab & Composite

Collected samples were submitted to and analyzed by a California-certified analytical laboratory per the NPDES permit requirements. All sanitary wastes from the domestic Sewage Treatment Plants (STPs I and II) were shipped offsite to a permitted offsite treatment and disposal facility. Details of the STP waste shipments are summarized in **Table 2**.

SUMMARY OF NON-COMPLIANCE AND CORRECTIVE ACTIONS

Non-compliance analytical results for all water samples are summarized in **Table 3**. Tables and graphs for all outfall locations, including the Arroyo Simi receiving water location, where data was collected (i.e., where outfalls flowed) are provided as Sections 1 through 7 as:

1. Outfall 001 South Slope below Perimeter Pond
2. Outfall 002 South Slope below R-2 Pond
3. Outfall 008 Happy Valley
4. Outfall 009 WS-13 Drainage
5. Outfall 018 R-2A Pond
6. Outfall 019 GETS
7. Receiving Water and Sediment Sample Location – Arroyo Simi (Frontier Park RSW-002)

Due to a laboratory error, priority pollutants by Environmental Protection Agency (EPA) Method 608 were inadvertently not analyzed during the annual sampling event at Outfall 008 in April 2012 and therefore these results were not reported in the Second Quarter 2012 report. This error was discovered as part of the annual quality audit. Review of historical results at outfall 008, by EPA Method 608, between 2005 and 2011 show none of these constituents to be present at or above laboratory reporting limits. Therefore, Boeing believes that the analysis for 2012 would have produced the same results. Stormwater samples collected at Outfall 008 will be analyzed by EPA Method 608 at the first opportunity. Corrective action has been initiated to ensure this issue is addressed for future sampling and analysis.

The Annual Reporting Summary Notes include a compilation of notes, abbreviations, and data validation codes that are found in the analytical data summary tables contained in the Sections.

Table 3 provides a 2012 summary of the Daily Max, Monthly Average, and Daily Mass Permit Limit or Benchmark Limit Exceedances at Outfalls 001, 002, 008, 009 and the Arroyo Simi (RSW-002) for 2012.

The following paragraphs present a summary of permit limit or benchmark exceedances for discharges at Outfalls 001, 002, 008 and 009. Outfalls 003 through 007 and Outfalls 010 through 014 did not discharge during 2012; therefore, there were no permit limit exceedances to report for these outfalls in 2012. Additionally, Samples collected from Outfall 018 in 2012 did not exceed permit limits and therefore was in compliance with NPDES Permit limits. A summary of the corrective actions implemented is included in the summary of non-compliance for each outfall. .

Boeing continued to take proactive steps to meet the requirements of its NPDES permit. These steps have been summarized below and are included in Site-wide BMP Activities table for 2012 (**Attachment 1**). These activities will continue to be re-evaluated and updated as needed to minimize the occurrence of any future benchmark exceedances.

Exceedance Summary and Discussion

Outfall 001

During the 2012 monitoring period, samples collected at Outfall 001 had four benchmark limit exceedances for iron, lead, manganese, and gross alpha, as summarized in **Table 3**.

Metals

Based on the results of previous studies by the Expert Panel, Boeing believes that sources of the metal exceedances at the Santa Susana Site in 2012 are attributed to naturally occurring contributions (e.g., native soil sedimentation, rainfall intensity), or were detected at concentrations consistent with regional background concentrations. Boeing has already implemented corrective actions to address metal exceedances in Outfall 001 and will continue to collaborate with the Expert Panel to evaluate potential impacts to stormwater, monitor the effectiveness of BMPs, and implement BMPs in order to reduce the occurrence of any future exceedances.

Gross Alpha

The surface water sample collected from Outfall 001 on April 13, 2012 resulted in an exceedance of the benchmark limit for gross alpha. This was discussed in the Second Quarter 2012 DMR. The benchmark limit for gross alpha is based on the Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL). Both the NPDES permit and the EPA drinking water regulations require subtraction of total uranium from gross alpha prior to comparison to the EPA gross alpha MCL. The resulting uranium subtracted gross alpha result for Outfall 001 was $(17.1 \pm 2.0) - (0.687 \pm 0.074) = 16.413 \pm 2.0$ picocuries per liter (pCi/L) which slightly exceeds the limit of 15 pCi/L. This slightly elevated level is caused by the high turbidity of this sample which was measured at 390 nephelometric turbidity units (NTUs).

A BMP Compliance Plan was submitted to the Regional Board on August 27, 2012. The BMP Compliance Plan primarily focused on stabilizing areas of erosion and reducing sediment loads upstream of Outfall 001. A list of measures implemented within the Outfall 001 watershed is included in **Attachment 1**. A detailed description of the exceedance discussion and specific BMPs implemented were included in the Fourth Quarter DMR and the 2012 Annual 401 Certification Compliance Report submitted to the Regional Board. Boeing will continue to evaluate and implement BMPs as needed to reduce the occurrence of any future exceedances.

Outfall 002

During the 2012 monitoring period, samples collected at Outfall 002 had one benchmark limit exceedance for iron, as summarized in **Table 3**.

Metals

Outfall 002 is located in the undeveloped portion of the property where no industrial activities have occurred. As stated above, the TSS loading will vary based on rainfall intensity, duration, and erosion characteristics. The high rainfall intensity that occurred in 2012 likely caused the elevated metals concentrations observed at Outfall 002. BMPs were evaluated at Outfall 002 and no additional BMPs or measures were warranted for implementation. Boeing will continue evaluate and implement BMPs as needed to reduce the occurrence of any future exceedances.

Outfall 008

During the 2012 monitoring period, samples collected at Outfall 008 had two exceedances of maximum daily limits for copper and lead, as summarized in **Table 3**.

Metals

In 2012, Boeing implemented measures to reduce erosion, sedimentation and TSS within the Outfall 008 watershed. As stated above, a 401c permit application was submitted and approved by the Regional Board thus Boeing could install BMPs in the Outfall 008 drainage to stabilize areas of erosion and reduce sediment loads in storm water. A list of measures implemented within the Outfall 008 watershed is included in **Attachment 1**. A detailed description of the specific BMPs are included in the quarterly DMRs and the 2012 Annual 401 Certification Compliance Report submitted to the Regional Board. Boeing will continue evaluate and implement BMPs as needed to reduce the occurrence of any future exceedances.

Outfall 009

During the 2012 monitoring period, Outfall 009 had four maximum daily limit exceedances for TCDD TEQ (Toxic Equivalent Quotient) and lead, as summarized in **Table 3**.

TCDD-TEQ and Metals

In 2012, Boeing took measures to stabilize disturbed soil areas and reduce turbidity within the Outfall 009 watershed. A list of measures implemented within the Outfall 009 watershed is included in **Attachment 2**. A detailed description of the specific BMPs are included in the quarterly DMRs. Boeing will continue evaluate and implement BMPs as needed to reduce the occurrence of any future exceedances. As noted in the discussion under the **Outfall 008/009 ISRA and BMP Plan Related Activities** and **Northern Drainage** sections, a detailed compliance approach for Outfall 009 is addressed in the separate BMP plan as well as the Northern Drainage RMMP.

Arroyo Simi, Frontier Park (Receiving Water RSW-002 and Sediment Sampling Location)

Samples collected at Arroyo Simi Receiving Water Location – Frontier Park (RSW-002) had exceedances of the NPDES Permit limits for Escherichia Coli (E. Coli) and Fecal Coliform in eight samples collected during the 2012 monitoring period as summarized in **Table 3**.

Bacteria

Samples collected on March 8, 17, 27, April 2, and 6, 2012 were utilized for the calculation of the geometric mean for E. Coli and Fecal Coliform calculated at 626 Most Probable Number (MPN)/100mL. The geometric mean is above the single sample maximum receiving water limits for E. Coli and for Fecal Coliform of 126 and 200 MPN/100mL, respectively.

As noted in the Second Quarter 2012 DMR, Boeing conducted an investigation at the Santa Susana Site in response to the detection of bacteria at the Arroyo Simi-Frontier Park receiving water sample location (RSW-002) and determined that no human sources were observed in drainages that convey stormwater to the Arroyo Simi and therefore could not have contributed to the detections of bacteria. Additionally, laboratory analytical results for bacteroides also indicated the bacteria results were not derived from human sources. Based on the results of the investigation, the Santa Susana Site activities did not contribute to the exceedances at the Arroyo Simi location. Boeing will continue to monitor E. Coli, Fecal Coliform, and human-specific Bacteroides in all samples analyzed for bacteria at the Arroyo Simi location.

SURFACE WATER DISCHARGE ANALYTICAL RESULTS REPORTING

All analyses of surface water discharge samples were conducted at laboratories certified for such analyses by the California Department of Public Health or approved by the Regional Board's Executive Officer, and in accordance with current EPA guidelines, procedures, or as specified in the monitoring program. As indicated on Page E-33 of the NPDES permit, analytical results were designated "Detected but not Quantified (DNQ)" (similar to organic analyses being J-flagged by the laboratory or data validator) if the analytical result was greater than or equal to the laboratory's method detection limit (MDL), and less than the State Board's Minimum Level (ML) or laboratory reporting limit (RL). For the purposes of determining compliance with permit limits, data that were designated DNQ or that were J-flagged (estimated values), were reported as such, but were not used to establish compliance because the estimated value was less than the laboratories' RL.

Attachment H of the NPDES permit presents the State Board's MLs for use in reporting and determining compliance with NPDES permit limits. The analytical laboratory achieved these MLs for 2012. However, some constituents' daily maximum and/or monthly average discharge limits in the NPDES permit are less than their respective MLs and less than the laboratory RL. In cases where the permit limit is less than the RL and ML, the RL was used to determine compliance. As required in the NPDES permit, **Section 10** of this report provides a summary table of constituents listed in the permit, their analytical laboratory methods, MDLs, and RLs, and copies of laboratory quality assurance and quality control procedures. California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) certifications are also included in **Section 10**, as required in the NPDES permit.

During 2012, specific constituents that had permit limits that were less than the RLs and MLs were mercury, bis(2-ethylhexyl)phthalate (DEHP), cyanide, polychlorinated biphenyls (PCBs), (Aroclors), chlordane, 4,4'-dichlorodiphenyldichloroethane (4,4'-DDD), 4,4'-dichlorodipenyldichloroethane (4,4'-DDE), 4,4'-dichlorodiphenyltrichloroethane (4,4'-DDT), dieldrin, toxaphene, and chlorpyrifos. None of these compounds were detected at concentrations equal to or greater than their RL in samples collected and analyzed during 2012.

REASONABLE POTENTIAL ANALYSIS (RPA)

Outfall monitoring data were collected during the First (Outfalls 009 and 019), Second (Outfalls 001, 002, 008, 009, 018 and 019), Third (Outfall 019), and Fourth (Outfalls 009 and 019) Quarters of 2012. Data from these quarters were added to the RPA data set, as per the MWH and Flow Science RPA procedures, for the following outfall monitoring groups: Outfalls 001, 002, 011, 018, 19; Outfalls 003-010; and Outfalls 012, 013 and 014 (MWH and Flow Science, 2006). Additionally, RPA analysis was performed for E.Coli at Outfalls 001, 002, 008, 009 and 018; these analyses are discussed below. RPA was not triggered for any other constituent in 2012 not already regulated under the current NPDES Permit. Complete RPA tables for the outfall monitoring groups are provided in Section 8.

Boeing notes that the water quality objectives for indicator bacteria were updated by the Regional Board on July 8, 2010 (Resolution No. 2010-005). This update eliminated water quality objectives for fecal coliform and added water quality objectives for E. Coli. In response to this change to objectives, RPA was not conducted for Fecal Coliform.

E. Coli

Reasonable potential was triggered for Outfalls 002, 008 and 009 based on the sampling results collected during the First and Second Quarter 2012. Boeing collects all sanitary waste generated at the Santa Susana site and transports it to an offsite facility for treatment and disposal. The discharges at these outfalls consist entirely of stormwater. Based upon the results of the bacteria investigation that was performed, human-specific bacteroides were not detected in any sample collected at the Santa Susana Site and it follows that the bacteria detected at these outfalls must have originated from non-human, natural sources. Therefore, Boeing does not believe that reasonable potential has been demonstrated for bacteria at Outfalls 002, 008, and 009. Boeing will continue to monitor both E. Coli, Fecal Coliform and human-specific bacteroides in all samples analyzed and monitor for any potentially contributing sources of bacteria at these and other outfalls in order to continue to confirm that any indicator bacteria detected at the outfalls are from animals and not human sources.

Boeing continues to improve stormwater quality in discharges at the Santa Susana Site through methods designed to preserve the natural conditions in the watershed to the maximum extent feasible by implementing erosion control/restoration measures such as the planting and maintenance of native plants and the application of hydroseed mulch, as well as through continuing with planned ISRA activities as detailed above and in the quarterly DMRs. Thus, there are no indications that any human waste can be exposed to or enter any stormwater discharges from Santa Susana Site, and any bacteria detected therefore must have originated from non-human, natural sources.

FACILITY CONTACT

If there are any questions regarding this report or its enclosures, please contact me at (818) 466-8778.

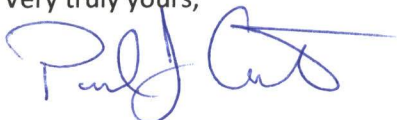
CERTIFICATION

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 a knowing violation.

Executed on the 26th day of February 2013 at the Boeing Company, Santa Susana Field Laboratory.

Very truly yours,



Paul J. Costa, Manager
Environmental Operations and Compliance
TG:jrc

Figures: 1 – Stormwater Drainage System and Outfall Locations
2 – ISRA Site Location Figure
3 – RMMP Location Figure
4 – BMP Construction Project Area Locations

Attachments:

1 – 2012 Site-wide BMP Activities
2 – 2012 Bioassessment Monitoring Report

Tables: 1 – 2012 Rainfall Summary
2 – 2012 Liquid Waste Shipments
3 – 2012 Summary of Permit Limit and Benchmark Limit Exceedances

Sections: 1 – Outfall 001 South Slope below Perimeter Pond
2 – Outfall 002 South Slope below R-2 Pond
3 – Outfall 008 Happy Valley
4 – Outfall 009 WS-13 Drainage
5 – Outfall 018 R-2A Pond
6 – Outfall 019 GETS
7 – Receiving Water and Sediment Sample Location – Arroyo Simi (Frontier Park)
8 – Reasonable Potential Analysis (RPA) Summary Tables
9 – Stormwater Pollution Prevention Plan Annual Evaluation
10 – Analytical Laboratory Methods, Method Detection Limits, Reporting Limits, QA/QC Procedures, and ELAP Certifications

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

References Cited:

California Environmental Protection Agency (EPA) Department of Toxic Substances Control (DTSC), 2011. "Certification of Completion for Actions Under Imminent and Substantial Endangerment Determination and Order, Docket Number I/SED 07/08-002, Northern Drainage Area, Santa Susana Field Laboratory, Ventura County, California". April 29.

Haley & Aldrich, Inc., 2011. Northern Drainage Restoration, Mitigation, and Monitoring Plan (RMMP), Santa Susana Field laboratory, Ventura County, California, October.

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