

APPENDIX E

THIRD QUARTER 2012 REASONABLE POTENTIAL
ANALYSIS (RPA) SUMMARY TABLES

**THIRD QUARTER 2012 REASONABLE POTENTIAL ANALYSIS SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
NPDES PERMIT CA0001309**

1. The following Reasonable Potential Analysis (RPA) provides the analytical results as performed by the procedures outlined in *Reasonable Potential Analysis Methodology Technical Memo* (MWH and Flow Science, 2006).
2. The monitoring data set utilized to conduct the RPA consists of all applicable and relevant data from August 2004 through the present reporting quarter.
3. As directed by the CTR and the Regional Water Control Board 2,3,7,8-TCDD (Dioxin) values are to be expressed in NPDES permitting and this RPA as TCDD Total Equivalence units (TEQs). A TCDD TEQ is determined by multiplying each of the seventeen dioxin and furan congeners by their respective toxicity equivalency factor (TEF) and bioaccumulation equivalency factor (BEF), and summing the results of those products. For the purposes of this RPA, the resulting TCDD TEQ does not include those congener concentrations that are reported as DNQ, as specified on Page 37, of the NPDES Permit Effective June 3, 2010.
4. In calculating the average, standard deviation, coefficient of variation, and projected maximum effluent concentration (99/99), one-half of the MDL was used for concentration results reported as ND. Data reported with qualifiers were not included in this RPA as Boeing believes qualified data are not "appropriate, valid, relevant, (nor) representative"¹ of storm water constituents and are therefore not utilized in its RPA.
5. All of the following abbreviations and/or notes may not occur on every table.

Definition of Acronyms, Abbreviations, and Terminology Used

>=	Greater than or equal to
*	Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. The equations are provided in the CTR, (US EPA, 2000). Values displayed correspond to a total hardness of 100 mg/l.
µg/L	Concentration units, micrograms per liter
All Data Qualified	All available monitoring data are qualified and no statistical analysis is performed.
Annually	The 2010 NPDES Permit requires annual monitoring.
Available Data < DL	All available monitoring data that are not qualified are below detection limits.
B	Background
C	Concentration
CCC	Criterion Continuous Concentration
CMC	Criterion Maximum Concentration
CTR	California Toxics Rule
CV	Coefficient of Variation
DL	Detection Limit
EPA TSD	EPA's Technical Support Document for Water Quality Based Toxics Control, (see references).

¹ SIP, p. 5.

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Definition of Acronyms, Abbreviations, and Terminology Used (Continued)

Fibers/L	Units for asbestos concentration, fibers per liter
HH O	Human Health criteria for consumption of Organisms only
HH W&O	Human Health criteria for consumption of Water and Organisms
MEC	Maximum Observed Effluent Concentration
Min	Minimum
NA	Not Applicable
Narrative	Water quality criteria are expressed as a narrative objective rather than a numeric objective, and therefore are not part of the statistical RPA calculations.
None	No available CTR or Basin Plan criteria.
pH Dependent	CTR Criteria are based on pH.
Once Per Discharge	The 2010 NPDES Permit requires monitoring once per discharge event.
Qualified Data	Data qualifier definitions are: (a) J- The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL), (b) U/UJ- The analyte was not detected in the sample at the detection limit /estimated detection limit (EDL), (c) B- Analyte found in sample and associated blank, and (d) DNQ- Detected Not Quantified.
Reserved	EPA has reserved the CTR criteria.
RPA	Reasonable Potential Analysis
SIP	The State Water Resources Control Board "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California," (see references).
Tot	Total

Priority Pollutant RPA Column Explanation

CTR	Provides CTR constituent reference number.
Constituent	Provides CTR constituent common name.
Units	Provides the data set's concentration units as referenced by 2010 NPDES Permit.
MEC	Provides the outfall monitoring group's maximum value from the applicable data set.
CV	Equal to the standard deviation divided by the average of the applicable data set. If the number of samples is less than 10, the CV is assumed to be 0.6.
<i>Step 1 identifies all applicable water quality criteria.</i>	
CTR Criteria	Concentration criteria as listed in the CTR.
CMC = Acute	The Freshwater CMC is listed as the acute concentration criterion.
CCC = Chronic	The Freshwater CCC is listed as the chronic concentration criterion.
HH W& O(Not App)	The HH W&O is deemed not applicable based on past Regional Board RPAs.
HH O = HH	The HH O is listed as the CTR human health concentration criterion.
Basin Plan Criteria	Applicable Basin Plan Criteria are listed for the Los Angeles River and/or Calleguas Creek watersheds.

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C = Lowest Criteria	The comparison concentration (C) is equal to the lowest criterion for a constituent based on the CMC, CCC, HH O, and Basin Plan Criteria listed.
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Priority Pollutant RPA Column Explanation (Continued)

Step 2 defines the applicable data set.

Is Effluent Data
Available

A

		II Data Qualified	06	NONE	NONE	Narrative	Narrative	4	4	No	No	No	NA	No		
19	004 Cadmium	ug/L	Available Data DL	DL	06	25	Narrative	Narrative	5	25	Yes	No	No	NA	No	
19	005 Chromium	ug/L	All Data Qualified	06	206	Narrative	Narrative		200	No	No	No	NA	No		
19	005 Chromium VI	ug/L	All Data Qualified	06	18	114	Narrative	Narrative	0	114	No	No	No	NA	No	
19	006 Copper	ug/L	Available Data DL	DL	06	93	1300	NONE		93	Yes	No	No	NA	No	
19	007 Lead	ug/L	Available Data DL	DL	06	318	Narrative	Narrative		32	Yes	No	No	NA	No	
19	008 Mercury	ug/L	All Data Qualified	06	Reserved	Reserved	005	005	2	005	No	No	No	N A	No	
19	009 Nickel	ug/L	All Data Qualified	06	Reserved	5	60	400	100	5	No	No	No	N A	No	
19	010 Selenium	ug/L	096	06	Reserved	5	Narrative	Narrative	0	5	Yes	Yes	N A	NA	No	
19	011 Silver	ug/L	All Data Qualified	06	406	none	NONE	NONE		406	No	No	No	N A	No	
19	012 Thallium	ug/L	All Data Qualified	06	NONE	NONE	17	0	2	2	No	No	No	N A	No	
19	013 Zinc	ug/L	Available Data DL	DL	06	120	120	none	NONE		120	Yes	No	No	NA	No
19	014 Total Cyanide	ug/L	Available Data DL	DL	06	200	AvNA									

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Table F1
REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS, (OUTFALL 019)

THIRD QUARTER 2012
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
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Step 2

Step 4

Outfall CTR Constituent

Units

MEC

CV CMC = Acute CCC = Chronic HH W&O (Not App) HH O = HH Title 22 GWR

MEC >= C

Table F1

