

WASTE CHARACTERIZATION: IN-SITU SOIL LOCATED AT
ISRA OUTFALL 009 PLANNED EXCAVATION B1-2

Introduction

This report presents supporting detailed information for the April 30, 2010 in-situ characterization of prospective soil wastes from planned ISRA excavations in SSFL Area I, near the former B-1 engine test facility.

Background

In-situ characterization of soil destined to be excavated from designated locations in SSFL Area I in accordance with the ISRA Workplan was performed.

During all phases of waste characterization sampling, samples were collected, contained, and handled according to field practice requirements in SW-846.

Results

Analytical results for the B1-2 planned excavation area are presented in GEL Laboratories reports 252089 issued on 5/12/10, 252784 issued on 5/19/10, and 254951 issued on 6/29/10. The follow-up excavation stockpile sampling results are presented in Test America report ITI0270 issued on 10/1/10.

Results from the first round of sampling demonstrated that Regulated Metals were far below 10-Times their respective California Soluble Threshold Limits (STLC) in all cases, with the exception of one sample that exhibited Lead at 65.8 parts per million (ppm). This is slightly above the 50 ppm 10X STLC threshold. The Lead concentrations in the other 11 samples ranged between 4.31 ppm and 28.3 ppm. Subsequent analysis of the elevated sample, by the California Waste Extraction Test (WET) for leaching properties as required, resulted in a concentration of 2.49 milligrams per liter (mg/L), well below the 5 mg/L STLC hazardous waste limit.

Low concentrations of TPH were detected. These TPH detections ranged between 20 ppm and 410 ppm. All of the detections that exceeded 100 ppm were related to heavier, oil type petroleum hydrocarbon fractions in the C25 through C40 carbon range. Consequently, the TPH concentrations detected in the planned B1-2 excavation area are below permit limits generally set for Municipal Solid Waste landfills in California. Gasoline range Petroleum Hydrocarbons were not detected.

No VOCs were detected. Very low concentrations of some SVOCs were detected in the soil samples from B1-2, none of which were above the parts per billion level. Specific hazardous waste thresholds have been established in the regulations for only a small number of SVOCs. There were no exceedances of established limits. Furthermore, none of the detected SVOCs exceeded U.S. EPA Region IX "Preliminary Remediation Goals" values for residential soils.

The follow-up sampling again resulted in the detection of low concentrations of Regulated Metals for all but one sample. In this case, Mercury was detected at 2.0 ppm, at the 10X STLC threshold. However, the WET performed on this sample did not detect Mercury in the leachate. All other Regulated Metals were well below their respective 10X STLC thresholds. TPH concentrations did not exceed 53 ppm and Gasoline range Petroleum Hydrocarbons were not detected. Trace concentrations of Acetone were detected in two samples but did not exceed 0.21 ppm. Methyl Ethyl Ketone was another VOC detected at 0.024 ppm in one of the samples that also contained Acetone. In this same sample, p-Isopropyltoluene was detected at 0.00086 ppm. Trace concentrations of SVOCs (Polycyclic Aromatic Hydrocarbons) were detected in one sample only, but as with the first round of sampling, all concentrations were well below 1 ppm. No PCBs were detected.

Determination

According to analytical results and generator knowledge, the soil in the planned excavation foot only, bu-e only, enwe ao

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

Object Name:	B1WC0019	B1WC0020	B1WC0021	B1WC0022	B1WC0023	B1WC0024	B1WC0025
Sample Name:	B1WC0019S001	B1WC0020S001	B1WC0021S001	B1WC0022S001	B1WC0023S001	B1WC0024S001	B1WC0025S001
Collection Date:	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010
Sample Depth (feet):	1.0 - 1.5	1.5 - 2.0	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5

ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger^a	TCLP Leachate Testing Trigger^b	STLC	RESULT^c	RESULT^c	RESULT^c	RESULT^c	RESULT^c	RESULT^c
Vinyl acetate	ug/kg	--	--	--	--	--	<5 {<1.25}	--	<5 {<1.25}	--	--
Vinyl chloride	ug/kg	--	--	4,000	--	--	<1 {<0.3}	--	<1 {<0.3}	--	--
Xylenes, Total	ug/kg	--	--	--	--	--	<1 {<0.3}	--	<1 {<0.3}	--	--

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

Object Name:	B1WC0019	B1WC0020	B1WC0021	B1WC0022	B1WC0023	B1WC0024	B1WC0025
Sample Name:	B1WC0019S001	B1WC0020S001	B1WC0021S001	B1WC0022S001	B1WC0023S001	B1WC0024S001	B1WC0025S001
Collection Date:	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010
Sample Depth (feet):	1.0 - 1.5	1.5 - 2.0	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5

ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger^a	TCLP Leachate Testing Trigger^b	STLC	RESULT^c	RESULT^c	RESULT^c	RESULT^c	RESULT^c	RESULT^c
Acenaphthylene	ug/kg	--	--	--							

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

				Object Name:	B1WC0019	B1WC0020	B1WC0021	B1WC0022	B1WC0023	B1WC0024	B1WC0025	
				Sample Name:	B1WC0019S001	B1WC0020S001	B1WC0021S001	B1WC0022S001	B1WC0023S001	B1WC0024S001	B1WC0025S001	
				Collection Date:	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010	
				Sample Depth (feet):	1.0 - 1.5	1.5 - 2.0	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.0 - 0.5	
ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger^a	TCLP Leachate Testing Trigger^b	STLC	RESULT^c	RESULT^c	RESULT^c	RESULT^c	RESULT^c	RESULT^c	
n-Nitrosodimethylamine	ug/kg	--	--	--	--	<333 {<66.6}	<332 {<66.5}	<333 {<66.5}	<332 {<66.3}	<332 {<66.4}	<333 {<66.5}	<332 {<66.4}
n-Nitroso-di-n-propylamine	ug/kg	--	--	--	--	<333 {<66.6}	<332 {<66.5}	<333 {<66.5}	<332 {<66.3}	<332 {<66.4}	<333 {<66.5}	<332 {<66.4}
p-(Dimethylamino)azobenzene	ug/kg	--	--	--	--	<333 {<66.6}	<332 {<66.5}	<333 {<66.5}	<332 {<66.3}	<332 {<66.4}	<333 {<66.5}	<332 {<66.4}
Pentachlorophenol	ug/kg	17,000	17,000	2,000,000	--	<333 {<83.3}	<332 {<83.1}	<333 {<83.1}	<332 {<82.9}	<332 {<83}	<333 {<83.1}	<332 {<83}
Phenanthrene	ug/kg	--	--	--	--	<33.3 {<9.99}	<33.2 {<9.97}	16.4 J	<33.2 {<9.95}	<33.2 {<9.96}	<33.3 {<9.98}	<33.2 {<9.96}
Phenol	ug/kg	--	--	--	--	<333 {<66.6}	<332 {<66.5}	<333 {<66.5}	<332 {<66.3}	<332 {<66.4}	<333 {<66.5}	<332 {<66.4}
Pyrene	ug/kg	--	--	--	--	<33.3 {<9.99}	<33.2 {<9.97}	31.5 J	<33.2 {<9.95}	<33.2 {<9.96}	22.8 J	35
Pyridine	ug/kg	--	--	--	--	<333 {<66.6}	<332 {<66.5}	<333 {<66.5}	<332 {<66.3}	<332 {<66.4}	<333 {<66.5}	<332 {<66.4}
RADIONUCLIDES	--	--	--	--	--	R	R	R	R	R	R	R

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

Object Name:

Sample Name:

Collection Date:

Sample Depth (feet):

ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	Object Name:		Sample Name:		Collection Date:		Sample Depth (feet):	
METALS													
Antimony	mg/kg	500	150	--	--								
Arsenic	mg/kg	500	50	100	--								
Barium	mg/kg	10,000	1,000	2,000	--								
Beryllium	mg/kg	75	7.5	--	--								
Cadm													
Sam0	50	100	--										

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

						Object Name:	B1WC0026	B1WC0035	B1WC0036	B1WC0037	B1WC0038
						Sample Name:	B1WC0026S001	B1WC0035S001	B1WC0036S001	B1WC0037S001	B1WC0038S001
						Collection Date:	4/30/2010	6/17/2010	6/17/2010	6/17/2010	6/17/2010
						Sample Depth (feet):	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5
ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	
1,3-Dichlorobenzene	ug/kg	--	--	--	--	--	--	--	--	--	
1,4-Dichlorobenzene	ug/kg	--	--	--	--	--	--	--	--	--	
2-Butanone (MEK)	ug/kg	--	--	4,000,000	--	--	--	--	--	--	
2-Hexanone	ug/kg	--	--	--	--	--	--	--	--	--	
Acetone	ug/kg	--	--	--	--	--	--	--	--	--	
Benzene	ug/kg	--	--	10,000	--	--	--	--	--	--	
Bromodichloromethane	ug/kg	--	--	--	--	--	--	--	--	--	
Bromoform	ug/kg	--	--	--	--	--	--	--	--	--	
Carbon Disulfide	ug/kg	--	--	--	--	--	--	--	--	--	
Carbon Tetrachloride	ug/kg	--	--	10,000	--	--	--	--	--	--	
Chlorobenzene	ug/kg	--	--	2,000,000	--	--	--	--	--	--	
Chloroethane	ug/kg	--	--	--	--	--	--	--	--	--	
Chloroform	ug/kg	--	--	120,000	--	--	--	--	--	--	
Chloromethane	ug/kg	--	--	--	--	--	--	--	--	--	
cis-1,2-Dichloroethene	ug/kg	--	--	--	--	--	--	--	--	--	
cis-1,3-Dichloropropene	ug/kg	--	--	--	--	--	--	--	--	--	
Cyclohexane	ug/kg	--	--	--	--	--	--	--	--	--	
Dibromochloromethane	ug/kg	--	--	--	--	--	--	--	--	--	
Dichlorodifluoromethane	ug/kg	--	--	--	--	--	--	--	--	--	
Ethylbenzene	ug/kg	--	--	--	--	--	--	--	--	--	
Hexachlorobutadiene	ug/kg	--	--	--	--	--	--	--	--	--	
Isopropylbenzene	ug/kg	--	--	--	--	--	--	--	--	--	
Methyl acetate	ug/kg	--	--	--	--	--	--	--	--	--	
Methyl-tert-butyl Ether (MTBE)	ug/kg	--	--	--	--	--	--	--	--	--	
Methylcyclohexane	ug/kg	--	--	--	--	--	--	--	--	--	
Methylene chloride	ug/kg	--	--	--	--	--	--	--	--	--	
m,p-Xylenes	ug/kg	--	--	--	--	--	--	--	--	--	
o-Xylene	ug/kg	--	--	--	--	--	--	--	--	--	
Styrene	ug/kg	--	--	--	--	--	--	--	--	--	
Tetrachloroethene	ug/kg	--	--	14,000	--	--	--	--	--	--	
Tetrahydrofuran	ug/kg	--	--	--	--	--	--	--	--	--	
Toluene	ug/kg	--	--	--	--	--	--	--	--	--	
trans-1,2-Dichloroethene	ug/kg	--	--	--	--	--	--	--	--	--	
trans-1,3-Dichloropropene	ug/kg	--	--	--	--	--	--	--	--	--	
Trichloroethene	ug/kg	2,040,000	2,040,000	10,000	--	--	--	--	--	--	
Trichlorofluoromethane	ug/kg	--	--	--	--	--	--	--	--	--	

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

						Object Name:	B1WC0026	B1WC0035	B1WC0036	B1WC0037	B1WC0038
						Sample Name:	B1WC0026S001	B1WC0035S001	B1WC0036S001	B1WC0037S001	B1WC0038S001
						Collection Date:	4/30/2010	6/17/2010	6/17/2010	6/17/2010	6/17/2010
						Sample Depth (feet):	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.5 - 1.0	0.0 - 0.5
ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	
Acenaphthylene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Acetophenone	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Anthracene	ug/kg	--	--	--	--	<33.1 {<6.62}	<33.3 {<6.66}	<33.2 {<6.64}	<33.2 {<6.64}	<33.2 {<6.65}	
Atrazine	ug/kg	--	--	--	--	<331 {<99.4}	<333 {<99.9}	<332 {<99.6}	<332 {<99.6}	<332 {<99.7}	
Benzaldehyde	ug/kg	--	--	--	--	<331 {<99.4}	<333 {<99.9}	<332 {<99.6}	<332 {<99.6}	<332 {<99.7}	
Benzidine	ug/kg	--	--	--	--	<331 {<99.4}	<333 {<99.9}	<332 {<99.6}	<332 {<99.6}	<332 {<99.7}	
Benzo(a)anthracene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Benzo(a)pyrene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	10.5 J	<33.2 {<9.97}	
Benzo(b)fluoranthene	ug/kg	--	--	--	--	<33.1 {<9.94}	21.8 J	<33.2 {<9.96}	21.8 J	<33.2 {<9.97}	
Benzo(ghi)perylene	ug/kg	--	--	--	--	<33.1 {<9.94}	21.2 J	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Benzo(k)fluoranthene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Bis(2-chloroethoxy)methane	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Bis(2-chloroethyl)ether	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Bis(2-chloroisopropyl)ether	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
bis(2-Ethylhexyl) phthalate	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Butyl benzyl phthalate	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Caprolactam	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Carbazole	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Chrysene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	14.2 J	<33.2 {<9.97}	
Dibenzo(a,h)anthracene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Dibenzofuran	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Diethyl phthalate	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	847	<332 {<66.5}	
Dimethyl phthalate	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Di-n-butyl phthalate	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Di-n-octyl phthalate	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Diphenylamine	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Fluoranthene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Fluorene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Hexachlorobenzene	ug/kg	--	--	2,600	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Hexachlorobutadiene	ug/kg	--	--	10,000	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Hexachlorocyclopentadiene	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Hexachloroethane	ug/kg	--	--	60,000	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Indeno(1,2,3-cd)pyrene	ug/kg	--	--	--	--	<33.1 {<9.94}	20.2 J	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Isophorone	ug/kg	--	--	--	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	
Naphthalene	ug/kg	--	--	--	--	<33.1 {<9.94}	<33.3 {<9.99}	<33.2 {<9.96}	<33.2 {<9.96}	<33.2 {<9.97}	
Nitrobenzene	ug/kg	--	--	40,000	--	<331 {<66.2}	<333 {<66.6}	<332 {<66.4}	<332 {<66.4}	<332 {<66.5}	

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

Object Name:

Sample Name:

Collection Date:

Sample Depth (feet):

ANALYTE

UNITS

TTLC

WET

Lea(E)-13226((E)-13h41(e)165326((E)-135402()611p01]R8 114 [I TqT)13173(H)460326(a)165s26((E)-135402()611j948(T)131n41(e)165gJ2985626(44I T4(e

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-1 AND B1-2
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

Notes:

"--" - not analyzed / not applicable

<5 - Analyte not detected at or above the stated method detection limit (metals) or analyte not detected at or above the stated reporting limit (organics)

{<1} - Analyte not detected at or above the stated method detection limit (organics)

^a - WET Leachate Testing Trigger = STLC limit * 10

^b - TCLP Leachate Testing Trigger = TCLP limit * 20

^c Waste characterization sample results not validated

H - Analytical holding time was exceeded.

J - Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

µg/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

R - Radiological analysis includes gamma spectroscopy (Na-22, K-40, Mn-54, Co-60, Cs-134, Cs-137, Eu-152, Eu-154, Th-228, Th-232, U-235, U-238 and Am-241), strontium-90, and tritium. Boeing will be preparing a document that provides the radiological results and statistical analysis of these waste characterization samples.

SU - Standard Units

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2 STOCKPILE
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

			Object Name: Sample Name: Collection Date: Sample Depth (feet):			B1ST0001 B1ST0001S001 9/2/2010 0 - 0.5	B1ST0002 B1ST0002S001 9/2/2010 0 - 0.5	B1ST0003 B1ST0003S001 9/2/2010 3.5 - 4	B1ST0004 B1ST0004S001 9/2/2010 2 - 2.5
ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c
Metals									
Antimony	mg/kg	500	150	--	--	1.7 J	1.3 J	1.5 J	1.2 J
Arsenic	mg/kg	500	50	100	--	6.2	4.8	7.2	6.7
Barium	mg/kg	10,000	1,000	2,000	--	86	82	73	68
Beryllium	mg/kg	75	7.5	--	--	0.44 J	0.48 J	0.45 J	0.41 J
Cadmium	mg/kg	100	10	20	--	<0.2	<0.2	<0.2	<0.2
Chromium	mg/kg	500	50	100	--	21	18	21	18
Cobalt	mg/kg	8,000	800	--	--	5.4	4.7	5.2	4.8
Copper	mg/kg	2,15007(k)-11.8476(g)556	J 5005	re f q 2.0h	[0)0.590251(.)-5.15273(4)51(0)-3037.83(8)0.5902T				89y64.590251(251(.)-5.15273(4)513-13.8 T9L5)0.59

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2 STOCKPILE
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

			Object Name: Sample Name: Collection Date: Sample Depth (feet):			B1ST0001 B1ST0001S001 9/2/2010 0 - 0.5	B1ST0002 B1ST0002S001 9/2/2010 0 - 0.5	B1ST0003 B1ST0003S001 9/2/2010 3.5 - 4	B1ST0004 B1ST0004S001 9/2/2010 2 - 2.5
ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c
1,3-Dichlorobenzene	ug/kg	--	--	--	--	<670 {<180}	<500 {<130}	<670 {<180}	<670 {<180}
1,4-Dichlorobenzene	ug/kg	--	--	150,000	--	<670 {<130}	<500 {<97}	<670 {<130}	<670 {<130}
2,4,5-Trichlorophenol	ug/kg	--	--	8,000,000	--	<670 {<260}	<500 {<190}	<670 {<260}	<670 {<260}
2,4,6-Trichlorophenol	ug/kg	--	--	40,000	--	<670 {<150}	<500 {<110}	<670 {<150}	<670 {<150}
2,4-Dichlorophenol	ug/kg	--	--	--	--	<670 {<120}	<500 {<90}	<670 {<120}	<670 {<120}
2,4-Dimethylphenol	ug/kg	--	--	--	--	<670 {<200}	<500 {<150}	<670 {<200}	<670 {<200}
2,4-Dinitrophenol	ug/kg	--	--	--	--	<1300 {<220}	<990 {<160}	<1300 {<220}	<1300 {<220}
2,4-Dinitrotoluene	ug/kg	--	--	2,600	--	<670 {<160}	<500 {<120}	<670 {<160}	<670 {<160}
2,6-Dinitrotoluene	ug/kg	--	--	--	--	<670 {<190}	<500 {<140}	<670 {<190}	<670 {<190}
2-Chloronaphthalene	ug/kg	--	--	--	--	<670 {<130}	<500 {<97}	<670 {<130}	<670 {<130}
2-Chlorophenol	ug/kg	--	--	--	--	<670 {<140}	<500 {<100}	<670 {<140}	<670 {<140}
2-Methylnaphthalene	ug/kg	--	--	--	--	<670 {<140}	<500 {<100}	<670 {<140}	<670 {<140}
2-Methylphenol	ug/kg	--	--	200	--	<670 {<160}	<500 {<120}	<670 {<160}	<670 {<160}
2-Nitroaniline	ug/kg	--	--	--	--	<670 {<120}	<500 {<90}	<670 {<120}	<670 {<120}
2-Nitrophenol	ug/kg	--	--	--	--	<670 {<120}	<500 {<90}	<670 {<120}	<670 {<120}
3,3'-Dichlorobenzidine	ug/kg	--	--	--	--	<1700 {<300}	<1200 {<220}	<1700 {<300}	<1700 {<300}
3-Nitroaniline	ug/kg	--	--	--	--	<670 {<150}	<500 {<110}	<670 {<150}	<670 {<150}
4,6-Dinitro-2-methylphenol	ug/kg	--	--	--	--				

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – B1-2 STOCKPILE
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

ANALYTE	UNITS	TTLC	WET	B1ST0001	B1ST0002	B1ST0003	B1ST0004
				B1ST0001S001	B1ST0002S001	B1ST0003S001	B1ST0004S001
				9/2/2010	9/2/2010	9/2/2010	9/2/2010
				0 - 0.5	0 - 0.5	3.5 - 4	2 - 2.5

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009