

WASTE CHARACTERIZATION: IN-SITU SOIL LOCATED AT ISRA OUTFALL 009 PLANNED EXCAVATION IEL-1

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 Instrument Laboratory 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. A step-by-step approach was followed to accomplish characterization of the soil prior to excavation. The first step was to review available information regarding historical area usage and existing analytical data from past soil sampling in the applicable SSFL Area I locations. The objective was to identify all substances that could have an impact on the determination of whether soil in each planned excavation footprint was hazardous or not.

The next step was to develop a random sampling plan for each of the planned excavation footprints. The sampling plan was developed based on the ISRA Workplan and the U.S. EPA SW-846 guidelines. The sampling plan was developed based on the ISRA Workplan and the U.S. EPA SW-846 guidelines. The sampling plan was developed based on the ISRA Workplan and the U.S. EPA SW-846 guidelines.

The guidelines presented in U.S. EPA SW-846 are used to determine if the soil is considered non-hazardous when analyte concentrations are below the applicable regulatory thresholds. Otherwise, additional sampling and the application of analytical results to determine if the soil is considered non-hazardous when analyte concentrations are below the applicable regulatory thresholds. Otherwise, additional sampling and the application of analytical results to determine if the soil is considered non-hazardous when analyte concentrations are below the applicable regulatory thresholds. Otherwise, additional sampling and the application of analytical results to determine if the soil is considered non-hazardous when analyte concentrations are below the applicable regulatory thresholds.

Existing analytical data relevant to planned excavation footprints were reviewed. Evaluation of these data and other sources of information, including sampling conducted specifically for ISRA, suggested that the presence of PCBs, VOCs, SVOCs, and other hazardous substances should be addressed in the IEL-1 excavation plan.

The sampling plan was developed for collection of 17 soil samples. The samples were analyzed for PCBs, VOCs, SVOCs, and other hazardous substances. The samples were collected, contained, and handled according to field practice requirements in SW-846.

Results

Analytical results for the IEL-1 planned excavation area are presented in GEL Laboratories reports 252091 issued on 5/12/10 and 252782 issued on 5/19/10. Regulated Metals were below 10-Times their respective California Soluble Threshold Limits (STLC) in all cases, with the exception of one sample that exhibited Arsenic at 59 parts per million (ppm). This is slightly above the 50 ppm 10X STLC threshold. The Arsenic concentrations in the other 3 samples were 12.1 ppm, 17.5 ppm, and 42.7 ppm. Subsequent analysis of the elevated sample, as required, by the California Waste Extraction Test (WET) for leaching properties resulted in a



INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – IEL-1
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

ANALYTE	UNITS	TTLC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	Object Name:	ILWC0001	ILWC0002	ILWC0003	ILWC0004
						Sample Name:	ILWC0001S001	ILWC0002S001	ILWC0003S001	ILWC0004S001
						Collection Date:	4/30/2010	4/30/2010	4/30/2010	4/30/2010
						Sample Depth (feet):	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.25 - 0.75
						RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	
METALS										
Antimony	mg/kg	500	150	--	--	0.143 J	0.183 J	0.107 J	0.158 J	
Arsenic	mg/kg	500	50	100	--	59	42.7	17.5	12.1	
Arsenic, WET	mg/L	--	--	--	5	0.119	--	--	--	
Barium	mg/kg	10,000	1,000	2,000	--	61.5	55.4	75.4	82.3	
Beryllium	mg/kg	75	7.5	--	--	0.669	0.896	0.554	0.469	
Cadmium	mg/kg	100	10	20	--	0.0786 J	0.147	0.437	0.539	
Chromium	mg/kg	500	50	100	--	27.2	26.9	23.5	29.9	
Cobalt	mg/kg	8,000	800	--	--	7.98	7.19	6.47	7.86	
Copper	mg/kg	2,500	250	--	--	11.4	11.5	35.5	32.3	
Lead	mg/kg	1,000	50	100	--	4.27	4.17	10.9	19.4	
Mercury	mg/kg	20	2	4	--	0.0217 J	0.0215 J	0.0713 J	0.0394 J	
Molybdenum	mg/kg	3,500	3,500	--	--	0.704	0.633	0.866	0.883	
Nickel	mg/kg	2,000	200	--	--	23.2	23.8	18.7	29.7	
Selenium	mg/kg	100	10	20	--	0.182 J	0.0696 J	0.158 J	0.206 J	
Silver	mg/kg	500	50	100	--	0.0346 J	<0.0092	0.113	0.108	
Thallium	mg/kg	700	70	--	--	0.233	0.24	0.227	0.243	
Vanadium	mg/kg	2,400	240	--	--	30	32.7	34.7	32.1	
Zinc	mg/kg	5,000	2,500	--	--	55	47	84.2	95.6	
General Chemistry										
pH	SU					--	--	--	8.03 H	
PCBs										
Aroclor 1016	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	<16.6 {<5.54}	<3.33 {<1.11}	
Aroclor 1221	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	<16.6 {<5.54}	<3.33 {<1.11}	
Aroclor 1232	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	<16.6 {<5.54}	<3.33 {<1.11}	
Aroclor 1242	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	179	<3.33 {<1.11}	
Aroclor 1248	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	<16.6 {<5.54}	<3.33 {<1.11}	
Aroclor 1254	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	160	<3.33 {<1.11}	
Aroclor 1260	ug/kg	50,000	50,000	--	--	<3.32 {<1.11}	<3.32 {<1.11}	72	5	
VOCs										
1,1,1-Trichloroethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,1,2,2-Tetrachloroethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	--	--	--	--	<5.32 {<1.7}	<5.43 {<1.74}	<5.95 {<1.9}	<5.1 {<1.63}	
1,1,2-Trichloroethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,1-Dichloroethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,1-Dichloroethene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – IEL-1
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

						Object Name:	ILWC0001	ILWC0002	ILWC0003	ILWC0004
						Sample Name:	ILWC0001S001	ILWC0002S001	ILWC0003S001	ILWC0004S001
						Collection Date:	4/30/2010	4/30/2010	4/30/2010	4/30/2010
						Sample Depth (feet):	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.25 - 0.75
ANALYTE	UNITS	TTLC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	
1,2,4-Trichlorobenzene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,2-Dibromo-3-chloropropane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,2-Dibromoethane (EDB)	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,2-Dichlorobenzene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,2-Dichloroethane	ug/kg	--	--	10,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,2-Dichloropropane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,3-Dichlorobenzene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
1,4-Dichlorobenzene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
2-Butanone (MEK)	ug/kg	--	--	4,000,000	--	<5.32 {<1.6}	<5.43 {<1.63}	<5.95 {<1.79}	<5.1 {<1.53}	
2-Hexanone	ug/kg	--	--	--	--	<5.32 {<1.6}	<5.43 {<1.63}	<5.95 {<1.79}	<5.1 {<1.53}	
Acetone	ug/kg	--	--	--	--	<5.32 {<1.77}	<5.43 {<1.8}	<5.95 {<1.98}	<5.1 {<1.69}	
Benzene	ug/kg	--	--	10,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Bromodichloromethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Bromoform	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Carbon Disulfide	ug/kg	--	--	--	--	<5.32 {<1.33}	<5.43 {<1.36}	<5.95 {<1.49}	<5.1 {<1.28}	
Carbon Tetrachloride	ug/kg	--	--	10,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Chlorobenzene	ug/kg	--	--	2,000,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Chloroethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Chloroform	ug/kg	--	--	120,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Chloromethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
cis-1,2-Dichloroethene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
cis-1,3-Dichloropropene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Cyclohexane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Dibromochloromethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Dichlorodifluoromethane	ug/kg	--	--	--	--	<1.06 {<0.362}	<1.09 {<0.37}	<1.19 {<0.405}	<1.02 {<0.347}	
Ethylbenzene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Hexachlorobutadiene	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
Isopropylbenzene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
m,p-Xylenes	ug/kg	--	--	--	--	<2.13 {<0.319}	<2.17 {<0.326}	<2.38 {<0.357}	<2.04 {<0.306}	
Methyl acetate	ug/kg	--	--	--	--	<5.32 {<1.77}	<5.43 {<1.8}	<5.95 {<1.98}	<5.1 {<1.69}	
Methyl isobutyl ketone (MIBK)	ug/kg	--	--	--	--	<5.32 {<1.33}	<5.43 {<1.36}	<5.95 {<1.49}	<5.1 {<1.28}	
Methylcyclohexane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Methylene chloride	ug/kg	--	--	--	--	<5.32 {<2.13}	<5.43 {<2.17}	<5.95 {<2.38}	<5.1 {<2.04}	
Methyl-tert-butyl Ether (MTBE)	ug/kg	--	--	--	--					

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						Sample Name:	ILWC0001S001	ILWC0002S001	ILWC0003S001	ILWC0004S001
						Collection Date:	4/30/2010	4/30/2010	4/30/2010	4/30/2010
						Sample Depth (feet):	0.5 - 1.0	0.0 - 0.5	0.0 - 0.5	0.25 - 0.75
ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger ^a	TCLP Leachate Testing Trigger ^b	STLC	RESULT ^c	RESULT ^c	RESULT ^c	RESULT ^c	
Tetrachloroethene	ug/kg	--	--	14,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Tetrahydrofuran	ug/kg	--	--	--	--	<5.32 {<1.81}	<5.43 {<1.85}	<5.95 {<2.02}	<5.1 {<1.73}	
Toluene	ug/kg	--	--	--	--	<1.06 {<0.319}	2	4	0.694 J	
trans-1,2-Dichloroethene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
trans-1,3-Dichloropropene	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Trichloroethene	ug/kg	2,040,000	2,040,000	10,000	--	<1.06 {<0.351}	<1.09 {<0.359}	<1.19 {<0.393}	<1.02 {<0.337}	
Trichlorofluoromethane	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Vinyl acetate	ug/kg	--	--	--	--	<5.32 {<1.33}	<5.43 {<1.36}	<5.95 {<1.49}	<5.1 {<1.28}	
Vinyl chloride	ug/kg	--	--	4,000	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
Xylenes, Total	ug/kg	--	--	--	--	<1.06 {<0.319}	<1.09 {<0.326}	<1.19 {<0.357}	<1.02 {<0.306}	
SVOCs										
1,1'-Biphenyl	ug/kg	--	--	--	--	<333 {<99.9}	<333 {<99.8}	<332 {<99.7}	<333 {<99.9}	
1,2,4-Trichlorobenzene	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
1,2-Dichlorobenzene	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
1,3-Dichlorobenzene	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
1,4-Dichlorobenzene	ug/kg	--	--	150,000	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
1-Naphthylamine	ug/kg	--	--	--	--	<333 {<99.9}	<333 {<99.8}	<332 {<99.7}	<333 {<99.9}	
2,4,5-Trichlorophenol	ug/kg	--	--	8,000,000	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
2,4,6-Trichlorophenol	ug/kg	--	--	40,000	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
2,4-Dichlorophenol	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
2,4-Dimethylphenol	ug/kg	--	--	--	--	<333 {<117}	<333 {<116}	<332 {<116}	<333 {<117}	
2,4-Dinitrophenol	ug/kg	--	--	--	--	<666 {<126}	<666 {<126}	<665 {<126}	<666 {<127}	
2,4-Dinitrotoluene	ug/kg	--	--	2,600	--	<333 {<33.3}	<333 {<33.3}	<332 {<33.2}	<333 {<33.3}	
2,6-Dinitrotoluene	ug/kg	--	--	--	--	<333 {<33.3}	<333 {<33.3}	<332 {<33.2}	<333 {<33.3}	
2-Chloronaphthalene	ug/kg	--	--	--	--	<33.3 {<11}	<33.3 {<11}	<33.2 {<11}	<33.3 {<11}	
2-Chlorophenol	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
2-Methylnaphthalene	ug/kg	--	--	--	--	<33.3 {<6.66}	<33.3 {<6.66}	<33.2 {<6.65}	<33.3 {<6.66}	
2-Methylphenol	ug/kg	--	--	200	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
2-Naphthylamine	ug/kg	--	--	--	--	<333 {<110}	<333 {<110}	<332 {<110}	<333 {<110}	
2-Nitroaniline	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
2-Nitrophenol	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
3,3-Dichlorobenzidine	ug/kg	--	--	--	--	<333 {<99.9}	<333 {<99.8}	<332 {<99.7}	<333 {<99.9}	
3-Nitroaniline	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
4,6-Dinitro-2-methylphenol	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
4-Aminobiphenyl	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	
4-Bromophenyl phenyl ether	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}	

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – IEL-1
THE BOEING COMPANY**

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THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY**

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ANALYTE	UNITS	TTLIC	WET Leachate Testing Trigger^a	TCLP Leachate Testing Trigger^b	STLC	RESULT^c	RESULT^c	RESULT^c	RESULT^c																				
Hexachlorobutadiene	ug/kg	--	--	10,000	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
Hexachlorocyclopentadiene	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
Hexachloroethane	ug/kg	--	--	60,000	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
Indeno(1,2,3-cd)pyrene	ug/kg	--	--	--	--	<33.3 {<9.99}	<33.3 {<9.98}	<33.2 {<9.97}	<33.3 {<9.99}																				
Isophorone	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
Naphthalene	ug/kg	--	--	--	--	<33.3 {<9.99}	<33.3 {<9.98}	<33.2 {<9.97}	<33.3 {<9.99}																				
Nitrobenzene	ug/kg	--	--	40,000	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
n-Nitrosodimethylamine	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
n-Nitroso-di-n-propylamine	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
p-(Dimethylamino)azobenzene	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
Pentachlorophenol	ug/kg	17,000	17,000	2,000,000	--	<333 {<83.2}	<333 {<83.2}	<332 {<83.1}	<333 {<83.3}																				
Phenanthrene	ug/kg	--	--	--	--	<33.3 {<9.99}	<33.3 {<9.98}	<33.2 {<9.97}	<33.3 {<9.99}																				
Phenol	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				
Pyrene	ug/kg	--	--	--	--	<33.3 {<9.99}	<33.3 {<9.98}	<33.2 {<9.97}	12.9 J																				
Pyridine	ug/kg	--	--	--	--	<333 {<66.6}	<333 {<66.6}	<332 {<66.5}	<333 {<66.6}																				

INTERIM SOURCE REMOVAL ACTION (ISRA) - OUTFALL 009

**WASTE CHARACTERIZATION SAMPLE RESULTS – IEL-1 and IEL-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