TABLES

TABLE 1
Laboratory Analytical Matrix
Burn Debris Sampling
San Bernardino County, California

Geosyntec consultants

Site ID	Sample ID	Date Collected	Analyses Performed		
			Title 22 Metals EPA 6010B/7471A	Hexavalent Chromium EPA 7196A	PAHs EPA 8310
SB-01[4]	-	-	-	-	-
SB-02[1]	-	-	-	-	-
SB-03[2]	-	-	-	-	-
SB-04	SB-04-112707	11/27/2007	X	-	X
SB-05	SB-05-112907	11/29/2007	X	X	X
SB-06[1]	-	-	-	-	-
SB-07	SB-07-112907	11/29/2007	X	X	X
SB-08	SB-08-112707	11/27/2007	X	-	X
SB-09[5]	-	-	-	-	-
SB-10[1]	-	-	-	-	-
SB-11	SB-11-112807	11/28/2007	X	-	X
SB-12[3]	-	-	-	-	-
SB-13	SB-13A-112707 SB-13B-112707 SB-13C-112707	11/27/2007	X	-	X
SB-14	SB-14-112707	11/27/2007	X	-	X
SB-15[2]	-	-	-	-	-
SB-16[2]	-	-	-	-	-
SB-17	SB-17-112807	11/28/2007	X	-	X
SB-18	SB-18-112707	11/27/2007	X	-	X
SB-19	SB-19-112807	11/28/2007	X	-	X
SB-20	SB-20-112807	11/28/2007	X	X	X
SB-21	SB-21-112907	11/29/2007	X	X	X
SB-22[2]	-	-	-	-	-
SB-23[6]	-	-	-	-	-
SB-24	SB-24-112907	11/29/2007	X	X	X
SB-25	SB-25A-112807 SB-25B-112807	11/28/2007	X	-	X
SB-26	SB-26-112707	11/27/2007	X	-	X
SB-27[1]	-	-	-	-	-
SB-28	SB-28-112807 SB-28C-112807	11/28/2007	X	-	X
SB-29	SB-29-112807	11/28/2007	X	-	X
SB-30	SB-30A-112707 SB-30B-112707	11/27/2007	X	-	X
SB-31	SB-31-112807	11/28/2007	X	-	X
SB-32	SB-32-112707	11/27/2007	X	-	X
SB-33[5]	-	-	-	-	-
SB-34[2]	-	-	-	-	-
SB-35	SB-35-112907	11/29/2007	X	-	X
SB-36	SB-36-112907	11/29/2007	X	X	X
SB-37[1]	-	-	-	-	-
SB-38	SB-38-113007	11/30/2007	X	-	X
SB-39	SB-39-112807	11/28/2007	X	-	X
SB-40	SB-40-112807	11/28/2007	X	-	X

TABLE 1
Laboratory Analytical Matrix
Burn Debris Sampling
San Bernardino County, California

Site ID	Sample ID	Date Collected	Analyses Performed		
			Title 22 Metals EPA 6010B/7471A	Hexavalent Chromium EPA 7196A	PAHs EPA 8310
SB-41	SB-41-112807	11/28/2007	X	-	X
SB-42	SB-42A-112807 SB-42B-112807	11/28/2007	X	-	X
SB-43	SB-43-112907	11/29/2007	X	X	X
SB-44	SB-44-113007	11/30/2007	X	-	X
SB-45	SB-45-112907	11/29/2007	X	-	X
SB-46	SB-46-112907	11/29/2007	X	-	X
SB-47	SB-47-112907	11/29/2007	X	-	X
SB-48	SB-48-112907	11/29/2007	X	-	X
SB-49[2]	-	-	-	-	-
SB-50	SB-50-113007	11/30/2007	X	-	X
SB-51	SB-51-113007	11/30/2007	X	-	X

Notes:
[1] Site found to be cleared upon arrival for sampling
[2] Site deemed unsafe
[3] Site was inaccessible
[4] House not burned
[5] Address does not exist
[6] More than eight fire destroyed structures within a single parcel
EPA - Environmental Protection Agency
PAHs - Polycyclic aromatic hydrocarbons

TABLE 2
Laboratory Analytical Matrix
Burn Debris Sampling
San Diego County, California

Geosyntec consultants

Site ID	Sample ID	Date Collected	Analyses Performed		
			Title 22 Metals EPA 6010B/7471A	Hexavalent Chromium EPA 7196A	PAHs EPA 8310
SD-01[1]	-	-	-	-	-
SD-02	SD-02-11282007	11/28/2007	X	X	X
SD-03[2]	-	-	-	-	-
SD-04[1]	-	-	-	-	-
SD-05[1]	-	-	-	-	-
SD-06[2]	-	-	-	-	-
SD-07[1]	-	-	-	-	-
SD-08	SD-08-11262007	11/26/2007	X	-	X
SD-09	SD-09-11262007	11/26/2007	X	-	X
SD-10[1]	-	-	-	-	-
SD-11	SD-11-11282007	11/28/2007	X	-	X
SD-12	SD-12-11272007	11/27/2007	X	X	X
SD-13	SD-13-11272007	11/27/2007	X	-	X
SD-14[1]	-	-	-	-	-
SD-15[4]	-	-	-	-	-
SD-16	SD-16-11272007	11/27/2007	X	-	X
SD-17[1]	-	-	-	-	-
SD-18	SD-18-11272007	11/27/2007	X	-	X
SD-19	SD-19-11272007	11/27/2007	X	-	X
SD-20	SD-20-11282007	11/28/2007	X	X	X
SD-21	SD-21-11272007	11/27/2007	X	-	X
SD-22	SD-22-11272007	11/27/2007	X	-	X
SD-23[1]	-	-	-	-	-
SD-24	SD-24-11272007	11/27/2007	X	-	X
SD-25	SD-25-11272007	11/27/2007	X	-	X
SD-26	SD-26-11282007	11/28/2007	X	-	X
SD-27[1]	-	-	-	-	-
SD-28[1]	-	-	-	-	-
SD-29[1]	-	-	-	-	-
SD-30[1]	-	-	-	-	-
SD-31	SD-31-11262007	11/26/2007	X	-	X
SD-32[2]	-	-	-	-	-
SD-33[2]	-	-	-	-	-
SD-34	SD-34-11262007	11/26/2007	X	X	X
SD-35[2]	-	-	-	-	-
SD-36	SD-36-11272007	11/27/2007	X	-	X
SD-37[3]	-	-	-	-	-
SD-38	SD-38-11272007	11/27/2007	X	-	X
SD-39[1]	-	-	-	-	-
SD-40	SD-40-11262007	11/26/2007	X	-	X
SD-41	SD-41-11272007	11/27/2007	X	-	X
SD-42[1]	-	-	-	-	-
SD-43[3]	-	-	-	-	-
SD-44	SD-44-11282007	11/28/2007	X	X	X
SD-45[1]	-	-	-	-	-

TABLE 2
Laboratory Analytical Matrix
Burn Debris Sampling
San Diego County, California

Geosyntec consultants

Site ID	Sample ID	Date Collected	Analyses Performed		
			Title 22 Metals EPA 6010B/7471A	Hexavalent Chromium EPA 7196A	PAHs EPA 8310
SD-46	SD-46-11272007	11/27/2007	X	-	X
SD-47	SD-47-11282007	11/28/2007	X	-	X
SD-48[1]	-	-	-	-	-
SD-49[1]	-	-	-	-	-
SD-50	SD-50-11282007	11/28/2007	X	-	X
SD-51	SD-51-11282007	11/28/2007	X	X	X
SD-52[1]	-	-	-	-	-
SD-53	SD-53-11282007	11/28/2007	X	-	X
SD-54	SD-54-11272007	11/27/2007	X	-	X
SD-55	SD-55-11282007	11/28/2007	X	-	X
SD-56	SD-56-11282007	11/28/2007	X	X	X
SD-57[2]	-	-	-	-	-
SD-58	SD-58-11282007	11/28/2007	X	-	X
SD-59[1]	-	-	-	-	-
SD-60[1]	-	-	-	-	-
SD-61[1]	-	-	-	-	-
SD-62	SD-62-11282007	11/28/2007	X	-	X
SD-63	SD-63-11292007	11/29/2007	X	-	X
SD-64[1]	-	-	-	-	-
SD-65[1]	-	-	-	-	-
SD-66[4]	-	-	-	-	-
SD-67	SD-67-11292007	11/29/2007	X	-	X
SD-68[1]	-	-	-	-	-
SD-69[1]	-	-	-	-	-
SD-70[1]	-	-	-	-	-
SD-71[1]	-	-	-	-	-
SD-72	SD-72-11292007	11/29/2007	X	-	X

Notes:
[1] Site found to be cleared upon arrival for sampling
[2] Site deemed unsafe
[3] Site fenced off-no access
[4] House not burned
EPA - Environmental Protection Agency
PAHs - Polycyclic aromatic hydrocarbons

TABLE 3
Summary of Analytical Results
Burn Debris Sampling
San Bernardino County, California

Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SB-04-112707 11/27/07	SB-05-112907 11/29/07	SB-07-112907 11/29/07	SB-08-112707 11/27/07	SB-11-112807 11/28/07	SB-13A-112707 11/27/07	SB-13B-112707 11/27/07	SB-13C-112707 11/27/07	SB-14-112707 11/27/07
Title 22 Metals by EPA Method 6010B/7471A																		
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	6.56	11.3	0.994	ND<0.191	ND<0.191	ND<0.191	13.5	ND<0.191	137
Arsenic	mg/kg	2.75	0.070	[7]0.062	500	5.0	5.0	1.0	29	66.6	17.2	13.6	1.28	2.69	1.87	7.21	2.26	12.0
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	514	303	222	1,510	196	222	798	224	192
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	ND<0.00368	1.49	0.293	0.356	0.256	ND<0.00368	ND<0.00368	ND<0.00368	0.388
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	2.16	ND<0.00988	21.9	ND<0.00988	ND<0.00988	1.29	76.1	1.24	0.598
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	14.8	84.6	21.1	6.59	16.3	24.0	126	21.9	23.5
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	ND<0.22	ND<0.22	-	-	-	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	7.24	10.5	13.4	3.72	4.30	6.66	7.92	7.32	7.28
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	1,940	6990	780	15,000	383	557	497	143	175
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	2,270	239	250	57.5	32.5	68.2	310	366	49,100
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	4.93	1.25	3.82	1.27	1.11	1.54	4.37	1.33	0.896
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	16.5	35.1	44.3	11.8	24.5	29.0	7.97	29.7	22.6
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	ND<0.0209	2.86	1.67	0.939	ND<0.0209	ND<0.0209	ND<0.0209	ND<0.0209	8.85
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	24.4	39.5	22.4	28.7	25.4	49.1	7.86	43.4	13.1
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	3,530	5680	1,870	365	1,060	1,570	20,500	1,480	2,540
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																		
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	990	560	180	1,900	1,000	540	450	450	590
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	1,200	320	ND<6.8	320	370	170	2,300	140	140
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	31	34	ND<3.5	ND<7.0	ND<35	10	130	ND<3.5	ND<3.5
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	60	ND<6.4	ND<3.2	ND<6.4	ND<32	ND<3.2	120	ND<3.2	ND<3.2
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<6.2	ND<6.2	ND<3.1	ND<6.2	ND<31	ND<3.1	ND<15	ND<3.1	ND<3.1
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<6.5	ND<6.5	ND<3.2	ND<6.5	ND<32	ND<3.2	ND<16	ND<3.2	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<7.9	ND<7.9	ND<4.0	ND<7.9	ND<40	ND<4.0	ND<20	ND<4.0	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<6.4	ND<6.4	ND<3.2	ND<6.4	ND<32	ND<3.2	ND<16	ND<3.2	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	29	ND<6.4	ND<3.2	ND<6.4	ND<32	ND<3.2	190	ND<3.2	ND<3.2
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<7.5	ND<7.5	ND<3.7	ND<7.5	ND<37	ND<3.7	ND<19	ND<3.7	ND<3.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	150	ND<6.8	ND<3.4	ND<6.8	ND<34	ND<3.4	580	ND<3.4	ND<3.4
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	31	27	ND<3.2	ND<6.4	ND<32	ND<3.2	170	ND<3.2	ND<3.2
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<7.1	ND<7.1	ND<3.5	ND<7.1	ND<35	ND<3.5	ND<18	ND<3.5	ND<3.5
Naphthalene	µg/kg	-	-	[7]1,700	-	-	-	4,000	84,000	1,100	1200	490	340	600	240	3,100	190	270
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	140	250	20	ND<6.7	ND<33	ND<3.3	680	ND<3.3	10
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	ND<5.8	34	ND<2.9	ND<5.8	ND<29	ND<2.9	380	ND<2.9	ND<2.9
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	10	ND<4.5	ND<2.2	ND<4.5	ND<22	ND<2.2	24	ND<2.2	ND<2.2

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
MDL - Method Detection Limit
PRG - Residential Preliminary Remediation Goal

STLC - Soluble Threshold Limit Concentration
TCLP - Toxicity Characteristic Leaching Potential
TTLC - Total Threshold Limit Concentration

[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table* , October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity* , 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics* , 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[7] Dilution-attenuation factor of 20 is used to compare to areas where groundwater is deep. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* , August 2003.

TABLE 3
Summary of Analytical Results
Burn Debris Sampling
San Bernardino County, California

Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SB-17-112807 11/28/07	SB-18-112707 11/27/07	SB-19-112807 11/28/07	SB-20-112807 11/28/07	SB-21-112907 11/29/07	SB-24-112907 11/29/07	SB-25A-112807 11/28/07	SB-25B-112807 11/28/07	SB-26-112707 11/27/07
Title 22 Metals by EPA Method 6010B/7471A																		
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	30.6	16.7	2.07	ND<0.191	14.9	189	24.6	67.5	3.04
Arsenic	mg/kg	2.75	0.070	[7]0.062	500	5.0	5.0	1.0	29	52.0	2.20	0.807	2.73	11.8	73.5	9.27	6.00	1.13
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	231	184	145	1570	238	138	155	740	137
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	0.409	0.323	0.307	0.634	0.596	ND<0.00368	ND<0.00368	0.493	0.488
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	2.36	0.849	52.1	ND<0.00988	683	22.9	0.674	ND<0.00988	ND<0.00988
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	42.2	11.6	11.1	19.2	18.8	62.2	8.82	5.95	3.70
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	-	-	ND<0.22	ND<0.22	ND<0.22	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	11.4	8.54	5.96	10.6	7.41	13.5	6.54	15.9	6.16
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	3,030	2,930	9,800	14,700	6,460	2,960	4,600	13,800	1,380
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	333	464	79.3	80.3	106	184	135	145	20.0
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	2.05	0.993	1.55	0.712	1.58	1.67	1.32	1.56	ND<0.0206
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	13.1	22.5	20.5	13.5	27.4	6.03	13.3	27.2	9.67
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	1.10	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	1.74	ND<0.0209	2.40	0.432	1.57	ND<0.0209	0.723	4.86	ND<0.0209
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	15.7	23.0	27.9	33.5	26.1	7.22	32.8	63.0	13.3
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	3,270	869	159,000	2,220	1,870	1,690	466	8,420	202
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																		
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	530	31	250	720	160	310	180	270	2,300
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	ND<6.8	200	350	2,100	ND<6.8	ND<6.8	ND<6.8	ND<6.8	1,700
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	10	ND<3.5	17	ND<35	ND<3.5	11	17	10	ND<18
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	ND<3.2	ND<3.2	ND<3.2	ND<32	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<16
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<3.1	ND<3.1	ND<3.1	ND<31	ND<3.1	ND<3.1	ND<3.1	ND<3.1	ND<15
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<3.2	ND<3.2	ND<3.2	ND<32	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<16
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<4.0	ND<4.0	ND<4.0	ND<40	ND<4.0	ND<4.0	ND<4.0	ND<4.0	ND<20
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<3.2	ND<3.2	ND<3.2	ND<32	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<16
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	ND<3.2	ND<3.2	ND<3.2	ND<32	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<16
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<3.7	ND<3.7	ND<3.7	ND<37	ND<3.7	ND<3.7	ND<3.7	ND<3.7	ND<19
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	ND<3.4	76	ND<3.4	200	ND<3.4	ND<3.4	250	ND<3.4	80
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	34	12	12	ND<32	ND<3.2	ND<3.2	210	24	ND<16
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<3.5	ND<3.5	ND<3.5	ND<35	ND<3.5	ND<3.5	13	ND<3.5	ND<18
Naphthalene	µg/kg	-	-	[7]1,700	-	-	-	4,000	84,000	610	350	860	820	250	610	200	350	830
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	61	54	52	ND<33	10	39	120	69	64
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	ND<2.9	28	10	ND<29	ND<2.9	ND<2.9	ND<2.9	ND<2.9	ND<14
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	ND<2.2	ND<2.2	ND<2.2	ND<22	ND<2.2	ND<2.2	3.3	ND<2.2	ND<11

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
MDL - Method Detection Limit
PRG - Residential Preliminary Remediation Goal

STLC - Soluble Threshold Limit Concentration
TCLP - Toxicity Characteristic Leaching Potential
TTLC - Total Threshold Limit Concentration

[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table* , October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity* , 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics* , 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[7] Dilution-attenuation factor of 20 is used to compare to areas where groundwater is deep. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* , August 2003.

TABLE 3
Summary of Analytical Results
Burn Debris Sampling
San Bernardino County, California

Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SB-28-112807 11/28/07	SB-28C-112807 11/28/07	SB-29-112807 11/28/07	SB-30A-112707 11/27/07	SB-30B-112707 11/27/07	SB-31-112807 11/28/07	SB-32-112707 11/27/07	SB-35-112907 11/29/07	SB-35C-112907 11/29/07
Title 22 Metals by EPA Method 6010B/7471A																		
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	14.5	10.9	ND<0.191	4.75	ND<0.191	12.7	1.63	5.15	21.6
Arsenic	mg/kg	2.75	0.070	[7]0.062	500	5.0	5.0	1.0	29	5.31	5.95	21.9	29.1	3.88	6.87	1.75	10.5	13.4
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	297	254	431	129	256	553	177	252	249
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	ND<0.00368	ND<0.00368	0.336	ND<0.00368	0.411	0.590	ND<0.00368	ND<0.00368	ND<0.00368
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	ND<0.00988	ND<0.00988	0.831	ND<0.00988	1.23	7.08	ND<0.00988	3.48	5.13
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	9.78	7.48	20.9	13.0	14.2	141	11.8	11.3	12.2
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	4.41	4.58	9.82	3.24	5.86	87.4	6.66	3.77	4.95
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	225	268	7,180	956	158	1,180	12,000	4,110	995
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	23.0	23.2	68.7	97.5	639	467	128	73.3	96.4
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	0.0867	4.50	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	20.8	21.0	6.41	1.10	0.886	8.11	2.09	2.38	3.54
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	18.3	20.5	14.0	43.0	20.3	81.2	21.2	12.7	9.50
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	0.959	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	ND<0.0209	ND<0.0209	ND<0.0209	ND<0.0209	ND<0.0209	6.58	ND<0.0209	ND<0.0209	0.605
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	48.7	54.8	22.6	16.2	40.4	34.7	25.6	20.6	17.8
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	485	408	7,390	3,170	1,070	6,240	2,480	951	1,120
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																		
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	620	580	2,600	ND<5.0	770	6800	37	190	150
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	2,800	2,500	1,200	280	140	3000	170	ND<6.8	ND<6.8
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	110	120	ND<35	ND<3.5	ND<7.0	ND<35	19	ND<3.5	ND<3.5
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	ND<32	ND<32	ND<32	19	ND<6.4	150	12	ND<3.2	ND<3.2
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<31	ND<31	ND<31	ND<3.1	ND<6.2	ND<31	ND<3.1	ND<3.1	ND<3.1
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<32	ND<32	ND<32	ND<3.2	ND<6.5	ND<32	ND<3.2	ND<3.2	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<40	ND<40	ND<40	ND<4.0	ND<7.9	ND<40	ND<4.0	ND<4.0	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<32	ND<32	ND<32	ND<3.2	ND<6.4	ND<32	ND<3.2	ND<3.2	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	ND<32	ND<32	ND<32	ND<3.2	ND<6.4	ND<32	ND<3.2	ND<3.2	ND<3.2
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<37	ND<37	ND<37	ND<3.7	ND<7.5	ND<37	ND<3.7	ND<3.7	ND<3.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	ND<34	ND<34	ND<34	ND<3.4	ND<6.8	380	73	ND<3.4	ND<3.4
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	200	200	ND<32	ND<3.2	ND<6.4	380	10	ND<3.2	ND<3.2
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<35	ND<35	ND<35	ND<3.5	ND<7.1	ND<35	ND<3.5	ND<3.5	ND<3.5
Naphthalene	µg/kg	-	-	[7]1,700	-	-	-	4,000	84,000	4,600	4,600	440	160	210	4600	270	ND<3.9	610
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	290	320	ND<33	ND<3.3	ND<6.7	290	140	16	23
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	ND<29	ND<29	150	ND<2.9	1,100	180	47	ND<2.9	ND<2.9
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	ND<22	ND<22	ND<22	4.0	ND<4.5	36	ND<3.3	ND<2.2	ND<2.2

Notes:

mg/kg - Milligrams per kilogram
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- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
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[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table* , October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity* , 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics* , 14 July, 2006.

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[8] State of California modified residential PRG (Cal-modified PRG)

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Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SB-36-112907 11/29/07	SB-38-113007 11/30/07	SB-39-112807 11/28/07	SB-40-112807 11/28/07	SB-41-112807 11/28/07	SB-42A-112807 11/28/07	SB-42B-112807 11/28/07	SB-43-112907 11/29/07	SB-44-113007 11/30/07
Title 22 Metals by EPA Method 6010B/7471A																		
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	25.9	106	ND<0.191	32.9	7.11	26.4	6.93	34.9	2.75
Arsenic	mg/kg	2.75	0.070	[7]0.062	500	5.0	5.0	1.0	29	17.1	8.89	2.57	16.6	40.0	21.7	4.47	40.0	3.73
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	208	831	344	262	265	271	315	575	31.9
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	0.263	1.18	0.315	0.318	0.836	ND<0.00368	0.278	ND<0.00368	0.929
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	2.20	2.15	1.29	1.63	1.84	69.3	17.4	2.08	ND<0.00988
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	35.6	29.6	41.1	40.7	51.8	30.5	15.4	101	2.43
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	ND<0.22	-	-	-	-	-	-	ND<0.22	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	7.97	30.8	5.73	8.93	31.3	24.2	5.89	8.43	1.74
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	2,280	750	792	1,020	2,980	9,970	902	20,800	129
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	680	1370	58.5	62.7	112	393	206	2,580	28.4
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	7.77	1.35	4.17	1.82	3.98	6.85	1.82	43.7	1.84
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	41.2	27.7	29.6	57.2	35.7	118	17.0	20.5	9.08
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	1.39	ND<0.175	ND<0.175	1.74	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	ND<0.0209	5.28	ND<0.0209	ND<0.0209	4.99	5.70	51.1	0.571	ND<0.0209
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	66.4	25.7	42.4	59.4	23.0	15.6	15.1	25.2	19.2
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	1,730	26100	1,150	591	2,610	2,840	555	4,300	32700
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																		
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	400	72	1,200	670	970	760	180	1500	280
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	310	60	1,200	ND<34	ND<14	ND<68	ND<6.8	ND<14	540
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	22	ND<3.5	ND<35	ND<18	ND<7.0	ND<35	ND<3.5	ND<7.0	54
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	26	ND<3.2	ND<32	ND<16	ND<6.4	ND<32	ND<3.2	ND<6.4	ND<6.4
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<3.1	ND<3.1	ND<31	ND<15	ND<6.2	ND<31	ND<3.1	ND<6.2	ND<6.2
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<3.2	ND<3.2	ND<32	ND<16	ND<6.5	ND<32	ND<3.2	ND<6.5	ND<6.5
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<4.0	ND<4.0	ND<40	ND<20	ND<7.9	ND<40	ND<4.0	ND<7.9	ND<7.9
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<3.2	ND<3.2	ND<32	ND<16	ND<6.4	ND<32	ND<3.2	ND<6.4	ND<6.4
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	16	ND<3.2	ND<32	ND<16	ND<6.4	ND<32	ND<3.2	ND<6.4	ND<6.4
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<3.7	ND<3.7	ND<37	ND<19	ND<7.5	ND<37	ND<3.7	ND<7.5	ND<7.5
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	140	15	ND<34	ND<17	67	ND<34	ND<3.4	ND<6.8	ND<6.8
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	81	23	ND<32	ND<16	30	ND<32	ND<3.2	ND<6.4	120
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<3.5	ND<3.5	ND<35	ND<18	ND<7.1	ND<35	ND<3.5	ND<7.1	ND<7.1
Naphthalene	µg/kg	-	-	[7]1,700	-	-	-	4,000	84,000	780	110	1,700	2100	770	1700	130	530	1300
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	120	38	ND<33	120	45	130	25	22	460
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	38	16	ND<29	ND<14	ND<5.8	ND<29	ND<2.9	ND<5.8	33
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	4.8	ND<2.2	ND<22	ND<11	ND<4.5	ND<22	ND<2.2	ND<4.5	ND<4.5

Notes:

mg/kg - Milligrams per kilogram
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ND<x - Not detected at concentrations greater than or equal to MDL (x)

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TCLP - Toxicity Characteristic Leaching Potential
TTLC - Total Threshold Limit Concentration

[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table* , October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity* , 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics* , 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[7] Dilution-attenuation factor of 20 is used to compare to areas where groundwater is deep. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* , August 2003.

TABLE 3
Summary of Analytical Results
Burn Debris Sampling
San Bernardino County, California

Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SB-44C-113007 11/30/07	SB-45-112907 11/29/07	SB-46-112907 11/29/07	SB-47-112907 11/29/07	SB-48-112907 11/29/07	SB-50-113007 11/30/07	SB-51-113007 11/30/07
Title 22 Metals by EPA Method 6010B/7471A																
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	17.5	13.6	2.60	29.9	17.9	20.4	52.4
Arsenic	mg/kg	2.75	0.070	[7]0.062	500	5.0	5.0	1.0	29	2.80	18.2	13.4	12.1	6.98	4.76	4.49
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	24.7	130	328	360	1010	118	270
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	0.885	0.935	1.02	1.03	1.17	0.893	0.992
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	ND<0.00988	ND<0.00988	ND<0.00988	7.76	ND<0.00988	ND<0.00988	ND<0.00988
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	1.22	10.9	8.02	22.4	19.8	7.31	24.0
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	-	-	-	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	0.796	9.41	10.8	5.39	6.68	2.83	17.6
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	177	435	267	7530	2630	324	1640
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	477	13.6	102	531	1450	97.8	171
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	0.204	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	1.86	29.3	1.09	4.49	4.81	0.806	0.978
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	20.0	18.9	6.87	11.7	23.2	7.42	43.9
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	5.10	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	ND<0.0209	ND<0.0209	ND<0.0209	3.12	ND<0.0209	0.953	3.62
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	14.6	16.3	16.4	18.2	44.1	10.1	28.2
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	298	969	1120	6160	1840	492	1440
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	250	770	930	170	1700	ND<10	38
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	540	640	3500	490	1300	ND<14	ND<6.8
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	43	ND<3.5	ND<70	ND<3.5	130	ND<7.0	16
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	ND<6.4	ND<3.2	750	ND<3.2	160	ND<6.4	ND<3.2
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<6.2	ND<3.1	ND<62	ND<3.1	ND<6.2	ND<6.2	ND<3.1
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<6.5	ND<3.2	ND<65	ND<3.2	29	ND<6.5	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<7.9	ND<4.0	ND<79	ND<4.0	ND<7.9	ND<7.9	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<6.4	ND<3.2	ND<64	ND<3.2	560	ND<6.4	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	ND<6.4	10	ND<64	15	180	ND<6.4	11
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<7.5	ND<3.7	ND<75	ND<3.7	ND<7.5	ND<7.5	ND<3.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	ND<6.8	ND<3.4	1900	ND<3.4	1400	ND<6.8	12
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	100	ND<3.2	ND<64	ND<3.2	ND<6.4	ND<6.4	18
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<7.1	ND<3.5	ND<71	ND<3.5	ND<7.1	ND<7.1	ND<3.5
Naphthalene	µg/kg	-	-	[7]1,700	-	-	-	4,000	84,000	1200	410	19000	790	530	95	79
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	380	ND<3.3	570	ND<3.3	220	ND<6.7	97
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	28	ND<2.9	1200	35	82	21	36
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	ND<4.5	2.3	120	2.4	80	ND<4.5	2.3

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
MDL - Method Detection Limit
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STLC - Soluble Threshold Limit Concentration
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TABLE 4
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Burn Debris Sampling
San Diego County, California

Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SD-02-11282007 11/28/07	SD-08-11262007 11/26/07	SD-09-11262007 11/26/07	SD-11-11282007 11/28/07	SD-12-11272007 11/27/07	SD-13-11272007 11/27/07	SD-16-11272007 11/27/07	SD-18-11272007 11/27/07
Title 22 Metals by EPA Method 6010B/7471A																	
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	73.1	ND<0.191	45.9	14.0	ND<0.191	1.10	50.5	ND<0.191
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	12.6	9.28	8.25	10.5	3.55	20.5	12.1	2.12
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	420	456	207	179	127	157	132	94.2
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	1.17	ND<0.00368	ND<0.00368	1.05	ND<0.00368	0.428	0.453	ND<0.00368
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	6.22	3.40	1.46	ND<0.00988	ND<0.00988	ND<0.00988	ND<0.00988	0.747
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	345	19.5	10.2	24.4	17.9	29.2	8.88	10.4
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	ND<0.22	-	-	-	ND<0.22	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	47.9	264	4.59	4.61	4.92	5.37	44.6	4.04
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	2,430	698	2,100	8,080	46,000	542	1,490	3,740
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	1,680	103	92.5	111	92.3	25.1	2510	68.5
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	3.63	1.69	0.913	1.17	0.495	1.79	2.12	6.13
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	23.1	48.8	76.5	27.8	12.2	27.6	31.6	14.2
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	42.2	ND<0.0209	2.67	1.01	2.59	ND<0.0209	35.8	62.4
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	40.9	20.7	18.8	29.1	22.8	66.6	40.0	12.6
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	3,080	2,190	1,570	1,310	685	407	6,030	1,790
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																	
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	ND<5.0	25	1,800	ND<5.0	66	ND<5.0	ND<5.0	400
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	100	240	790	830	540	230	1,000	480
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	ND<3.5	ND<3.5	240	31	23	ND<3.5	110	20
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	ND<3.2	61	170	60	21	ND<3.2	200	86
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<3.1	ND<3.1	34	14	ND<3.1	ND<3.1	77	ND<3.1
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	29	ND<3.2	ND<6.5	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	19	ND<4.0	ND<7.9	10	ND<4.0	ND<4.0	130	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<3.2	ND<3.2	22	ND<3.2	ND<3.2	ND<3.2	39	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	ND<3.2	39	26	72	ND<3.2	ND<3.2	580	11
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<3.7	ND<3.7	90	ND<3.7	ND<3.7	ND<3.7	330	ND<3.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	ND<3.4	650	73	26	ND<3.4	ND<3.4	290	ND<3.4
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	10	12	480	80	89	18	140	37
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<3.5	ND<3.5	22	14	ND<3.5	ND<3.5	74	ND<3.5
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	140	370	770	950	830	490	630	330
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	ND<3.3	100	1,100	360	140	70	440	130
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	29	110	510	600	72	49	650	150
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	5.0	8.5	56	22	4.2	ND<2.2	110	11

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
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[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

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[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics* , 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

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Title 22 Metals by EPA Method 6010B/7471A																	
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	0.898	4.78	5.43	35.0	97.1	2.05	14.2	5.87
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	3.17	2.52	2.53	11.3	8.04	1.93	1.26	2.23
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	78.9	181	236	283	208	65.7	161	316
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	ND<0.00368	0.361	0.391	1.08	ND<0.00368	ND<0.00368	0.340	0.288
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	1.24	ND<0.00988	ND<0.00988	1.93	2.80	ND<0.00988	ND<0.00988	ND<0.00988
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	10.2	6.45	8.02	28.7	10.5	10.9	8.70	19.4
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	-	-	ND<0.22	-	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	4.51	2.45	2.27	6.05	6.58	7.24	5.39	3.43
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	2,460	69.7	73.1	2,310	614	452	886	1,230
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	80.8	21.7	23.3	448	53.8	33.4	20.3	32.3
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	9.62	1.10	1.36	2.65	5.22	1.12	0.709	1.12
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	16.6	29.7	41.8	69.2	14.0	33.5	13.0	13.1
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	60.1	ND<0.0209	ND<0.0209	12.4	ND<0.0209	ND<0.0209	ND<0.0209	0.267
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	11.5	81.4	115	31.6	33.9	67.3	28.9	22.5
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	54,300	384	1,060	2,180	1,060	1,330	303	404
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																	
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	490	33	36	ND<5.0	280	ND<100	300	380
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	500	290	230	210	1,400	3,200	760	610
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	22	11	11	ND<3.5	68	ND<70	52	14
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	120	27	24	130	92	3,200	130	170
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<3.1	ND<3.1	ND<3.1	ND<3.1	ND<15	ND<62	13	ND<3.1
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<16	ND<65	ND<3.2	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<4.0	ND<4.0	ND<4.0	ND<4.0	ND<20	ND<79	ND<4.0	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<3.2	64	28	ND<3.2	ND<16	ND<64	ND<3.2	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	12	ND<3.2	ND<3.2	28	ND<16	210	56	ND<3.2
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<3.7	190	130	ND<3.7	ND<19	ND<75	ND<3.7	ND<3.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	ND<3.4	ND<3.4	ND<3.4	310	ND<17	ND<68	860	53
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	40	34	30	17	410	530	180	33
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<3.5	ND<3.5	ND<3.5	ND<3.5	ND<18	ND<71	12	ND<3.5
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	340	260	220	240	2,200	840	740	200
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	150	72	74	110	300	1,000	290	130
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	160	79	81	430	59	10,000	300	420
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	14	11	7.1	15	19	360	28	19

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
MDL - Method Detection Limit
PRG - Residential Preliminary Remediation Goal

STLC - Soluble Threshold Limit Concentration
TCLP - Toxicity Characteristic Leaching Potential
TTLC - Total Threshold Limit Concentration

[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA) *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* . January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table* , October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity* , 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics* , 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[7] Dilution-attenuation factor of 20 is used to compare to areas where groundwater is deep. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update* , 1 October 2004.

[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* , August 2003.

TABLE 4
Summary of Analytical Results
Burn Debris Sampling
San Diego County, California

Geosyntec consultants

Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	Sample ID and Date Sampled: SD-26-11282007 11/28/07	SD-31-11262007 11/26/07	SD-34-11262007 11/26/07	SD-36-11272007 11/27/07	SD-38-11272007 11/27/07	SD-40-11262007 11/26/07	SD-41-11272007 11/27/07	SD-44-11282007 11/28/07
Title 22 Metals by EPA Method 6010B/7471A																	
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	ND<0.191	ND<0.191	ND<0.191	22.6	52.8	ND<0.191	ND<0.191	ND<0.191
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	5.96	34.3	4.62	4.06	1.78	12.2	5.22	9.00
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	159	167	113	164	213	166	121	262
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	1.00	ND<0.00368	ND<0.00368	ND<0.00368	ND<0.00368	ND<0.00368	0.605	1.14
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	31.4	1.40	1.30	ND<0.00988	4.15	1.34	ND<0.00988	2.67
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	13.5	15.7	27.0	9.64	21.2	15.9	15.6	26.7
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	-	ND<0.22	-	-	-	-	ND<0.22
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	4.17	7.25	4.70	8.18	3.35	6.84	4.52	5.82
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	1,860	879	448	45,700	417	539	172	627
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	3,350	36.5	69.4	36.3	193	87.7	24.4	1,370
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	0.187	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	2.67	6.09	1.02	1.70	15.6	ND<0.0206	2.86	5.64
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	28.5	25.6	26.9	21.9	8.08	8.19	39.3	28.2
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	1.70	4.71	ND<0.0209	2.43	ND<0.0209	ND<0.0209	ND<0.0209	9.09
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	17.5	68.3	31.0	16.8	10.1	22.3	67.7	21.2
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	2,190	3,160	547	892	767	534	304	1,640
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																	
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	380	ND<5.0	ND<5.0	38	110	83	ND<10	ND<5.0
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	610	130	210	230	600	150	1,200	240
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	38	ND<3.5	ND<3.5	ND<3.5	26	ND<3.5	230	12
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	34	14	ND<3.2	63	15	ND<3.2	160	72
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<3.1	29	ND<3.1	ND<3.1	ND<3.1	ND<3.1	92	10
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<6.5	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	12	47	ND<4.0	ND<4.0	ND<4.0	ND<4.0	91	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<3.2	24	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	ND<3.2	ND<3.2	ND<3.2	13	16	ND<3.2	140	ND<3.2
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	12	250	ND<3.7	ND<3.7	ND<3.7	ND<3.7	160	ND<3.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	220	11	ND<3.4	ND<3.4	240	ND<3.4	180	24
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	71	140	12	19	74	18	810	20
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<3.5	ND<3.5	ND<3.5	ND<3.5	ND<3.5	ND<3.5	57	ND<3.5
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	530	210	200	430	680	460	1,100	230
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	210	60	47	79	190	18	640	91
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	ND<2.9	93	62	240	88	14	360	210
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	5.5	31	ND<2.2	8.5	3.7	ND<2.2	120	18

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
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Summary of Analytical Results
Burn Debris Sampling
San Diego County, California

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Parameter	Units	[1]California Background	Health Risk: [2]CHHSL	Health Risk: [3]PRG	Waste Characterization: [4]TTLC Limits	Waste Characterization: [4]STLC Limits (mg/L)	Waste Characterization: [5]TCLP Limits (mg/L)	Soil Screening Level: [6]DAF1	Soil Screening Level: [7]DAF20	SD-46-11272007 11/27/07	SD-47-11282007 11/28/07	SD-50-11282007 11/28/07	SD-50C-11282007 11/28/07	SD-51-11282007 11/28/07	SD-53-11282007 11/28/07	SD-54-11272007 11/27/07	SD-55-11282007 11/28/07
Title 22 Metals by EPA Method 6010B/7471A																	
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	10.8	7.11	6.61	11.3	2.24	18.2	101	9.20
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	10.0	8.17	6.67	6.64	5.96	6.59	2.81	4.13
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	142	326	146	130	163	213	238	94.3
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	ND<0.00368	0.922	0.966	0.920	1.03	0.995	ND<0.00368	0.899
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	2.31	3.63	ND<0.00988	ND<0.00988	2.81	4.73	1.79	0.736
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	12.2	15.9	8.64	7.52	21.4	195	10.4	8.84
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	-	-	-	0.88	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	6.00	2.00	44.3	46.9	5.07	18.5	9.31	6.09
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	22,300	124	4,340	2,530	851	6,870	1,150	457
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	225	379	60.2	288	39.7	463	143	56.1
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	1.59	1.90	3.69	4.65	1.55	3.76	0.520	2.00
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	34.6	5.96	9.46	9.85	9.68	27.9	10.3	8.13
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	4.74	0.793	ND<0.0209	ND<0.0209	ND<0.0209	21.1	4.17	ND<0.0209
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	15.9	8.63	12.8	13.2	24.4	16.6	6.84	9.38
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	1,360	4,490	9,020	5,110	572	6,080	5,080	772
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																	
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	260	200	180	ND<5.0	ND<5.0	520	41	ND<10
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	250	610	670	450	590	1,200	330	1,500
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	ND<3.5	ND<3.5	81	54	21	51	18	180
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	87	16	66	37	45	810	27	260
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	ND<3.1	ND<3.1	27	21	ND<3.1	ND<6.2	ND<3.1	61
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<3.2	ND<3.2	ND<3.2	28	ND<3.2	ND<6.5	ND<3.2	ND<6.5
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<4.0	ND<4.0	16	ND<4.0	ND<4.0	26	20	30
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<3.2	ND<6.4	ND<3.2	40
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	ND<3.2	ND<3.2	140	100	ND<3.2	130	ND<3.2	67
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<3.7	ND<3.7	67	70	ND<3.7	ND<7.5	ND<3.7	52
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	260	27	77	52	ND<3.4	100	ND<3.4	310
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	26	27	130	92	71	94	44	400
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<3.5	ND<3.5	17	ND<3.5	ND<3.5	23	ND<3.5	52
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	260	610	790	440	450	830	440	1,500
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	60	19	410	250	160	490	140	840
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	340	44	100	17	310	790	110	360
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	11	3.7	37	29	6.6	88	4.8	97

Notes:

mg/kg - Milligrams per kilogram
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ND<x - Not detected at concentrations greater than or equal to MDL (x)

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Title 22 Metals by EPA Method 6010B/7471A																
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	6.18	21.6	ND<0.191	80.3	5.51	8.80	2.65
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	9.44	2.53	6.62	6.69	4.50	7.36	7.82
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	253	88.1	195	195	218	83.2	73.6
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	0.975	0.867	0.996	ND<0.00368	ND<0.00368	ND<0.00368	ND<0.00368
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	0.951	3.03	14.6	1.93	6.32	ND<0.00988	ND<0.00988
Chromium (total)	mg/kg	76.25	NE	210	2,500	5.0	5.0	2.0	38	18.7	8.50	20.9	10.4	27.1	8.17	7.21
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	ND<0.22	-	-	-	-	-	-
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	6.88	3.03	21.1	16.7	108	10.9	13.2
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	313	222	1,980	2,390	937	340	2,320
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	49.4	36.2	154	2790	432	47.4	23.8
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130	ND<0.00130
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	1.89	0.717	1.47	1.14	2.07	14.1	16.3
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	23.3	32.1	320	49.5	17.9	18.3	24.7
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175	ND<0.175
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	ND<0.0209	0.781	5.99	6.51	ND<0.0209	ND<0.0209	ND<0.0209
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987	ND<0.0987
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	13.1	15.7	20.1	9.76	12.0	34.9	35.1
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	2,340	489	2,290	5,740	2,430	421	776
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	840	20	ND<5.0	160	560	ND<5.0	ND<5.0
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	2,100	160	440	140	3,800	68	72
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	120	ND<3.5	20	20	280	ND<3.5	ND<3.5
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	160	37	120	32	530	ND<3.2	ND<3.2
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	72	ND<3.1	17	11	ND<31	ND<3.1	ND<3.1
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	ND<16	ND<3.2	ND<3.2	ND<3.2	ND<32	ND<3.2	ND<3.2
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	ND<20	ND<4.0	ND<4.0	ND<4.0	ND<40	ND<4.0	ND<4.0
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	ND<16	ND<3.2	ND<3.2	ND<3.2	ND<32	ND<3.2	ND<3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	100	20	16	28	ND<32	ND<3.2	17
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	ND<19	ND<3.7	14	ND<3.7	ND<37	ND<3.7	12
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	120	80	25	680	2,400	280	440
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	210	32	44	18	520	ND<3.2	ND<3.2
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	ND<18	ND<3.5	11	ND<3.5	ND<35	ND<3.5	ND<3.5
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	3,000	280	510	180	3,000	140	190
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	1,000	36	130	130	2,600	43	38
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	370	140	610	140	4,800	28	24
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	92	5.9	31	15	74	ND<2.2	2.4

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
MDL - Method Detection Limit
PRG - Residential Preliminary Remediation Goal

STLC - Soluble Threshold Limit Concentration
TCLP - Toxicity Characteristic Leaching Potential
TTLC - Total Threshold Limit Concentration

[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table*, October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity*, 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24, *Toxicity Characteristics*, 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update*, 1 October 2004.

[7] Dilution-attenuation factor of 20 is used to compare to areas where groundwater is deep. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update*, 1 October 2004.

[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, August 2003.

Geosyntec consultants

TABLE 5
Summary of Samples Exceeding Established Regulatory Criteria
Burn Debris Sampling
San Bernardino County, California

			Health Risk		Waste Characterization			Soil Screening Level		Frequency of Exceedences								Summary of Statistics			
Parameter	Units	[1]California Background	[2]CHHSL	[3]PRG	[4]TTLC Limits	[4]STLC Limits (mg/L)	[5]TCLP Limits (mg/L)	[6]DAF1	[7]DAF20	California Background	CHHSL	PRG	TTLC	10XSTLC	20XTCLP	DAF1	DAF20	Minimim Detected	Maximim Detected	Arithmetic Mean	Geometric Mean
Title 22 Metals by EPA Method 6010B/7471A																					
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	32	8	7	0	1	-	32	5	0.994	189	24.8	6.17
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	30	39	39	0	3	0	38	6	0.807	73.5	14.9	8.25
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	9	0	0	0	3	0	38	0	24.7	1570	382	285
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	3	0	0	0	0	-	0	0	0.256	1.49	0.450	0.109
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	24	16	4	1	7	6	24	1	0.598	683	25.2	0.346
Chromium (total)	mg/kg	76.25	-	210	2,500	5.0	5.0	2.0	38	4	-	0	0	6	3	39	9	1.22	141	29.8	19.6
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	0	0	0	0	-	0	0	0	0	0.11	0.11
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	8	0	0	0	0	-	-	-	0.796	87	11.5	8.38
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	39	14	13	18	36	-	-	-	129	20,800	4,210	1,830
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	35	20	20	5	35	26	-	-	13.6	49,100	1,640	211
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	2	0	0	0	1	1	-	-	0.0867	4.5	0.123	0.00107
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	34	0	0	0	0	-	-	-	0.712	43.7	4.83	2.22
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	7	0	0	0	0	-	37	0	6.03	118	26.6	21.3
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	39	0	0	0	0	0	5	1	0.959	5.10	0.340	0.128
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	20	0	0	0	1	0	11	1	0.432	51.1	2.79	0.172
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	0	0	0	0	0	-	-	-	0.0	0.0	0.0494	0.0494
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	0	0	0	0	0	-	0	0	7.22	66.4	28.0	24.5
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	39	3	3	9	16	-	32	4	202	159,000	8,250	2,280
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																					
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	-	-	0	-	-	-	0	0	31	6,800	810	360
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	3,500	640	110
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	-	-	0	-	-	-	0	0	10	130	21	9.1
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	-	-	1	-	-	-	4	0	12	750	37	6.1
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	-	0	0	-	-	-	0	0	0	0	5.6	3.4
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	-	-	0	-	-	-	0	0	29	29	6.5	3.7
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	7.3	4.3
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	-	-	1	-	-	-	0	0	560	560	20	4.0
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	-	-	0	-	-	-	0	0	10	190	17	5.5
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	-	-	0	-	-	-	0	0	0	0	6.8	4.0
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	-	-	0	-	-	-	0	0	12	1,900	140	13
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	-	-	0	-	-	-	0	0	10	380	40	11
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	-	-	-	-	-	-	0	0	13	13	6.7	4.0
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	-	-	5	-	-	-	3	0	79	19,000	1,400	590
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	680	110	37
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	-	-	0	-	-	-	0	0	10	1,200	90	11
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	-	2	2	-	-	-	0	0	2.3	116	13	5.9

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
MDL - Method Detection Limit
PRG - Residential Preliminary Remediation Goal

STLC - Soluble Threshold Limit Concentration
TCLP - Toxicity Characteristic Leaching Potential
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[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table*, October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity*, 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24. *Toxicity Characteristics*, 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update*, 1 October 2004.

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[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, August 2003.

Geosyntec consultants

TABLE 6
Summary of Samples Exceeding Established Regulatory Criteria
Burn Debris Sampling
San Diego County, California

			Health Risk		Waste Characterization			Soil Screening Level		Frequency of Exceedences								Summary of Statistics			
Parameter	Units	[1]California Background	[2]CHHSL	[3]PRG	[4]TTLC Limits	[4]STLC Limits (mg/L)	[5]TCLP Limits (mg/L)	[6]DAF1	[7]DAF20	California Background	CHHSL	PRG	TTLC	10XSTLC	20XTCLP	DAF 1	DAF20	Minimim Detected	Maximim Detected	Arithmetic Mean	Geometric Mean
Title 22 Metals by EPA Method 6010B/7471A																					
Antimony	mg/kg	0.5	30	31	500	15	-	0.30	50	26	8	8	0	0	-	26	6	0.898	101	20.1	3.73
Arsenic	mg/kg	2.75	0.070	[8]0.062	500	5.0	5.0	1.0	29	29	35	35	0	0	0	35	1	1.26	34.3	7.60	5.95
Barium	mg/kg	468	5,200	5,400	10,000	100	100	82	1,600	0	0	0	0	0	0	34	0	65.7	456	193	176
Beryllium	mg/kg	1.14	150	150	75	0.75	-	3.0	63	1	0	0	0	0	-	0	0	0.288	1.17	0.446	0.0482
Cadmium	mg/kg	0.26	1.7	37	100	1.0	1.0	0.40	80	23	16	0	0	2	1	23	0	0.736	31	2.92	0.315
Chromium (total)	mg/kg	76.25	-	210	2,500	5.0	5.0	2.0	38	2	-	1	0	2	2	35	2	6.45	345	30.4	17.1
Chromium (hexavalent)	mg/kg	-	17	31	500	5.0	-	2.0	38	-	0	0	0	0	-	0	0	0.880	0.880	0.220	0.148
Cobalt	mg/kg	12.6	660	900	8,000	80	-	-	-	9	0	0	0	0	-	-	-	2.00	264	20.6	8.55
Copper	mg/kg	24	3,000	3,100	2,500	25	-	-	-	35	7	7	7	31	-	-	-	69.7	46,000	4,730	1,270
Lead	mg/kg	44.6	150	[8]150	1,000	5.0	5.0	-	-	25	13	13	5	23	16	-	-	20.3	3,350	445	130
Mercury	mg/kg	0.2	18	23	20	0.2	0.2	-	-	0	0	0	0	0	0	-	-	0.187	0.2	0.00597	0.000764
Molybdenum	mg/kg	0.9	380	390	3,500	350	-	-	-	30	0	0	0	0	-	-	-	0.495	16.3	3.11	1.80
Nickel	mg/kg	35.75	1,600	1,600	2,000	20	-	7.0	130	7	0	0	0	1	-	34	1	5.96	320	34.6	23.3
Selenium	mg/kg	0.028	380	390	100	1.0	1.0	0.30	5.0	35	0	0	0	0	0	0	0	0.0	0.0	0.088	0.088
Silver	mg/kg	0.41	380	390	500	5.0	5.0	2.0	34	18	0	0	0	1	0	14	3	0.267	62.4	6.33	0.285
Thallium	mg/kg	13.8	5.0	5.2	700	7.0	-	-	-	0	0	0	0	0	-	-	-	0.0	0.0	0.0494	0.0494
Vanadium	mg/kg	101	530	78	2,400	24	-	300	6,000	1	0	1	0	0	-	0	0	6.84	115	28.8	22.7
Zinc	mg/kg	145	23,000	23,000	5,000	250	-	620	12,000	35	1	1	6	9	-	27	1	303	54,300	3,640	1,570
Polycyclic Aromatic Hydrocarbons by EPA Method 8310																					
Acenaphthene	µg/kg	-	-	3,700,000	-	-	-	29,000	570,000	-	-	0	-	-	-	0	0	20	1,800	200	36
Acenaphthylene	µg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	3,800	740	470
Anthracene	µg/kg	-	-	22,000,000	-	-	-	590,000	12,000,000	-	-	0	-	-	-	0	0	11	280	49	15
Benzo(a)anthracene	µg/kg	-	-	620	-	-	-	80	2,000	-	-	2	-	-	-	19	1	14	3,200	200	49
Benzo(a)pyrene	µg/kg	-	38	62	-	-	-	400	8,000	-	4	3	-	-	-	0	0	10	92	16	5.2
Benzo(b)fluoranthene	µg/kg	-	-	620	-	-	-	200	5,000	-	-	0	-	-	-	0	0	28	29	5.0	2.6
Benzo(g,h,i)perylene	µg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	130	15	5.5
Benzo(k)fluoranthene	µg/kg	-	-	[8]380	-	-	-	2,000	49,000	-	-	0	-	-	-	0	0	22	64	8.5	3.2
Chrysene	µg/kg	-	-	[8]3,800	-	-	-	8,000	160,000	-	-	0	-	-	-	0	0	11	580	50	11
Dibenz(a,h)anthracene	µg/kg	-	-	62	-	-	-	80	2,000	-	-	6	-	-	-	0	0	12	330	37	6.7
Fluoranthene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,300,000	-	-	0	-	-	-	0	0	11	2,400	210	36
Fluorene	µg/kg	-	-	2,700,000	-	-	-	28,000	560,000	-	-	0	-	-	-	0	0	10	810	140	59
Indeno(1,2,3-c,d)pyrene	µg/kg	-	-	-	-	-	-	700	14,000	-	-	-	-	-	-	0	0	11	74	11	4.4
Naphthalene	µg/kg	-	-	[8]1,700	-	-	-	4,000	84,000	-	-	3	-	-	-	3	0	140	3,000	710	510
Phenanthrene	µg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	2,600	330	150
Pyrene	µg/kg	-	-	2,300,000	-	-	-	210,000	4,200,000	-	-	0	-	-	-	0	0	14	10,000	650	170
Total B(a)P Equivalency[9]	µg/kg	-	38	62	-	-	-	400	8,000	-	8	7	-	-	-	0	0	2.4	360	38	15

Notes:

mg/kg - Milligrams per kilogram
mg/L - Milligrams per liter
µg/kg - Microgram per kilogram
- Not established
ND<x - Not detected at concentrations greater than or equal to MDL (x)

CHHSL - California Human Health Screening Level for soil in residential land use
DAF- Dilution-Attenuation Factor
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TCLP - Toxicity Characteristic Leaching Potential
TTLC - Total Threshold Limit Concentration

[1] Geometric mean concentrations were used which are more conservative than average concentrations. Reference: UC Riverside and Cal-EPA DTSC, 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report*, March 1996.

[2] Reference: California Environmental Protection Agency (Cal/EPA). *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. January 2005.

[3] Reference: USEPA Region IX, 2004. *EPA Region IX PRGs Table*, October 2004.

[4] Reference: California Code of Regulations (CCR), 2006. Title 22, Chapter 11, Article 3, Section 66261.24. *Characteristics of Toxicity*, 30 November 2007.

[5] Reference: Code of Federal Regulations (CFR), 2006. 40 CFR, Chapter 1, Section 261.24. *Toxicity Characteristics*, 14 July, 2006.

[6] Dilution-attenuation factor of 1 is used to compare to surface water and areas with shallow groundwater or underlain by fractured media. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update*, 1 October 2004.

[7] Dilution-attenuation factor of 20 is used to compare to areas where groundwater is deep. Reference: USEPA, Region IX, 2004. *Region IX PRGs Table 2004 Update*, 1 October 2004.

[8] State of California modified residential PRG (Cal-modified PRG)

[9] Benzo(a)pyrene equivalancy based on potency equivalency factors (PEFs) Reference: Office of Environmental Health Hazard Assessment. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, August 2003.