

TABLE 4-3

Statistical Summary of Chemicals Detected in Surface Soil at Site LF01

Bellows OU1 EE/CA, Bellows AFS, Hawaii

Chemical Group	Analyte	Units	Number of Detects	Number of Rejects	Total Number of Samples	Frequency of Detection ¹	Minimum MDL	Maximum MDL	Minimum Detected Value	Maximum Detected Value
TPH	TPH-Diesel	mg/kg	33	1	39	87%	8.1	9.1	2.3	53
SVOC	Bis (2-ethylhexyl) phthalate	mg/kg	6	--	53	11%	0.050	4.0	0.043	7.0
SVOC	Butyl benzylphthalate	mg/kg	1	--	39	3%	0.040	0.23	0.060	0.060
SVOC	Diethyl phthalate	mg/kg	1	--	39	3%	0.060	0.24	0.14	0.14
SVOC	Di-n-butylphthalate	mg/kg	3	--	53	6%	0.040	4.0	0.11	0.14
SVOC	Di-n-octylphthalate	mg/kg	1	--	39	3%	0.040	0.060	0.040	0.040
PEST	4,4'-DDD	mg/kg	18	20	53	55%	8.90E-04	0.037	9.90E-04	0.092
PEST	4,4'-DDE	mg/kg	12	18	44	46%	4.00E-04	0.0038	0.0016	0.81
PEST	4,4'-DDE/Dieldrin ²	mg/kg	7	19	37	39%	4.70E-04	6.00E-04	0.0023	0.026
PEST	Dieldrin	mg/kg	1	1	2	100%	--	--	0.0022	0.0022
PEST	4,4'-DDT	mg/kg	22	26	53	81%	0.0011	0.0039	0.0014	0.45
PEST	Aldrin	mg/kg	20	17	39	91%	2.00E-04	2.10E-04	2.20E-04	0.013
PEST	alpha-BHC	mg/kg	14	17	39	64%	2.60E-04	4.50E-04	4.20E-04	0.0049
PEST	beta-BHC	mg/kg	17	17	39	77%	5.50E-04	6.00E-04	6.10E-04	0.025
PEST	Chlordane (Alpha)	mg/kg	8	22	39	47%	5.60E-04	7.30E-04	9.80E-04	0.012
PEST	Chlordane (Gamma)	mg/kg	10	19	39	50%	3.20E-04	3.60E-04	4.20E-04	0.0072
PEST	delta-BHC	mg/kg	13	17	39	59%	1.70E-04	2.00E-04	2.60E-04	0.0087
PEST	Endosulfan I	mg/kg	9	19	38	47%	5.80E-04	6.50E-04	6.30E-04	0.0059
PEST	Endosulfan II	mg/kg	6	21	53	19%	0.0011	0.0042	0.0019	0.010
PEST	Endosulfan sulfate	mg/kg	18	18	39	86%	0.0011	0.0012	0.0012	0.013
PEST	Endrin	mg/kg	10	18	53	29%	0.0012	0.0042	0.0024	0.0091
PEST	Endrin aldehyde	mg/kg	5	18	53	14%	0.0021	0.0042	0.0049	0.013
PEST	gamma-BHC (Lindane)	mg/kg	13	17	39	59%	3.30E-04	3.80E-04	4.00E-04	0.0058
PEST	Heptachlor	mg/kg	19	18	39	90%	2.00E-04	2.20E-04	3.10E-04	0.019
PEST	Heptachlor epoxide	mg/kg	12	17	53	33%	2.40E-04	0.0022	3.30E-04	0.015
PEST	Methoxychlor	mg/kg	9	17	53	25%	0.0013	0.022	0.0017	0.024
PEST	Toxaphene	mg/kg	--	39	39	--	--	--	--	--
PCB	Aroclor-1016	mg/kg	2	1	42	5%	0.0077	0.080	0.050	0.071
PCB	Aroclor-1242	mg/kg	8	1	56	15%	0.0092	0.080	0.22	2.9
PCB	Aroclor-1248	mg/kg	3	1	42	7%	0.013	0.11	0.062	4.0
PCB	Aroclor-1254	mg/kg	4	1	56	7%	0.0022	0.042	0.061	0.25
PCB	Aroclor-1260	mg/kg	3	1	56	5%	0.0031	0.042	0.082	0.16
PAH	Acenaphthene	mg/kg	1	--	53	2%	0.020	4.0	0.086	0.086
PAH	Acenaphthylene	mg/kg	1	--	39	3%	0.026	0.044	0.032	0.032
PAH	Anthracene	mg/kg	8	--	39	21%	0.0010	0.0020	0.0050	0.035
PAH	Benzo (a) anthracene	mg/kg	26	--	53	49%	0.0013	4.0	0.0027	0.90

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Chemical Group	Analyte	Units	Number of			Frequency of Detection ¹	Minimum MDL	Maximum MDL	Minimum Detected Value	Maximum Detected Value
			Detects	Rejects	Total Number of Samples					
PAH	Benzo (a) pyrene	mg/kg	27	--	53	51%	0.0016	4.0	0.0032	0.68
PAH	Benzo (b) fluoranthene	mg/kg	23	--	53	43%	0.0030	4.0	0.0064	1.1
PAH	Benzo (g,h,i) perylene	mg/kg	28	--	53	53%	0.0040	4.0	0.0050	0.27
PAH	Benzo (k) fluoranthene	mg/kg	25	--	53	47%	0.0015	4.0	0.0023	0.39
PAH	Chrysene	mg/kg	29	--	53	55%	0.0010	4.0	0.0040	0.98
PAH	Dibenzo (a,h) anthracene	mg/kg	5	--	39	13%	0.0030	0.0060	0.010	0.11
PAH	Fluoranthene	mg/kg	22	--	53	42%	0.0020	4.0	0.0060	1.8
PAH	Fluorene	mg/kg	2	--	53	4%	0.0030	4.0	0.014	0.13
PAH	Indeno (1,2,3-c,d) pyrene	mg/kg	28	--	53	53%	0.0060	4.0	0.0060	0.39
PAH	Phenanthrene	mg/kg	21	--	53	40%	0.0010	4.0	0.0020	1.6
PAH	Pyrene	mg/kg	29	--	53	55%	0.0010	4.0	0.0020	1.5
METALS	Aluminum	mg/kg	39	--	39	100%	--	--	4,140	34,200
METALS	Antimony	mg/kg	34	--	53	64%	1.1	1.4	1.7	565
METALS	Arsenic	mg/kg	53	--	53	100%	--	--	2.0	79
METALS	Barium	mg/kg	39	--	39	100%	--	--	7.2	178
METALS	Beryllium	mg/kg	45	--	53	85%	0.090	0.55	0.11	0.81
METALS	Cadmium	mg/kg	52	--	53	98%	0.11	0.11	0.14	42
METALS	Calcium	mg/kg	39	--	39	100%	--	--	101,000	342,000
METALS	Chromium	mg/kg	53	--	53	100%	--	--	23	170
METALS	Cobalt	mg/kg	39	--	39	100%	--	--	2.3	32
METALS	Copper	mg/kg	53	--	53	100%	--	--	6.2	5,290
METALS	Iron	mg/kg	39	--	39	100%	--	--	5,670	174,500
METALS	Lead	mg/kg	53	--	53	100%	--	--	1.4	2,910
METALS	Magnesium	mg/kg	39	--	39	100%	--	--	3,520	12,000
METALS	Manganese	mg/kg	39	--	39	100%	--	--	147	1,285
METALS	Mercury	mg/kg	36	--	53	68%	0.050	0.070	0.038	19
METALS	Nickel	mg/kg	53	--	53	100%	--	--	12	152
METALS	Potassium	mg/kg	39	--	39	100%	--	--	125	2,210
METALS	Selenium	mg/kg	14	--	53	26%	0.86	1.5	0.93	4.1
METALS	Silver	mg/kg	29	--	53	55%	0.32	0.45	0.32	5.7
METALS	Sodium	mg/kg	39	--	39	100%	--	--	250	3,320
METALS	Thallium	mg/kg	8	--	39	21%	0.74	1.3	0.97	1.5
METALS	Vanadium	mg/kg	39	--	39	100%	--	--	13	112
METALS	Zinc	mg/kg	53	--	53	100%	--	--	8.8	2,950
HERB	2,4-D	mg/kg	9	1	39	24%	0.020	0.034	0.022	0.067
HERB	Dalapon	mg/kg	8	--	39	21%	0.022	1.4	0.94	3.1
HERB	MCPA	mg/kg	13	--	39	33%	3.6	6.1	4.1	11

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Chemical Group	Analyte	Units	Number of			Frequency of Detection ¹	Minimum MDL	Maximum MDL	Minimum Detected Value	Maximum Detected Value
			Detects	Rejects	Total Number of Samples					
HERB	MCP	mg/kg	4	1	39	11%	1.9	3.2	2.3	12
DIOX/FURAN	1,2,3,4,6,7,8,9-OCDD	ug/kg	7	--	7	100%	--	--	0.0049	5.5
DIOX/FURAN	1,2,3,4,6,7,8,9-OCDF	ug/kg	5	--	7	71%	0.0016	0.0038	0.0035	0.24
DIOX/FURAN	1,2,3,4,6,7,8-HpCDD	ug/kg	6	--	7	86%	7.00E-04	7.00E-04	0.0032	0.87
DIOX/FURAN	1,2,3,4,6,7,8-HpCDF	ug/kg	7	--	7	100%	--	--	0.0018	0.24
DIOX/FURAN	1,2,3,4,7,8,9-HpCDF	ug/kg	4	--	7	57%	0.0040	0.0040	0.0018	0.024
DIOX/FURAN	1,2,3,4,7,8-HxCDD	ug/kg	4	--	7	57%	0.0010	0.0010	0.0038	0.015
DIOX/FURAN	1,2,3,4,7,8-HxCDF	ug/kg	7	--	7	100%	--	--	9.60E-04	0.15
DIOX/FURAN	1,2,3,6,7,8-HxCDD	ug/kg	6	--	7	86%	0.0010	0.0010	3.20E-04	0.038
DIOX/FURAN	1,2,3,6,7,8-HxCDF	ug/kg	6	--	7	86%	4.10E-04	4.10E-04	4.70E-04	0.049
DIOX/FURAN	1,2,3,7,8,9-HxCDD	ug/kg	5	--	7	71%	2.80E-04	0.0025	0.0012	0.054
DIOX/FURAN	1,2,3,7,8,9-HxCDF	ug/kg	4	--	7	57%	0.0043	0.0043	6.00E-04	0.0057
DIOX/FURAN	1,2,3,7,8-PeCDD	ug/kg	4	--	7	57%	0.0012	0.0012	0.0030	0.015
DIOX/FURAN	1,2,3,7,8-PeCDF	ug/kg	6	--	7	86%	3.60E-04	3.60E-04	3.30E-04	0.045
DIOX/FURAN	2,3,4,6,7,8-HxCDF	ug/kg	5	--	7	71%	2.30E-04	5.30E-04	2.60E-04	0.067
DIOX/FURAN	2,3,4,7,8-PeCDF	ug/kg	5	--	7	71%	0.0015	0.0015	6.20E-04	0.069
DIOX/FURAN	2,3,7,8-TCDD	ug/kg	3	--	7	43%	7.80E-04	0.0015	6.50E-04	0.0049
DIOX/FURAN	2,3,7,8-TCDF	ug/kg	7	--	7	100%	--	--	5.10E-04	0.039
DIOX/FURAN	Total TCDD TEQs	ug/kg	7	--	7	100%	--	--	1.90E-04	0.108

Notes:

¹ Frequency of detection is based on number of detections divided by [total number of samples minus number of rejections].

² The laboratory could not distinguish between 4,4'-DDE and dieldrin; however when resolvable, individual results for 4,4'-DDE and dieldrin were reported.

Chemical Groups

TPH = total petroleum hydrocarbons
 SVOC = semivolatile organic compounds
 PEST = pesticides
 PCB = polychlorinated biphenyls
 PAH = polynuclear aromatic hydrocarbons
 HERB = herbicides
 DIOX/FURAN = dioxins and furans

Abbreviations

mg/kg = milligrams per kilogram
 ug/kg = micrograms per kilogram
 MDL = method detection limit