

Table 4-3
Chemicals Detected in Surface Water at Waimanalo Stream
Bellows OU1 EE/CA, Bellows AFS, Hawaii

Location	Upstream Locations				Downstream Locations					
	WSU-001	WSU-002	WS-001	WS-002	WS-003	WS-004	WS-005			
Sample ID	WSU-SW001A	WSU-SW002A	WS-SW001A	WS-SW002A	WS-SW003A	WS-SW004A	WS-SW005A			
Sampling Date	11/11/98	11/11/98	11/10/98	11/10/98	11/10/98	11/11/98	11/11/98			
Depth (feet bgs)	NM	NM	NM	NM	NM	NM	NM			
Chemical										
Group	Chemical	CAS	Units	WSU-001	WSU-002	WS-001	WS-002	WS-003	WS-004	WS-005
VOC	Toluene	108-88-3	µg/L	ND	ND	ND	ND	0.1275 D F	ND	0.11 F
TPH	TPH-Gasoline	TPH-GASOLINE	mg/L	ND	ND	ND	0.01 F	0.0075 D F	ND	ND
SVOC	Di-n-butylphthalate	84-74-2	µg/L	ND	ND	ND	2.32 F	1.09 D F	ND	ND
PEST	4,4'-DDT	50-29-3	µg/L	ND	ND	ND	0.044 F	0.09 D F	ND	ND
PEST	Aldrin	309-00-2	µg/L	0.12 F	0.1 F	0.091 M	0.091 F	0.107 F	0.15 F	0.12 F
PEST	alpha-BHC	319-84-6	µg/L	0.016 F	ND	ND	ND	ND	ND	ND
PEST	delta-BHC	319-86-8	µg/L	ND	ND	0.015 M	ND	ND	ND	ND
PEST	Endosulfan I	959-98-8	µg/L	ND	ND	ND	0.013 F	ND	ND	ND
PEST	Endosulfan II	33213-65-9	µg/L	ND	ND	ND	0.032 F	ND	ND	ND
PEST	Endosulfan sulfate	1031-07-8	µg/L	ND	ND	ND	0.17 F	0.15 F	ND	ND
PEST	Endrin aldehyde	7421-93-4	µg/L	ND	ND	0.048 M	ND	0.035 D F	ND	ND
PEST	Heptachlor	76-44-8	µg/L	0.047 F	0.041 F	ND	ND	0.022 D F	0.064 F	0.055 F
PEST	Heptachlor epoxid	1024-57-3	µg/L	0.034 F	0.02 F	0.19 M	0.035 F	0.0375 F	0.042 F	0.06 F
METALS	Aluminum	7429-90-5	mg/L	0.34	0.03 F	0.05 F	0.05 F	0.055 F	0.02 F	0.09 F
METALS	Aluminum, dissolved	7429-90-5_D	mg/L	ND	ND	ND	ND	0.02 F	ND	ND
METALS	Antimony	7440-36-0	mg/L	ND	ND	ND	ND	0.00575 D F	ND	ND
METALS	Antimony, dissolved	7440-36-0_D	mg/L	ND	ND	ND	ND	ND	0.025 F	0.029 F
METALS	Arsenic, dissolved	7440-38-2_D	mg/L	0.007 F	ND	ND	ND	ND	ND	ND
METALS	Barium	7440-39-3	mg/L	0.0033 F	0.0044 F	0.0154	0.0167	0.0166	0.012	0.0114
METALS	Barium, dissolved	7440-39-3_D	mg/L	0.0031 F	0.0058	0.0151	0.0167	0.0167	0.013	0.0114
METALS	Cadmium	7440-43-9	mg/L	0.001 F	ND	ND	ND	ND	ND	ND
METALS	Calcium	7440-70-2	mg/L	21.1	17	81.7 M	142	139.5	86.3	101
METALS	Calcium, dissolved	7440-70-2_D	mg/L	20.6	19.1	91.7 M	142	144	95.3	107
METALS	Copper	7440-50-8	mg/L	0.002 F	ND	ND	ND	ND	ND	ND
METALS	Iron	7439-89-6	mg/L	0.537	0.073 F	0.141 F	0.094 F	0.1115 F	0.112 F	0.169 F
METALS	Iron, dissolved	7439-89-6_D	mg/L	0.066 F	0.086 F	0.022 F	ND	0.0295 D F	0.015 F	0.017 F
METALS	Lead	7439-92-1	mg/L	ND	ND	ND	ND	ND	ND	0.007 F
METALS	Lead, dissolved	7439-92-1_D	mg/L	ND	ND	ND	ND	ND	0.005 F	0.005 F
METALS	Magnesium	7439-95-4	mg/L	14	14.2	200 M	400 B	394.5 B	215	272
METALS	Magnesium, disso	7439-95-4_D	mg/L	13.8	15.9	237 M	402 B	409.5 B	249	296
METALS	Manganese	7439-96-5	mg/L	0.0161	0.0075	0.0741	0.0852	0.0898	0.074	0.0626
METALS	Manganese, disso	7439-96-5_D	mg/L	0.0063	0.0072	0.0894	0.0809	0.086	0.071	0.0553
METALS	Nickel	7440-02-0	mg/L	ND	ND	0.008 F	ND	ND	ND	ND

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Chemical										
Group	Chemical	CAS	Units	WSU-001	WSU-002	WS-001	WS-002	WS-003	WS-004	WS-005
METALS	Nickel, dissolved	7440-02-0_D	mg/L	ND	ND	ND	ND	0.006 D F	ND	ND
METALS	Potassium	7440-09-7	mg/L	1.67 F	0.93 F	57.2	116	115	62.3	79.5
METALS	Potassium, dissolved	7440-09-7_D	mg/L	1.37 F	0.78 F	69.8	117	117	71.6	85.4
METALS	Sodium	7440-23-5	mg/L	27.8	37.8	1,570 M	3,110 B	3,085 B	1,690	2,120
METALS	Sodium, dissolved	7440-23-5_D	mg/L	28	42	1,880 M	3,100 B	3,110 B	1,980	2,340
METALS	Vanadium	7440-62-2	mg/L	0.007 F	0.003 F	0.005 F	0.005 F	0.005 F	0.006 F	0.005 F
METALS	Vanadium, dissolved	7440-62-2_D	mg/L	0.004 F	0.003 F	0.006 F	0.004 F	0.0045 F	0.006 F	0.005 F
METALS	Zinc	7440-66-6	mg/L	0.009 F	0.003 F	0.003 F	0.002 F	0.0225 D	0.002 F	0.002 F
METALS	Zinc, dissolved	7440-66-6_D	mg/L	0.005 F	0.005 F	0.003 F	ND	0.004 F	0.004 F	0.005 F
HERB	Dalapon	75-99-0	µg/L	ND	ND	ND	ND	ND	ND	52 J
CONV	Chloride	CHLORIDE	mg/L	31.6	39.1	4,260	6,080	6,285	3,630	2,870
CONV	Cyanide	5955-70-0	mg/L	ND	ND	ND	ND	0.00275 D F	ND	ND
CONV	Nitrate	NITRATE-N	mg/L	0.19 F	6.2 F	1.04	0.79 F	0.785 F	1.05	1.11
CONV	Nitrite	NITRITE-N	mg/L	0.007 F	0.02	0.03	0.02	0.02	0.03	0.03
CONV	Sulfate	SULFATE	mg/L	11.3	23.7	612	875	891	543	409
CONV	Total Phosphorus-TOTAL PHOSPHORU		mg/L	0.2	0.1	0.1	0.1	0.1	0.1	0.1

Notes:

Chemical Groups

VOC = volatile organic compounds
 TPH = total petroleum hydrocarbons
 SVOC = semivolatile organic compounds
 PEST = pesticides
 HERB = herbicides
 CONV = conventionals

Abbreviations

µg/L = micrograms per liter
 mg/L = milligrams per liter
 NM = not measured
 ND = not detected

Data Qualifiers

F The detected concentration is below the reporting limit.
 J The analyte was positively identified; the quantitation is an estimation.
 R The data are unusable because of deficiencies in the ability to analyze the sample and meet QC criteria.
 B The analyte was detected in an associated blank, as well as in the sample.
 M A matrix effect was present.
 ND The analyte was not detected. The associated numerical value is at or below the method detection limit (MDL).
 D Applied to averaged results when non-"U" qualifiers are not identical.