

Table 5-12

Human Health Risk Screening Evaluation for Contaminants in Surface Water Samples - WSD

Bellows OU1 EE/CA, Bellows AFS, Hawaii

Chemical Name	Chemical Class	Concentration in Surface Water (mg/L)	Kp (cm/hour)	Chemical Intake (mg/kg-day)				Oral RfD (mg/kg-day)	Oral SF (kg-day/mg)	Ingestion HQ	Dermal HQ	Ingestion ILCR	Dermal ILCR
				Ingestion (non-carcinogen exposure)	Dermal contact (non-carcinogen exposure)	Ingestion (carcinogen exposure)	Dermal contact (carcinogen exposure)						
Toluene	VOC	1.10E-04	4.50E-02	8.43E-08	2.68E-07	7.22E-09	2.30E-08	0.2		4.21E-07	1.34E-06		
Aluminum	METALS	9.00E-02	1.00E-03	6.89E-05	4.88E-06	5.91E-06	4.18E-07	1		6.89E-05	4.88E-06		
Barium	METALS	1.24E-02	1.00E-03	9.50E-06	6.72E-07	8.14E-07	5.76E-08	0.07		1.36E-04	9.60E-06		
Lead	METALS	7.00E-03	1.00E-03	5.36E-06	3.79E-07	4.60E-07	3.25E-08						
Manganese	METALS	7.41E-02	1.00E-03	5.68E-05	4.01E-06	4.86E-06	3.44E-07	0.0467		1.22E-03	8.59E-05		
Vanadium	METALS	6.00E-03	1.00E-03	4.60E-06	3.25E-07	3.94E-07	2.79E-08	0.007		6.57E-04	4.64E-05		
Dalapon	HERB	5.20E-02	2.10E-04	3.98E-05	5.92E-07	3.41E-06	5.07E-08	0.03		1.33E-03	1.97E-05		

Chemical-specific HI	% Contribution	Chemical-specific ILCR	% Contribution
1.76E-06	0.05		
7.38E-05	2.07		
1.45E-04	4.07		
1.30E-03	36.43		
7.03E-04	19.68		
1.35E-03	37.72		

Total Hazard Index 3.57E-03 **Total Risk** 0.00E+00

EXPOSURE ASSUMPTIONS	
Exposure Setting	Recreational User
Exposure Case	RME
Surface Water Ingestion Rate - (L/day)	0.05
Exposed Skin Surface Area (cm ²)	1360
Dermal permeability coefficient (cm/hr)	chemical-specific
Body Weight - (kilograms)	46.5
Exposure Time (hr/day)	2.6
Number of Days/Year Exposed	260
Number of Years Exposed	6
Averaging Time - Noncancer (yrs)	6
Averaging Time - Noncancer (yrs)	70
Ingestion (Noncancer) (L/kg-day)	7.66E-04
Ingestion (Cancer) (L/kg-day)	6.57E-05
Dermal (Noncancer) (cm ² -hr/kg-day)	5.42E-02
Dermal (Cancer) (cm ² -hr/kg-day)	4.64E-03