[1]Tier 1 EAL SURFER SUMMARY REPORT
Hawai'i DOH (Summer 2016, rev Nov 2016)

Site Name: test
Site Address: test adress
test city HI 12345

Site ID Number:
Date of EAL Search: 1985-12-19

Selected Site Scenario	
Land Use:	Unrestricted
Groundwater Utility:	Drinking Water Resource
Distance To Nearest Surface Water Body:	>150m

Selected Chemical of Concern: **ANTIMONY**

Input Site Concentrations	
Soil (mg/kg):	10
Groundwater (ug/L):	5300
Soil Vapor (ug/m^3):	250000

Soil Environmental Hazards	Units	Tier 1 Action Level	[2]Potential Hazard?	[3]Referenced Table
Direct Exposure:	mg/kg	6.3E+00	Yes	Table I-1
Vapor Emissions To Indoor Air:	mg/kg	-	-	Table C-1b
Terrestrial Ecotoxicity:	mg/kg	site-specific	No	Table L
Gross Contamination:	mg/kg	1.0E+03	No	Table F-2
Leaching (threat to groundwater):	mg/kg	(Use batch test)	-	Table E-1
Background:	mg/kg	2.4E+00		
Final Soil Tier 1 EAL:	**mg/kg**	**6.3E+00**		
Basis:	**Direct Exposure**			

Groundwater Environmental Hazards	Units	Tier 1 Action Level	[2]Potential Hazard?	[3]Referenced Table
Drinking Water (Toxicity):	ug/L	6.0E+00	Yes	Table D-1b
Vapor Emissions To Indoor Air:	ug/L	-	-	Table C-1a
Aquatic Ecotoxicity:	ug/L	1.8E+02	Yes	Table D-4a
Gross Contamination:	ug/L	5.0E+04	No	Table G-1
Final Groundwater Tier 1 EAL:	**ug/L**	**6.0E+00**		
Basis:	**Drinking Water Toxicity**			

Other Tier 1 EALs:	Units	EAL	[2]Potential Hazard?	[3]Referenced Table
Shallow Soil Vapor:	ug/m^3	-	-	Table C-2
Indoor Air:	ug/m^3	-	-	Table C-3

Notes:

1. Include Surfer Summary Report in appendices of *Environmental Hazard Evaluation* (EHE) for contaminants that exceed Tier 1 EALs (refer to Chapter 3 of main text).
2. Environmental hazard could exist of concentration of contaminant exceeds action level.
3. Referenced tables presented in Appendix 1 of EHE guidance document.

Reference: HDOH 2016, Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Summer 2016): Hawai'i Department of Health, Hazard Evaluation and Emergency Response, http://hawaii.gov/health/environmental/hazard/index.html

Tier 1 Environmental Action Levels Surfer
Hawai'i DOH (Summer 2016, rev Nov 2016)

Summary of Toxicity and Fate & Transport Information

ANTIMONY

Human Toxicity Factors	Value	Units	Appendix 1 Reference Table
Cancer Slope Factor - oral		$(mg/kg\text{-}day)^{-1}$	Table H
Cancer Inhalation Unit Risk Factor		$(ug/m^3)^{-1}$	Table H
Reference Dose - oral	4.0E-04	mg/kg-day	Table H
Reference Dose - inhalation	#NAME?	(mg/m^3)	Table H
Gastro-Intestinal Absorption Factor	0.15	unitless	Table H
Skin Absorption Factor		unitless	Table H
Target Excess Cancer Risk Used:	#NAME?	unitless	Table I-1
Target Hazard Quotient Used:	0.2	unitless	Table I-1

Aquatic Habitat Protection Goals	Value	Units	Appendix 1 Reference Table
Freshwater Chronic Goal	130	ug/L	Table D-4a
Marine Chronic Goal	30	ug/L	Table D-4a
Estuary Chronic Goal	30	ug/L	Table D-4a
Freshwater Acute Goal	3000	ug/L	Table D-4a
Marine Acute Goal	180	ug/L	Table D-4a
Estuary Acute Goal	180	ug/L	Table D-4a
*Bioaccumulation Goal	15000	ug/L	Table D-4f

*Bioaccumulation goals used to screen surface water only (refer to Volume 1, Chapter 2 of EAL text).

Fate & Transport Information	Value	Units	Appendix 1 Reference Table
Molecular Weight	122		Table H
Physical State	nonvolatile solid		Table H
Organic Carbon Partition Coeff. (koc)	#NAME?	cm^3/g	Table H
Diffusivity in air	#NAME?	cm^2/s	Table H
Diffusivity in water	#NAME?	cm^2/s	Table H
Solubility (water)	#NAME?	mg/L	Table H
Henry's Law Constant	#NAME?	$atm\text{-}m^3/mol$	Table H
Henry's Law Constant	#NAME?	unitless	Table H

*Potential Health Effects	Target Organs & Health Effect
Carcinogen	#NAME?
Mutagen	#NAME?
Alimentary Tract	#NAME?
Cardiovascular	X
Developmental	#NAME?
Endocrine	#NAME?
Eye	X
Hematologic	X
Immune	#NAME?
Kidney	#NAME?
Nervous	#NAME?
Reproductive	X
Respiratory	X
Skin	#NAME?
Other	#NAME?

*Not intended to serve as a comprehensive source of toxicological information. Ultimate potential health effects dependent on exposure dose, duration of exposure and numerous other factors. Refer to Appendix 1, Table J for specific references.

Reference: HDOH 2016, Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater (Summer 2016): Hawai'i Department of Health, Hazard Evaluation and Emergency Response, http://hawaii.gov/health/environmental/hazard/index.html