J

Human Health Risk Assessment Risk Hazard Tables

Table J-1
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - SMA
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Soil	Ingestion	Arsenic (inorganic)	5.66E+03	mg/kg	5.66E+03	mg/kg	5.66E+03	5.33E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**8.0E-03**	**8.0E-03**
Soil	Dermal	Arsenic (inorganic)	5.66E+03	mg/kg	5.66E+03	mg/kg	5.66E+03	8.93E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.3E-03**	**1.3E-03**
Sediment	Dermal	Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	3.16E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.7E-03**	**4.7E-03**
Groundwater	Ingestion	Arsenic (Inorganic)	3.91E+01	µg/L	3.91E+01	µg/L	3.91E+01	9.49E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.4E-03**	**1.4E-03**
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Groundwater	Dermal	Arsenic (Inorganic)	3.91E+01	µg/L	3.91E-02	mg/L	3.91E-02	5.25E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	7.9E-06	7.9E-06
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Surface Water	Dermal	Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	6.76E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.0E-05**	**1.0E-05**
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	5.66E+03	mg/kg	8.32E-03	$µg/m^3$	8.32E-03	2.85E-03	$µg/m^3$	4.3E-03	$(µg/m^3)^{-1}$	**1.2E-05**	**1.2E-05**
		Chromium (hexavalent)	2.24E+01	mg/kg	3.29E-05	$µg/m^3$	3.29E-05	3.47E-05	$µg/m^3$	8.4E-02	$(µg/m^3)^{-1}$	2.9E-06	2.9E-06
											Cancer Risk	**1.6E-02**	**1.5E-02**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer	Cancer Risk One-Hit Eq.
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	6.53E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.8E-02**	**9.3E-02**
Large Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	2.73E-05	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.1E-05**	**4.1E-05**
Small Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.47E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**3.7E-04**	**3.7E-04**
Birds	Ingestion	Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.03E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.5E-03**	**1.5E-03**
Berries and Plants	Ingestion	Arsenic (Inorganic)	5.66E+03	mg/kg	3.40E+01	mg/kg	3.40E+01	6.09E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.1E-03**	**9.1E-03**
											Cancer Risk	**1.1E-01**	**1.0E-01**

Total Excess Cancer Risk	**1.2E-01**	**1.2E-01**

Table J-2
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - MPA
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Soil	Ingestion	Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	7.35E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.1E-02**	**1.1E-02**
Soil	Dermal	Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	1.23E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.8E-03**	**1.8E-03**
Sediment	Dermal	Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	3.16E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.7E-03**	**4.7E-03**
Groundwater	Ingestion	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	1.10E-01	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.6E-01**	**1.5E-01**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.38E-04	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	1.9E-06	1.9E-06
Groundwater	Dermal	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	6.08E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.1E-04**	**9.1E-04**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Surface Water	Dermal	Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	6.76E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.0E-05**	**1.0E-05**
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	7.80E+03	mg/kg	1.15E-02	µg/m^3	1.15E-02	3.93E-03	µg/m^3	4.3E-03	$(µg/m^3)^{-1}$	**1.7E-05**	**1.7E-05**
		Chromium (hexavalent)	2.41E+01	mg/kg	3.54E-05	µg/m^3	3.54E-05	3.74E-05	µg/m^3	8.4E-02	$(µg/m^3)^{-1}$	3.1E-06	3.1E-06
Air	Inhalation of Volatiles	Naphthalene	5.05E-01	mg/kg	3.19E-02	µg/m^3	3.19E-02	1.82E-02	µg/m^3	3.4E-05	$(µg/m^3)$-1	6.2E-07	6.2E-07
											Cancer Risk	**1.8E-01**	**1.7E-01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	6.53E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.8E-02**	**9.3E-02**
Large Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	2.73E-05	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.1E-05**	**4.1E-05**
Small Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.47E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**3.7E-04**	**3.7E-04**
Birds	Ingestion	Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.03E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.5E-03**	**1.5E-03**
Berries and Plants	Ingestion	Arsenic (Inorganic)	7.80E+03	mg/kg	4.68E+01	mg/kg	4.68E+01	8.40E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.3E-02**	**1.3E-02**
											Cancer Risk	**1.1E-01**	**1.1E-01**

Total Excess Cancer Risk	**3.0E-01**	**2.8E-01**

Table J-3
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - DA
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Soil	Ingestion	Arsenic (inorganic)	3.41E+03	mg/kg	3.41E+03	mg/kg	3.41E+03	3.21E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.8E-03**	**4.8E-03**
Soil	Dermal	Arsenic (inorganic)	3.41E+03	mg/kg	3.41E+03	mg/kg	3.41E+03	5.37E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**8.1E-04**	**8.1E-04**
Sediment	Dermal	Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	3.16E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.7E-03**	**4.7E-03**
Groundwater	Ingestion	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	1.10E-01	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.6E-01**	**1.5E-01**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.38E-04	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	1.9E-06	1.9E-06
Groundwater	Dermal	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	6.08E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.1E-04**	**9.1E-04**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Surface Water	Dermal	Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	6.76E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.0E-05**	**1.0E-05**
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	3.41E+03	mg/kg	5.01E-03	$\mu g/m^3$	5.01E-03	1.71E-03	$\mu g/m^3$	4.3E-03	$(\mu g/m^3)^{-1}$	7.4E-06	7.4E-06
		Chromium (hexavalent)	2.43E+01	mg/kg	3.57E-05	$\mu g/m^3$	3.57E-05	3.78E-05	$\mu g/m^3$	8.4E-02	$(\mu g/m^3)^{-1}$	3.2E-06	3.2E-06
											Cancer Risk	**1.8E-01**	**1.6E-01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	6.53E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.8E-02**	**9.3E-02**
Large Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	2.73E-05	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.1E-05**	**4.1E-05**
Small Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.47E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**3.7E-04**	**3.7E-04**
Birds	Ingestion	Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.03E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.5E-03**	**1.5E-03**
Berries and Plants	Ingestion	Arsenic (Inorganic)	3.41E+03	mg/kg	2.04E+01	mg/kg	2.04E+01	3.66E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**5.5E-03**	**5.5E-03**
											Cancer Risk	**1.1E-01**	**1.0E-01**

Table J-4
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational/Subsistence User
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk
Soil	Ingestion	Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	1.85E-03	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**2.8E-03**	**2.8E-03**
Soil	Dermal	Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	3.09E-04	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**4.6E-04**	**4.6E-04**
Sediment	Dermal	Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	3.16E-03	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**4.7E-03**	**4.7E-03**
Surface Water	Ingestion	Arsenic (Inorganic)	5.73E+02	µg/L	5.73E+02	µg/L	5.73E+02	7.94E-04	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**1.2E-03**	**1.2E-03**
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E+00	µg/L	1.50E+00	2.08E-06	mg/kg-d	2.9E-02	$(mg/kg\text{-}d)^{-1}$	6.0E-08	6.0E-08
Surface Water	Dermal	Arsenic (inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	2.25E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	3.4E-06	3.4E-06
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg\text{-}d)^{-1}$	0.0E+00	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	5.88E+03	mg/kg	1.87E-03	$\mu g/m^3$	1.87E-03	2.14E-04	$\mu g/m^3$	4.3E-03	$(\mu g/m^3)^{-1}$	9.2E-07	9.2E-07
		Chromium (hexavalent)	2.35E+01	mg/kg	7.47E-06	$\mu g/m^3$	7.47E-06	7.89E-06	$\mu g/m^3$	8.4E-02	$(\mu g/m3)^{-1}$	6.6E-07	6.6E-07
											Cancer Risk	**9.2E-03**	**9.1E-03**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Non-Salmon Fish	Ingestion	Arsenic (inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	1.31E-02	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**2.0E-02**	**1.9E-02**
Large Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	3.82E-07	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	5.7E-07	5.7E-07
Small Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	4.94E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	7.4E-06	7.4E-06
Birds	Ingestion	Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	3.41E-04	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**5.1E-04**	**5.1E-04**
Berries and Plants	Ingestion	Arsenic (Inorganic)	5.88E+03	mg/kg	3.53E+01	mg/kg	3.53E+01	6.33E-05	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**9.5E-05**	**9.5E-05**
											Cancer Risk	**2.0E-02**	**2.0E-02**

Total Excess Cancer Risk	**2.9E-02**	**2.9E-02**

Table J-5
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Mine Worker
Receptor Age: Combined Adult

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Soil	Ingestion	Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	1.48E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**2.2E-03**	**2.2E-03**
Soil	Dermal	Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	3.19E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.8E-04**	**4.8E-04**
Sediment	Dermal	Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	1.49E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**2.2E-03**	**2.2E-03**
Groundwater	Ingestion	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	3.80E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**5.7E-02**	**5.5E-02**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	4.78E-05	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	6.7E-07	6.7E-07
Groundwater	Dermal	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	2.78E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.2E-04**	**4.2E-04**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Surface Water	Dermal	Arsenic (inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	3.28E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	4.9E-06	4.9E-06
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	5.88E+03	mg/kg	8.65E-03	$µg/m^3$	8.65E-03	1.65E-03	$µg/m^3$	4.3E-03	$(µg/m^3)^{-1}$	7.1E-06	7.1E-06
		Chromium (hexavalent)	2.35E+01	mg/kg	3.45E-05	$µg/m^3$	3.45E-05	1.09E-05	$µg/m^3$	8.4E-02	$(µg/m^3)^{-1}$	9.2E-07	9.2E-07
											Cancer Risk	**6.2E-02**	**6.1E-02**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	4.37E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**6.6E-03**	**6.5E-03**
Large Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	1.27842E-07	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	1.9E-07	1.9E-07
Small Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	1.65E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	2.5E-06	2.5E-06
Birds	Ingestion	Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.14E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.7E-04**	**1.7E-04**
Berries and Plants	Ingestion	Arsenic (Inorganic)	5.88E+03	mg/kg	3.53E+01	mg/kg	3.53E+01	2.12E-05	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**3.2E-05**	**3.2E-05**
											Cancer Risk	**6.8E-03**	**6.7E-03**

Total Excess Cancer Risk	**6.9E-02**	**6.8E-02**

Table J-6
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - SMA
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Soil	Ingestion	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	1.14E-02	1.06E-01	mg/kg-d	1.0E+00	mg/kg-d	1.1E-02	1.1E-01
		Antimony	5.01E+01	mg/kg	5.01E+01	mg/kg	5.01E+01	5.29E-05	4.94E-04	mg/kg-d	4.0E-04	mg/kg-d	1.3E-01	**1.2E+00**
		Arsenic (inorganic)	5.66E+03	mg/kg	5.66E+03	mg/kg	5.66E+03	3.59E-03	3.35E-02	mg/kg-d	3.0E-04	mg/kg-d	**1.2E+01**	**1.1E+02**
		Barium	1.91E+02	mg/kg	1.91E+02	mg/kg	1.91E+02	2.02E-04	1.88E-03	mg/kg-d	2.0E-01	mg/kg-d	1.0E-03	9.4E-03
		Chromium	2.24E+01	mg/kg	2.24E+01	mg/kg	2.24E+01	2.36E-05	2.21E-04	mg/kg-d	3.0E-03	mg/kg-d	7.9E-03	7.4E-02
		Cobalt	1.79E+01	mg/kg	1.79E+01	mg/kg	1.79E+01	1.89E-05	1.76E-04	mg/kg-d	3.0E-04	mg/kg-d	6.3E-02	5.9E-01
		Iron	4.01E+04	mg/kg	4.01E+04	mg/kg	4.01E+04	4.24E-02	3.96E-01	mg/kg-d	7.0E-01	mg/kg-d	6.1E-02	5.7E-01
		Manganese	8.96E+02	mg/kg	8.96E+02	mg/kg	8.96E+02	9.47E-04	8.84E-03	mg/kg-d	2.4E-02	mg/kg-d	3.9E-02	3.7E-01
		Mercury	3.94E+01	mg/kg	3.94E+01	mg/kg	3.94E+01	4.17E-05	3.89E-04	mg/kg-d	3.0E-04	mg/kg-d	1.4E-01	**1.3E+00**
		Thallium	2.00E-01	mg/kg	2.00E-01	mg/kg	2.00E-01	2.11E-07	1.97E-06	mg/kg-d	1.0E-05	mg/kg-d	2.1E-02	2.0E-01
		Vanadium	3.56E+01	mg/kg	3.56E+01	mg/kg	3.56E+01	3.76E-05	3.51E-04	mg/kg-d	5.0E-03	mg/kg-d	7.5E-03	7.0E-02
												Hazard Index	**1.2E+01**	**1.2E+02**
Soil	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.0E+00	0.0E+00
		Antimony	5.01E+01	mg/kg	5.01E+01	mg/kg	5.01E+01	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.0E+00	0.0E+00
		Arsenic	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Arsenic (inorganic)	5.66E+03	mg/kg	5.66E+03	mg/kg	5.66E+03	7.16E-04	4.69E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.4E+00**	**1.6E+01**
		Barium	1.91E+02	mg/kg	1.91E+02	mg/kg	1.91E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.0E+00	0.0E+00
		Chromium	2.24E+01	mg/kg	2.24E+01	mg/kg	2.24E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.0E+00	0.0E+00
		Cobalt	1.79E+01	mg/kg	1.79E+01	mg/kg	1.79E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Iron	4.01E+04	mg/kg	4.01E+04	mg/kg	4.01E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.0E+00	0.0E+00
		Manganese	8.96E+02	mg/kg	8.96E+02	mg/kg	8.96E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.0E+00	0.0E+00
		Mercury	3.94E+01	mg/kg	3.94E+01	mg/kg	3.94E+01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.0E+00	0.0E+00
		Thallium	2.00E-01	mg/kg	2.00E-01	mg/kg	2.00E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.0E+00	0.0E+00
		Vanadium	3.56E+01	mg/kg	3.56E+01	mg/kg	3.56E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.0E+00	0.0E+00
												Hazard Index	**2.4E+00**	**1.6E+01**
Sediment	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.0E+00	0.0E+00
		Antimony	4.46E+03	mg/kg	4.46E+03	mg/kg	4.46E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.0E+00	0.0E+00
		Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	2.53E-03	1.66E-02	mg/kg-d	3.0E-04	mg/kg-d	**8.4E+00**	**5.5E+01**
		Barium	6.81E+02	mg/kg	6.81E+02	mg/kg	6.81E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.0E+00	0.0E+00
		Cadmium	2.92E-01	mg/kg	2.92E-01	mg/kg	2.92E-01	0.00E+00	0.00E+00	mg/kg-d	2.5E-05	mg/kg-d	0.0E+00	0.0E+00
		Chromium	2.57E+01	mg/kg	2.57E+01	mg/kg	2.57E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.0E+00	0.0E+00
		Cobalt	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Copper	3.72E+01	mg/kg	3.72E+01	mg/kg	3.72E+01	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.0E+00	0.0E+00
		Iron	9.92E+04	mg/kg	9.92E+04	mg/kg	9.92E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.0E+00	0.0E+00
		Manganese	2.02E+03	mg/kg	2.02E+03	mg/kg	2.02E+03	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.0E+00	0.0E+00
		Mercury	6.66E+01	mg/kg	6.66E+01	mg/kg	6.66E+01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.0E+00	0.0E+00
		Methyl Mercury	5.23E-03	mg/kg	5.23E-03	mg/kg	5.23E-03	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Nickel	5.70E+01	mg/kg	5.70E+01	mg/kg	5.70E+01	0.00E+00	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Selenium	4.87E-01	mg/kg	4.87E-01	mg/kg	4.87E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.0E+00	0.0E+00
		Silver	1.14E-01	mg/kg	1.14E-01	mg/kg	1.14E-01	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Thallium	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.0E+00	0.0E+00
		Vanadium	3.10E+01	mg/kg	3.10E+01	mg/kg	3.10E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.0E+00	0.0E+00
		Zinc	9.16E+01	mg/kg	9.16E+01	mg/kg	9.16E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.0E+00	0.0E+00
												Hazard Index	**8.4E+00**	**5.5E+01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Ingestion	Antimony	1.21E+00	µg/L	1.21E+00	µg/L	1.21E+00	3.32E-05	7.74E-05	mg/kg-d	4.0E-04	mg/kg-d	8.3E-02	1.9E-01
		Arsenic (Inorganic)	3.91E+01	µg/L	3.91E+01	µg/L	3.91E+01	1.07E-03	2.50E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.6E+00**	**8.3E+00**
		Barium	2.24E+02	µg/L	2.24E+02	µg/L	2.24E+02	6.14E-03	1.43E-02	mg/kg-d	2.0E-01	mg/kg-d	3.1E-02	7.2E-02
		Chromium	1.06E+01	µg/L	1.06E+01	µg/L	1.06E+01	2.90E-04	6.78E-04	mg/kg-d	3.0E-03	mg/kg-d	9.7E-02	2.3E-01
		Cobalt	9.48E+00	µg/L	9.48E+00	µg/L	9.48E+00	2.60E-04	6.06E-04	mg/kg-d	3.0E-04	mg/kg-d	8.7E-01	**2.0E+00**
		Iron	2.67E+03	µg/L	2.67E+03	µg/L	2.67E+03	7.32E-02	1.71E-01	mg/kg-d	7.0E-01	mg/kg-d	1.0E-01	2.4E-01
		Manganese	7.78E+02	µg/L	7.78E+02	µg/L	7.78E+02	2.13E-02	4.97E-02	mg/kg-d	2.4E-02	mg/kg-d	8.9E-01	**2.1E+00**
		Mercury	2.47E-01	µg/L	2.47E-01	µg/L	2.47E-01	6.77E-06	1.58E-05	mg/kg-d	3.0E-04	mg/kg-d	2.3E-02	5.3E-02
		Nickel	2.83E+01	µg/L	2.83E+01	µg/L	2.83E+01	7.75E-04	1.81E-03	mg/kg-d	2.0E-02	mg/kg-d	3.9E-02	9.0E-02
		Selenium		µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.0E+00	0.0E+00
		Thallium	1.50E-02	µg/L	1.50E-02	µg/L	1.50E-02	4.11E-07	9.59E-07	mg/kg-d	1.0E-05	mg/kg-d	4.1E-02	9.6E-02
		Bis(2-ethylhexyl)phthalate		µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.0E+00	0.0E+00
												Hazard Index	**5.7E+00**	**1.3E+01**
Groundwater	Dermal	Antimony	1.21E+00	µg/L	1.21E-03	mg/L	1.21E-03	1.73E-07	5.11E-07	mg/kg-d	6.0E-05	mg/kg-d	2.9E-03	8.5E-03
		Arsenic (Inorganic)	3.91E+01	µg/L	3.91E-02	mg/L	3.91E-02	5.59E-06	1.65E-05	mg/kg-d	3.0E-04	mg/kg-d	1.9E-02	5.5E-02
		Barium	2.24E+02	µg/L	2.24E-01	mg/L	2.24E-01	3.20E-05	9.45E-05	mg/kg-d	1.4E-02	mg/kg-d	2.3E-03	6.8E-03
		Chromium	1.06E+01	µg/L	1.06E-02	mg/L	1.06E-02	1.52E-06	4.47E-06	mg/kg-d	7.5E-05	mg/kg-d	2.0E-02	6.0E-02
		Cobalt	9.48E+00	µg/L	9.48E-03	mg/L	9.48E-03	5.42E-07	1.60E-06	mg/kg-d	3.0E-04	mg/kg-d	1.8E-03	5.3E-03
		Iron	2.67E+03	µg/L	2.67E+00	mg/L	2.67E+00	3.82E-04	1.13E-03	mg/kg-d	7.0E-01	mg/kg-d	5.5E-04	1.6E-03
		Manganese	7.78E+02	µg/L	7.78E-01	mg/L	7.78E-01	1.11E-04	3.28E-04	mg/kg-d	9.6E-04	mg/kg-d	1.2E-01	3.4E-01
		Mercury	2.47E-01	µg/L	2.47E-04	mg/L	2.47E-04	3.53E-08	1.04E-07	mg/kg-d	2.1E-05	mg/kg-d	1.7E-03	5.0E-03
		Nickel	2.83E+01	µg/L	2.83E-02	mg/L	2.83E-02	8.09E-07	2.39E-06	mg/kg-d	8.0E-04	mg/kg-d	1.0E-03	3.0E-03
		Selenium		µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.0E+00	0.0E+00
		Thallium	1.50E-02	µg/L	1.50E-05	mg/L	1.50E-05	2.15E-09	6.33E-09	mg/kg-d	1.0E-05	mg/kg-d	2.1E-04	6.3E-04
		Bis(2-ethylhexyl)phthalate		µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.0E+00	0.0E+00
												Hazard Index	1.7E-01	4.9E-01
Surface Water	Dermal	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	1.81E-06	4.16E-06	mg/kg-d	6.0E-05	mg/kg-d	3.0E-02	6.9E-02
		Arsenic	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	7.66E-06	1.76E-05	mg/kg-d	3.0E-04	mg/kg-d	2.6E-02	5.9E-02
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	1.07E-10	2.45E-10	mg/kg-d	2.5E-05	mg/kg-d	4.3E-06	9.8E-06
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	4.10E-09	9.39E-09	mg/kg-d	7.5E-05	mg/kg-d	5.5E-05	1.3E-04
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	1.63E-08	3.73E-08	mg/kg-d	3.0E-04	mg/kg-d	5.4E-05	1.2E-04
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	5.77E-09	1.32E-08	mg/kg-d	4.0E-02	mg/kg-d	1.4E-07	3.3E-07
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	1.77E-05	4.07E-05	mg/kg-d	7.0E-01	mg/kg-d	2.5E-05	5.8E-05
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	2.28E-06	5.23E-06	mg/kg-d	9.6E-04	mg/kg-d	2.4E-03	5.5E-03
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	3.23E-09	7.40E-09	mg/kg-d	2.1E-05	mg/kg-d	1.5E-04	3.5E-04
		Methyl Mercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	4.18E-12	9.57E-12	mg/kg-d	1.0E-04	mg/kg-d	4.2E-08	9.6E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	2.82E-08	6.47E-08	mg/kg-d	8.0E-04	mg/kg-d	3.5E-05	8.1E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	5.15E-09	1.18E-08	mg/kg-d	5.0E-03	mg/kg-d	1.0E-06	2.4E-06
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	2.09E-10	4.79E-10	mg/kg-d	2.0E-04	mg/kg-d	1.0E-06	2.4E-06
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	5.84E-09	1.34E-08	mg/kg-d	3.0E-01	mg/kg-d	1.9E-08	4.5E-08
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.0E+00	0.0E+00
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	4.28E-07	9.81E-07	mg/kg-d	2.0E-02	mg/kg-d	2.1E-05	4.9E-05
												Hazard Index	5.9E-02	1.3E-01

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Air	Dust Particulates or Volatile from Soil	Aluminum	1.08E+04	mg/kg	1.59E-05	mg/m^3	1.59E-05	1.17E-05	1.17E-05	mg/m^3	5.0E-03	mg/m^3	2.3E-03	2.3E-03
		Antimony	5.01E+01	mg/kg	7.37E-08	mg/m^3	7.37E-08	5.45E-08	5.45E-08	mg/m^3	--	mg/m^3	--	--
		Arsenic (inorganic)	5.66E+03	mg/kg	8.32E-06	mg/m^3	8.32E-06	3.69E-06	3.69E-06	mg/m^3	1.5E-05	mg/m^3	2.5E-01	2.5E-01
		Barium	1.91E+02	mg/kg	2.81E-07	mg/m^3	2.81E-07	2.08E-07	2.08E-07	mg/m^3	5.0E-04	mg/m^3	4.2E-04	4.2E-04
		Chromium	2.24E+01	mg/kg	3.29E-08	mg/m^3	3.29E-08	2.43E-08	2.43E-08	mg/m^3	1.0E-04	mg/m^3	2.4E-04	2.4E-04
		Cobalt	1.79E+01	mg/kg	2.63E-08	mg/m^3	2.63E-08	1.94E-08	1.94E-08	mg/m^3	6.0E-06	mg/m^3	3.2E-03	3.2E-03
		Iron	4.01E+04	mg/kg	5.90E-05	mg/m^3	5.90E-05	4.37E-05	4.37E-05	mg/m^3	--	mg/m^3	--	--
		Manganese	8.96E+02	mg/kg	1.32E-06	mg/m^3	1.32E-06	9.75E-07	9.75E-07	mg/m^3	5.0E-05	mg/m^3	1.9E-02	1.9E-02
		Mercury	3.94E+01	mg/kg	1.74E-03	mg/m^3	1.74E-03	1.29E-03	1.29E-03	mg/m^3	3.0E-04	mg/m^3	**4.3E+00**	**4.3E+00**
		Thallium	2.00E-01	mg/kg	2.94E-10	mg/m^3	2.94E-10	2.18E-10	2.18E-10	mg/m^3	--	mg/m^3	--	--
		Vanadium	3.56E+01	mg/kg	5.23E-08	mg/m^3	5.23E-08	3.87E-08	3.87E-08	mg/m^3	--	mg/m^3	--	--
												Hazard Index	**4.6E+00**	**4.6E+00**
Air	Volatile from Groundwater	Mercury	2.47E-01	µg/L	1.24E-04	mg/m^3	1.24E-04	3.70E-06	3.70E-06	mg/m^3	3.0E-04	mg/m^3	1.2E-02	1.2E-02
												Hazard Index	1.2E-02	1.2E-02

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Non-Salmon Fish	Ingestion	Aluminum	2.67E+01	mg/kg	2.67E+01	mg/kg	2.67E+01	1.03E-01	2.32E-01	mg/kg-d	1.0E+00	mg/kg-d	1.0E-01	2.3E-01
		Antimony	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	6.60E-02	1.48E-01	mg/kg-d	4.0E-04	mg/kg-d	**1.7E+02**	**3.7E+02**
		Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	7.44E-02	1.67E-01	mg/kg-d	3.0E-04	mg/kg-d	**2.5E+02**	**5.6E+02**
		Barium	6.06E+00	mg/kg	6.06E+00	mg/kg	6.06E+00	2.35E-02	5.26E-02	mg/kg-d	2.0E-01	mg/kg-d	1.2E-01	2.6E-01
		Cadmium	4.20E-02	mg/kg	4.20E-02	mg/kg	4.20E-02	1.63E-04	3.64E-04	mg/kg-d	1.0E-03	mg/kg-d	1.6E-01	3.6E-01
		Chromium	1.99E-01	mg/kg	1.99E-01	mg/kg	1.99E-01	7.70E-04	1.73E-03	mg/kg-d	3.0E-03	mg/kg-d	2.6E-01	5.8E-01
		Cobalt	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.0E+00	0.0E+00
		Copper	1.24E+00	mg/kg	1.24E+00	mg/kg	1.24E+00	4.79E-03	1.07E-02	mg/kg-d	4.0E-02	mg/kg-d	1.2E-01	2.7E-01
		Iron	1.20E+02	mg/kg	1.20E+02	mg/kg	1.20E+02	4.66E-01	1.04E+00	mg/kg-d	7.0E-01	mg/kg-d	6.7E-01	**1.5E+00**
		Manganese	1.54E+01	mg/kg	1.54E+01	mg/kg	1.54E+01	5.97E-02	1.34E-01	mg/kg-d	1.4E-01	mg/kg-d	4.3E-01	9.6E-01
		Methyl Mercury	2.07E-01	mg/kg	6.21E-01	mg/kg	6.21E-01	2.40E-03	5.39E-03	mg/kg-d	1.0E-04	mg/kg-d	**2.4E+01**	**5.4E+01**
		Nickel	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	5.77E-04	1.29E-03	mg/kg-d	2.0E-02	mg/kg-d	2.9E-02	6.5E-02
		Selenium	1.43E+00	mg/kg	1.43E+00	mg/kg	1.43E+00	5.54E-03	1.24E-02	mg/kg-d	5.0E-03	mg/kg-d	**1.1E+00**	**2.5E+00**
		Silver	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.0E+00	0.0E+00
		Thallium	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.0E+00	0.0E+00
		Vanadium	1.81E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	7.01E-04	1.57E-03	mg/kg-d	5.0E-03	mg/kg-d	1.4E-01	3.1E-01
		Zinc	2.56E+01	mg/kg	2.56E+01	mg/kg	2.56E+01	9.91E-02	2.22E-01	mg/kg-d	3.0E-01	mg/kg-d	3.3E-01	7.4E-01
												Hazard Index	**4.4E+02**	**9.9E+02**
Large Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	6.43E-01	mg/kg	6.43E-01	6.96E-04	1.56E-03	mg/kg-d	1.0E+00	mg/kg-d	7.0E-04	1.6E-03
		Antimony	2.72E+00	mg/kg	7.35E-02	mg/kg	7.35E-02	7.96E-05	1.78E-04	mg/kg-d	4.0E-04	mg/kg-d	2.0E-01	4.5E-01
		Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	3.11E-05	6.97E-05	mg/kg-d	3.0E-04	mg/kg-d	1.0E-01	2.3E-01
		Barium	1.55E+02	mg/kg	6.29E-01	mg/kg	6.29E-01	6.81E-04	1.52E-03	mg/kg-d	2.0E-01	mg/kg-d	3.4E-03	7.6E-03
		Chromium	8.55E-01	mg/kg	1.27E-01	mg/kg	1.27E-01	1.37E-04	3.08E-04	mg/kg-d	3.0E-03	mg/kg-d	4.6E-02	1.0E-01
		Cobalt	3.35E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	1.96E-04	4.39E-04	mg/kg-d	3.0E-04	mg/kg-d	6.5E-01	**1.5E+00**
		Iron	2.96E+01	mg/kg	1.60E+01	mg/kg	1.60E+01	1.73E-02	3.87E-02	mg/kg-d	7.0E-01	mg/kg-d	2.5E-02	5.5E-02
		Manganese	7.15E+02	mg/kg	7.72E+00	mg/kg	7.72E+00	8.36E-03	1.87E-02	mg/kg-d	1.4E-01	mg/kg-d	6.0E-02	1.3E-01
		Mercury	2.10E-01	mg/kg	1.42E+00	mg/kg	1.42E+00	1.53E-03	3.44E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.1E+00**	**1.1E+01**
		Thallium	1.62E-02	mg/kg	1.75E-02	mg/kg	1.75E-02	1.89E-05	4.24E-05	mg/kg-d	1.0E-05	mg/kg-d	**1.9E+00**	**4.2E+00**
		Vanadium	6.45E-02	mg/kg	4.35E-03	mg/kg	4.35E-03	4.71E-06	1.06E-05	mg/kg-d	5.0E-03	mg/kg-d	9.4E-04	2.1E-03
												Hazard Index	**8.1E+00**	**1.8E+01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Small Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	1.59E+01	mg/kg	1.59E+01	8.39E-03	1.88E-02	mg/kg-d	1.0E+00	mg/kg-d	8.4E-03	1.9E-02
		Antimony	2.72E+00	mg/kg	2.72E+00	mg/kg	2.72E+00	1.44E-03	3.23E-03	mg/kg-d	4.0E-04	mg/kg-d	**3.6E+00**	**8.1E+00**
		Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.81E-04	6.30E-04	mg/kg-d	3.0E-04	mg/kg-d	9.4E-01	**2.1E+00**
		Barium	1.55E+02	mg/kg	1.55E+02	mg/kg	1.55E+02	8.20E-02	1.84E-01	mg/kg-d	2.0E-01	mg/kg-d	4.1E-01	9.2E-01
		Chromium	8.55E-01	mg/kg	8.55E-01	mg/kg	8.55E-01	4.52E-04	1.01E-03	mg/kg-d	3.0E-03	mg/kg-d	1.5E-01	3.4E-01
		Cobalt	3.35E-01	mg/kg	3.35E-01	mg/kg	3.35E-01	1.77E-04	3.97E-04	mg/kg-d	3.0E-04	mg/kg-d	5.9E-01	**1.3E+00**
		Iron	2.96E+01	mg/kg	2.96E+01	mg/kg	2.96E+01	1.56E-02	3.50E-02	mg/kg-d	7.0E-01	mg/kg-d	2.2E-02	5.0E-02
		Manganese	7.15E+02	mg/kg	7.15E+02	mg/kg	7.15E+02	3.78E-01	8.46E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.7E+00**	**6.0E+00**
		Mercury	2.10E-01	mg/kg	2.10E-01	mg/kg	2.10E-01	1.11E-04	2.49E-04	mg/kg-d	3.0E-04	mg/kg-d	3.7E-01	8.3E-01
		Thallium	1.62E-02	mg/kg	1.62E-02	mg/kg	1.62E-02	8.56E-06	1.92E-05	mg/kg-d	1.0E-05	mg/kg-d	8.6E-01	**1.9E+00**
		Vanadium	6.45E-02	mg/kg	6.45E-02	mg/kg	6.45E-02	3.41E-05	7.64E-05	mg/kg-d	5.0E-03	mg/kg-d	6.8E-03	1.5E-02
												Hazard Index	**9.7E+00**	**2.2E+01**
Birds	Ingestion	Aluminum	1.30E+02	mg/kg	1.30E+02	mg/kg	1.30E+02	2.01E-02	4.50E-02	mg/kg-d	1.0E+00	mg/kg-d	2.0E-02	4.5E-02
		Antimony	1.03E+01	mg/kg	1.03E+01	mg/kg	1.03E+01	1.60E-03	3.59E-03	mg/kg-d	4.0E-04	mg/kg-d	**4.0E+00**	**9.0E+00**
		Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.18E-03	2.64E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.9E+00**	**8.8E+00**
		Barium	5.99E+01	mg/kg	5.99E+01	mg/kg	5.99E+01	9.30E-03	2.08E-02	mg/kg-d	2.0E-01	mg/kg-d	4.6E-02	1.0E-01
		Chromium	9.19E-01	mg/kg	9.19E-01	mg/kg	9.19E-01	1.43E-04	3.20E-04	mg/kg-d	3.0E-03	mg/kg-d	4.8E-02	1.1E-01
		Cobalt	2.33E-01	mg/kg	2.33E-01	mg/kg	2.33E-01	3.62E-05	8.10E-05	mg/kg-d	3.0E-04	mg/kg-d	1.2E-01	2.7E-01
		Iron	1.97E+02	mg/kg	1.97E+02	mg/kg	1.97E+02	3.06E-02	6.86E-02	mg/kg-d	7.0E-01	mg/kg-d	4.4E-02	9.8E-02
		Manganese	1.90E+03	mg/kg	1.90E+03	mg/kg	1.90E+03	2.96E-01	6.62E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.1E+00**	**4.7E+00**
		Mercury	5.64E+00	mg/kg	5.64E+00	mg/kg	5.64E+00	8.76E-04	1.96E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.9E+00**	**6.5E+00**
		Thallium	2.10E-02	mg/kg	2.10E-02	mg/kg	2.10E-02	3.26E-06	7.30E-06	mg/kg-d	1.0E-05	mg/kg-d	3.3E-01	7.3E-01
		Vanadium	4.70E-01	mg/kg	4.70E-01	mg/kg	4.70E-01	7.30E-05	1.63E-04	mg/kg-d	5.0E-03	mg/kg-d	1.5E-02	3.3E-02
												Hazard Index	**1.4E+01**	**3.0E+01**
Berries and Plants	Ingestion	Aluminum	1.08E+04	mg/kg	7.01E+00	mg/kg	7.01E+00	1.43E-03	3.21E-03	mg/kg-d	1.0E+00	mg/kg-d	1.4E-03	3.2E-03
		Antimony	5.01E+01	mg/kg	1.50E+00	mg/kg	1.50E+00	3.07E-04	6.88E-04	mg/kg-d	4.0E-04	mg/kg-d	7.7E-01	**1.7E+00**
		Arsenic (inorganic)	5.66E+03	mg/kg	3.40E+01	mg/kg	3.40E+01	6.94E-03	1.55E-02	mg/kg-d	3.0E-04	mg/kg-d	**2.3E+01**	**5.2E+01**
		Barium	1.91E+02	mg/kg	2.87E+00	mg/kg	2.87E+00	5.85E-04	1.31E-03	mg/kg-d	2.0E-01	mg/kg-d	2.9E-03	6.6E-03
		Chromium	2.24E+01	mg/kg	1.01E-01	mg/kg	1.01E-01	2.06E-05	4.60E-05	mg/kg-d	3.0E-03	mg/kg-d	6.9E-03	1.5E-02
		Cobalt	1.79E+01	mg/kg	1.25E-01	mg/kg	1.25E-01	2.55E-05	5.72E-05	mg/kg-d	3.0E-04	mg/kg-d	8.5E-02	1.9E-01
		Iron	4.01E+04	mg/kg	4.01E+01	mg/kg	4.01E+01	8.20E-03	1.84E-02	mg/kg-d	7.0E-01	mg/kg-d	1.2E-02	2.6E-02
		Manganese	8.96E+02	mg/kg	4.48E+01	mg/kg	4.48E+01	9.15E-03	2.05E-02	mg/kg-d	1.4E-01	mg/kg-d	6.5E-02	1.5E-01
		Mercury	3.94E+01	mg/kg	7.89E+00	mg/kg	7.89E+00	1.61E-03	3.61E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.4E+00**	**1.2E+01**
		Thallium	2.00E-01	mg/kg	8.00E-05	mg/kg	8.00E-05	1.63E-08	3.66E-08	mg/kg-d	1.0E-05	mg/kg-d	1.6E-03	3.7E-03
		Vanadium	3.56E+01	mg/kg	1.07E-01	mg/kg	1.07E-01	2.18E-05	4.89E-05	mg/kg-d	5.0E-03	mg/kg-d	4.4E-03	9.8E-03
												Hazard Index	**2.9E+01**	**6.6E+01**
												Total Hazard Index	**5.4E+02**	**1.3E+03**

Table J-7
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - MPA
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Soil	Ingestion	Aluminum	9.36E+03	mg/kg	9.36E+03	mg/kg	9.36E+03	9.90E-03	9.24E-02	mg/kg-d	1.0E+00	mg/kg-d	9.90E-03	9.2E-02
		Antimony	4.52E+03	mg/kg	4.52E+03	mg/kg	4.52E+03	4.77E-03	4.45E-02	mg/kg-d	4.0E-04	mg/kg-d	**1.19E+01**	**1.1E+02**
		Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	4.95E-03	4.62E-02	mg/kg-d	3.0E-04	mg/kg-d	**1.65E+01**	**1.5E+02**
		Barium	3.79E+02	mg/kg	3.79E+02	mg/kg	3.79E+02	4.01E-04	3.74E-03	mg/kg-d	2.0E-01	mg/kg-d	2.00E-03	1.9E-02
		Chromium	2.41E+01	mg/kg	2.41E+01	mg/kg	2.41E+01	2.54E-05	2.37E-04	mg/kg-d	3.0E-03	mg/kg-d	8.48E-03	7.9E-02
		Cobalt	1.61E+01	mg/kg	1.61E+01	mg/kg	1.61E+01	1.70E-05	1.59E-04	mg/kg-d	3.0E-04	mg/kg-d	5.68E-02	5.3E-01
		Iron	3.71E+04	mg/kg	3.71E+04	mg/kg	3.71E+04	3.92E-02	3.66E-01	mg/kg-d	7.0E-01	mg/kg-d	5.60E-02	5.2E-01
		Manganese	7.28E+02	mg/kg	7.28E+02	mg/kg	7.28E+02	7.69E-04	7.18E-03	mg/kg-d	2.4E-02	mg/kg-d	3.21E-02	3.0E-01
		Mercury	5.06E+02	mg/kg	5.06E+02	mg/kg	5.06E+02	5.35E-04	4.99E-03	mg/kg-d	3.0E-04	mg/kg-d	**1.78E+00**	**1.7E+01**
		Thallium	1.74E-01	mg/kg	1.74E-01	mg/kg	1.74E-01	1.84E-07	1.72E-06	mg/kg-d	1.0E-05	mg/kg-d	1.84E-02	1.7E-01
		Vanadium	2.98E+01	mg/kg	2.98E+01	mg/kg	2.98E+01	3.15E-05	2.94E-04	mg/kg-d	5.0E-03	mg/kg-d	6.30E-03	5.9E-02
		Naphthalene	5.05E-01	mg/kg	5.05E-01	mg/kg	5.05E-01	5.33E-07	4.98E-06	mg/kg-d	2.0E-02	mg/kg-d	2.67E-05	2.5E-04
												Hazard Index	**3.04E+01**	**2.84E+02**
Soil	Dermal	Aluminum	9.36E+03	mg/kg	9.36E+03	mg/kg	9.36E+03	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.52E+03	mg/kg	4.52E+03	mg/kg	4.52E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	9.87E-04	6.47E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.29E+00**	**2.2E+01**
		Barium	3.79E+02	mg/kg	3.79E+02	mg/kg	3.79E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.41E+01	mg/kg	2.41E+01	mg/kg	2.41E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.61E+01	mg/kg	1.61E+01	mg/kg	1.61E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Iron	3.71E+04	mg/kg	3.71E+04	mg/kg	3.71E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	7.28E+02	mg/kg	7.28E+02	mg/kg	7.28E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	5.06E+02	mg/kg	5.06E+02	mg/kg	5.06E+02	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.74E-01	mg/kg	1.74E-01	mg/kg	1.74E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	2.98E+01	mg/kg	2.98E+01	mg/kg	2.98E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	5.05E-01	mg/kg	5.05E-01	mg/kg	5.05E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**3.29E+00**	**2.16E+01**
Sediment	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.46E+03	mg/kg	4.46E+03	mg/kg	4.46E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	2.53E-03	1.66E-02	mg/kg-d	3.0E-04	mg/kg-d	**8.43E+00**	**5.5E+01**
		Barium	6.81E+02	mg/kg	6.81E+02	mg/kg	6.81E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Cadmium	2.92E-01	mg/kg	2.92E-01	mg/kg	2.92E-01	0.00E+00	0.00E+00	mg/kg-d	2.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.57E+01	mg/kg	2.57E+01	mg/kg	2.57E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	3.72E+01	mg/kg	3.72E+01	mg/kg	3.72E+01	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Iron	9.92E+04	mg/kg	9.92E+04	mg/kg	9.92E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	2.02E+03	mg/kg	2.02E+03	mg/kg	2.02E+03	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	6.66E+01	mg/kg	6.66E+01	mg/kg	6.66E+01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Methyl Mercury	5.23E-03	mg/kg	5.23E-03	mg/kg	5.23E-03	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Nickel	5.70E+01	mg/kg	5.70E+01	mg/kg	5.70E+01	0.00E+00	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Selenium	4.87E-01	mg/kg	4.87E-01	mg/kg	4.87E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Silver	1.14E-01	mg/kg	1.14E-01	mg/kg	1.14E-01	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	3.10E+01	mg/kg	3.10E+01	mg/kg	3.10E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Zinc	9.16E+01	mg/kg	9.16E+01	mg/kg	9.16E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**8.43E+00**	**5.52E+01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Ingestion	Antimony	1.31E+04	µg/L	1.31E+04	µg/L	1.31E+04	3.59E-01	8.37E-01	mg/kg-d	4.0E-04	mg/kg-d	**8.97E+02**	**2.1E+03**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	1.24E-01	2.90E-01	mg/kg-d	3.0E-04	mg/kg-d	**4.14E+02**	**9.7E+02**
		Barium	3.65E+02	µg/L	3.65E+02	µg/L	3.65E+02	1.00E-02	2.33E-02	mg/kg-d	2.0E-01	mg/kg-d	5.00E-02	1.2E-01
		Chromium	1.06E+01	µg/L	1.06E+01	µg/L	1.06E+01	2.90E-04	6.78E-04	mg/kg-d	3.0E-03	mg/kg-d	9.68E-02	2.3E-01
		Cobalt	4.05E+01	µg/L	4.05E+01	µg/L	4.05E+01	1.11E-03	2.59E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.70E+00**	**8.6E+00**
		Iron	2.24E+04	µg/L	2.24E+04	µg/L	2.24E+04	6.14E-01	1.43E+00	mg/kg-d	7.0E-01	mg/kg-d	8.77E-01	**2.0E+00**
		Manganese	7.37E+03	µg/L	7.37E+03	µg/L	7.37E+03	2.02E-01	4.71E-01	mg/kg-d	2.4E-02	mg/kg-d	**8.41E+00**	**2.0E+01**
		Mercury	5.65E+01	µg/L	5.65E+01	µg/L	5.65E+01	1.55E-03	3.61E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.16E+00**	**1.2E+01**
		Nickel	3.59E+01	µg/L	3.59E+01	µg/L	3.59E+01	9.84E-04	2.29E-03	mg/kg-d	2.0E-02	mg/kg-d	4.92E-02	1.1E-01
		Selenium	5.40E+00	µg/L	5.40E+00	µg/L	5.40E+00	1.48E-04	3.45E-04	mg/kg-d	5.0E-03	mg/kg-d	2.96E-02	6.9E-02
		Thallium	7.50E-02	µg/L	7.50E-02	µg/L	7.50E-02	2.05E-06	4.79E-06	mg/kg-d	1.0E-05	mg/kg-d	2.05E-01	4.8E-01
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.56E-04	3.64E-04	mg/kg-d	2.0E-02	mg/kg-d	7.81E-03	1.8E-02
												Hazard Index	**1.33E+03**	**3.10E+03**
Groundwater	Dermal	Antimony	1.31E+04	µg/L	1.31E+01	mg/L	1.31E+01	1.87E-03	5.53E-03	mg/kg-d	6.0E-05	mg/kg-d	**3.12E+01**	**9.2E+01**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	6.48E-04	1.91E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.16E+00**	**6.4E+00**
		Barium	3.65E+02	µg/L	3.65E-01	mg/L	3.65E-01	5.22E-05	1.54E-04	mg/kg-d	1.4E-02	mg/kg-d	3.73E-03	1.1E-02
		Chromium	1.06E+01	µg/L	1.06E-02	mg/L	1.06E-02	1.52E-06	4.47E-06	mg/kg-d	7.5E-05	mg/kg-d	2.02E-02	6.0E-02
		Cobalt	4.05E+01	µg/L	4.05E-02	mg/L	4.05E-02	2.32E-06	6.84E-06	mg/kg-d	3.0E-04	mg/kg-d	7.72E-03	2.3E-02
		Iron	2.24E+04	µg/L	2.24E+01	mg/L	2.24E+01	3.20E-03	9.45E-03	mg/kg-d	7.0E-01	mg/kg-d	4.58E-03	1.4E-02
		Manganese	7.37E+03	µg/L	7.37E+00	mg/L	7.37E+00	1.05E-03	3.11E-03	mg/kg-d	9.6E-04	mg/kg-d	**1.10E+00**	**3.2E+00**
		Mercury	5.65E+01	µg/L	5.65E-02	mg/L	5.65E-02	8.08E-06	2.38E-05	mg/kg-d	2.1E-05	mg/kg-d	3.85E-01	**1.1E+00**
		Nickel	3.59E+01	µg/L	3.59E-02	mg/L	3.59E-02	1.03E-06	3.03E-06	mg/kg-d	8.0E-04	mg/kg-d	1.28E-03	3.8E-03
		Selenium	5.40E+00	µg/L	5.40E-03	mg/L	5.40E-03	7.72E-07	2.28E-06	mg/kg-d	5.0E-03	mg/kg-d	1.54E-04	4.6E-04
		Thallium	7.50E-02	µg/L	7.50E-05	mg/L	7.50E-05	1.07E-08	3.16E-08	mg/kg-d	1.0E-05	mg/kg-d	1.07E-03	3.2E-03
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**3.49E+01**	**1.03E+02**
Surface Water	Dermal	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	1.81E-06	4.16E-06	mg/kg-d	6.0E-05	mg/kg-d	3.02E-02	6.9E-02
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	7.66E-06	1.76E-05	mg/kg-d	3.0E-04	mg/kg-d	2.55E-02	5.9E-02
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	1.07E-10	2.45E-10	mg/kg-d	3.0E-03	mg/kg-d	3.57E-08	8.2E-08
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	4.10E-09	9.39E-09	mg/kg-d	7.5E-05	mg/kg-d	5.46E-05	1.3E-04
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	1.63E-08	3.73E-08	mg/kg-d	3.0E-04	mg/kg-d	5.42E-05	1.2E-04
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	5.77E-09	1.32E-08	mg/kg-d	4.0E-02	mg/kg-d	1.44E-07	3.3E-07
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	1.77E-05	4.07E-05	mg/kg-d	7.0E-01	mg/kg-d	2.53E-05	5.8E-05
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	2.28E-06	5.23E-06	mg/kg-d	9.6E-04	mg/kg-d	2.38E-03	5.5E-03
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	3.23E-09	7.40E-09	mg/kg-d	2.1E-05	mg/kg-d	1.54E-04	3.5E-04
		Methyl Mercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	4.18E-12	9.57E-12	mg/kg-d	1.0E-04	mg/kg-d	4.18E-08	9.6E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	2.82E-08	6.47E-08	mg/kg-d	8.0E-04	mg/kg-d	3.53E-05	8.1E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	5.15E-09	1.18E-08	mg/kg-d	5.0E-03	mg/kg-d	1.03E-06	2.4E-06
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	2.09E-10	4.79E-10	mg/kg-d	2.0E-04	mg/kg-d	1.04E-06	2.4E-06
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	5.84E-09	1.34E-08	mg/kg-d	3.0E-01	mg/kg-d	1.95E-08	4.5E-08
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	4.28E-07	9.81E-07	mg/kg-d	2.0E-02	mg/kg-d	2.14E-05	4.9E-05
												Hazard Index	5.85E-02	1.34E-01
Air	Dust Particulates or Volatile from Soil	Aluminum	9.36E+03	mg/kg	1.38E-05	mg/m^3	1.38E-05	1.02E-05	1.02E-05	mg/m^3	5.0E-03	mg/m^3	2.04E-03	2.0E-03
		Antimony	4.52E+03	mg/kg	6.64E-06	mg/m^3	6.64E-06	4.91E-06	4.91E-06	mg/m^3	--	mg/m^3	--	--
		Arsenic (inorganic)	7.80E+03	mg/kg	1.15E-05	mg/m^3	1.15E-05	5.09E-06	5.09E-06	mg/m^3	1.5E-05	mg/m^3	3.40E-01	3.4E-01
		Barium	3.79E+02	mg/kg	5.57E-07	mg/m^3	5.57E-07	4.12E-07	4.12E-07	mg/m^3	5.0E-04	mg/m^3	8.25E-04	8.2E-04
		Chromium	2.41E+01	mg/kg	3.54E-08	mg/m^3	3.54E-08	2.62E-08	2.62E-08	mg/m^3	1.0E-04	mg/m^3	2.62E-04	2.6E-04
		Cobalt	1.61E+01	mg/kg	2.37E-08	mg/m^3	2.37E-08	1.75E-08	1.75E-08	mg/m^3	6.0E-06	mg/m^3	2.92E-03	2.9E-03
		Iron	3.71E+04	mg/kg	5.46E-05	mg/m^3	5.46E-05	4.04E-05	4.04E-05	mg/m^3	--	mg/m^3	--	--
		Manganese	7.28E+02	mg/kg	1.07E-06	mg/m^3	1.07E-06	7.92E-07	7.92E-07	mg/m^3	5.0E-05	mg/m^3	1.58E-02	1.6E-02
		Mercury	5.06E+02	mg/kg	2.24E-02	mg/m^3	2.24E-02	1.66E-02	1.66E-02	mg/m^3	3.0E-04	mg/m^3	**5.52E+01**	**5.5E+01**
		Thallium	1.74E-01	mg/kg	2.56E-10	mg/m^3	2.56E-10	1.89E-10	1.89E-10	mg/m^3	--	mg/m^3	--	--
		Vanadium	2.98E+01	mg/kg	4.38E-08	mg/m^3	4.38E-08	3.24E-08	3.24E-08	mg/m^3	--	mg/m^3	--	--
		Naphthalene	5.05E-01	mg/kg	7.42E-10	mg/m^3	7.42E-10	5.49E-10	5.49E-10	mg/m^3	3.0E-03	mg/m^3	1.83E-07	1.8E-07
												Hazard Index	**5.56E+01**	**5.56E+01**
Air	Volatile from Groundwater	Mercury	5.65E+01	µg/L	2.83E-02	mg/m^3	2.83E-02	8.47E-04	8.47E-04	mg/m^3	3.0E-04	mg/m^3	**2.82E+00**	**2.8E+00**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Non-Salmon Fish	Ingestion	Aluminum	2.67E+01	mg/kg	2.67E+01	mg/kg	2.67E+01	1.03E-01	2.32E-01	mg/kg-d	1.0E+00	mg/kg-d	1.03E-01	2.3E-01
		Antimony	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	6.60E-02	1.48E-01	mg/kg-d	4.0E-04	mg/kg-d	**1.65E+02**	**3.7E+02**
		Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	7.44E-02	1.67E-01	mg/kg-d	3.0E-04	mg/kg-d	**2.48E+02**	**5.6E+02**
		Barium	6.06E+00	mg/kg	6.06E+00	mg/kg	6.06E+00	2.35E-02	5.26E-02	mg/kg-d	2.0E-01	mg/kg-d	1.17E-01	2.6E-01
		Cadmium	4.20E-02	mg/kg	4.20E-02	mg/kg	4.20E-02	1.63E-04	3.64E-04	mg/kg-d	1.0E-03	mg/kg-d	1.63E-01	3.6E-01
		Chromium	1.99E-01	mg/kg	1.99E-01	mg/kg	1.99E-01	7.70E-04	1.73E-03	mg/kg-d	3.0E-03	mg/kg-d	2.57E-01	5.8E-01
		Cobalt	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	1.24E+00	mg/kg	1.24E+00	mg/kg	1.24E+00	4.79E-03	1.07E-02	mg/kg-d	4.0E-02	mg/kg-d	1.20E-01	2.7E-01
		Iron	1.20E+02	mg/kg	1.20E+02	mg/kg	1.20E+02	4.66E-01	1.04E+00	mg/kg-d	7.0E-01	mg/kg-d	6.65E-01	**1.5E+00**
		Manganese	1.54E+01	mg/kg	1.54E+01	mg/kg	1.54E+01	5.97E-02	1.34E-01	mg/kg-d	1.4E-01	mg/kg-d	4.26E-01	9.6E-01
		Methyl Mercury	2.07E-01	mg/kg	6.21E-01	mg/kg	6.21E-01	2.40E-03	5.39E-03	mg/kg-d	1.0E-04	mg/kg-d	**2.40E+01**	**5.4E+01**
		Nickel	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	5.77E-04	1.29E-03	mg/kg-d	2.0E-02	mg/kg-d	2.88E-02	6.5E-02
		Selenium	1.43E+00	mg/kg	1.43E+00	mg/kg	1.43E+00	5.54E-03	1.24E-02	mg/kg-d	5.0E-03	mg/kg-d	**1.11E+00**	**2.5E+00**
		Silver	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	1.81E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	7.01E-04	1.57E-03	mg/kg-d	5.0E-03	mg/kg-d	1.40E-01	3.1E-01
		Zinc	2.56E+01	mg/kg	2.56E+01	mg/kg	2.56E+01	9.91E-02	2.22E-01	mg/kg-d	3.0E-01	mg/kg-d	3.30E-01	7.4E-01
												Hazard Index	**4.41E+02**	**9.87E+02**
Large Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	6.43E-01	mg/kg	6.43E-01	6.96E-04	1.56E-03	mg/kg-d	1.0E+00	mg/kg-d	6.96E-04	1.6E-03
		Antimony	2.72E+00	mg/kg	7.35E-02	mg/kg	7.35E-02	7.96E-05	1.78E-04	mg/kg-d	4.0E-04	mg/kg-d	1.99E-01	4.5E-01
		Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	3.11E-05	6.97E-05	mg/kg-d	3.0E-04	mg/kg-d	1.04E-01	2.3E-01
		Barium	1.55E+02	mg/kg	6.29E-01	mg/kg	6.29E-01	6.81E-04	1.52E-03	mg/kg-d	2.0E-01	mg/kg-d	3.40E-03	7.6E-03
		Chromium	8.55E-01	mg/kg	1.27E-01	mg/kg	1.27E-01	1.37E-04	3.08E-04	mg/kg-d	3.0E-03	mg/kg-d	4.58E-02	1.0E-01
		Cobalt	3.35E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	1.96E-04	4.39E-04	mg/kg-d	3.0E-04	mg/kg-d	6.53E-01	**1.5E+00**
		Iron	2.96E+01	mg/kg	1.60E+01	mg/kg	1.60E+01	1.73E-02	3.87E-02	mg/kg-d	7.0E-01	mg/kg-d	2.47E-02	5.5E-02
		Manganese	7.15E+02	mg/kg	7.72E+00	mg/kg	7.72E+00	8.36E-03	1.87E-02	mg/kg-d	1.4E-01	mg/kg-d	5.97E-02	1.3E-01
		Mercury	2.10E-01	mg/kg	1.42E+00	mg/kg	1.42E+00	1.53E-03	3.44E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.12E+00**	**1.1E+01**
		Thallium	1.62E-02	mg/kg	1.75E-02	mg/kg	1.75E-02	1.89E-05	4.24E-05	mg/kg-d	1.0E-05	mg/kg-d	**1.89E+00**	**4.2E+00**
		Vanadium	6.45E-02	mg/kg	4.35E-03	mg/kg	4.35E-03	4.71E-06	1.06E-05	mg/kg-d	5.0E-03	mg/kg-d	9.43E-04	2.1E-03
												Hazard Index	**8.10E+00**	**1.81E+01**
Small Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	1.59E+01	mg/kg	1.59E+01	8.39E-03	1.88E-02	mg/kg-d	1.0E+00	mg/kg-d	8.39E-03	1.9E-02
		Antimony	2.72E+00	mg/kg	2.72E+00	mg/kg	2.72E+00	1.44E-03	3.23E-03	mg/kg-d	4.0E-04	mg/kg-d	**3.60E+00**	**8.1E+00**
		Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.81E-04	6.30E-04	mg/kg-d	3.0E-04	mg/kg-d	9.37E-01	**2.1E+00**
		Barium	1.55E+02	mg/kg	1.55E+02	mg/kg	1.55E+02	8.20E-02	1.84E-01	mg/kg-d	2.0E-01	mg/kg-d	4.10E-01	9.2E-01
		Chromium	8.55E-01	mg/kg	8.55E-01	mg/kg	8.55E-01	4.52E-04	1.01E-03	mg/kg-d	3.0E-03	mg/kg-d	1.51E-01	3.4E-01
		Cobalt	3.35E-01	mg/kg	3.35E-01	mg/kg	3.35E-01	1.77E-04	3.97E-04	mg/kg-d	3.0E-04	mg/kg-d	5.90E-01	**1.3E+00**
		Iron	2.96E+01	mg/kg	2.96E+01	mg/kg	2.96E+01	1.56E-02	3.50E-02	mg/kg-d	7.0E-01	mg/kg-d	2.23E-02	5.0E-02
		Manganese	7.15E+02	mg/kg	7.15E+02	mg/kg	7.15E+02	3.78E-01	8.46E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.70E+00**	**6.0E+00**
		Mercury	2.10E-01	mg/kg	2.10E-01	mg/kg	2.10E-01	1.11E-04	2.49E-04	mg/kg-d	3.0E-04	mg/kg-d	3.70E-01	8.3E-01
		Thallium	1.62E-02	mg/kg	1.62E-02	mg/kg	1.62E-02	8.56E-06	1.92E-05	mg/kg-d	1.0E-05	mg/kg-d	8.56E-01	**1.9E+00**
		Vanadium	6.45E-02	mg/kg	6.45E-02	mg/kg	6.45E-02	3.41E-05	7.64E-05	mg/kg-d	5.0E-03	mg/kg-d	6.82E-03	1.5E-02
												Hazard Index	**9.65E+00**	**2.16E+01**
Birds	Ingestion	Aluminum	1.30E+02	mg/kg	1.30E+02	mg/kg	1.30E+02	2.01E-02	4.50E-02	mg/kg-d	1.0E+00	mg/kg-d	2.01E-02	4.5E-02
		Antimony	1.03E+01	mg/kg	1.03E+01	mg/kg	1.03E+01	1.60E-03	3.59E-03	mg/kg-d	4.0E-04	mg/kg-d	**4.01E+00**	**9.0E+00**
		Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.18E-03	2.64E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.92E+00**	**8.8E+00**
		Barium	5.99E+01	mg/kg	5.99E+01	mg/kg	5.99E+01	9.30E-03	2.08E-02	mg/kg-d	2.0E-01	mg/kg-d	4.65E-02	1.0E-01
		Chromium	9.19E-01	mg/kg	9.19E-01	mg/kg	9.19E-01	1.43E-04	3.20E-04	mg/kg-d	3.0E-03	mg/kg-d	4.76E-02	1.1E-01
		Cobalt	2.33E-01	mg/kg	2.33E-01	mg/kg	2.33E-01	3.62E-05	8.10E-05	mg/kg-d	3.0E-04	mg/kg-d	1.21E-01	2.7E-01
		Iron	1.97E+02	mg/kg	1.97E+02	mg/kg	1.97E+02	3.06E-02	6.86E-02	mg/kg-d	7.0E-01	mg/kg-d	4.37E-02	9.8E-02
		Manganese	1.90E+03	mg/kg	1.90E+03	mg/kg	1.90E+03	2.96E-01	6.62E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.11E+00**	**4.7E+00**
		Mercury	5.64E+00	mg/kg	5.64E+00	mg/kg	5.64E+00	8.76E-04	1.96E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.92E+00**	**6.5E+00**
		Thallium	2.10E-02	mg/kg	2.10E-02	mg/kg	2.10E-02	3.26E-06	7.30E-06	mg/kg-d	1.0E-05	mg/kg-d	3.26E-01	7.3E-01
		Vanadium	4.70E-01	mg/kg	4.70E-01	mg/kg	4.70E-01	7.30E-05	1.63E-04	mg/kg-d	5.0E-03	mg/kg-d	1.46E-02	3.3E-02
												Hazard Index	**1.36E+01**	**3.04E+01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Berries and Plants	Ingestion	Aluminum	9.36E+03	mg/kg	6.09E+00	mg/kg	6.09E+00	1.24E-03	2.79E-03	mg/kg-d	1.0E+00	mg/kg-d	1.24E-03	2.8E-03
		Antimony	4.52E+03	mg/kg	1.35E+02	mg/kg	1.35E+02	2.77E-02	6.20E-02	mg/kg-d	4.0E-04	mg/kg-d	**6.92E+01**	**1.5E+02**
		Arsenic (inorganic)	7.80E+03	mg/kg	4.68E+01	mg/kg	4.68E+01	9.57E-03	2.14E-02	mg/kg-d	3.0E-04	mg/kg-d	**3.19E+01**	**7.1E+01**
		Barium	3.79E+02	mg/kg	5.69E+00	mg/kg	5.69E+00	1.16E-03	2.60E-03	mg/kg-d	2.0E-01	mg/kg-d	5.81E-03	1.3E-02
		Chromium	2.41E+01	mg/kg	1.08E-01	mg/kg	1.08E-01	2.21E-05	4.95E-05	mg/kg-d	3.0E-03	mg/kg-d	7.37E-03	1.7E-02
		Cobalt	1.61E+01	mg/kg	1.13E-01	mg/kg	1.13E-01	2.31E-05	5.17E-05	mg/kg-d	3.0E-04	mg/kg-d	7.69E-02	1.7E-01
		Iron	3.71E+04	mg/kg	3.71E+01	mg/kg	3.71E+01	7.58E-03	1.70E-02	mg/kg-d	7.0E-01	mg/kg-d	1.08E-02	2.4E-02
		Manganese	7.28E+02	mg/kg	3.64E+01	mg/kg	3.64E+01	7.43E-03	1.67E-02	mg/kg-d	1.4E-01	mg/kg-d	5.31E-02	1.2E-01
		Mercury	5.06E+02	mg/kg	1.01E+02	mg/kg	1.01E+02	2.07E-02	4.63E-02	mg/kg-d	3.0E-04	mg/kg-d	**6.89E+01**	**1.5E+02**
		Thallium	1.74E-01	mg/kg	6.96E-05	mg/kg	6.96E-05	1.42E-08	3.18E-08	mg/kg-d	1.0E-05	mg/kg-d	1.42E-03	3.2E-03
		Vanadium	2.98E+01	mg/kg	8.94E-02	mg/kg	8.94E-02	1.83E-05	4.09E-05	mg/kg-d	5.0E-03	mg/kg-d	3.65E-03	8.2E-03
												Hazard Index	**1.70E+02**	**3.81E+02**
												Total Hazard Index	**2.11E+03**	**5.06E+03**

Table J-8
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - DA
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Soil	Ingestion	Aluminum	1.17E+04	mg/kg	1.17E+04	mg/kg	1.17E+04	1.23E-02	1.15E-01	mg/kg-d	1.0E+00	mg/kg-d	1.23E-02	1.2E-01
		Antimony	7.99E+02	mg/kg	7.99E+02	mg/kg	7.99E+02	8.44E-04	7.88E-03	mg/kg-d	4.0E-04	mg/kg-d	**2.11E+00**	**2.0E+01**
		Arsenic (inorganic)	3.41E+03	mg/kg	3.41E+03	mg/kg	3.41E+03	2.16E-03	2.02E-02	mg/kg-d	3.0E-04	mg/kg-d	**7.20E+00**	**6.7E+01**
		Barium	2.03E+02	mg/kg	2.03E+02	mg/kg	2.03E+02	2.14E-04	2.00E-03	mg/kg-d	2.0E-01	mg/kg-d	1.07E-03	1.0E-02
		Chromium	2.43E+01	mg/kg	2.43E+01	mg/kg	2.43E+01	2.57E-05	2.40E-04	mg/kg-d	3.0E-03	mg/kg-d	8.56E-03	8.0E-02
		Cobalt	1.28E+01	mg/kg	1.28E+01	mg/kg	1.28E+01	1.35E-05	1.26E-04	mg/kg-d	3.0E-04	mg/kg-d	4.49E-02	4.2E-01
		Iron	3.48E+04	mg/kg	3.48E+04	mg/kg	3.48E+04	3.67E-02	3.43E-01	mg/kg-d	7.0E-01	mg/kg-d	5.25E-02	4.9E-01
		Manganese	4.69E+02	mg/kg	4.69E+02	mg/kg	4.69E+02	4.96E-04	4.62E-03	mg/kg-d	2.4E-02	mg/kg-d	2.06E-02	1.9E-01
		Mercury	1.63E+02	mg/kg	1.63E+02	mg/kg	1.63E+02	1.72E-04	1.60E-03	mg/kg-d	3.0E-04	mg/kg-d	5.72E-01	**5.3E+00**
		Thallium	1.92E-01	mg/kg	1.92E-01	mg/kg	1.92E-01	2.03E-07	1.89E-06	mg/kg-d	1.0E-05	mg/kg-d	2.03E-02	1.9E-01
		Vanadium	3.55E+01	mg/kg	3.55E+01	mg/kg	3.55E+01	3.75E-05	3.50E-04	mg/kg-d	5.0E-03	mg/kg-d	7.50E-03	7.0E-02
												Hazard Index	**1.00E+01**	**9.38E+01**
Soil	Dermal	Aluminum	1.17E+04	mg/kg	1.17E+04	mg/kg	1.17E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	7.99E+02	mg/kg	7.99E+02	mg/kg	7.99E+02	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (inorganic)	3.41E+03	mg/kg	3.41E+03	mg/kg	3.41E+03	4.31E-04	2.82E-03	mg/kg-d	3.0E-04	mg/kg-d	**1.44E+00**	**9.4E+00**
		Barium	2.03E+02	mg/kg	2.03E+02	mg/kg	2.03E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.43E+01	mg/kg	2.43E+01	mg/kg	2.43E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.28E+01	mg/kg	1.28E+01	mg/kg	1.28E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Iron	3.48E+04	mg/kg	3.48E+04	mg/kg	3.48E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	4.69E+02	mg/kg	4.69E+02	mg/kg	4.69E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	1.63E+02	mg/kg	1.63E+02	mg/kg	1.63E+02	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.92E-01	mg/kg	1.92E-01	mg/kg	1.92E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	3.55E+01	mg/kg	3.55E+01	mg/kg	3.55E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**1.44E+00**	**9.40E+00**
Sediment	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.46E+03	mg/kg	4.46E+03	mg/kg	4.46E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	2.53E-03	1.66E-02	mg/kg-d	3.0E-04	mg/kg-d	**8.43E+00**	**5.5E+01**
		Barium	6.81E+02	mg/kg	6.81E+02	mg/kg	6.81E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Cadmium	2.92E-01	mg/kg	2.92E-01	mg/kg	2.92E-01	0.00E+00	0.00E+00	mg/kg-d	2.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.57E+01	mg/kg	2.57E+01	mg/kg	2.57E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	3.72E+01	mg/kg	3.72E+01	mg/kg	3.72E+01	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Iron	9.92E+04	mg/kg	9.92E+04	mg/kg	9.92E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	2.02E+03	mg/kg	2.02E+03	mg/kg	2.02E+03	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	6.66E+01	mg/kg	6.66E+01	mg/kg	6.66E+01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Methyl Mercury	5.23E-03	mg/kg	5.23E-03	mg/kg	5.23E-03	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Nickel	5.70E+01	mg/kg	5.70E+01	mg/kg	5.70E+01	0.00E+00	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Selenium	4.87E-01	mg/kg	4.87E-01	mg/kg	4.87E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Silver	1.14E-01	mg/kg	1.14E-01	mg/kg	1.14E-01	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	3.10E+01	mg/kg	3.10E+01	mg/kg	3.10E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Zinc	9.16E+01	mg/kg	9.16E+01	mg/kg	9.16E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**8.43E+00**	**5.52E+01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Ingestion	Antimony	1.31E+04	µg/L	1.31E+04	µg/L	1.31E+04	3.59E-01	8.37E-01	mg/kg-d	4.0E-04	mg/kg-d	**8.97E+02**	**2.1E+03**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	1.24E-01	2.90E-01	mg/kg-d	3.0E-04	mg/kg-d	**4.14E+02**	**9.7E+02**
		Barium	3.65E+02	µg/L	3.65E+02	µg/L	3.65E+02	1.00E-02	2.33E-02	mg/kg-d	2.0E-01	mg/kg-d	5.00E-02	1.2E-01
		Chromium	1.06E+01	µg/L	1.06E+01	µg/L	1.06E+01	2.90E-04	6.78E-04	mg/kg-d	3.0E-03	mg/kg-d	9.68E-02	2.3E-01
		Cobalt	4.05E+01	µg/L	4.05E+01	µg/L	4.05E+01	1.11E-03	2.59E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.70E+00**	**8.6E+00**
		Iron	2.24E+04	µg/L	2.24E+04	µg/L	2.24E+04	6.14E-01	1.43E+00	mg/kg-d	7.0E-01	mg/kg-d	8.77E-01	**2.0E+00**
		Manganese	7.37E+03	µg/L	7.37E+03	µg/L	7.37E+03	2.02E-01	4.71E-01	mg/kg-d	2.4E-02	mg/kg-d	**8.41E+00**	**2.0E+01**
		Mercury	5.65E+01	µg/L	5.65E+01	µg/L	5.65E+01	1.55E-03	3.61E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.16E+00**	**1.2E+01**
		Nickel	3.59E+01	µg/L	3.59E+01	µg/L	3.59E+01	9.84E-04	2.29E-03	mg/kg-d	2.0E-02	mg/kg-d	4.92E-02	1.1E-01
		Selenium	5.40E+00	µg/L	5.40E+00	µg/L	5.40E+00	1.48E-04	3.45E-04	mg/kg-d	5.0E-03	mg/kg-d	2.96E-02	6.9E-02
		Thallium	7.50E-02	µg/L	7.50E-02	µg/L	7.50E-02	2.05E-06	4.79E-06	mg/kg-d	1.0E-05	mg/kg-d	2.05E-01	4.8E-01
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.56E-04	3.64E-04	mg/kg-d	2.0E-02	mg/kg-d	7.81E-03	1.8E-02
												Hazard Index	**1.33E+03**	**3.10E+03**
Groundwater	Dermal	Antimony	1.31E+04	µg/L	1.31E+01	mg/L	1.31E+01	1.87E-03	5.53E-03	mg/kg-d	6.0E-05	mg/kg-d	**3.12E+01**	**9.2E+01**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	6.48E-04	1.91E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.16E+00**	**6.4E+00**
		Barium	3.65E+02	µg/L	3.65E-01	mg/L	3.65E-01	5.22E-05	1.54E-04	mg/kg-d	1.4E-02	mg/kg-d	3.73E-03	1.1E-02
		Chromium	1.06E+01	µg/L	1.06E-02	mg/L	1.06E-02	1.52E-06	4.47E-06	mg/kg-d	7.5E-05	mg/kg-d	2.02E-02	6.0E-02
		Cobalt	4.05E+01	µg/L	4.05E-02	mg/L	4.05E-02	2.32E-06	6.84E-06	mg/kg-d	3.0E-04	mg/kg-d	7.72E-03	2.3E-02
		Iron	2.24E+04	µg/L	2.24E+01	mg/L	2.24E+01	3.20E-03	9.45E-03	mg/kg-d	7.0E-01	mg/kg-d	4.58E-03	1.4E-02
		Manganese	7.37E+03	µg/L	7.37E+00	mg/L	7.37E+00	1.05E-03	3.11E-03	mg/kg-d	9.6E-04	mg/kg-d	**1.10E+00**	**3.2E+00**
		Mercury	5.65E+01	µg/L	5.65E-02	mg/L	5.65E-02	8.08E-06	2.38E-05	mg/kg-d	2.1E-05	mg/kg-d	3.85E-01	**1.1E+00**
		Nickel	3.59E+01	µg/L	3.59E-02	mg/L	3.59E-02	1.03E-06	3.03E-06	mg/kg-d	8.0E-04	mg/kg-d	1.28E-03	3.8E-03
		Selenium	5.40E+00	µg/L	5.40E-03	mg/L	5.40E-03	7.72E-07	2.28E-06	mg/kg-d	5.0E-03	mg/kg-d	1.54E-04	4.6E-04
		Thallium	7.50E-02	µg/L	7.50E-05	mg/L	7.50E-05	1.07E-08	3.16E-08	mg/kg-d	1.0E-05	mg/kg-d	1.07E-03	3.2E-03
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**3.49E+01**	**1.03E+02**
Surface Water	Dermal	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	1.81E-06	4.16E-06	mg/kg-d	6.0E-05	mg/kg-d	3.02E-02	6.9E-02
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	7.66E-06	1.76E-05	mg/kg-d	3.0E-04	mg/kg-d	2.55E-02	5.9E-02
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	1.07E-10	2.45E-10	mg/kg-d	2.5E-05	mg/kg-d	4.28E-06	9.8E-06
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	4.10E-09	9.39E-09	mg/kg-d	7.5E-05	mg/kg-d	5.46E-05	1.3E-04
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	1.63E-08	3.73E-08	mg/kg-d	3.0E-04	mg/kg-d	5.42E-05	1.2E-04
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	5.77E-09	1.32E-08	mg/kg-d	4.0E-02	mg/kg-d	1.44E-07	3.3E-07
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	1.77E-05	4.07E-05	mg/kg-d	7.0E-01	mg/kg-d	2.53E-05	5.8E-05
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	2.28E-06	5.23E-06	mg/kg-d	9.6E-04	mg/kg-d	2.38E-03	5.5E-03
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	3.23E-09	7.40E-09	mg/kg-d	2.1E-05	mg/kg-d	1.54E-04	3.5E-04
		Methylmercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	4.18E-12	9.57E-12	mg/kg-d	1.0E-04	mg/kg-d	4.18E-08	9.6E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	2.82E-08	6.47E-08	mg/kg-d	8.0E-04	mg/kg-d	3.53E-05	8.1E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	5.15E-09	1.18E-08	mg/kg-d	5.0E-03	mg/kg-d	1.03E-06	2.4E-06
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	2.09E-10	4.79E-10	mg/kg-d	2.0E-04	mg/kg-d	1.04E-06	2.4E-06
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	5.84E-09	1.34E-08	mg/kg-d	3.0E-01	mg/kg-d	1.95E-08	4.5E-08
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	4.28E-07	9.81E-07	mg/kg-d	2.0E-02	mg/kg-d	2.14E-05	4.9E-05
												Hazard Index	5.85E-02	1.34E-01
Air	Dust Particulates or Volatile from Soil	Aluminum	1.17E+04	mg/kg	1.72E-05	mg/m^3	1.72E-05	1.27E-05	1.27E-05	mg/m^3	5.0E-03	mg/m^3	2.54E-03	2.5E-03
		Antimony	7.99E+02	mg/kg	1.17E-06	mg/m^3	1.17E-06	8.69E-07	8.69E-07	mg/m^3	--	mg/m^3	--	--
		Arsenic (inorganic)	3.41E+03	mg/kg	5.01E-06	mg/m^3	5.01E-06	2.22E-06	2.22E-06	mg/m^3	1.5E-05	mg/m^3	1.48E-01	1.5E-01
		Barium	2.03E+02	mg/kg	2.98E-07	mg/m^3	2.98E-07	2.21E-07	2.21E-07	mg/m^3	5.0E-04	mg/m^3	4.41E-04	4.4E-04
		Chromium	2.43E+01	mg/kg	3.57E-08	mg/m^3	3.57E-08	2.64E-08	2.64E-08	mg/m^3	1.0E-04	mg/m^3	2.64E-04	2.6E-04
		Cobalt	1.28E+01	mg/kg	1.88E-08	mg/m^3	1.88E-08	1.39E-08	1.39E-08	mg/m^3	6.0E-06	mg/m^3	2.31E-03	2.3E-03
		Iron	3.48E+04	mg/kg	5.11E-05	mg/m^3	5.11E-05	3.78E-05	3.78E-05	mg/m^3	--	mg/m^3	--	--
		Manganese	4.69E+02	mg/kg	6.90E-07	mg/m^3	6.90E-07	5.10E-07	5.10E-07	mg/m^3	5.0E-05	mg/m^3	1.02E-02	1.0E-02
		Mercury	1.63E+02	mg/kg	7.19E-03	mg/m^3	7.19E-03	5.32E-03	5.32E-03	mg/m^3	3.0E-04	mg/m^3	**1.77E+01**	**1.8E+01**
		Thallium	1.92E-01	mg/kg	2.82E-10	mg/m^3	2.82E-10	2.09E-10	2.09E-10	mg/m^3	--	mg/m^3	--	--
		Vanadium	3.55E+01	mg/kg	5.22E-08	mg/m^3	5.22E-08	3.86E-08	3.86E-08	mg/m^3	--	mg/m^3	--	--
												Hazard Index	**1.79E+01**	**1.79E+01**
Air	Volatile from Groundwater	Mercury	5.65E+01	µg/L	2.83E-02	mg/m^3	2.83E-02	8.47E-04	8.47E-04	mg/m^3	3.0E-04	mg/m^3	**2.82E+00**	**2.8E+00**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Non-Salmon Fish	Ingestion	Aluminum	2.67E+01	mg/kg	2.67E+01	mg/kg	2.67E+01	1.03E-01	2.32E-01	mg/kg-d	1.0E+00	mg/kg-d	1.03E-01	2.3E-01
		Antimony	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	6.60E-02	1.48E-01	mg/kg-d	4.0E-04	mg/kg-d	**1.65E+02**	**3.7E+02**
		Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	7.44E-02	1.67E-01	mg/kg-d	3.0E-04	mg/kg-d	**2.48E+02**	**5.6E+02**
		Barium	6.06E+00	mg/kg	6.06E+00	mg/kg	6.06E+00	2.35E-02	5.26E-02	mg/kg-d	2.0E-01	mg/kg-d	1.17E-01	2.6E-01
		Cadmium	4.20E-02	mg/kg	4.20E-02	mg/kg	4.20E-02	1.63E-04	3.64E-04	mg/kg-d	1.0E-03	mg/kg-d	1.63E-01	3.6E-01
		Chromium	1.99E-01	mg/kg	1.99E-01	mg/kg	1.99E-01	7.70E-04	1.73E-03	mg/kg-d	3.0E-03	mg/kg-d	2.57E-01	5.8E-01
		Cobalt	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	1.24E+00	mg/kg	1.24E+00	mg/kg	1.24E+00	4.79E-03	1.07E-02	mg/kg-d	4.0E-02	mg/kg-d	1.20E-01	2.7E-01
		Iron	1.20E+02	mg/kg	1.20E+02	mg/kg	1.20E+02	4.66E-01	1.04E+00	mg/kg-d	7.0E-01	mg/kg-d	6.65E-01	**1.5E+00**
		Manganese	1.54E+01	mg/kg	1.54E+01	mg/kg	1.54E+01	5.97E-02	1.34E-01	mg/kg-d	1.4E-01	mg/kg-d	4.26E-01	9.6E-01
		Methylmercury	2.07E-01	mg/kg	6.21E-01	mg/kg	6.21E-01	2.40E-03	5.39E-03	mg/kg-d	1.0E-04	mg/kg-d	**2.40E+01**	**5.4E+01**
		Nickel	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	5.77E-04	1.29E-03	mg/kg-d	2.0E-02	mg/kg-d	2.88E-02	6.5E-02
		Selenium	1.43E+00	mg/kg	1.43E+00	mg/kg	1.43E+00	5.54E-03	1.24E-02	mg/kg-d	5.0E-03	mg/kg-d	**1.11E+00**	**2.5E+00**
		Silver	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	1.81E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	7.01E-04	1.57E-03	mg/kg-d	5.0E-03	mg/kg-d	1.40E-01	3.1E-01
		Zinc	2.56E+01	mg/kg	2.56E+01	mg/kg	2.56E+01	9.91E-02	2.22E-01	mg/kg-d	3.0E-01	mg/kg-d	3.30E-01	7.4E-01
												Hazard Index	**4.41E+02**	**9.87E+02**
Large Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	6.43E-01	mg/kg	6.43E-01	6.96E-04	1.56E-03	mg/kg-d	1.0E+00	mg/kg-d	6.96E-04	1.6E-03
		Antimony	2.72E+00	mg/kg	7.35E-02	mg/kg	7.35E-02	7.96E-05	1.78E-04	mg/kg-d	4.0E-04	mg/kg-d	1.99E-01	4.5E-01
		Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	3.11E-05	6.97E-05	mg/kg-d	3.0E-04	mg/kg-d	1.04E-01	2.3E-01
		Barium	1.55E+02	mg/kg	6.29E-01	mg/kg	6.29E-01	6.81E-04	1.52E-03	mg/kg-d	2.0E-01	mg/kg-d	3.40E-03	7.6E-03
		Chromium	8.55E-01	mg/kg	1.27E-01	mg/kg	1.27E-01	1.37E-04	3.08E-04	mg/kg-d	3.0E-03	mg/kg-d	4.58E-02	1.0E-01
		Cobalt	3.35E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	1.96E-04	4.39E-04	mg/kg-d	3.0E-04	mg/kg-d	6.53E-01	**1.5E+00**
		Iron	2.96E+01	mg/kg	1.60E+01	mg/kg	1.60E+01	1.73E-02	3.87E-02	mg/kg-d	7.0E-01	mg/kg-d	2.47E-02	5.5E-02
		Manganese	7.15E+02	mg/kg	7.72E+00	mg/kg	7.72E+00	8.36E-03	1.87E-02	mg/kg-d	1.4E-01	mg/kg-d	5.97E-02	1.3E-01
		Mercury	2.10E-01	mg/kg	1.42E+00	mg/kg	1.42E+00	1.53E-03	3.44E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.12E+00**	**1.1E+01**
		Thallium	1.62E-02	mg/kg	1.75E-02	mg/kg	1.75E-02	1.89E-05	4.24E-05	mg/kg-d	1.0E-05	mg/kg-d	**1.89E+00**	**4.2E+00**
		Vanadium	6.45E-02	mg/kg	4.35E-03	mg/kg	4.35E-03	4.71E-06	1.06E-05	mg/kg-d	5.0E-03	mg/kg-d	9.43E-04	2.1E-03
												Hazard Index	**8.10E+00**	**1.81E+01**
Small Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	1.59E+01	mg/kg	1.59E+01	8.39E-03	1.88E-02	mg/kg-d	1.0E+00	mg/kg-d	8.39E-03	1.9E-02
		Antimony	2.72E+00	mg/kg	2.72E+00	mg/kg	2.72E+00	1.44E-03	3.23E-03	mg/kg-d	4.0E-04	mg/kg-d	**3.60E+00**	**8.1E+00**
		Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.81E-04	6.30E-04	mg/kg-d	3.0E-04	mg/kg-d	9.37E-01	**2.1E+00**
		Barium	1.55E+02	mg/kg	1.55E+02	mg/kg	1.55E+02	8.20E-02	1.84E-01	mg/kg-d	2.0E-01	mg/kg-d	4.10E-01	9.2E-01
		Chromium	8.55E-01	mg/kg	8.55E-01	mg/kg	8.55E-01	4.52E-04	1.01E-03	mg/kg-d	3.0E-03	mg/kg-d	1.51E-01	3.4E-01
		Cobalt	3.35E-01	mg/kg	3.35E-01	mg/kg	3.35E-01	1.77E-04	3.97E-04	mg/kg-d	3.0E-04	mg/kg-d	5.90E-01	**1.3E+00**
		Iron	2.96E+01	mg/kg	2.96E+01	mg/kg	2.96E+01	1.56E-02	3.50E-02	mg/kg-d	7.0E-01	mg/kg-d	2.23E-02	5.0E-02
		Manganese	7.15E+02	mg/kg	7.15E+02	mg/kg	7.15E+02	3.78E-01	8.46E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.70E+00**	**6.0E+00**
		Mercury	2.10E-01	mg/kg	2.10E-01	mg/kg	2.10E-01	1.11E-04	2.49E-04	mg/kg-d	3.0E-04	mg/kg-d	3.70E-01	8.3E-01
		Thallium	1.62E-02	mg/kg	1.62E-02	mg/kg	1.62E-02	8.56E-06	1.92E-05	mg/kg-d	1.0E-05	mg/kg-d	8.56E-01	**1.9E+00**
		Vanadium	6.45E-02	mg/kg	6.45E-02	mg/kg	6.45E-02	3.41E-05	7.64E-05	mg/kg-d	5.0E-03	mg/kg-d	6.82E-03	1.5E-02
												Hazard Index	**9.65E+00**	**2.16E+01**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Birds	Ingestion	Aluminum	1.30E+02	mg/kg	1.30E+02	mg/kg	1.30E+02	2.01E-02	4.50E-02	mg/kg-d	1.0E+00	mg/kg-d	2.01E-02	4.5E-02
		Antimony	1.03E+01	mg/kg	1.03E+01	mg/kg	1.03E+01	1.60E-03	3.59E-03	mg/kg-d	4.0E-04	mg/kg-d	**4.01E+00**	**9.0E+00**
		Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.18E-03	2.64E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.92E+00**	**8.8E+00**
		Barium	5.99E+01	mg/kg	5.99E+01	mg/kg	5.99E+01	9.30E-03	2.08E-02	mg/kg-d	2.0E-01	mg/kg-d	4.65E-02	1.0E-01
		Chromium	9.19E-01	mg/kg	9.19E-01	mg/kg	9.19E-01	1.43E-04	3.20E-04	mg/kg-d	3.0E-03	mg/kg-d	4.76E-02	1.1E-01
		Cobalt	2.33E-01	mg/kg	2.33E-01	mg/kg	2.33E-01	3.62E-05	8.10E-05	mg/kg-d	3.0E-04	mg/kg-d	1.21E-01	2.7E-01
		Iron	1.97E+02	mg/kg	1.97E+02	mg/kg	1.97E+02	3.06E-02	6.86E-02	mg/kg-d	7.0E-01	mg/kg-d	4.37E-02	9.8E-02
		Manganese	1.90E+03	mg/kg	1.90E+03	mg/kg	1.90E+03	2.96E-01	6.62E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.11E+00**	**4.7E+00**
		Mercury	5.64E+00	mg/kg	5.64E+00	mg/kg	5.64E+00	8.76E-04	1.96E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.92E+00**	**6.5E+00**
		Thallium	2.10E-02	mg/kg	2.10E-02	mg/kg	2.10E-02	3.26E-06	7.30E-06	mg/kg-d	1.0E-05	mg/kg-d	3.26E-01	7.3E-01
		Vanadium	4.70E-01	mg/kg	4.70E-01	mg/kg	4.70E-01	7.30E-05	1.63E-04	mg/kg-d	5.0E-03	mg/kg-d	1.46E-02	3.3E-02
												Hazard Index	**1.36E+01**	**3.04E+01**
Berries and Plants	Ingestion	Aluminum	1.17E+04	mg/kg	7.59E+00	mg/kg	7.59E+00	1.55E-03	3.47E-03	mg/kg-d	1.0E+00	mg/kg-d	1.55E-03	3.5E-03
		Antimony	7.99E+02	mg/kg	2.40E+01	mg/kg	2.40E+01	4.89E-03	1.10E-02	mg/kg-d	4.0E-04	mg/kg-d	**1.22E+01**	**2.7E+01**
		Arsenic (inorganic)	3.41E+03	mg/kg	2.04E+01	mg/kg	2.04E+01	4.17E-03	9.35E-03	mg/kg-d	3.0E-04	mg/kg-d	**1.39E+01**	**3.1E+01**
		Barium	2.03E+02	mg/kg	3.04E+00	mg/kg	3.04E+00	6.21E-04	1.39E-03	mg/kg-d	2.0E-01	mg/kg-d	3.11E-03	7.0E-03
		Chromium	2.43E+01	mg/kg	1.09E-01	mg/kg	1.09E-01	2.23E-05	5.00E-05	mg/kg-d	3.0E-03	mg/kg-d	7.45E-03	1.7E-02
		Cobalt	1.28E+01	mg/kg	8.93E-02	mg/kg	8.93E-02	1.82E-05	4.08E-05	mg/kg-d	3.0E-04	mg/kg-d	6.08E-02	1.4E-01
		Iron	3.48E+04	mg/kg	3.48E+01	mg/kg	3.48E+01	7.10E-03	1.59E-02	mg/kg-d	7.0E-01	mg/kg-d	1.01E-02	2.3E-02
		Manganese	4.69E+02	mg/kg	2.34E+01	mg/kg	2.34E+01	4.79E-03	1.07E-02	mg/kg-d	1.4E-01	mg/kg-d	3.42E-02	7.7E-02
		Mercury	1.63E+02	mg/kg	3.25E+01	mg/kg	3.25E+01	6.64E-03	1.49E-02	mg/kg-d	3.0E-04	mg/kg-d	**2.21E+01**	**5.0E+01**
		Thallium	1.92E-01	mg/kg	7.68E-05	mg/kg	7.68E-05	1.57E-08	3.51E-08	mg/kg-d	1.0E-05	mg/kg-d	1.57E-03	3.5E-03
		Vanadium	3.55E+01	mg/kg	1.06E-01	mg/kg	1.06E-01	2.17E-05	4.87E-05	mg/kg-d	5.0E-03	mg/kg-d	4.35E-03	9.7E-03
												Hazard Index	**4.84E+01**	**1.08E+02**
												Total Hazard Index	**1.93E+03**	**4.55E+03**

Table J-9

CALCULATION OF NON-CANCER HAZARDS

RED DEVIL MINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational/Subsistence User
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Soil	Ingestion	Aluminum	9.73E+03	mg/kg	9.73E+03	mg/kg	9.73E+03	3.43E-03	3.20E-02	mg/kg-d	1.0E+00	mg/kg-d	3.43E-03	3.2E-02
		Antimony	3.78E+03	mg/kg	3.78E+03	mg/kg	3.78E+03	1.33E-03	1.24E-02	mg/kg-d	4.0E-04	mg/kg-d	**3.33E+00**	**3.1E+01**
		Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	1.24E-03	1.16E-02	mg/kg-d	3.0E-04	mg/kg-d	**4.14E+00**	**3.9E+01**
		Barium	3.22E+02	mg/kg	3.22E+02	mg/kg	3.22E+02	1.14E-04	1.06E-03	mg/kg-d	2.0E-01	mg/kg-d	5.68E-04	5.3E-03
		Chromium	2.35E+01	mg/kg	2.35E+01	mg/kg	2.35E+01	8.26E-06	7.71E-05	mg/kg-d	3.0E-03	mg/kg-d	2.75E-03	2.6E-02
		Cobalt	1.58E+01	mg/kg	1.58E+01	mg/kg	1.58E+01	5.56E-06	5.19E-05	mg/kg-d	3.0E-04	mg/kg-d	1.85E-02	1.7E-01
		Iron	3.67E+04	mg/kg	3.67E+04	mg/kg	3.67E+04	1.29E-02	1.21E-01	mg/kg-d	7.0E-01	mg/kg-d	1.84E-02	1.7E-01
		Manganese	7.19E+02	mg/kg	7.19E+02	mg/kg	7.19E+02	2.53E-04	2.36E-03	mg/kg-d	2.4E-02	mg/kg-d	1.05E-02	9.8E-02
		Mercury	3.73E+02	mg/kg	3.73E+02	mg/kg	3.73E+02	1.31E-04	1.23E-03	mg/kg-d	3.0E-04	mg/kg-d	4.38E-01	**4.1E+00**
		Thallium	1.71E-01	mg/kg	1.71E-01	mg/kg	1.71E-01	6.02E-08	5.62E-07	mg/kg-d	1.0E-05	mg/kg-d	6.02E-03	5.6E-02
		Vanadium	3.11E+01	mg/kg	3.11E+01	mg/kg	3.11E+01	1.10E-05	1.02E-04	mg/kg-d	5.0E-03	mg/kg-d	2.19E-03	2.0E-02
												Hazard Index	**7.98E+00**	**7.45E+01**
Soil	Dermal	Aluminum	9.73E+03	mg/kg	9.73E+03	mg/kg	9.73E+03	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	3.78E+03	mg/kg	3.78E+03	mg/kg	3.78E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	2.48E-04	1.62E-03	mg/kg-d	3.0E-04	mg/kg-d	8.27E-01	**5.4E+00**
		Barium	3.22E+02	mg/kg	3.22E+02	mg/kg	3.22E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.35E+01	mg/kg	2.35E+01	mg/kg	2.35E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.58E+01	mg/kg	1.58E+01	mg/kg	1.58E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Iron	3.67E+04	mg/kg	3.67E+04	mg/kg	3.67E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	7.19E+02	mg/kg	7.19E+02	mg/kg	7.19E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	3.73E+02	mg/kg	3.73E+02	mg/kg	3.73E+02	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.71E-01	mg/kg	1.71E-01	mg/kg	1.71E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	3.11E+01	mg/kg	3.11E+01	mg/kg	3.11E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	8.27E-01	**5.42E+00**
Sediment	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.46E+03	mg/kg	4.46E+03	mg/kg	4.46E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	2.53E-03	1.66E-02	mg/kg-d	3.0E-04	mg/kg-d	**8.43E+00**	**5.5E+01**
		Barium	6.81E+02	mg/kg	6.81E+02	mg/kg	6.81E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Cadmium	2.92E-01	mg/kg	2.92E-01	mg/kg	2.92E-01	4.10E-10	2.69E-09	mg/kg-d	2.5E-05	mg/kg-d	1.64E-05	1.1E-04
		Chromium	2.57E+01	mg/kg	2.57E+01	mg/kg	2.57E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	3.72E+01	mg/kg	3.72E+01	mg/kg	3.72E+01	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Iron	9.92E+04	mg/kg	9.92E+04	mg/kg	9.92E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	2.02E+03	mg/kg	2.02E+03	mg/kg	2.02E+03	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	6.66E+01	mg/kg	6.66E+01	mg/kg	6.66E+01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Methylmercury	5.23E-03	mg/kg	5.23E-03	mg/kg	5.23E-03	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Nickel	5.70E+01	mg/kg	5.70E+01	mg/kg	5.70E+01	0.00E+00	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.00E+00	0.0E+00

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
		Selenium	4.87E-01	mg/kg	4.87E-01	mg/kg	4.87E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Silver	1.14E-01	mg/kg	1.14E-01	mg/kg	1.14E-01	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	3.10E+01	mg/kg	3.10E+01	mg/kg	3.10E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Zinc	9.16E+01	mg/kg	9.16E+01	mg/kg	9.16E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**8.43E+00**	**5.52E+01**
Surface Water	Ingestion	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	2.12E-07	4.95E-07	mg/kg-d	6.0E-05	mg/kg-d	3.54E-03	8.2E-03
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	8.96E-07	2.09E-06	mg/kg-d	3.0E-04	mg/kg-d	2.99E-03	7.0E-03
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	1.25E-11	2.92E-11	mg/kg-d	2.5E-05	mg/kg-d	5.01E-07	1.2E-06
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	4.79E-10	1.12E-09	mg/kg-d	3.0E-03	mg/kg-d	1.60E-07	3.7E-07
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	4.76E-09	1.11E-08	mg/kg-d	3.0E-04	mg/kg-d	1.59E-05	3.7E-05
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	6.75E-10	1.57E-09	mg/kg-d	4.0E-02	mg/kg-d	1.69E-08	3.9E-08
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	2.07E-06	4.84E-06	mg/kg-d	7.0E-01	mg/kg-d	2.96E-06	6.9E-06
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	2.67E-07	6.23E-07	mg/kg-d	9.6E-04	mg/kg-d	2.78E-04	6.5E-04
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	3.77E-10	8.80E-10	mg/kg-d	2.1E-05	mg/kg-d	1.80E-05	4.2E-05
		Methylmercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	4.88E-13	1.14E-12	mg/kg-d	1.0E-04	mg/kg-d	4.88E-09	1.1E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	1.65E-08	3.85E-08	mg/kg-d	8.0E-04	mg/kg-d	2.06E-05	4.8E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	6.03E-10	1.41E-09	mg/kg-d	5.0E-03	mg/kg-d	1.21E-07	2.8E-07
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	4.07E-11	9.50E-11	mg/kg-d	2.0E-04	mg/kg-d	2.04E-07	4.7E-07
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	1.14E-09	2.66E-09	mg/kg-d	3.0E-01	mg/kg-d	3.79E-09	8.9E-09
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	2.35E-09	5.48E-09	mg/kg-d	7.0E-02	mg/kg-d	3.35E-08	7.8E-08
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	1.06E-09	2.48E-09	mg/kg-d	2.0E-02	mg/kg-d	5.32E-08	1.2E-07
												Hazard Index	3.36E-04	7.84E-04
Surface Water	Dermal	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	6.05E-07	1.39E-06	mg/kg-d	6.0E-05	mg/kg-d	1.01E-02	2.3E-02
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	2.55E-06	5.86E-06	mg/kg-d	3.0E-04	mg/kg-d	8.52E-03	2.0E-02
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	3.57E-11	8.18E-11	mg/kg-d	2.5E-05	mg/kg-d	1.43E-06	3.3E-06
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	1.37E-09	3.13E-09	mg/kg-d	7.5E-05	mg/kg-d	1.82E-05	4.2E-05
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	5.42E-09	1.24E-08	mg/kg-d	3.0E-04	mg/kg-d	1.81E-05	4.1E-05
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	1.92E-09	4.41E-09	mg/kg-d	4.0E-02	mg/kg-d	4.81E-08	1.1E-07
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	5.91E-06	1.36E-05	mg/kg-d	7.0E-01	mg/kg-d	8.45E-06	1.9E-05
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	7.61E-07	1.74E-06	mg/kg-d	9.6E-04	mg/kg-d	7.93E-04	1.8E-03
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	1.08E-09	2.47E-09	mg/kg-d	2.1E-05	mg/kg-d	5.12E-05	1.2E-04
		Methylmercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	1.39E-12	3.19E-12	mg/kg-d	1.0E-04	mg/kg-d	1.39E-08	3.2E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	9.41E-09	2.16E-08	mg/kg-d	8.0E-04	mg/kg-d	1.18E-05	2.7E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	1.72E-09	3.94E-09	mg/kg-d	5.0E-03	mg/kg-d	3.44E-07	7.9E-07
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	6.96E-11	1.60E-10	mg/kg-d	2.0E-04	mg/kg-d	3.48E-07	8.0E-07
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	1.95E-09	4.46E-09	mg/kg-d	3.0E-01	mg/kg-d	6.49E-09	1.5E-08
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	1.43E-07	3.27E-07	mg/kg-d	2.0E-02	mg/kg-d	7.13E-06	1.6E-05
												Hazard Index	1.95E-02	4.47E-02
		Aluminum	9.73E+03	mg/kg	3.10E-06	mg/m^3	3.10E-06	7.64E-07	7.64E-07	mg/m^3	5.0E-03	mg/m^3	1.53E-04	1.5E-04
		Antimony	3.78E+03	mg/kg	1.21E-06	mg/m^3	1.21E-06	2.97E-07	2.97E-07	mg/m^3	--	mg/m^3	--	--
		Arsenic (inorganic)	5.88E+03	mg/kg	1.87E-06	mg/m^3	1.87E-06	2.77E-07	2.77E-07	mg/m^3	1.5E-05	mg/m^3	1.85E-02	1.8E-02
		Barium	3.22E+02	mg/kg	1.03E-07	mg/m^3	1.03E-07	2.53E-08	2.53E-08	mg/m^3	5.0E-04	mg/m^3	5.06E-05	5.1E-05

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Air	Dust Particulates or Volatile from Soil	Chromium	2.35E+01	mg/kg	7.47E-09	mg/m^3	7.47E-09	1.84E-09	1.84E-09	mg/m^3	1.0E-04	mg/m^3	1.84E-05	1.8E-05
		Cobalt	1.58E+01	mg/kg	5.03E-09	mg/m^3	5.03E-09	1.24E-09	1.24E-09	mg/m^3	6.0E-06	mg/m^3	2.07E-04	2.1E-04
		Iron	3.67E+04	mg/kg	1.17E-05	mg/m^3	1.17E-05	2.88E-06	2.88E-06	mg/m^3	--	mg/m^3	--	--
		Manganese	7.19E+02	mg/kg	2.29E-07	mg/m^3	2.29E-07	5.64E-08	5.64E-08	mg/m^3	5.0E-05	mg/m^3	1.13E-03	1.1E-03
		Mercury	3.73E+02	mg/kg	1.65E-02	mg/m^3	1.65E-02	4.07E-03	4.07E-03	mg/m^3	3.0E-04	mg/m^3	**1.36E+01**	**1.4E+01**
		Thallium	1.71E-01	mg/kg	5.45E-11	mg/m^3	5.45E-11	1.34E-11	1.34E-11	mg/m^3	--	mg/m^3	--	--
		Vanadium	3.11E+01	mg/kg	9.90E-09	mg/m^3	9.90E-09	2.44E-09	2.44E-09	mg/m^3	--	mg/m^3	--	--
												Hazard Index	**1.36E+01**	**1.36E+01**
Non-Salmon Fish	Ingestion	Aluminum	2.67E+01	mg/kg	2.67E+01	mg/kg	2.67E+01	2.07E-02	4.63E-02	mg/kg-d	1.0E+00	mg/kg-d	2.07E-02	4.6E-02
		Antimony	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	1.32E-02	2.96E-02	mg/kg-d	4.0E-04	mg/kg-d	**3.30E+01**	**7.4E+01**
		Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	1.49E-02	3.34E-02	mg/kg-d	3.0E-04	mg/kg-d	**4.96E+01**	**1.1E+02**
		Barium	6.06E+00	mg/kg	6.06E+00	mg/kg	6.06E+00	4.69E-03	1.05E-02	mg/kg-d	2.0E-01	mg/kg-d	2.35E-02	5.3E-02
		Cadmium	4.20E-02	mg/kg	4.20E-02	mg/kg	4.20E-02	3.25E-05	7.28E-05	mg/kg-d	1.0E-03	mg/kg-d	3.25E-02	7.3E-02
		Chromium	1.99E-01	mg/kg	1.99E-01	mg/kg	1.99E-01	1.54E-04	3.45E-04	mg/kg-d	3.0E-03	mg/kg-d	5.14E-02	1.2E-01
		Cobalt	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	1.24E+00	mg/kg	1.24E+00	mg/kg	1.24E+00	9.59E-04	2.15E-03	mg/kg-d	4.0E-02	mg/kg-d	2.40E-02	5.4E-02
		Iron	1.20E+02	mg/kg	1.20E+02	mg/kg	1.20E+02	9.31E-02	2.09E-01	mg/kg-d	7.0E-01	mg/kg-d	1.33E-01	3.0E-01
		Manganese	1.54E+01	mg/kg	1.54E+01	mg/kg	1.54E+01	1.19E-02	2.67E-02	mg/kg-d	1.4E-01	mg/kg-d	8.53E-02	1.9E-01
		Methylmercury	2.07E-01	mg/kg	6.21E-01	mg/kg	6.21E-01	4.81E-04	1.08E-03	mg/kg-d	1.0E-04	mg/kg-d	**4.81E+00**	**1.1E+01**
		Nickel	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	1.15E-04	2.58E-04	mg/kg-d	2.0E-02	mg/kg-d	5.77E-03	1.3E-02
		Selenium	1.43E+00	mg/kg	1.43E+00	mg/kg	1.43E+00	1.11E-03	2.48E-03	mg/kg-d	5.0E-03	mg/kg-d	2.22E-01	5.0E-01
		Silver	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	1.81E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	1.40E-04	3.14E-04	mg/kg-d	5.0E-03	mg/kg-d	2.80E-02	6.3E-02
		Zinc	2.56E+01	mg/kg	2.56E+01	mg/kg	2.56E+01	1.98E-02	4.44E-02	mg/kg-d	3.0E-01	mg/kg-d	6.61E-02	1.5E-01
												Hazard Index	**8.82E+01**	**1.97E+02**
Large Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	6.43E-01	mg/kg	6.43E-01	9.74E-06	2.18E-05	mg/kg-d	1.0E+00	mg/kg-d	9.74E-06	2.2E-05
		Antimony	2.72E+00	mg/kg	7.35E-02	mg/kg	7.35E-02	1.11E-06	2.50E-06	mg/kg-d	4.0E-04	mg/kg-d	2.79E-03	6.2E-03
		Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	4.36E-07	9.76E-07	mg/kg-d	3.0E-04	mg/kg-d	1.45E-03	3.3E-03
		Barium	1.55E+02	mg/kg	6.29E-01	mg/kg	6.29E-01	9.53E-06	2.13E-05	mg/kg-d	2.0E-01	mg/kg-d	4.76E-05	1.1E-04
		Chromium	8.55E-01	mg/kg	1.27E-01	mg/kg	1.27E-01	1.92E-06	4.31E-06	mg/kg-d	3.0E-03	mg/kg-d	6.42E-04	1.4E-03
		Cobalt	3.35E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	2.74E-06	6.14E-06	mg/kg-d	3.0E-04	mg/kg-d	9.14E-03	2.0E-02
		Iron	2.96E+01	mg/kg	1.60E+01	mg/kg	1.60E+01	2.42E-04	5.42E-04	mg/kg-d	7.0E-01	mg/kg-d	3.46E-04	7.7E-04
		Manganese	7.15E+02	mg/kg	7.72E+00	mg/kg	7.72E+00	1.17E-04	2.62E-04	mg/kg-d	1.4E-01	mg/kg-d	8.36E-04	1.9E-03
		Mercury	2.10E-01	mg/kg	1.42E+00	mg/kg	1.42E+00	2.15E-05	4.81E-05	mg/kg-d	3.0E-04	mg/kg-d	7.16E-02	1.6E-01
		Thallium	1.62E-02	mg/kg	1.75E-02	mg/kg	1.75E-02	2.65E-07	5.94E-07	mg/kg-d	1.0E-05	mg/kg-d	2.65E-02	5.9E-02
		Vanadium	6.45E-02	mg/kg	4.35E-03	mg/kg	4.35E-03	6.60E-08	1.48E-07	mg/kg-d	5.0E-03	mg/kg-d	1.32E-05	3.0E-05
												Hazard Index	1.13E-01	2.54E-01
		Aluminum	1.59E+01	mg/kg	1.59E+01	mg/kg	1.59E+01	1.68E-04	3.76E-04	mg/kg-d	1.0E+00	mg/kg-d	1.68E-04	3.8E-04
		Antimony	2.72E+00	mg/kg	2.72E+00	mg/kg	2.72E+00	2.88E-05	6.45E-05	mg/kg-d	4.0E-04	mg/kg-d	7.20E-02	1.6E-01
		Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	5.62E-06	1.26E-05	mg/kg-d	3.0E-04	mg/kg-d	1.87E-02	4.2E-02
		Barium	1.55E+02	mg/kg	1.55E+02	mg/kg	1.55E+02	1.64E-03	3.68E-03	mg/kg-d	2.0E-01	mg/kg-d	8.20E-03	1.8E-02
		Chromium	8.55E-01	mg/kg	8.55E-01	mg/kg	8.55E-01	9.04E-06	2.02E-05	mg/kg-d	3.0E-03	mg/kg-d	3.01E-03	6.7E-03

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Small Land Mammal	Ingestion	Cobalt	3.35E-01	mg/kg	3.35E-01	mg/kg	3.35E-01	3.54E-06	7.93E-06	mg/kg-d	3.0E-04	mg/kg-d	1.18E-02	2.6E-02
		Iron	2.96E+01	mg/kg	2.96E+01	mg/kg	2.96E+01	3.13E-04	7.00E-04	mg/kg-d	7.0E-01	mg/kg-d	4.47E-04	1.0E-03
		Manganese	7.15E+02	mg/kg	7.15E+02	mg/kg	7.15E+02	7.56E-03	1.69E-02	mg/kg-d	1.4E-01	mg/kg-d	5.40E-02	1.2E-01
		Mercury	2.10E-01	mg/kg	2.10E-01	mg/kg	2.10E-01	2.22E-06	4.97E-06	mg/kg-d	3.0E-04	mg/kg-d	7.40E-03	1.7E-02
		Thallium	1.62E-02	mg/kg	1.62E-02	mg/kg	1.62E-02	1.71E-07	3.84E-07	mg/kg-d	1.0E-05	mg/kg-d	1.71E-02	3.8E-02
		Vanadium	6.45E-02	mg/kg	6.45E-02	mg/kg	6.45E-02	6.82E-07	1.53E-06	mg/kg-d	5.0E-03	mg/kg-d	1.36E-04	3.1E-04
												Hazard Index	1.93E-01	4.32E-01
Birds	Ingestion	Aluminum	1.30E+02	mg/kg	1.30E+02	mg/kg	1.30E+02	6.64E-03	1.49E-02	mg/kg-d	1.0E+00	mg/kg-d	6.64E-03	1.5E-02
		Antimony	1.03E+01	mg/kg	1.03E+01	mg/kg	1.03E+01	5.29E-04	1.18E-03	mg/kg-d	4.0E-04	mg/kg-d	**1.32E+00**	**3.0E+00**
		Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	3.88E-04	8.70E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.29E+00**	**2.9E+00**
		Barium	5.99E+01	mg/kg	5.99E+01	mg/kg	5.99E+01	3.07E-03	6.87E-03	mg/kg-d	2.0E-01	mg/kg-d	1.53E-02	3.4E-02
		Chromium	9.19E-01	mg/kg	9.19E-01	mg/kg	9.19E-01	4.71E-05	1.05E-04	mg/kg-d	3.0E-03	mg/kg-d	1.57E-02	3.5E-02
		Cobalt	2.33E-01	mg/kg	2.33E-01	mg/kg	2.33E-01	1.19E-05	2.67E-05	mg/kg-d	3.0E-04	mg/kg-d	3.98E-02	8.9E-02
		Iron	1.97E+02	mg/kg	1.97E+02	mg/kg	1.97E+02	1.01E-02	2.26E-02	mg/kg-d	7.0E-01	mg/kg-d	1.44E-02	3.2E-02
		Manganese	1.90E+03	mg/kg	1.90E+03	mg/kg	1.90E+03	9.76E-02	2.19E-01	mg/kg-d	1.4E-01	mg/kg-d	6.97E-01	**1.6E+00**
		Mercury	5.64E+00	mg/kg	5.64E+00	mg/kg	5.64E+00	2.89E-04	6.47E-04	mg/kg-d	3.0E-04	mg/kg-d	9.63E-01	**2.2E+00**
		Thallium	2.10E-02	mg/kg	2.10E-02	mg/kg	2.10E-02	1.08E-06	2.41E-06	mg/kg-d	1.0E-05	mg/kg-d	1.08E-01	2.4E-01
		Vanadium	4.70E-01	mg/kg	4.70E-01	mg/kg	4.70E-01	2.41E-05	5.39E-05	mg/kg-d	5.0E-03	mg/kg-d	4.82E-03	1.1E-02
												Hazard Index	**4.48E+00**	**1.00E+01**
Berries and Plants	Ingestion	Aluminum	9.73E+03	mg/kg	6.32E+00	mg/kg	6.32E+00	1.29E-05	2.89E-05	mg/kg-d	1.0E+00	mg/kg-d	1.29E-05	2.9E-05
		Antimony	3.78E+03	mg/kg	1.14E+02	mg/kg	1.14E+02	2.32E-04	5.19E-04	mg/kg-d	4.0E-04	mg/kg-d	5.80E-01	**1.3E+00**
		Arsenic (inorganic)	5.88E+03	mg/kg	3.53E+01	mg/kg	3.53E+01	7.21E-05	1.62E-04	mg/kg-d	3.0E-04	mg/kg-d	2.40E-01	5.4E-01
		Barium	3.22E+02	mg/kg	4.84E+00	mg/kg	4.84E+00	9.88E-06	2.21E-05	mg/kg-d	2.0E-01	mg/kg-d	4.94E-05	1.1E-04
		Chromium	2.35E+01	mg/kg	1.06E-01	mg/kg	1.06E-01	2.16E-07	4.83E-07	mg/kg-d	3.0E-03	mg/kg-d	7.19E-05	1.6E-04
		Cobalt	1.58E+01	mg/kg	1.11E-01	mg/kg	1.11E-01	2.26E-07	5.06E-07	mg/kg-d	3.0E-04	mg/kg-d	7.53E-04	1.7E-03
		Iron	3.67E+04	mg/kg	3.67E+01	mg/kg	3.67E+01	7.49E-05	1.68E-04	mg/kg-d	7.0E-01	mg/kg-d	1.07E-04	2.4E-04
		Manganese	7.19E+02	mg/kg	3.59E+01	mg/kg	3.59E+01	7.34E-05	1.64E-04	mg/kg-d	1.4E-01	mg/kg-d	5.24E-04	1.2E-03
		Mercury	3.73E+02	mg/kg	7.46E+01	mg/kg	7.46E+01	1.52E-04	3.41E-04	mg/kg-d	3.0E-04	mg/kg-d	5.08E-01	**1.1E+00**
		Thallium	1.71E-01	mg/kg	6.84E-05	mg/kg	6.84E-05	1.40E-10	3.13E-10	mg/kg-d	1.0E-05	mg/kg-d	1.40E-05	3.1E-05
		Vanadium	3.11E+01	mg/kg	9.33E-02	mg/kg	9.33E-02	1.91E-07	4.27E-07	mg/kg-d	5.0E-03	mg/kg-d	3.81E-05	8.5E-05
												Hazard Index	**1.33E+00**	**2.98E+00**
												Total Hazard Index	**1.25E+02**	**3.60E+02**

Table J-10
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Mine Worker
Receptor Age: Adult

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient
Soil	Ingestion	Aluminum	9.73E+03	mg/kg	9.73E+03	mg/kg	9.73E+03	9.52E-03	mg/kg-d	1.0E+00	mg/kg-d	9.52E-03
		Antimony	3.78E+03	mg/kg	3.78E+03	mg/kg	3.78E+03	3.70E-03	mg/kg-d	4.0E-04	mg/kg-d	**9.26E+00**
		Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	3.45E-03	mg/kg-d	3.0E-04	mg/kg-d	**1.15E+01**
		Barium	3.22E+02	mg/kg	3.22E+02	mg/kg	3.22E+02	3.15E-04	mg/kg-d	2.0E-01	mg/kg-d	1.58E-03
		Chromium	2.35E+01	mg/kg	2.35E+01	mg/kg	2.35E+01	2.29E-05	mg/kg-d	3.0E-03	mg/kg-d	7.65E-03
		Cobalt	1.58E+01	mg/kg	1.58E+01	mg/kg	1.58E+01	1.55E-05	mg/kg-d	3.0E-04	mg/kg-d	5.15E-02
		Iron	3.67E+04	mg/kg	3.67E+04	mg/kg	3.67E+04	3.59E-02	mg/kg-d	7.0E-01	mg/kg-d	5.12E-02
		Manganese	7.19E+02	mg/kg	7.19E+02	mg/kg	7.19E+02	7.03E-04	mg/kg-d	2.4E-02	mg/kg-d	2.93E-02
		Mercury	3.73E+02	mg/kg	3.73E+02	mg/kg	3.73E+02	3.65E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.22E+00**
		Thallium	1.71E-01	mg/kg	1.71E-01	mg/kg	1.71E-01	1.67E-07	mg/kg-d	1.0E-05	mg/kg-d	1.67E-02
		Vanadium	3.11E+01	mg/kg	3.11E+01	mg/kg	3.11E+01	3.04E-05	mg/kg-d	5.0E-03	mg/kg-d	6.09E-03
											Hazard Index	**2.22E+01**
Soil	Dermal	Aluminum	9.73E+03	mg/kg	9.73E+03	mg/kg	9.73E+03	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00
		Antimony	3.78E+03	mg/kg	3.78E+03	mg/kg	3.78E+03	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00
		Arsenic (inorganic)	5.88E+03	mg/kg	5.88E+03	mg/kg	5.88E+03	1.14E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.80E+00**
		Barium	3.22E+02	mg/kg	3.22E+02	mg/kg	3.22E+02	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00
		Chromium	2.35E+01	mg/kg	2.35E+01	mg/kg	2.35E+01	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00
		Cobalt	1.58E+01	mg/kg	1.58E+01	mg/kg	1.58E+01	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00
		Iron	3.67E+04	mg/kg	3.67E+04	mg/kg	3.67E+04	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00
		Manganese	7.19E+02	mg/kg	7.19E+02	mg/kg	7.19E+02	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00
		Mercury	3.73E+02	mg/kg	3.73E+02	mg/kg	3.73E+02	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00
		Thallium	1.71E-01	mg/kg	1.71E-01	mg/kg	1.71E-01	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00
		Vanadium	3.11E+01	mg/kg	3.11E+01	mg/kg	3.11E+01	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00
											Hazard Index	**3.80E+00**
Sediment	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00
		Antimony	4.46E+03	mg/kg	4.46E+03	mg/kg	4.46E+03	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00
		Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	4.19E-03	mg/kg-d	3.0E-04	mg/kg-d	**1.40E+01**
		Barium	6.81E+02	mg/kg	6.81E+02	mg/kg	6.81E+02	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00
		Cadmium	2.92E-01	mg/kg	2.92E-01	mg/kg	2.92E-01	0.00E+00	mg/kg-d	2.5E-05	mg/kg-d	0.00E+00
		Chromium	2.57E+01	mg/kg	2.57E+01	mg/kg	2.57E+01	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00
		Cobalt	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00
		Copper	3.72E+01	mg/kg	3.72E+01	mg/kg	3.72E+01	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00
		Iron	9.92E+04	mg/kg	9.92E+04	mg/kg	9.92E+04	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00
		Manganese	2.02E+03	mg/kg	2.02E+03	mg/kg	2.02E+03	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00
		Mercury	6.66E+01	mg/kg	6.66E+01	mg/kg	6.66E+01	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00
		Methyl Mercury	5.23E-03	mg/kg	5.23E-03	mg/kg	5.23E-03	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00
		Nickel	5.70E+01	mg/kg	5.70E+01	mg/kg	5.70E+01	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.00E+00
		Selenium	4.87E-01	mg/kg	4.87E-01	mg/kg	4.87E-01	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00
		Silver	1.14E-01	mg/kg	1.14E-01	mg/kg	1.14E-01	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient
		Thallium	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00
		Vanadium	3.10E+01	mg/kg	3.10E+01	mg/kg	3.10E+01	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00
		Zinc	9.16E+01	mg/kg	9.16E+01	mg/kg	9.16E+01	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00
											Hazard Index	**1.40E+01**
Groundwater	Ingestion	Antimony	1.31E+04	µg/L	1.31E+04	µg/L	1.31E+04	2.56E-01	mg/kg-d	4.0E-04	mg/kg-d	**6.41E+02**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	8.86E-02	mg/kg-d	3.0E-04	mg/kg-d	**2.95E+02**
		Barium	3.65E+02	µg/L	3.65E+02	µg/L	3.65E+02	7.14E-03	mg/kg-d	2.0E-01	mg/kg-d	3.57E-02
		Chromium	1.06E+01	µg/L	1.06E+01	µg/L	1.06E+01	2.07E-04	mg/kg-d	3.0E-03	mg/kg-d	6.91E-02
		Cobalt	4.05E+01	µg/L	4.05E+01	µg/L	4.05E+01	7.93E-04	mg/kg-d	3.0E-04	mg/kg-d	**2.64E+00**
		Iron	2.24E+04	µg/L	2.24E+04	µg/L	2.24E+04	4.38E-01	mg/kg-d	7.0E-01	mg/kg-d	6.26E-01
		Manganese	7.37E+03	µg/L	7.37E+03	µg/L	7.37E+03	1.44E-01	mg/kg-d	2.4E-02	mg/kg-d	**6.01E+00**
		Mercury	5.65E+01	µg/L	5.65E+01	µg/L	5.65E+01	1.11E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.69E+00**
		Nickel	3.59E+01	µg/L	3.59E+01	µg/L	3.59E+01	7.03E-04	mg/kg-d	2.0E-02	mg/kg-d	3.51E-02
		Selenium	5.40E+00	µg/L	5.40E+00	µg/L	5.40E+00	1.06E-04	mg/kg-d	5.0E-03	mg/kg-d	2.11E-02
		Thallium	7.50E-02	µg/L	7.50E-02	µg/L	7.50E-02	1.47E-06	mg/kg-d	1.0E-05	mg/kg-d	1.47E-01
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.12E-04	mg/kg-d	2.0E-02	mg/kg-d	5.58E-03
											Hazard Index	**9.50E+02**
Groundwater	Dermal	Antimony	1.31E+04	µg/L	1.31E+01	mg/L	1.31E+01	1.34E-03	mg/kg-d	6.0E-05	mg/kg-d	**2.23E+01**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	4.63E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.54E+00**
		Barium	3.65E+02	µg/L	3.65E-01	mg/L	3.65E-01	3.73E-05	mg/kg-d	1.4E-02	mg/kg-d	2.66E-03
		Chromium	1.06E+01	µg/L	1.06E-02	mg/L	1.06E-02	1.08E-06	mg/kg-d	7.5E-05	mg/kg-d	1.44E-02
		Cobalt	4.05E+01	µg/L	4.05E-02	mg/L	4.05E-02	1.65E-06	mg/kg-d	3.0E-04	mg/kg-d	5.52E-03
		Iron	2.24E+04	µg/L	2.24E+01	mg/L	2.24E+01	2.29E-03	mg/kg-d	7.0E-01	mg/kg-d	3.27E-03
		Manganese	7.37E+03	µg/L	7.37E+00	mg/L	7.37E+00	7.53E-04	mg/kg-d	9.6E-04	mg/kg-d	7.84E-01
		Mercury	5.65E+01	µg/L	5.65E-02	mg/L	5.65E-02	5.77E-06	mg/kg-d	2.1E-05	mg/kg-d	2.75E-01
		Nickel	3.59E+01	µg/L	3.59E-02	mg/L	3.59E-02	7.33E-07	mg/kg-d	8.0E-04	mg/kg-d	9.17E-04
		Selenium	5.40E+00	µg/L	5.40E-03	mg/L	5.40E-03	5.52E-07	mg/kg-d	5.0E-03	mg/kg-d	1.10E-04
		Thallium	7.50E-02	µg/L	7.50E-05	mg/L	7.50E-05	7.66E-09	mg/kg-d	1.0E-05	mg/kg-d	7.66E-04
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00
											Hazard Index	**2.49E+01**
Surface Water	Dermal	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	1.21E-06	mg/kg-d	6.0E-05	mg/kg-d	2.02E-02
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	5.11E-06	mg/kg-d	3.0E-04	mg/kg-d	1.70E-02
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	7.14E-11	mg/kg-d	2.5E-05	mg/kg-d	2.86E-06
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	2.73E-09	mg/kg-d	7.5E-05	mg/kg-d	3.64E-05
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	1.08E-08	mg/kg-d	3.0E-04	mg/kg-d	3.62E-05
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	3.85E-09	mg/kg-d	4.0E-02	mg/kg-d	9.62E-08
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	1.18E-05	mg/kg-d	7.0E-01	mg/kg-d	1.69E-05
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	1.52E-06	mg/kg-d	9.6E-04	mg/kg-d	1.59E-03
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	2.15E-09	mg/kg-d	2.1E-05	mg/kg-d	1.02E-04
		Methylmercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	2.78E-12	mg/kg-d	1.0E-04	mg/kg-d	2.78E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	1.88E-08	mg/kg-d	8.0E-04	mg/kg-d	2.35E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	3.44E-09	mg/kg-d	5.0E-03	mg/kg-d	6.87E-07
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	1.39E-10	mg/kg-d	2.0E-04	mg/kg-d	6.96E-07
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	3.89E-09	mg/kg-d	3.0E-01	mg/kg-d	1.30E-08
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.00E+00
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	2.85E-07	mg/kg-d	2.0E-02	mg/kg-d	1.43E-05
											Hazard Index	3.90E-02

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient
Air	Dust Particulates or Volatile from Soil	Aluminum	9.73E+03	mg/kg	1.43E-05	mg/m^3	1.43E-05	3.27E-06	mg/m^3	5.0E-03	mg/m^3	6.53E-04
		Antimony	3.78E+03	mg/kg	5.56E-06	mg/m^3	5.56E-06	1.27E-06	mg/m^3	--	mg/m^3	--
		Arsenic (inorganic)	5.88E+03	mg/kg	8.65E-06	mg/m^3	8.65E-06	1.19E-06	mg/m^3	1.5E-05	mg/m^3	7.90E-02
		Barium	3.22E+02	mg/kg	4.74E-07	mg/m^3	4.74E-07	1.08E-07	mg/m^3	5.0E-04	mg/m^3	2.16E-04
		Chromium	2.35E+01	mg/kg	3.45E-08	mg/m^3	3.45E-08	7.87E-09	mg/m^3	1.0E-04	mg/m^3	7.87E-05
		Cobalt	1.58E+01	mg/kg	2.32E-08	mg/m^3	2.32E-08	5.30E-09	mg/m^3	6.0E-06	mg/m^3	8.84E-04
		Iron	3.67E+04	mg/kg	5.39E-05	mg/m^3	5.39E-05	1.23E-05	mg/m^3	--	mg/m^3	--
		Manganese	7.19E+02	mg/kg	1.06E-06	mg/m^3	1.06E-06	2.41E-07	mg/m^3	5.0E-05	mg/m^3	4.83E-03
		Mercury	3.73E+02	mg/kg	1.65E-02	mg/m^3	1.65E-02	3.77E-03	mg/m^3	3.0E-04	mg/m^3	**1.26E+01**
		Thallium	1.71E-01	mg/kg	2.51E-10	mg/m^3	2.51E-10	5.74E-11	mg/m^3	--	mg/m^3	--
		Vanadium	3.11E+01	mg/kg	4.57E-08	mg/m^3	4.57E-08	1.04E-08	mg/m^3	--	mg/m^3	--
											Hazard Index	**1.26E+01**
Non-Salmon Fish	Ingestion	Aluminum	2.67E+01	mg/kg	2.67E+01	mg/kg	2.67E+01	1.42E-02	mg/kg-d	1.0E+00	mg/kg-d	1.42E-02
		Antimony	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	9.05E-03	mg/kg-d	4.0E-04	mg/kg-d	**2.26E+01**
		Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	1.02E-02	mg/kg-d	3.0E-04	mg/kg-d	**3.40E+01**
		Barium	6.06E+00	mg/kg	6.06E+00	mg/kg	6.06E+00	3.21E-03	mg/kg-d	2.0E-01	mg/kg-d	1.61E-02
		Cadmium	4.20E-02	mg/kg	4.20E-02	mg/kg	4.20E-02	2.23E-05	mg/kg-d	1.0E-03	mg/kg-d	2.23E-02
		Chromium	1.99E-01	mg/kg	1.99E-01	mg/kg	1.99E-01	1.06E-04	mg/kg-d	3.0E-03	mg/kg-d	3.52E-02
		Cobalt	--	mg/kg	--	mg/kg	--	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00
		Copper	1.24E+00	mg/kg	1.24E+00	mg/kg	1.24E+00	6.57E-04	mg/kg-d	4.0E-02	mg/kg-d	1.64E-02
		Iron	1.20E+02	mg/kg	1.20E+02	mg/kg	1.20E+02	6.38E-02	mg/kg-d	7.0E-01	mg/kg-d	9.11E-02
		Manganese	1.54E+01	mg/kg	1.54E+01	mg/kg	1.54E+01	8.18E-03	mg/kg-d	1.4E-01	mg/kg-d	5.84E-02
		Methyl Mercury	2.07E-01	mg/kg	6.21E-01	mg/kg	6.21E-01	3.29E-04	mg/kg-d	1.0E-04	mg/kg-d	**3.29E+00**
		Nickel	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	7.90E-05	mg/kg-d	2.0E-02	mg/kg-d	3.95E-03
		Selenium	1.43E+00	mg/kg	1.43E+00	mg/kg	1.43E+00	7.59E-04	mg/kg-d	5.0E-03	mg/kg-d	1.52E-01
		Silver	--	mg/kg	--	mg/kg	--	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00
		Thallium	--	mg/kg	--	mg/kg	--	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00
		Vanadium	1.81E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	9.60E-05	mg/kg-d	5.0E-03	mg/kg-d	1.92E-02
		Zinc	2.56E+01	mg/kg	2.56E+01	mg/kg	2.56E+01	1.36E-02	mg/kg-d	3.0E-01	mg/kg-d	4.53E-02
											Hazard Index	**6.04E+01**
Large Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	6.43E-01	mg/kg	6.43E-01	6.67E-06	mg/kg-d	1.0E+00	mg/kg-d	6.67E-06
		Antimony	2.72E+00	mg/kg	7.35E-02	mg/kg	7.35E-02	7.64E-07	mg/kg-d	4.0E-04	mg/kg-d	1.91E-03
		Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	2.98E-07	mg/kg-d	3.0E-04	mg/kg-d	9.94E-04
		Barium	1.55E+02	mg/kg	6.29E-01	mg/kg	6.29E-01	6.53E-06	mg/kg-d	2.0E-01	mg/kg-d	3.26E-05
		Chromium	8.55E-01	mg/kg	1.27E-01	mg/kg	1.27E-01	1.32E-06	mg/kg-d	3.0E-03	mg/kg-d	4.39E-04
		Cobalt	3.35E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	1.88E-06	mg/kg-d	3.0E-04	mg/kg-d	6.26E-03
		Iron	2.96E+01	mg/kg	1.60E+01	mg/kg	1.60E+01	1.66E-04	mg/kg-d	7.0E-01	mg/kg-d	2.37E-04
		Manganese	7.15E+02	mg/kg	7.72E+00	mg/kg	7.72E+00	8.02E-05	mg/kg-d	1.4E-01	mg/kg-d	5.73E-04
		Mercury	2.10E-01	mg/kg	1.42E+00	mg/kg	1.42E+00	1.47E-05	mg/kg-d	3.0E-04	mg/kg-d	4.91E-02
		Thallium	1.62E-02	mg/kg	1.75E-02	mg/kg	1.75E-02	1.82E-07	mg/kg-d	1.0E-05	mg/kg-d	1.82E-02
		Vanadium	6.45E-02	mg/kg	4.35E-03	mg/kg	4.35E-03	4.52E-08	mg/kg-d	5.0E-03	mg/kg-d	9.04E-06
											Hazard Index	7.77E-02
		Aluminum	1.59E+01	mg/kg	1.59E+01	mg/kg	1.59E+01	1.15E-04	mg/kg-d	1.0E+00	mg/kg-d	1.15E-04
		Antimony	2.72E+00	mg/kg	2.72E+00	mg/kg	2.72E+00	1.97E-05	mg/kg-d	4.0E-04	mg/kg-d	4.93E-02

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient
Small Land Mammal	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	3.85E-06	mg/kg-d	3.0E-04	mg/kg-d	1.28E-02
		Barium	1.55E+02	mg/kg	1.55E+02	mg/kg	1.55E+02	1.12E-03	mg/kg-d	2.0E-01	mg/kg-d	5.62E-03
		Chromium	8.55E-01	mg/kg	8.55E-01	mg/kg	8.55E-01	6.19E-06	mg/kg-d	3.0E-03	mg/kg-d	2.06E-03
		Cobalt	3.35E-01	mg/kg	3.35E-01	mg/kg	3.35E-01	2.43E-06	mg/kg-d	3.0E-04	mg/kg-d	8.09E-03
		Iron	2.96E+01	mg/kg	2.96E+01	mg/kg	2.96E+01	2.14E-04	mg/kg-d	7.0E-01	mg/kg-d	3.06E-04
		Manganese	7.15E+02	mg/kg	7.15E+02	mg/kg	7.15E+02	5.18E-03	mg/kg-d	1.4E-01	mg/kg-d	3.70E-02
		Mercury	2.10E-01	mg/kg	2.10E-01	mg/kg	2.10E-01	1.52E-06	mg/kg-d	3.0E-04	mg/kg-d	5.07E-03
		Thallium	1.62E-02	mg/kg	1.62E-02	mg/kg	1.62E-02	1.17E-07	mg/kg-d	1.0E-05	mg/kg-d	1.17E-02
		Vanadium	6.45E-02	mg/kg	6.45E-02	mg/kg	6.45E-02	4.67E-07	mg/kg-d	5.0E-03	mg/kg-d	9.34E-05
											Hazard Index	1.32E-01
Birds	Ingestion	Aluminum	1.30E+02	mg/kg	1.30E+02	mg/kg	1.30E+02	4.55E-03	mg/kg-d	1.0E+00	mg/kg-d	4.55E-03
		Antimony	1.03E+01	mg/kg	1.03E+01	mg/kg	1.03E+01	3.62E-04	mg/kg-d	4.0E-04	mg/kg-d	9.06E-01
		Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	2.66E-04	mg/kg-d	3.0E-04	mg/kg-d	8.86E-01
		Barium	5.99E+01	mg/kg	5.99E+01	mg/kg	5.99E+01	2.10E-03	mg/kg-d	2.0E-01	mg/kg-d	1.05E-02
		Chromium	9.19E-01	mg/kg	9.19E-01	mg/kg	9.19E-01	3.23E-05	mg/kg-d	3.0E-03	mg/kg-d	1.08E-02
		Cobalt	2.33E-01	mg/kg	2.33E-01	mg/kg	2.33E-01	8.18E-06	mg/kg-d	3.0E-04	mg/kg-d	2.73E-02
		Iron	1.97E+02	mg/kg	1.97E+02	mg/kg	1.97E+02	6.92E-03	mg/kg-d	7.0E-01	mg/kg-d	9.89E-03
		Manganese	1.90E+03	mg/kg	1.90E+03	mg/kg	1.90E+03	6.68E-02	mg/kg-d	1.4E-01	mg/kg-d	4.77E-01
		Mercury	5.64E+00	mg/kg	5.64E+00	mg/kg	5.64E+00	1.98E-04	mg/kg-d	3.0E-04	mg/kg-d	6.60E-01
		Thallium	2.10E-02	mg/kg	2.10E-02	mg/kg	2.10E-02	7.37E-07	mg/kg-d	1.0E-05	mg/kg-d	7.37E-02
		Vanadium	4.70E-01	mg/kg	4.70E-01	mg/kg	4.70E-01	1.65E-05	mg/kg-d	5.0E-03	mg/kg-d	3.30E-03
											Hazard Index	**3.07E+00**
Berries and Plants	Ingestion	Aluminum	9.73E+03	mg/kg	6.32E+00	mg/kg	6.32E+00	8.85E-06	mg/kg-d	1.0E+00	mg/kg-d	8.85E-06
		Antimony	3.78E+03	mg/kg	1.14E+02	mg/kg	1.14E+02	1.59E-04	mg/kg-d	4.0E-04	mg/kg-d	3.97E-01
		Arsenic (inorganic)	5.88E+03	mg/kg	3.53E+01	mg/kg	3.53E+01	4.94E-05	mg/kg-d	3.0E-04	mg/kg-d	1.65E-01
		Barium	3.22E+02	mg/kg	4.84E+00	mg/kg	4.84E+00	6.77E-06	mg/kg-d	2.0E-01	mg/kg-d	3.38E-05
		Chromium	2.35E+01	mg/kg	1.06E-01	mg/kg	1.06E-01	1.48E-07	mg/kg-d	3.0E-03	mg/kg-d	4.92E-05
		Cobalt	1.58E+01	mg/kg	1.11E-01	mg/kg	1.11E-01	1.55E-07	mg/kg-d	3.0E-04	mg/kg-d	5.16E-04
		Iron	3.67E+04	mg/kg	3.67E+01	mg/kg	3.67E+01	5.13E-05	mg/kg-d	7.0E-01	mg/kg-d	7.33E-05
		Manganese	7.19E+02	mg/kg	3.59E+01	mg/kg	3.59E+01	5.03E-05	mg/kg-d	1.4E-01	mg/kg-d	3.59E-04
		Mercury	3.73E+02	mg/kg	7.46E+01	mg/kg	7.46E+01	1.04E-04	mg/kg-d	3.0E-04	mg/kg-d	3.48E-01
		Thallium	1.71E-01	mg/kg	6.84E-05	mg/kg	6.84E-05	9.57E-11	mg/kg-d	1.0E-05	mg/kg-d	9.57E-06
		Vanadium	3.11E+01	mg/kg	9.33E-02	mg/kg	9.33E-02	1.31E-07	mg/kg-d	5.0E-03	mg/kg-d	2.61E-05
											Hazard Index	9.11E-01
											Total Hazard Index	**1.09E+03**

Table J-11
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - 95% UCL Groundwater
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Groundwater	Ingestion	Arsenic (Inorganic)	1.80E+03	µg/L	1.80E+03	µg/L	1.80E+03	4.37E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**6.55E-02**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.38E-04	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	1.94E-06
Groundwater	Dermal	Arsenic (Inorganic)	1.80E+03	µg/L	1.80E+00	mg/L	1.80E+00	2.42E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**3.62E-04**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.00E+00
											Cancer Risk	**6.59E-02**

Table J-12
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - 95% UCL
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Ingestion	Antimony	5.61E+03	µg/L	5.61E+03	µg/L	5.61E+03	1.54E-01	3.59E-01	mg/kg-d	4.0E-04	mg/kg-d	**3.84E+02**	**9.0E+02**
		Arsenic (Inorganic)	1.80E+03	µg/L	1.80E+03	µg/L	1.80E+03	4.93E-02	1.15E-01	mg/kg-d	3.0E-04	mg/kg-d	**1.64E+02**	**3.8E+02**
		Barium	1.01E+02	µg/L	1.01E+02	µg/L	1.01E+02	2.76E-03	6.43E-03	mg/kg-d	2.0E-01	mg/kg-d	1.38E-02	3.2E-02
		Chromium	3.51E+00	µg/L	3.51E+00	µg/L	3.51E+00	9.61E-05	2.24E-04	mg/kg-d	1.5E+00	mg/kg-d	6.40E-05	1.5E-04
		Cobalt	9.79E+00	µg/L	9.79E+00	µg/L	9.79E+00	2.68E-04	6.26E-04	mg/kg-d	3.0E-04	mg/kg-d	8.94E-01	**2.1E+00**
		Iron	8.04E+00	µg/L	8.04E+00	µg/L	8.04E+00	2.20E-04	5.14E-04	mg/kg-d	7.0E-01	mg/kg-d	3.15E-04	7.3E-04
		Manganese	2.24E+03	µg/L	2.24E+03	µg/L	2.24E+03	6.15E-02	1.43E-01	mg/kg-d	2.4E-02	mg/kg-d	**2.56E+00**	**6.0E+00**
		Mercury	1.48E+01	µg/L	1.48E+01	µg/L	1.48E+01	4.05E-04	9.45E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.35E+00**	**3.2E+00**
		Nickel	1.73E+01	µg/L	1.73E+01	µg/L	1.73E+01	4.74E-04	1.11E-03	mg/kg-d	2.0E-02	mg/kg-d	2.37E-02	5.5E-02
		Selenium	9.17E-01	µg/L	9.17E-01	µg/L	9.17E-01	2.51E-05	5.86E-05	mg/kg-d	5.0E-03	mg/kg-d	5.02E-03	1.2E-02
		Thallium	1.71E-02	µg/L	1.71E-02	µg/L	1.71E-02	4.68E-07	1.09E-06	mg/kg-d	1.0E-05	mg/kg-d	4.68E-02	1.1E-01
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.56E-04	3.64E-04	mg/kg-d	2.0E-02	mg/kg-d	7.81E-03	1.8E-02
												Hazard Index	**5.53E+02**	**1.29E+03**
Groundwater	Dermal	Antimony	5.61E+03	µg/L	5.61E+00	mg/L	5.61E+00	8.02E-04	2.37E-03	mg/kg-d	6.0E-05	mg/kg-d	**1.34E+01**	**3.9E+01**
		Arsenic (Inorganic)	1.80E+03	µg/L	1.80E+00	mg/L	1.80E+00	2.57E-04	7.59E-04	mg/kg-d	3.0E-04	mg/kg-d	8.58E-01	**2.5E+00**
		Barium	1.01E+02	µg/L	1.01E-01	mg/L	1.01E-01	1.44E-05	4.24E-05	mg/kg-d	1.4E-02	mg/kg-d	1.03E-03	3.0E-03
		Chromium	3.51E+00	µg/L	3.51E-03	mg/L	3.51E-03	5.01E-07	1.48E-06	mg/kg-d	2.0E-02	mg/kg-d	2.51E-05	7.4E-05
		Cobalt	9.79E+00	µg/L	9.79E-03	mg/L	9.79E-03	5.60E-07	1.65E-06	mg/kg-d	3.0E-04	mg/kg-d	1.87E-03	5.5E-03
		Iron	8.04E+00	µg/L	8.04E-03	mg/L	8.04E-03	1.15E-06	3.39E-06	mg/kg-d	7.0E-01	mg/kg-d	1.64E-06	4.8E-06
		Manganese	2.24E+03	µg/L	2.24E+00	mg/L	2.24E+00	3.21E-04	9.46E-04	mg/kg-d	9.6E-04	mg/kg-d	3.34E-01	9.9E-01
		Mercury	1.48E+01	µg/L	1.48E-02	mg/L	1.48E-02	2.12E-06	6.24E-06	mg/kg-d	2.1E-05	mg/kg-d	1.01E-01	3.0E-01
		Nickel	1.73E+01	µg/L	1.73E-02	mg/L	1.73E-02	4.95E-07	1.46E-06	mg/kg-d	8.0E-04	mg/kg-d	6.18E-04	1.8E-03
		Selenium	9.17E-01	µg/L	9.17E-04	mg/L	9.17E-04	1.31E-07	3.87E-07	mg/kg-d	5.0E-03	mg/kg-d	2.62E-05	7.7E-05
		Thallium	1.71E-02	µg/L	1.71E-05	mg/L	1.71E-05	2.45E-09	7.21E-09	mg/kg-d	1.0E-05	mg/kg-d	2.45E-04	7.2E-04
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**1.47E+01**	**4.33E+01**
Air	Volatile from Groundwater	Mercury	1.48E+01	µg/L	7.40E-03	mg/m^3	7.40E-03	2.22E-04	2.22E-04	mg/m^3	3.0E-04	mg/m^3	7.39E-01	7.4E-01
												Total Hazard Index	**5.69E+02**	**1.34E+03**

Table J-12
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - 95% UCL
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Ingestion	Antimony	5.61E+03	µg/L	5.61E+03	µg/L	5.61E+03	1.54E-01	3.59E-01	mg/kg-d	4.0E-04	mg/kg-d	**3.84E+02**	**9.0E+02**
		Arsenic (Inorganic)	1.80E+03	µg/L	1.80E+03	µg/L	1.80E+03	4.93E-02	1.15E-01	mg/kg-d	3.0E-04	mg/kg-d	**1.64E+02**	**3.8E+02**
		Barium	1.01E+02	µg/L	1.01E+02	µg/L	1.01E+02	2.76E-03	6.43E-03	mg/kg-d	2.0E-01	mg/kg-d	1.38E-02	3.2E-02
		Chromium	3.51E+00	µg/L	3.51E+00	µg/L	3.51E+00	9.61E-05	2.24E-04	mg/kg-d	1.5E+00	mg/kg-d	6.40E-05	1.5E-04
		Cobalt	9.79E+00	µg/L	9.79E+00	µg/L	9.79E+00	2.68E-04	6.26E-04	mg/kg-d	3.0E-04	mg/kg-d	8.94E-01	**2.1E+00**
		Iron	8.04E+00	µg/L	8.04E+00	µg/L	8.04E+00	2.20E-04	5.14E-04	mg/kg-d	7.0E-01	mg/kg-d	3.15E-04	7.3E-04
		Manganese	2.24E+03	µg/L	2.24E+03	µg/L	2.24E+03	6.15E-02	1.43E-01	mg/kg-d	2.4E-02	mg/kg-d	**2.56E+00**	**6.0E+00**
		Mercury	1.48E+01	µg/L	1.48E+01	µg/L	1.48E+01	4.05E-04	9.45E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.35E+00**	**3.2E+00**
		Nickel	1.73E+01	µg/L	1.73E+01	µg/L	1.73E+01	4.74E-04	1.11E-03	mg/kg-d	2.0E-02	mg/kg-d	2.37E-02	5.5E-02
		Selenium	9.17E-01	µg/L	9.17E-01	µg/L	9.17E-01	2.51E-05	5.86E-05	mg/kg-d	5.0E-03	mg/kg-d	5.02E-03	1.2E-02
		Thallium	1.71E-02	µg/L	1.71E-02	µg/L	1.71E-02	4.68E-07	1.09E-06	mg/kg-d	1.0E-05	mg/kg-d	4.68E-02	1.1E-01
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.56E-04	3.64E-04	mg/kg-d	2.0E-02	mg/kg-d	7.81E-03	1.8E-02
												Hazard Index	**5.53E+02**	**1.29E+03**
Groundwater	Dermal	Antimony	5.61E+03	µg/L	5.61E+00	mg/L	5.61E+00	8.02E-04	2.37E-03	mg/kg-d	6.0E-05	mg/kg-d	**1.34E+01**	**3.9E+01**
		Arsenic (Inorganic)	1.80E+03	µg/L	1.80E+00	mg/L	1.80E+00	2.57E-04	7.59E-04	mg/kg-d	3.0E-04	mg/kg-d	8.58E-01	**2.5E+00**
		Barium	1.01E+02	µg/L	1.01E-01	mg/L	1.01E-01	1.44E-05	4.24E-05	mg/kg-d	1.4E-02	mg/kg-d	1.03E-03	3.0E-03
		Chromium	3.51E+00	µg/L	3.51E-03	mg/L	3.51E-03	5.01E-07	1.48E-06	mg/kg-d	2.0E-02	mg/kg-d	2.51E-05	7.4E-05
		Cobalt	9.79E+00	µg/L	9.79E-03	mg/L	9.79E-03	5.60E-07	1.65E-06	mg/kg-d	3.0E-04	mg/kg-d	1.87E-03	5.5E-03
		Iron	8.04E+00	µg/L	8.04E-03	mg/L	8.04E-03	1.15E-06	3.39E-06	mg/kg-d	7.0E-01	mg/kg-d	1.64E-06	4.8E-06
		Manganese	2.24E+03	µg/L	2.24E+00	mg/L	2.24E+00	3.21E-04	9.46E-04	mg/kg-d	9.6E-04	mg/kg-d	3.34E-01	9.9E-01
		Mercury	1.48E+01	µg/L	1.48E-02	mg/L	1.48E-02	2.12E-06	6.24E-06	mg/kg-d	2.1E-05	mg/kg-d	1.01E-01	3.0E-01
		Nickel	1.73E+01	µg/L	1.73E-02	mg/L	1.73E-02	4.95E-07	1.46E-06	mg/kg-d	8.0E-04	mg/kg-d	6.18E-04	1.8E-03
		Selenium	9.17E-01	µg/L	9.17E-04	mg/L	9.17E-04	1.31E-07	3.87E-07	mg/kg-d	5.0E-03	mg/kg-d	2.62E-05	7.7E-05
		Thallium	1.71E-02	µg/L	1.71E-05	mg/L	1.71E-05	2.45E-09	7.21E-09	mg/kg-d	1.0E-05	mg/kg-d	2.45E-04	7.2E-04
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**1.47E+01**	**4.33E+01**
Air	Volatile from Groundwater	Mercury	1.48E+01	µg/L	7.40E-03	mg/m^3	7.40E-03	2.22E-04	2.22E-04	mg/m^3	3.0E-04	mg/m^3	7.39E-01	7.4E-01
												Total Hazard Index	**5.69E+02**	**1.34E+03**

Table J-13
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - Background
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Soil	Ingestion	Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	2.69E-05	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**4.0E-05**
Soil	Dermal	Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	4.51E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	6.8E-06
Sediment	Dermal	Arsenic (Inorganic)	1.27E+01	mg/kg	1.27E+01	mg/kg	1.27E+01	2.00E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	3.0E-06
Groundwater	Ingestion	Arsenic (Inorganic)	1.35E+01	µg/L	1.35E+01	µg/L	1.35E+01	3.28E-04	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**4.9E-04**
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Groundwater	Dermal	Arsenic (Inorganic)	1.35E+01	µg/L	1.35E-02	mg/L	1.35E-02	1.81E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	2.7E-06
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Surface Water	Dermal	Arsenic (inorganic)	8.63E-01	µg/L	8.63E-04	mg/L	8.63E-04	1.02E-08	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	1.5E-08
		1-Methylnaphthalene	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	2.86E+01	mg/kg	4.20E-05	$\mu g/m^3$	4.20E-05	1.44E-05	$\mu g/m^3$	4.3E-03	$(\mu g/m^3)^{-1}$	6.2E-08
											Cancer Risk	**5.4E-04**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Large Land Mammals	Ingestion	Arsenic	1.00E-01	mg/kg	5.40E-03	mg/kg	5.40E-03	5.13E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	7.7E-06
Small Land Mammals	Ingestion	Arsenic	1.00E-01	mg/kg	1.00E-01	mg/kg	1.00E-01	4.64E-05	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**7.0E-05**
Birds	Ingestion	Arsenic	1.10E-01	mg/kg	1.10E-01	mg/kg	1.10E-01	1.50E-05	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**2.2E-05**
Berries and Plants	Ingestion	Arsenic (Inorganic)	6.00E-02	mg/kg	6.00E-02	mg/kg	6.00E-02	1.08E-05	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**1.6E-05**
											Cancer Risk	**1.2E-04**
											Total Excess Cancer Risk	**6.6E-04**

Table J-14
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Rec/Sub User (Background)
Receptor Age: Combined Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Soil	Ingestion	Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	8.97E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	**1.3E-05**
Soil	Dermal	Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	1.50E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	2.3E-06
Sediment	Dermal	Arsenic (Inorganic)	1.27E+01	mg/kg	1.27E+01	mg/kg	1.27E+01	6.68E-07	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	1.0E-06
Surface Water	Ingestion	Arsenic (Inorganic)	8.63E-01	µg/L	8.63E-01	µg/L	8.63E-01	1.20E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	1.8E-06
		1-Methylnaphthalene	0.00E+00	µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Surface Water	Dermal	Arsenic	8.63E-01	µg/L	8.63E-04	mg/L	8.63E-04	3.40E-09	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	5.1E-09
		1-Methylnaphthalene	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	2.86E+01	mg/kg	9.10E-06	µg/m3	9.10E-06	1.04E-06	$\mu g/m^3$	4.3E-03	$(\mu g/m^3)^{-1}$	4.5E-09
											Cancer Risk	**1.9E-05**

Medium	Exposure	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	0.0E+00
Large Land Mammals	Ingestion	Arsenic	1.00E-01	mg/kg	5.40E-03	mg/kg	5.40E-03	7.19E-08	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	1.1E-07
Small Land Mammals	Ingestion	Arsenic	1.00E-01	mg/kg	1.00E-01	mg/kg	1.00E-01	9.28E-07	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	1.4E-06
Birds	Ingestion	Arsenic	1.10E-01	mg/kg	1.10E-01	mg/kg	1.10E-01	4.95E-06	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	7.4E-06
Berries and Plants	Ingestion	Arsenic (Inorganic)	6.00E-02	mg/kg	3.60E-04	mg/kg	3.60E-04	6.45E-10	mg/kg-d	1.5E+00	$(mg/kg\text{-}d)^{-1}$	9.7E-10
											Cancer Risk	8.9E-06
											Total Excess Cancer Risk	**2.7E-05**

Table J-15
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Mine Worker - Background
Receptor Age: Combined Adult

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Values	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Soil	Ingestion	Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	7.19E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.1E-05**
Soil	Dermal	Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	1.55E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	2.3E-06
Sediment	Dermal	Arsenic (Inorganic)	1.27E+01	mg/kg	1.27E+01	mg/kg	1.27E+01	6.88E-07	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	1.0E-06
Groundwater	Ingestion	Arsenic (Inorganic)	1.35E+01	µg/L	1.35E+01	µg/L	1.35E+01	1.13E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.7E-04**
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00
Groundwater	Dermal	Arsenic (Inorganic)	1.35E+01	µg/L	1.35E-02	mg/L	1.35E-02	8.27E-07	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	1.2E-06
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00
Surface Water	Dermal	Arsenic	8.63E-01	µg/L	8.63E-04	mg/L	8.63E-04	4.95E-09	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	7.4E-09
		1-Methylnaphthalene	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg-d)^{-1}$	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	2.86E+01	mg/kg	4.20E-05	µg/m3	4.20E-05	7.99E-06	µg/m3	4.3E-03	$(µg/m^3)^{-1}$	3.4E-08
											Cancer Risk	**1.9E-04**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Units	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	0.0E+00
Large Land Mammals	Ingestion	Arsenic	1.00E-01	mg/kg	5.40E-03	mg/kg	5.40E-03	2.40305E-08	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	3.6E-08
Small Land Mammals	Ingestion	Arsenic	1.00E-01	mg/kg	1.00E-01	mg/kg	1.00E-01	3.10E-07	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	4.7E-07
Birds	Ingestion	Arsenic	1.10E-01	mg/kg	1.10E-01	mg/kg	1.10E-01	1.65E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	2.5E-06
Berries and Plants	Ingestion	Arsenic (Inorganic)	6.00E-02	mg/kg	3.60E-04	mg/kg	3.60E-04	2.16E-10	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	3.2E-10
											Cancer Risk	3.0E-06
											Total Excess Cancer Risk	**1.9E-04**

Table J-16
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - Background
Receptor Age: Adult/Child

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Soil	Ingestion	Aluminum	1.95E+04	mg/kg	1.95E+04	mg/kg	1.95E+04	2.06E-02	1.92E-01	mg/kg-d	1.0E+00	mg/kg-d	2.06E-02	1.9E-01
		Antimony	8.00E+00	mg/kg	8.00E+00	mg/kg	8.00E+00	8.45E-06	7.89E-05	mg/kg-d	4.0E-04	mg/kg-d	2.11E-02	2.0E-01
		Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	1.81E-05	1.69E-04	mg/kg-d	3.0E-04	mg/kg-d	6.04E-02	5.6E-01
		Barium	2.66E+02	mg/kg	2.66E+02	mg/kg	2.66E+02	2.81E-04	2.62E-03	mg/kg-d	2.0E-01	mg/kg-d	1.41E-03	1.3E-02
		Chromium	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	3.02E-05	2.82E-04	mg/kg-d	3.0E-03	mg/kg-d	1.01E-02	9.4E-02
		Cobalt	1.13E+01	mg/kg	1.13E+01	mg/kg	1.13E+01	1.19E-05	1.11E-04	mg/kg-d	3.0E-04	mg/kg-d	3.97E-02	3.7E-01
		Iron	3.09E+04	mg/kg	3.09E+04	mg/kg	3.09E+04	3.26E-02	3.05E-01	mg/kg-d	7.0E-01	mg/kg-d	4.66E-02	4.4E-01
		Manganese	4.65E+02	mg/kg	4.65E+02	mg/kg	4.65E+02	4.91E-04	4.59E-03	mg/kg-d	2.4E-02	mg/kg-d	2.05E-02	1.9E-01
		Mercury	1.86E+00	mg/kg	1.86E+00	mg/kg	1.86E+00	1.97E-06	1.83E-05	mg/kg-d	3.0E-04	mg/kg-d	6.55E-03	6.1E-02
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	6.29E+01	mg/kg	6.29E+01	mg/kg	6.29E+01	6.65E-05	6.20E-04	mg/kg-d	5.0E-03	mg/kg-d	1.33E-02	1.2E-01
												Hazard Index	2.40E-01	**2.24E+00**
Soil	Dermal	Aluminum	1.95E+04	mg/kg	1.95E+04	mg/kg	1.95E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	8.00E+00	mg/kg	8.00E+00	mg/kg	8.00E+00	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (inorganic)	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	3.62E-06	2.37E-05	mg/kg-d	3.0E-04	mg/kg-d	1.21E-02	7.9E-02
		Barium	2.66E+02	mg/kg	2.66E+02	mg/kg	2.66E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.86E+01	mg/kg	2.86E+01	mg/kg	2.86E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.13E+01	mg/kg	1.13E+01	mg/kg	1.13E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Iron	3.09E+04	mg/kg	3.09E+04	mg/kg	3.09E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	4.65E+02	mg/kg	4.65E+02	mg/kg	4.65E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	1.86E+00	mg/kg	1.86E+00	mg/kg	1.86E+00	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	6.29E+01	mg/kg	6.29E+01	mg/kg	6.29E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	1.21E-02	7.89E-02
Sediment	Dermal	Aluminum	1.25E+04	mg/kg	1.25E+04	mg/kg	1.25E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.73E-01	mg/kg	4.73E-01	mg/kg	4.73E-01	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (Inorganic)	1.27E+01	mg/kg	1.27E+01	mg/kg	1.27E+01	1.61E-06	1.05E-05	mg/kg-d	3.0E-04	mg/kg-d	5.35E-03	3.5E-02
		Barium	1.46E+02	mg/kg	1.46E+02	mg/kg	1.46E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Cadmium	2.88E-01	mg/kg	2.88E-01	mg/kg	2.88E-01	1.21E-09	7.95E-09	mg/kg-d	2.5E-05	mg/kg-d	4.86E-05	3.2E-04
		Chromium	2.22E+01	mg/kg	2.22E+01	mg/kg	2.22E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.35E+01	mg/kg	1.35E+01	mg/kg	1.35E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	3.69E+01	mg/kg	3.69E+01	mg/kg	3.69E+01	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Iron	3.36E+04	mg/kg	3.36E+04	mg/kg	3.36E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	7.43E+02	mg/kg	7.43E+02	mg/kg	7.43E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	1.43E-01	mg/kg	1.43E-01	mg/kg	1.43E-01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Methyl Mercury	4.90E-04	mg/kg	4.90E-04	mg/kg	4.90E-04	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Nickel	3.70E+01	mg/kg	3.70E+01	mg/kg	3.70E+01	0.00E+00	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Selenium	1.03E+00	mg/kg	1.03E+00	mg/kg	1.03E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Silver	1.24E-01	mg/kg	1.24E-01	mg/kg	1.24E-01	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.05E-01	mg/kg	1.05E-01	mg/kg	1.05E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	2.98E+01	mg/kg	2.98E+01	mg/kg	2.98E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Zinc	7.80E+01	mg/kg	7.80E+01	mg/kg	7.80E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	5.40E-03	3.54E-02

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Ingestion	Antimony	5.05E-01	µg/L	5.05E-01	µg/L	5.05E-01	1.38E-05	3.23E-05	mg/kg-d	4.0E-04	mg/kg-d	3.46E-02	8.1E-02
		Arsenic (Inorganic)	1.35E+01	µg/L	1.35E+01	µg/L	1.35E+01	3.70E-04	8.63E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.23E+00**	**2.9E+00**
		Barium	8.33E+01	µg/L	8.33E+01	µg/L	8.33E+01	2.28E-03	5.33E-03	mg/kg-d	2.0E-01	mg/kg-d	1.14E-02	2.7E-02
		Chromium	4.95E+00	µg/L	4.95E+00	µg/L	4.95E+00	1.36E-04	3.16E-04	mg/kg-d	3.0E-03	mg/kg-d	4.52E-02	1.1E-01
		Cobalt	1.14E+00	µg/L	1.14E+00	µg/L	1.14E+00	3.12E-05	7.29E-05	mg/kg-d	3.0E-04	mg/kg-d	1.04E-01	2.4E-01
		Iron	8.99E+03	µg/L	8.99E+03	µg/L	8.99E+03	2.46E-01	5.75E-01	mg/kg-d	7.0E-01	mg/kg-d	3.52E-01	8.2E-01
		Manganese	1.12E+03	µg/L	1.12E+03	µg/L	1.12E+03	3.07E-02	7.16E-02	mg/kg-d	2.4E-02	mg/kg-d	**1.28E+00**	**3.0E+00**
		Mercury	5.84E-02	µg/L	5.84E-02	µg/L	5.84E-02	1.60E-06	3.73E-06	mg/kg-d	3.0E-04	mg/kg-d	5.33E-03	1.2E-02
		Nickel	2.68E+00	µg/L	2.68E+00	µg/L	2.68E+00	7.34E-05	1.71E-04	mg/kg-d	2.0E-02	mg/kg-d	3.67E-03	8.6E-03
		Selenium	0.00E+00	µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	9.00E-03	µg/L	9.00E-03	µg/L	9.00E-03	2.47E-07	5.75E-07	mg/kg-d	1.0E-05	mg/kg-d	2.47E-02	5.8E-02
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	µg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**4.33E+00**	**1.01E+01**
Groundwater	Dermal	Antimony	5.05E-01	µg/L	5.05E-04	mg/L	5.05E-04	7.22E-08	2.13E-10	mg/kg-d	6.0E-05	mg/kg-d	1.20E-03	3.6E-06
		Arsenic (Inorganic)	1.35E+01	µg/L	1.35E-02	mg/L	1.35E-02	1.93E-06	5.70E-06	mg/kg-d	3.0E-04	mg/kg-d	6.44E-03	1.9E-02
		Barium	8.33E+01	µg/L	8.33E-02	mg/L	8.33E-02	1.19E-05	3.51E-05	mg/kg-d	1.4E-02	mg/kg-d	8.51E-04	2.5E-03
		Chromium	4.95E+00	µg/L	4.95E-03	mg/L	4.95E-03	7.08E-07	2.09E-06	mg/kg-d	7.5E-05	mg/kg-d	9.44E-03	2.8E-02
		Cobalt	1.14E+00	µg/L	1.14E-03	mg/L	1.14E-03	6.52E-08	1.92E-07	mg/kg-d	3.0E-04	mg/kg-d	2.17E-04	6.4E-04
		Iron	8.99E+03	µg/L	8.99E+00	mg/L	8.99E+00	1.29E-03	3.79E-03	mg/kg-d	7.0E-01	mg/kg-d	1.84E-03	5.4E-03
		Manganese	1.12E+03	µg/L	1.12E+00	mg/L	1.12E+00	1.60E-04	4.73E-04	mg/kg-d	9.6E-04	mg/kg-d	1.67E-01	4.9E-01
		Mercury	5.84E-02	µg/L	5.84E-05	mg/L	5.84E-05	8.35E-09	2.46E-08	mg/kg-d	2.1E-05	mg/kg-d	3.98E-04	1.2E-03
		Nickel	2.68E+00	µg/L	2.68E-03	mg/L	2.68E-03	7.67E-08	2.26E-07	mg/kg-d	8.0E-04	mg/kg-d	9.58E-05	2.8E-04
		Selenium	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	9.00E-03	µg/L	9.00E-06	mg/L	9.00E-06	1.29E-09	3.80E-09	mg/kg-d	1.0E-05	mg/kg-d	1.29E-04	3.8E-04
		Bis(2-ethylhexyl)phthalate	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	1.90E-01	5.56E-01
Surface Water	Dermal	Antimony	1.52E+00	µg/L	1.52E-03	mg/L	1.52E-03	2.03E-08	4.66E-08	mg/kg-d	6.0E-05	mg/kg-d	3.39E-04	7.8E-04
		Arsenic (Inorganic)	8.63E-01	µg/L	8.63E-04	mg/L	8.63E-04	1.16E-08	2.65E-08	mg/kg-d	3.0E-04	mg/kg-d	3.85E-05	8.8E-05
		Cadmium	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Chromium	4.30E-01	µg/L	4.30E-04	mg/L	4.30E-04	5.76E-09	1.32E-08	mg/kg-d	7.5E-05	mg/kg-d	7.67E-05	1.8E-04
		Cobalt	6.60E-02	µg/L	6.60E-05	mg/L	6.60E-05	3.53E-10	8.10E-10	mg/kg-d	3.0E-04	mg/kg-d	1.18E-06	2.7E-06
		Copper	3.70E-01	µg/L	3.70E-04	mg/L	3.70E-04	4.95E-09	1.14E-08	mg/kg-d	4.0E-02	mg/kg-d	1.24E-07	2.8E-07
		Iron	1.38E+02	µg/L	1.38E-01	mg/L	1.38E-01	1.85E-06	4.23E-06	mg/kg-d	7.0E-01	mg/kg-d	2.64E-06	6.0E-06
		Manganese	1.75E+01	µg/L	1.75E-02	mg/L	1.75E-02	2.34E-07	5.37E-07	mg/kg-d	9.6E-04	mg/kg-d	2.44E-04	5.6E-04
		Mercury	2.63E-03	µg/L	2.63E-06	mg/L	2.63E-06	3.52E-11	8.07E-11	mg/kg-d	2.1E-05	mg/kg-d	1.68E-06	3.8E-06
		Methyl Mercury	8.00E-05	µg/L	8.00E-08	mg/L	8.00E-08	1.07E-12	2.45E-12	mg/kg-d	1.0E-04	mg/kg-d	1.07E-08	2.5E-08
		Nickel	4.40E-01	µg/L	4.40E-04	mg/L	4.40E-04	1.18E-09	2.70E-09	mg/kg-d	8.0E-04	mg/kg-d	1.47E-06	3.4E-06
		Selenium	5.00E-01	µg/L	5.00E-04	mg/L	5.00E-04	6.69E-09	1.53E-08	mg/kg-d	5.0E-03	mg/kg-d	1.34E-06	3.1E-06
		Silver	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Zinc	5.00E-01	µg/L	5.00E-04	mg/L	5.00E-04	4.02E-09	9.21E-09	mg/kg-d	3.0E-01	mg/kg-d	1.34E-08	3.1E-08
		1-Methylnaphthalene	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	0.00E+00	µg/L	0.00E+00	mg/L	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	7.07E-04	1.62E-03
Air	Dust Particulates or Volatile from Soil	Aluminum	1.95E+04	mg/kg	2.86E-05	mg/m^3	2.86E-05	2.12E-05	2.12E-05	mg/m^3	5.0E-03	mg/m^3	4.24E-03	4.2E-03
		Antimony	8.00E+00	mg/kg	1.18E-08	mg/m^3	1.18E-08	8.70E-09	8.70E-09	mg/m^3	--	mg/m^3	--	--
		Arsenic (inorganic)	2.86E+01	mg/kg	4.20E-08	mg/m^3	4.20E-08	1.87E-08	1.87E-08	mg/m^3	1.5E-05	mg/m^3	1.24E-03	1.2E-03
		Barium	2.66E+02	mg/kg	3.91E-07	mg/m^3	3.91E-07	2.89E-07	2.89E-07	mg/m^3	5.0E-04	mg/m^3	5.79E-04	5.8E-04
		Chromium	2.86E+01	mg/kg	4.20E-08	mg/m^3	4.20E-08	3.11E-08	3.11E-08	mg/m^3	8.4E-02	mg/m^3	3.70E-07	3.7E-07
		Cobalt	1.13E+01	mg/kg	1.66E-08	mg/m^3	1.66E-08	1.23E-08	1.23E-08	mg/m^3	6.0E-06	mg/m^3	2.05E-03	2.0E-03
		Iron	3.09E+04	mg/kg	4.54E-05	mg/m^3	4.54E-05	3.36E-05	3.36E-05	mg/m^3	--	mg/m^3	--	--
		Manganese	4.65E+02	mg/kg	6.84E-07	mg/m^3	6.84E-07	5.06E-07	5.06E-07	mg/m^3	5.0E-05	mg/m^3	1.01E-02	1.0E-02
		Mercury	1.86E+00	mg/kg	8.23E-05	mg/m^3	8.23E-05	6.09E-05	6.09E-05	mg/m^3	3.0E-04	mg/m^3	2.03E-01	2.0E-01
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/m^3	0.00E+00	0.00E+00	0.00E+00	mg/m^3	--	mg/m^3	--	--
		Vanadium	6.29E+01	mg/kg	9.25E-08	mg/m^3	9.25E-08	6.84E-08	6.84E-08	mg/m^3	--	mg/m^3	--	--
												Hazard Index	2.21E-01	2.21E-01

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Air	Volatile from Groundwater	Mercury	5.84E-02	µg/L	2.92E-05	mg/m^3	2.92E-05	8.75E-07	8.75E-07	mg/m^3	3.0E-04	mg/m^3	2.92E-03	2.9E-03
Non-Salmon Fish	Ingestion	Aluminum	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	4.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (Inorganic)	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Barium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Cadmium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Chromium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Iron	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.4E-01	mg/kg-d	0.00E+00	0.0E+00
		Methyl Mercury	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Nickel	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Selenium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Silver	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Zinc	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	0.00E+00	0.00E+00
Large Land Mammal	Ingestion	Aluminum	8.70E+00	mg/kg	3.52E-01	mg/kg	3.52E-01	3.82E-04	8.55E-04	mg/kg-d	1.0E+00	mg/kg-d	3.82E-04	8.5E-04
		Antimony	1.39E-01	mg/kg	3.75E-03	mg/kg	3.75E-03	4.06E-06	9.10E-06	mg/kg-d	4.0E-04	mg/kg-d	1.02E-02	2.3E-02
		Arsenic	1.00E-01	mg/kg	5.40E-03	mg/kg	5.40E-03	5.85E-06	1.31E-05	mg/kg-d	3.0E-04	mg/kg-d	1.95E-02	4.4E-02
		Barium	3.40E+01	mg/kg	1.38E-01	mg/kg	1.38E-01	1.49E-04	3.34E-04	mg/kg-d	2.0E-01	mg/kg-d	7.46E-04	1.7E-03
		Chromium	1.10E+00	mg/kg	1.63E-01	mg/kg	1.63E-01	1.77E-04	3.96E-04	mg/kg-d	3.0E-03	mg/kg-d	5.90E-02	1.3E-01
		Cobalt	7.90E-02	mg/kg	4.27E-02	mg/kg	4.27E-02	4.62E-05	1.03E-04	mg/kg-d	3.0E-04	mg/kg-d	1.54E-01	3.4E-01
		Iron	2.79E+01	mg/kg	1.51E+01	mg/kg	1.51E+01	1.63E-02	3.65E-02	mg/kg-d	7.0E-01	mg/kg-d	2.33E-02	5.2E-02
		Manganese	2.29E+02	mg/kg	2.47E+00	mg/kg	2.47E+00	2.68E-03	6.00E-03	mg/kg-d	1.4E-01	mg/kg-d	1.91E-02	4.3E-02
		Mercury	5.60E-02	mg/kg	3.78E-01	mg/kg	3.78E-01	4.09E-04	9.17E-04	mg/kg-d	3.0E-04	mg/kg-d	**1.36E+00**	**3.1E+00**
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	5.00E-02	mg/kg	3.38E-03	mg/kg	3.38E-03	3.65E-06	8.19E-06	mg/kg-d	5.0E-03	mg/kg-d	7.31E-04	1.6E-03
												Hazard Index	**1.65E+00**	**3.70E+00**
Small Land Mammal	Ingestion	Aluminum	8.70E+00	mg/kg	8.70E+00	mg/kg	8.70E+00	4.60E-03	1.03E-02	mg/kg-d	1.0E+00	mg/kg-d	4.60E-03	1.0E-02
		Antimony	1.39E-01	mg/kg	1.39E-01	mg/kg	1.39E-01	7.35E-05	1.65E-04	mg/kg-d	4.0E-04	mg/kg-d	1.84E-01	4.1E-01
		Arsenic	1.00E-01	mg/kg	1.00E-01	mg/kg	1.00E-01	5.29E-05	1.18E-04	mg/kg-d	3.0E-04	mg/kg-d	1.76E-01	3.9E-01
		Barium	3.40E+01	mg/kg	3.40E+01	mg/kg	3.40E+01	1.80E-02	4.03E-02	mg/kg-d	2.0E-01	mg/kg-d	8.99E-02	2.0E-01
		Chromium	1.10E+00	mg/kg	1.10E+00	mg/kg	1.10E+00	5.81E-04	1.30E-03	mg/kg-d	3.0E-03	mg/kg-d	1.94E-01	4.3E-01
		Cobalt	7.90E-02	mg/kg	7.90E-02	mg/kg	7.90E-02	4.18E-05	9.35E-05	mg/kg-d	3.0E-04	mg/kg-d	1.39E-01	3.1E-01
		Iron	2.79E+01	mg/kg	2.79E+01	mg/kg	2.79E+01	1.47E-02	3.30E-02	mg/kg-d	7.0E-01	mg/kg-d	2.11E-02	4.7E-02
		Manganese	2.29E+02	mg/kg	2.29E+02	mg/kg	2.29E+02	1.21E-01	2.71E-01	mg/kg-d	1.4E-01	mg/kg-d	8.65E-01	**1.9E+00**
		Mercury	5.60E-02	mg/kg	5.60E-02	mg/kg	5.60E-02	2.96E-05	6.63E-05	mg/kg-d	3.0E-04	mg/kg-d	9.87E-02	2.2E-01
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	5.00E-02	mg/kg	5.00E-02	mg/kg	5.00E-02	2.64E-05	5.92E-05	mg/kg-d	5.0E-03	mg/kg-d	5.29E-03	1.2E-02
												Hazard Index	**1.78E+00**	**3.98E+00**
Birds	Ingestion	Aluminum	6.88E+01	mg/kg	6.88E+01	mg/kg	6.88E+01	1.07E-02	2.39E-02	mg/kg-d	1.0E+00	mg/kg-d	1.07E-02	2.4E-02
		Antimony	1.49E+00	mg/kg	1.49E+00	mg/kg	1.49E+00	2.31E-04	5.18E-04	mg/kg-d	4.0E-04	mg/kg-d	5.78E-01	**1.3E+00**
		Arsenic	1.10E-01	mg/kg	1.10E-01	mg/kg	1.10E-01	1.71E-05	3.83E-05	mg/kg-d	3.0E-04	mg/kg-d	5.69E-02	1.3E-01
		Barium	8.04E+01	mg/kg	8.04E+01	mg/kg	8.04E+01	1.25E-02	2.80E-02	mg/kg-d	2.0E-01	mg/kg-d	6.24E-02	1.4E-01
		Chromium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	3.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	9.40E-02	mg/kg	9.40E-02	mg/kg	9.40E-02	1.46E-05	3.27E-05	mg/kg-d	3.0E-04	mg/kg-d	4.87E-02	1.1E-01
		Iron	2.50E+01	mg/kg	2.50E+01	mg/kg	2.50E+01	3.88E-03	8.68E-03	mg/kg-d	7.0E-01	mg/kg-d	5.54E-03	1.2E-02
		Manganese	1.59E+03	mg/kg	1.59E+03	mg/kg	1.59E+03	2.47E-01	5.53E-01	mg/kg-d	1.4E-01	mg/kg-d	**1.76E+00**	**4.0E+00**
		Mercury	5.60E-02	mg/kg	5.60E-02	mg/kg	5.60E-02	8.70E-06	1.95E-05	mg/kg-d	3.0E-04	mg/kg-d	2.90E-02	6.5E-02
		Thallium	1.50E-02	mg/kg	1.50E-02	mg/kg	1.50E-02	2.33E-06	5.22E-06	mg/kg-d	1.0E-05	mg/kg-d	2.33E-01	5.2E-01
		Vanadium	5.00E-02	mg/kg	5.00E-02	mg/kg	5.00E-02	7.76E-06	1.74E-05	mg/kg-d	5.0E-03	mg/kg-d	1.55E-03	3.5E-03
												Hazard Index	**2.79E+00**	**6.25E+00**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Berries and Plants	Ingestion	Aluminum	8.40E+02	mg/kg	8.40E+02	mg/kg	8.40E+02	1.72E-01	3.84E-01	mg/kg-d	1.0E+00	mg/kg-d	1.72E-01	3.8E-01
		Antimony	1.40E+00	mg/kg	1.40E+00	mg/kg	1.40E+00	2.86E-04	6.41E-04	mg/kg-d	4.0E-04	mg/kg-d	7.15E-01	**1.6E+00**
		Arsenic (inorganic)	6.00E-02	mg/kg	6.00E-02	mg/kg	6.00E-02	1.23E-05	2.75E-05	mg/kg-d	3.0E-04	mg/kg-d	4.09E-02	9.2E-02
		Barium	2.00E+01	mg/kg	2.00E+01	mg/kg	2.00E+01	4.09E-03	9.15E-03	mg/kg-d	2.0E-01	mg/kg-d	2.04E-02	4.6E-02
		Chromium	1.80E+00	mg/kg	1.80E+00	mg/kg	1.80E+00	3.68E-04	8.24E-04	mg/kg-d	3.0E-03	mg/kg-d	1.23E-01	2.7E-01
		Cobalt	8.40E-01	mg/kg	8.40E-01	mg/kg	8.40E-01	1.72E-04	3.84E-04	mg/kg-d	3.0E-04	mg/kg-d	5.72E-01	**1.3E+00**
		Iron	2.10E+03	mg/kg	2.10E+03	mg/kg	2.10E+03	4.29E-01	9.61E-01	mg/kg-d	7.0E-01	mg/kg-d	6.13E-01	**1.4E+00**
		Manganese	3.30E+02	mg/kg	3.30E+02	mg/kg	3.30E+02	6.74E-02	1.51E-01	mg/kg-d	1.4E-01	mg/kg-d	4.82E-01	**1.1E+00**
		Mercury	5.30E-02	mg/kg	5.30E-02	mg/kg	5.30E-02	1.08E-05	2.43E-05	mg/kg-d	3.0E-04	mg/kg-d	3.61E-02	8.1E-02
		Thallium	0.00E+00	mg/kg	0.00E+00	mg/kg	0.00E+00	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	6.00E-02	mg/kg	6.00E-02	mg/kg	6.00E-02	1.23E-05	2.75E-05	mg/kg-d	5.0E-03	mg/kg-d	2.45E-03	5.5E-03
												Hazard Index	**2.78E+00**	**6.22E+00**
												Total Hazard Index	**1.40E+01**	**3.34E+01**

Table J-17 Particulate Emission Factor For Unpaved Road Traffic

$$F_D = 0.1852 + \frac{5.3537}{t} + \frac{-9.6318}{t^2}$$

t =	720	hr	(90 days x 8 hr/day)
F_D =	0.192	(unitless)	

$$PEF_{sr} = Q/C_{sr} \times \frac{1}{F_D} \times \frac{T \times A_R}{\frac{2.6 \times (s/12)^{0.8} (W/3)^{0.4}}{(M_{dry}/0.2)^{0.3}} \times \frac{365-p}{365} \times 281.9 \times \sum VKT}$$

Q/C_{sr} =	46.92	g/m^2-s per kg/m^3	Default for Minneapolis, MN largest source area
T =	2,592,000	s	(90 days x 8 hr/day x 3600 s/hr)
A_R =	995,000	m^2	246 acres
s =	8.5	%	(default)
W =	0.277	Ton	vehicle = 181 kg (yamaha-moter.com, based on 400 lb ATV) +70 kg rider
M_{dry} =	0.20	%	(default)
∑VKT =	1.08E+03	km	(10 vehicles x 1.2 km/day [2x site width] x 90 days)
p =	49	days	(sum of precipitation data from Bethel, AK - summer months)
PEF =	3.14E+09	m^3/kg	

Reference:
EPA 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.
OSWER 9355.4-24. December

Table J-18 Volatilization Factor For Mercury and Naphthalene

$$Q/C_{sr} = A \times \exp \frac{(\ln A_s - B)^2}{C}$$

A,B,C constant based on Zone 2, Fresno, CA

A =	10.2152	(unitless)	
B =	19.2654	(unitless)	
C =	220.0604	(unitless)	
A_s =	1200	acres	(area of contamination, OU2)

Q/C_{sr} = 46.92 g/m^2-s per kg/m^3

$$D_A = \frac{(\theta_a^{10/3} D_i H' + \theta_w^{10/3} D_w) / n^2}{\rho_b K_d + \theta_w + \theta_a H'}$$

θ_a =	0.28	
θ_w =	0.15	
n =	0.430	
pb =	1.500	

	Mercury	Naphthalene
H' =	0.467	0.0179886
Di =	0.031	0.060499
Dw =	6.30E-06	8.38E-06
Kd =	52	1.837
D_A =	1.42259E-05	2.90701E-05

$$VF = [Q/C * (3.14 * D_A * T)^{1/2} * 10^{-4}] / (2 * pb * D_A)$$

T = 9.50E+08

	Mercury	Naphthalene
VF =	2.26E+04	1.58E+04

Table J-19
CALCULATION OF CANCER RISKS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - MPA
Receptor Age: Combined Adult/Child (100% RBA for As)

Medium	Exposure	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Soil	Ingestion	Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	1.23E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.8E-02**	**1.8E-02**
Soil	Dermal	Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	1.23E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.8E-03**	**1.8E-03**
Sediment	Dermal	Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	3.16E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.7E-03**	**4.7E-03**
Groundwater	Ingestion	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	1.10E-01	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.6E-01**	**1.5E-01**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.38E-04	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	1.9E-06	1.9E-06
Groundwater	Dermal	Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	6.08E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.1E-04**	**9.1E-04**
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	mg/kg-d	1.4E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Surface Water	Dermal	Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	6.76E-06	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.0E-05**	**1.0E-05**
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	mg/kg-d	2.9E-02	$(mg/kg-d)^{-1}$	0.0E+00	0.0E+00
Air	Inhalation of Particulates	Arsenic (inorganic)	7.80E+03	mg/kg	1.15E-02	$µg/m^3$	1.15E-02	6.55E-03	$µg/m^3$	4.3E-03	$(µg/m^3)^{-1}$	**2.8E-05**	**2.8E-05**
		Chromium (hexavalent)	2.41E+01	mg/kg	3.54E-05	$µg/m^3$	3.54E-05	3.74E-05	$µg/m^3$	8.4E-02	$(µg/m^3)^{-1}$	3.1E-06	3.1E-06
Air	Inhalation of Volatiles	Naphthalene	5.05E-01	mg/kg	3.19E-02	$µg/m^3$	3.19E-02	1.82E-02	$µg/m^3$	3.4E-05	$(µg/m^3)^{-1}$	6.2E-07	6.2E-07
											Cancer Risk	**1.9E-01**	**1.8E-01**

Medium	Exposure Routes	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake	Intake Units	Slope Factor	Slope Factor Units	Cancer Risk	Cancer Risk One-Hit Eq.
Non-Salmon Fish	Ingestion	Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	6.53E-02	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**9.8E-02**	**9.3E-02**
Large Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	2.73E-05	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**4.1E-05**	**4.1E-05**
Small Land Mammals	Ingestion	Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.47E-04	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**3.7E-04**	**3.7E-04**
Birds	Ingestion	Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.03E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.5E-03**	**1.5E-03**
Berries and Plants	Ingestion	Arsenic (Inorganic)	7.80E+03	mg/kg	4.68E+01	mg/kg	4.68E+01	8.40E-03	mg/kg-d	1.5E+00	$(mg/kg-d)^{-1}$	**1.3E-02**	**1.3E-02**
											Cancer Risk	**1.1E-01**	**1.1E-01**

Total Excess Cancer Risk	**3.0E-01**	**2.9E-01**

Table H-20
CALCULATION OF NON-CANCER HAZARDS
RED DEVIL MINE

Scenario Timeframe: Future
Receptor Population: Residential - MPA
Receptor Age: Adult/Child (100% RBA for As)

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Soil	Ingestion	Aluminum	9.36E+03	mg/kg	9.36E+03	mg/kg	9.36E+03	9.90E-03	9.24E-02	mg/kg-d	1.0E+00	mg/kg-d	9.90E-03	9.2E-02
		Antimony	4.52E+03	mg/kg	4.52E+03	mg/kg	4.52E+03	4.77E-03	4.45E-02	mg/kg-d	4.0E-04	mg/kg-d	**1.19E+01**	**1.1E+02**
		Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	8.25E-03	7.70E-02	mg/kg-d	3.0E-04	mg/kg-d	**2.75E+01**	**2.6E+02**
		Barium	3.79E+02	mg/kg	3.79E+02	mg/kg	3.79E+02	4.01E-04	3.74E-03	mg/kg-d	2.0E-01	mg/kg-d	2.00E-03	1.9E-02
		Chromium	2.41E+01	mg/kg	2.41E+01	mg/kg	2.41E+01	2.54E-05	2.37E-04	mg/kg-d	3.0E-03	mg/kg-d	8.48E-03	7.9E-02
		Cobalt	1.61E+01	mg/kg	1.61E+01	mg/kg	1.61E+01	1.70E-05	1.59E-04	mg/kg-d	3.0E-04	mg/kg-d	5.68E-02	5.3E-01
		Iron	3.71E+04	mg/kg	3.71E+04	mg/kg	3.71E+04	3.92E-02	3.66E-01	mg/kg-d	7.0E-01	mg/kg-d	5.60E-02	5.2E-01
		Manganese	7.28E+02	mg/kg	7.28E+02	mg/kg	7.28E+02	7.69E-04	7.18E-03	mg/kg-d	2.4E-02	mg/kg-d	3.21E-02	3.0E-01
		Mercury	5.06E+02	mg/kg	5.06E+02	mg/kg	5.06E+02	5.35E-04	4.99E-03	mg/kg-d	3.0E-04	mg/kg-d	**1.78E+00**	**1.7E+01**
		Thallium	1.74E-01	mg/kg	1.74E-01	mg/kg	1.74E-01	1.84E-07	1.72E-06	mg/kg-d	1.0E-05	mg/kg-d	1.84E-02	1.7E-01
		Vanadium	2.98E+01	mg/kg	2.98E+01	mg/kg	2.98E+01	3.15E-05	2.94E-04	mg/kg-d	5.0E-03	mg/kg-d	6.30E-03	5.9E-02
		Naphthalene	5.05E-01	mg/kg	5.05E-01	mg/kg	5.05E-01	5.33E-07	4.98E-06	mg/kg-d	2.0E-02	mg/kg-d	2.67E-05	2.5E-04
												Hazard Index	**4.14E+01**	**3.86E+02**
Soil	Dermal	Aluminum	9.36E+03	mg/kg	9.36E+03	mg/kg	9.36E+03	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.52E+03	mg/kg	4.52E+03	mg/kg	4.52E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (inorganic)	7.80E+03	mg/kg	7.80E+03	mg/kg	7.80E+03	9.87E-04	6.47E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.29E+00**	**2.2E+01**
		Barium	3.79E+02	mg/kg	3.79E+02	mg/kg	3.79E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.41E+01	mg/kg	2.41E+01	mg/kg	2.41E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.61E+01	mg/kg	1.61E+01	mg/kg	1.61E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Iron	3.71E+04	mg/kg	3.71E+04	mg/kg	3.71E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	7.28E+02	mg/kg	7.28E+02	mg/kg	7.28E+02	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	5.06E+02	mg/kg	5.06E+02	mg/kg	5.06E+02	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.74E-01	mg/kg	1.74E-01	mg/kg	1.74E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	2.98E+01	mg/kg	2.98E+01	mg/kg	2.98E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	5.05E-01	mg/kg	5.05E-01	mg/kg	5.05E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**3.29E+00**	**2.16E+01**
Sediment	Dermal	Aluminum	1.08E+04	mg/kg	1.08E+04	mg/kg	1.08E+04	0.00E+00	0.00E+00	mg/kg-d	1.0E+00	mg/kg-d	0.00E+00	0.0E+00
		Antimony	4.46E+03	mg/kg	4.46E+03	mg/kg	4.46E+03	0.00E+00	0.00E+00	mg/kg-d	6.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Arsenic (Inorganic)	6.00E+04	mg/kg	6.00E+04	mg/kg	6.00E+04	2.53E-03	1.66E-02	mg/kg-d	3.0E-04	mg/kg-d	**8.43E+00**	**5.5E+01**
		Barium	6.81E+02	mg/kg	6.81E+02	mg/kg	6.81E+02	0.00E+00	0.00E+00	mg/kg-d	1.4E-02	mg/kg-d	0.00E+00	0.0E+00
		Cadmium	2.92E-01	mg/kg	2.92E-01	mg/kg	2.92E-01	0.00E+00	0.00E+00	mg/kg-d	2.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Chromium	2.57E+01	mg/kg	2.57E+01	mg/kg	2.57E+01	0.00E+00	0.00E+00	mg/kg-d	7.5E-05	mg/kg-d	0.00E+00	0.0E+00
		Cobalt	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	3.72E+01	mg/kg	3.72E+01	mg/kg	3.72E+01	0.00E+00	0.00E+00	mg/kg-d	4.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Iron	9.92E+04	mg/kg	9.92E+04	mg/kg	9.92E+04	0.00E+00	0.00E+00	mg/kg-d	7.0E-01	mg/kg-d	0.00E+00	0.0E+00
		Manganese	2.02E+03	mg/kg	2.02E+03	mg/kg	2.02E+03	0.00E+00	0.00E+00	mg/kg-d	9.6E-04	mg/kg-d	0.00E+00	0.0E+00
		Mercury	6.66E+01	mg/kg	6.66E+01	mg/kg	6.66E+01	0.00E+00	0.00E+00	mg/kg-d	2.1E-05	mg/kg-d	0.00E+00	0.0E+00
		Methyl Mercury	5.23E-03	mg/kg	5.23E-03	mg/kg	5.23E-03	0.00E+00	0.00E+00	mg/kg-d	1.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Nickel	5.70E+01	mg/kg	5.70E+01	mg/kg	5.70E+01	0.00E+00	0.00E+00	mg/kg-d	8.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Selenium	4.87E-01	mg/kg	4.87E-01	mg/kg	4.87E-01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Silver	1.14E-01	mg/kg	1.14E-01	mg/kg	1.14E-01	0.00E+00	0.00E+00	mg/kg-d	2.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Thallium	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	3.10E+01	mg/kg	3.10E+01	mg/kg	3.10E+01	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Zinc	9.16E+01	mg/kg	9.16E+01	mg/kg	9.16E+01	0.00E+00	0.00E+00	mg/kg-d	3.0E-01	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**8.43E+00**	**5.52E+01**
Groundwater	Ingestion	Antimony	1.31E+04	µg/L	1.31E+04	µg/L	1.31E+04	3.59E-01	8.37E-01	mg/kg-d	4.0E-04	mg/kg-d	**8.97E+02**	**2.1E+03**
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+03	µg/L	4.53E+03	1.24E-01	2.90E-01	mg/kg-d	3.0E-04	mg/kg-d	**4.14E+02**	**9.7E+02**
		Barium	3.65E+02	µg/L	3.65E+02	µg/L	3.65E+02	1.00E-02	2.33E-02	mg/kg-d	2.0E-01	mg/kg-d	5.00E-02	1.2E-01
		Chromium	1.06E+01	µg/L	1.06E+01	µg/L	1.06E+01	2.90E-04	6.78E-04	mg/kg-d	3.0E-03	mg/kg-d	9.68E-02	2.3E-01
		Cobalt	4.05E+01	µg/L	4.05E+01	µg/L	4.05E+01	1.11E-03	2.59E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.70E+00**	**8.6E+00**
		Iron	2.24E+04	µg/L	2.24E+04	µg/L	2.24E+04	6.14E-01	1.43E+00	mg/kg-d	7.0E-01	mg/kg-d	8.77E-01	**2.0E+00**
		Manganese	7.37E+03	µg/L	7.37E+03	µg/L	7.37E+03	2.02E-01	4.71E-01	mg/kg-d	2.4E-02	mg/kg-d	**8.41E+00**	**2.0E+01**
		Mercury	5.65E+01	µg/L	5.65E+01	µg/L	5.65E+01	1.55E-03	3.61E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.16E+00**	**1.2E+01**
		Nickel	3.59E+01	µg/L	3.59E+01	µg/L	3.59E+01	9.84E-04	2.29E-03	mg/kg-d	2.0E-02	mg/kg-d	4.92E-02	1.1E-01
		Selenium	5.40E+00	µg/L	5.40E+00	µg/L	5.40E+00	1.48E-04	3.45E-04	mg/kg-d	5.0E-03	mg/kg-d	2.96E-02	6.9E-02
		Thallium	7.50E-02	µg/L	7.50E-02	µg/L	7.50E-02	2.05E-06	4.79E-06	mg/kg-d	1.0E-05	mg/kg-d	2.05E-01	4.8E-01
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E+00	µg/L	5.70E+00	1.56E-04	3.64E-04	mg/kg-d	2.0E-02	mg/kg-d	7.81E-03	1.8E-02
												Hazard Index	**1.33E+03**	**3.10E+03**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Refer-ence Dose	Chronic Refer-ence Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Groundwater	Dermal	Antimony	1.31E+04	µg/L	1.31E+01	mg/L	1.31E+01	1.87E-03	5.53E-06	mg/kg-d	6.0E-05	mg/kg-d	**3.12E+01**	9.2E-02
		Arsenic (Inorganic)	4.53E+03	µg/L	4.53E+00	mg/L	4.53E+00	6.48E-04	1.91E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.16E+00**	**6.4E+00**
		Barium	3.65E+02	µg/L	3.65E-01	mg/L	3.65E-01	5.22E-05	1.54E-04	mg/kg-d	1.4E-02	mg/kg-d	3.73E-03	1.1E-02
		Chromium	1.06E+01	µg/L	1.06E-02	mg/L	1.06E-02	1.52E-06	4.47E-06	mg/kg-d	7.5E-05	mg/kg-d	2.02E-02	6.0E-02
		Cobalt	4.05E+01	µg/L	4.05E-02	mg/L	4.05E-02	2.32E-06	6.84E-06	mg/kg-d	3.0E-04	mg/kg-d	7.72E-03	2.3E-02
		Iron	2.24E+04	µg/L	2.24E+01	mg/L	2.24E+01	3.20E-03	9.45E-03	mg/kg-d	7.0E-01	mg/kg-d	4.58E-03	1.4E-02
		Manganese	7.37E+03	µg/L	7.37E+00	mg/L	7.37E+00	1.05E-03	3.11E-03	mg/kg-d	9.6E-04	mg/kg-d	**1.10E+00**	**3.2E+00**
		Mercury	5.65E+01	µg/L	5.65E-02	mg/L	5.65E-02	8.08E-06	2.38E-05	mg/kg-d	2.1E-05	mg/kg-d	3.85E-01	**1.1E+00**
		Nickel	3.59E+01	µg/L	3.59E-02	mg/L	3.59E-02	1.03E-06	3.03E-06	mg/kg-d	8.0E-04	mg/kg-d	1.28E-03	3.8E-03
		Selenium	5.40E+00	µg/L	5.40E-03	mg/L	5.40E-03	7.72E-07	2.28E-06	mg/kg-d	5.0E-03	mg/kg-d	1.54E-04	4.6E-04
		Thallium	7.50E-02	µg/L	7.50E-05	mg/L	7.50E-05	1.07E-08	3.16E-08	mg/kg-d	1.0E-05	mg/kg-d	1.07E-03	3.2E-03
		Bis(2-ethylhexyl)phthalate	5.70E+00	µg/L	5.70E-03	mg/L	5.70E-03	0.00E+00	0.00E+00	mg/kg-d	2.0E-02	mg/kg-d	0.00E+00	0.0E+00
												Hazard Index	**3.49E+01**	**1.10E+01**
Surface Water	Dermal	Antimony	1.36E+02	µg/L	1.36E-01	mg/L	1.36E-01	1.81E-06	4.16E-06	mg/kg-d	6.0E-05	mg/kg-d	3.02E-02	6.9E-02
		Arsenic (Inorganic)	5.73E+02	µg/L	5.73E-01	mg/L	5.73E-01	7.66E-06	1.76E-05	mg/kg-d	3.0E-04	mg/kg-d	2.55E-02	5.9E-02
		Cadmium	8.00E-03	µg/L	8.00E-06	mg/L	8.00E-06	1.07E-10	2.45E-10	mg/kg-d	3.0E-03	mg/kg-d	3.57E-08	8.2E-08
		Chromium	3.06E-01	µg/L	3.06E-04	mg/L	3.06E-04	4.10E-09	9.39E-09	mg/kg-d	7.5E-05	mg/kg-d	5.46E-05	1.3E-04
		Cobalt	3.04E+00	µg/L	3.04E-03	mg/L	3.04E-03	1.63E-08	3.73E-08	mg/kg-d	3.0E-04	mg/kg-d	5.42E-05	1.2E-04
		Copper	4.31E-01	µg/L	4.31E-04	mg/L	4.31E-04	5.77E-09	1.32E-08	mg/kg-d	4.0E-02	mg/kg-d	1.44E-07	3.3E-07
		Iron	1.33E+03	µg/L	1.33E+00	mg/L	1.33E+00	1.77E-05	4.07E-05	mg/kg-d	7.0E-01	mg/kg-d	2.53E-05	5.8E-05
		Manganese	1.71E+02	µg/L	1.71E-01	mg/L	1.71E-01	2.28E-06	5.23E-06	mg/kg-d	9.6E-04	mg/kg-d	2.38E-03	5.5E-03
		Mercury	2.41E-01	µg/L	2.41E-04	mg/L	2.41E-04	3.23E-09	7.40E-09	mg/kg-d	2.1E-05	mg/kg-d	1.54E-04	3.5E-04
		Methyl Mercury	3.12E-04	µg/L	3.12E-07	mg/L	3.12E-07	4.18E-12	9.57E-12	mg/kg-d	1.0E-04	mg/kg-d	4.18E-08	9.6E-08
		Nickel	1.05E+01	µg/L	1.05E-02	mg/L	1.05E-02	2.82E-08	6.47E-08	mg/kg-d	8.0E-04	mg/kg-d	3.53E-05	8.1E-05
		Selenium	3.85E-01	µg/L	3.85E-04	mg/L	3.85E-04	5.15E-09	1.18E-08	mg/kg-d	5.0E-03	mg/kg-d	1.03E-06	2.4E-06
		Silver	2.60E-02	µg/L	2.60E-05	mg/L	2.60E-05	2.09E-10	4.79E-10	mg/kg-d	2.0E-04	mg/kg-d	1.04E-06	2.4E-06
		Zinc	7.27E-01	µg/L	7.27E-04	mg/L	7.27E-04	5.84E-09	1.34E-08	mg/kg-d	3.0E-01	mg/kg-d	1.95E-08	4.5E-08
		1-Methylnaphthalene	1.50E+00	µg/L	1.50E-03	mg/L	1.50E-03	0.00E+00	0.00E+00	mg/kg-d	7.0E-02	mg/kg-d	0.00E+00	0.0E+00
		Naphthalene	6.80E-01	µg/L	6.80E-04	mg/L	6.80E-04	4.28E-07	9.81E-07	mg/kg-d	2.0E-02	mg/kg-d	2.14E-05	4.9E-05
												Hazard Index	5.85E-02	1.34E-01
Air	Dust Particulates or Volatile from Soil	Aluminum	9.36E+03	mg/kg	1.38E-05	mg/m^3	1.38E-05	1.02E-05	1.02E-05	mg/m^3	5.0E-03	mg/m^3	2.04E-03	2.0E-03
		Antimony	4.52E+03	mg/kg	6.64E-06	mg/m^3	6.64E-06	4.91E-06	4.91E-06	mg/m^3	--	mg/m^3	--	--
		Arsenic (inorganic)	7.80E+03	mg/kg	1.15E-05	mg/m^3	1.15E-05	8.49E-06	8.49E-06	mg/m^3	1.5E-05	mg/m^3	5.66E-01	5.7E-01
		Barium	3.79E+02	mg/kg	5.57E-07	mg/m^3	5.57E-07	4.12E-07	4.12E-07	mg/m^3	5.0E-04	mg/m^3	8.25E-04	8.2E-04
		Chromium	2.41E+01	mg/kg	3.54E-08	mg/m^3	3.54E-08	2.62E-08	2.62E-08	mg/m^3	1.0E-04	mg/m^3	2.62E-04	2.6E-04
		Cobalt	1.61E+01	mg/kg	2.37E-08	mg/m^3	2.37E-08	1.75E-08	1.75E-08	mg/m^3	6.0E-06	mg/m^3	2.92E-03	2.9E-03
		Iron	3.71E+04	mg/kg	5.46E-05	mg/m^3	5.46E-05	4.04E-05	4.04E-05	mg/m^3	--	mg/m^3	--	--
		Manganese	7.28E+02	mg/kg	1.07E-06	mg/m^3	1.07E-06	7.92E-07	7.92E-07	mg/m^3	5.0E-05	mg/m^3	1.58E-02	1.6E-02
		Mercury	5.06E+02	mg/kg	2.24E-02	mg/m^3	2.24E-02	1.66E-02	1.66E-02	mg/m^3	3.0E-04	mg/m^3	**5.52E+01**	**5.5E+01**
		Thallium	1.74E-01	mg/kg	2.56E-10	mg/m^3	2.56E-10	1.89E-10	1.89E-10	mg/m^3	--	mg/m^3	--	--
		Vanadium	2.98E+01	mg/kg	4.38E-08	mg/m^3	4.38E-08	3.24E-08	3.24E-08	mg/m^3	--	mg/m^3	--	--
		Naphthalene	5.05E-01	mg/kg	7.42E-10	mg/m^3	7.42E-10	5.49E-10	5.49E-10	mg/m^3	3.0E-03	mg/m^3	1.83E-07	1.8E-07
												Hazard Index	**5.58E+01**	**5.58E+01**
Air	Volatile from Groundwater	Mercury	5.65E+01	ug/L	2.83E-02	mg/m3	2.83E-02	8.47E-04	8.47E-04	mg/m3	3.0E-04	mg/m3	**2.82E+00**	**2.8E+00**
Non-Salmon Fish	Ingestion	Aluminum	2.67E+01	mg/kg	2.67E+01	mg/kg	2.67E+01	1.03E-01	2.32E-01	mg/kg-d	1.0E+00	mg/kg-d	1.03E-01	2.3E-01
		Antimony	1.71E+01	mg/kg	1.71E+01	mg/kg	1.71E+01	6.60E-02	1.48E-01	mg/kg-d	4.0E-04	mg/kg-d	**1.65E+02**	**3.7E+02**
		Arsenic (Inorganic)	1.92E+01	mg/kg	1.92E+01	mg/kg	1.92E+01	7.44E-02	1.67E-01	mg/kg-d	3.0E-04	mg/kg-d	**2.48E+02**	**5.6E+02**
		Barium	6.06E+00	mg/kg	6.06E+00	mg/kg	6.06E+00	2.35E-02	5.26E-02	mg/kg-d	2.0E-01	mg/kg-d	1.17E-01	2.6E-01
		Cadmium	4.20E-02	mg/kg	4.20E-02	mg/kg	4.20E-02	1.63E-04	3.64E-04	mg/kg-d	1.0E-03	mg/kg-d	1.63E-01	3.6E-01
		Chromium	1.99E-01	mg/kg	1.99E-01	mg/kg	1.99E-01	7.70E-04	1.73E-03	mg/kg-d	3.0E-03	mg/kg-d	2.57E-01	5.8E-01
		Cobalt	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	3.0E-04	mg/kg-d	0.00E+00	0.0E+00
		Copper	1.24E+00	mg/kg	1.24E+00	mg/kg	1.24E+00	4.79E-03	1.07E-02	mg/kg-d	4.0E-02	mg/kg-d	1.20E-01	2.7E-01
		Iron	1.20E+02	mg/kg	1.20E+02	mg/kg	1.20E+02	4.66E-01	1.04E+00	mg/kg-d	7.0E-01	mg/kg-d	6.65E-01	**1.5E+00**
		Manganese	1.54E+01	mg/kg	1.54E+01	mg/kg	1.54E+01	5.97E-02	1.34E-01	mg/kg-d	1.4E-01	mg/kg-d	4.26E-01	9.6E-01
		Methyl Mercury	2.07E-01	mg/kg	6.21E-01	mg/kg	6.21E-01	2.40E-03	5.39E-03	mg/kg-d	1.0E-04	mg/kg-d	**2.40E+01**	**5.4E+01**
		Nickel	1.49E-01	mg/kg	1.49E-01	mg/kg	1.49E-01	5.77E-04	1.29E-03	mg/kg-d	2.0E-02	mg/kg-d	2.88E-02	6.5E-02
		Selenium	1.43E+00	mg/kg	1.43E+00	mg/kg	1.43E+00	5.54E-03	1.24E-02	mg/kg-d	5.0E-03	mg/kg-d	**1.11E+00**	**2.5E+00**
		Silver	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	5.0E-03	mg/kg-d	0.00E+00	0.0E+00
		Thallium	--	mg/kg	--	mg/kg	--	0.00E+00	0.00E+00	mg/kg-d	1.0E-05	mg/kg-d	0.00E+00	0.0E+00
		Vanadium	1.81E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	7.01E-04	1.57E-03	mg/kg-d	5.0E-03	mg/kg-d	1.40E-01	3.1E-01
		Zinc	2.56E+01	mg/kg	2.56E+01	mg/kg	2.56E+01	9.91E-02	2.22E-01	mg/kg-d	3.0E-01	mg/kg-d	3.30E-01	7.4E-01
												Hazard Index	**4.41E+02**	**9.87E+02**

Medium	Exposure Route	Contaminant of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Adult Intake	Child Intake	Intake Units	Chronic Reference Dose	Chronic Reference Dose Units	Adult Hazard Quotient	Child Hazard Quotient
Large Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	6.43E-01	mg/kg	6.43E-01	6.96E-04	1.56E-03	mg/kg-d	1.0E+00	mg/kg-d	6.96E-04	1.6E-03
		Antimony	2.72E+00	mg/kg	7.35E-02	mg/kg	7.35E-02	7.96E-05	1.78E-04	mg/kg-d	4.0E-04	mg/kg-d	1.99E-01	4.5E-01
		Arsenic	5.32E-01	mg/kg	2.87E-02	mg/kg	2.87E-02	3.11E-05	6.97E-05	mg/kg-d	3.0E-04	mg/kg-d	1.04E-01	2.3E-01
		Barium	1.55E+02	mg/kg	6.29E-01	mg/kg	6.29E-01	6.81E-04	1.52E-03	mg/kg-d	2.0E-01	mg/kg-d	3.40E-03	7.6E-03
		Chromium	8.55E-01	mg/kg	1.27E-01	mg/kg	1.27E-01	1.37E-04	3.08E-04	mg/kg-d	3.0E-03	mg/kg-d	4.58E-02	1.0E-01
		Cobalt	3.35E-01	mg/kg	1.81E-01	mg/kg	1.81E-01	1.96E-04	4.39E-04	mg/kg-d	3.0E-04	mg/kg-d	6.53E-01	**1.5E+00**
		Iron	2.96E+01	mg/kg	1.60E+01	mg/kg	1.60E+01	1.73E-02	3.87E-02	mg/kg-d	7.0E-01	mg/kg-d	2.47E-02	5.5E-02
		Manganese	7.15E+02	mg/kg	7.72E+00	mg/kg	7.72E+00	8.36E-03	1.87E-02	mg/kg-d	1.4E-01	mg/kg-d	5.97E-02	1.3E-01
		Mercury	2.10E-01	mg/kg	1.42E+00	mg/kg	1.42E+00	1.53E-03	3.44E-03	mg/kg-d	3.0E-04	mg/kg-d	**5.12E+00**	**1.1E+01**
		Thallium	1.62E-02	mg/kg	1.75E-02	mg/kg	1.75E-02	1.89E-05	4.24E-05	mg/kg-d	1.0E-05	mg/kg-d	**1.89E+00**	**4.2E+00**
		Vanadium	6.45E-02	mg/kg	4.35E-03	mg/kg	4.35E-03	4.71E-06	1.06E-05	mg/kg-d	5.0E-03	mg/kg-d	9.43E-04	2.1E-03
												Hazard Index	**8.10E+00**	**1.81E+01**
Small Land Mammal	Ingestion	Aluminum	1.59E+01	mg/kg	1.59E+01	mg/kg	1.59E+01	8.39E-03	1.88E-02	mg/kg-d	1.0E+00	mg/kg-d	8.39E-03	1.9E-02
		Antimony	2.72E+00	mg/kg	2.72E+00	mg/kg	2.72E+00	1.44E-03	3.23E-03	mg/kg-d	4.0E-04	mg/kg-d	**3.60E+00**	**8.1E+00**
		Arsenic	5.32E-01	mg/kg	5.32E-01	mg/kg	5.32E-01	2.81E-04	6.30E-04	mg/kg-d	3.0E-04	mg/kg-d	9.37E-01	**2.1E+00**
		Barium	1.55E+02	mg/kg	1.55E+02	mg/kg	1.55E+02	8.20E-02	1.84E-01	mg/kg-d	2.0E-01	mg/kg-d	4.10E-01	9.2E-01
		Chromium	8.55E-01	mg/kg	8.55E-01	mg/kg	8.55E-01	4.52E-04	1.01E-03	mg/kg-d	3.0E-03	mg/kg-d	1.51E-01	3.4E-01
		Cobalt	3.35E-01	mg/kg	3.35E-01	mg/kg	3.35E-01	1.77E-04	3.97E-04	mg/kg-d	3.0E-04	mg/kg-d	5.90E-01	**1.3E+00**
		Iron	2.96E+01	mg/kg	2.96E+01	mg/kg	2.96E+01	1.56E-02	3.50E-02	mg/kg-d	7.0E-01	mg/kg-d	2.23E-02	5.0E-02
		Manganese	7.15E+02	mg/kg	7.15E+02	mg/kg	7.15E+02	3.78E-01	8.46E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.70E+00**	**6.0E+00**
		Mercury	2.10E-01	mg/kg	2.10E-01	mg/kg	2.10E-01	1.11E-04	2.49E-04	mg/kg-d	3.0E-04	mg/kg-d	3.70E-01	8.3E-01
		Thallium	1.62E-02	mg/kg	1.62E-02	mg/kg	1.62E-02	8.56E-06	1.92E-05	mg/kg-d	1.0E-05	mg/kg-d	8.56E-01	**1.9E+00**
		Vanadium	6.45E-02	mg/kg	6.45E-02	mg/kg	6.45E-02	3.41E-05	7.64E-05	mg/kg-d	5.0E-03	mg/kg-d	6.82E-03	1.5E-02
												Hazard Index	**9.65E+00**	**2.16E+01**
Birds	Ingestion	Aluminum	1.30E+02	mg/kg	1.30E+02	mg/kg	1.30E+02	2.01E-02	4.50E-02	mg/kg-d	1.0E+00	mg/kg-d	2.01E-02	4.5E-02
		Antimony	1.03E+01	mg/kg	1.03E+01	mg/kg	1.03E+01	1.60E-03	3.59E-03	mg/kg-d	4.0E-04	mg/kg-d	**4.01E+00**	**9.0E+00**
		Arsenic	7.58E+00	mg/kg	7.58E+00	mg/kg	7.58E+00	1.18E-03	2.64E-03	mg/kg-d	3.0E-04	mg/kg-d	**3.92E+00**	**8.8E+00**
		Barium	5.99E+01	mg/kg	5.99E+01	mg/kg	5.99E+01	9.30E-03	2.08E-02	mg/kg-d	2.0E-01	mg/kg-d	4.65E-02	1.0E-01
		Chromium	9.19E-01	mg/kg	9.19E-01	mg/kg	9.19E-01	1.43E-04	3.20E-04	mg/kg-d	3.0E-03	mg/kg-d	4.76E-02	1.1E-01
		Cobalt	2.33E-01	mg/kg	2.33E-01	mg/kg	2.33E-01	3.62E-05	8.10E-05	mg/kg-d	3.0E-04	mg/kg-d	1.21E-01	2.7E-01
		Iron	1.97E+02	mg/kg	1.97E+02	mg/kg	1.97E+02	3.06E-02	6.86E-02	mg/kg-d	7.0E-01	mg/kg-d	4.37E-02	9.8E-02
		Manganese	1.90E+03	mg/kg	1.90E+03	mg/kg	1.90E+03	2.96E-01	6.62E-01	mg/kg-d	1.4E-01	mg/kg-d	**2.11E+00**	**4.7E+00**
		Mercury	5.64E+00	mg/kg	5.64E+00	mg/kg	5.64E+00	8.76E-04	1.96E-03	mg/kg-d	3.0E-04	mg/kg-d	**2.92E+00**	**6.5E+00**
		Thallium	2.10E-02	mg/kg	2.10E-02	mg/kg	2.10E-02	3.26E-06	7.30E-06	mg/kg-d	1.0E-05	mg/kg-d	3.26E-01	7.3E-01
		Vanadium	4.70E-01	mg/kg	4.70E-01	mg/kg	4.70E-01	7.30E-05	1.63E-04	mg/kg-d	5.0E-03	mg/kg-d	1.46E-02	3.3E-02
												Hazard Index	**1.36E+01**	**3.04E+01**
Berries and Plants	Ingestion	Aluminum	9.36E+03	mg/kg	6.09E+00	mg/kg	6.09E+00	1.24E-03	2.79E-03	mg/kg-d	1.0E+00	mg/kg-d	1.24E-03	2.8E-03
		Antimony	4.52E+03	mg/kg	1.35E+02	mg/kg	1.35E+02	2.77E-02	6.20E-02	mg/kg-d	4.0E-04	mg/kg-d	**6.92E+01**	**1.5E+02**
		Arsenic (inorganic)	7.80E+03	mg/kg	4.68E+01	mg/kg	4.68E+01	9.57E-03	2.14E-02	mg/kg-d	3.0E-04	mg/kg-d	**3.19E+01**	**7.1E+01**
		Barium	3.79E+02	mg/kg	5.69E+00	mg/kg	5.69E+00	1.16E-03	2.60E-03	mg/kg-d	2.0E-01	mg/kg-d	5.81E-03	1.3E-02
		Chromium	2.41E+01	mg/kg	1.08E-01	mg/kg	1.08E-01	2.21E-05	4.95E-05	mg/kg-d	3.0E-03	mg/kg-d	7.37E-03	1.7E-02
		Cobalt	1.61E+01	mg/kg	1.13E-01	mg/kg	1.13E-01	2.31E-05	5.17E-05	mg/kg-d	3.0E-04	mg/kg-d	7.69E-02	1.7E-01
		Iron	3.71E+04	mg/kg	3.71E+01	mg/kg	3.71E+01	7.58E-03	1.70E-02	mg/kg-d	7.0E-01	mg/kg-d	1.08E-02	2.4E-02
		Manganese	7.28E+02	mg/kg	3.64E+01	mg/kg	3.64E+01	7.43E-03	1.67E-02	mg/kg-d	1.4E-01	mg/kg-d	5.31E-02	1.2E-01
		Mercury	5.06E+02	mg/kg	1.01E+02	mg/kg	1.01E+02	2.07E-02	4.63E-02	mg/kg-d	3.0E-04	mg/kg-d	**6.89E+01**	**1.5E+02**
		Thallium	1.74E-01	mg/kg	6.96E-05	mg/kg	6.96E-05	1.42E-08	3.18E-08	mg/kg-d	1.0E-05	mg/kg-d	1.42E-03	3.2E-03
		Vanadium	2.98E+01	mg/kg	8.94E-02	mg/kg	8.94E-02	1.83E-05	4.09E-05	mg/kg-d	5.0E-03	mg/kg-d	3.65E-03	8.2E-03
												Hazard Index	**1.70E+02**	**3.81E+02**
												Total Hazard Index	**2.12E+03**	**5.07E+03**