

APPENDIX C

ERA MODEL INPUTS AND OUTPUTS

Jacques Whitford's Ecological Risk Assessment Model (Version 1.21)

Intake Parameters for the Snowy Owl

Receptor Name	Snowy Owl	
Name of Area	FOX-C	
Receptor Type	1	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	2.05	kg
Food intake rate	0.290218284	kg wet-wt/day
Water intake rate	0.095439268	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.32	
Fraction of food intake rate	0.028	
Ingestion rate	0.002600356	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.001268466	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-lp)	0	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ti)	0	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1	
Ingestion rate	0.290218284	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-lm)	0.141569895	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	0.095439268	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.04655574	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0	
Fraction of food intake rate	0	
Ingestion rate	0	kg dry-wt/day
Fraction from site	0	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-fsh)	0	kg/kg-day

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Intake Parameters for the Ptarmigan

Receptor Name	Ptarmigan	
Name of Area	FOX-C	
Receptor Type	1	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	0.5	kg
Food intake rate	0.124	kg wet-wt/day
Water intake rate	0.037	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.3	
Fraction of food intake rate	0.02	
Ingestion rate	0.000744	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.001488	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1	
Ingestion rate	0.124	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.248	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.1	
Ingestion rate	0.0124	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	0.0248	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-tm)	0	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	0.037	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.074	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0	
Fraction of food intake rate	0	
Ingestion rate	0	kg dry-wt/day
Fraction from site	0	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-fsh)	0	kg/kg-day

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Intake Parameters for the Lemming

Receptor Name	Lemming	
Name of Area	FOX-C	
Receptor Type	2	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	0.04	kg
Food intake rate	0.023	kg wet-wt/day
Water intake rate	0.009	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.3	
Fraction of food intake rate	0.02	
Ingestion rate	0.000138	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.00345	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1	
Ingestion rate	0.023	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.575	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ti)	0	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	0.009	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.225	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.1	
Fraction of food intake rate	0.01	
Ingestion rate	0.000023	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.25	
Ingestion rate	0.00575	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.25	
Ingestion rate	0.00575	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0	kg/kg-day

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Intake Parameters for the Ermine

Receptor Name	Ermine	
Name of Area	FOX-C	
Receptor Type	2	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	0.128	kg
Food intake rate	0.026336787	kg wet-wt/day
Water intake rate	0.009273303	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.3	
Fraction of food intake rate	0.028	
Ingestion rate	0.000221229	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.001728352	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.05	
Ingestion rate	0.001316839	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.010287807	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.1	
Ingestion rate	0.002633679	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	0.020575615	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.85	
Ingestion rate	0.022386269	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.174892727	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	0.009273303	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.072447678	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0	
Fraction of food intake rate	0	
Ingestion rate	0	kg dry-wt/day
Fraction from site	0	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-fsh)	0	kg/kg-day

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Intake Parameters for the Caribou

Receptor Name	Caribou	
Name of Area	FOX-C	
Receptor Type	2	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	117.5	kg
Food intake rate	18.6639	kg wet-wt/day
Water intake rate	7.222196069	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.15	
Fraction of food intake rate	0.082	
Ingestion rate	0.22956597	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.001953753	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1	
Ingestion rate	18.6639	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.158841702	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ti)	0	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-tm)	0	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	7.222196069	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.061465498	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0	
Fraction of food intake rate	0	
Ingestion rate	0	kg dry-wt/day
Fraction from site	0	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-fsh)	0	kg/kg-day

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Intake Parameters for the Arctic Fox

Receptor Name	Arctic Fox	
Name of Area	FOX-C	
Receptor Type	2	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	5.75	kg
Food intake rate	0.933	kg wet-wt/day
Water intake rate	0.478	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.31	
Fraction of food intake rate	0.03	
Ingestion rate	0.0086769	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.001509026	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.05	
Ingestion rate	0.04665	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.008113043	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ti)	0	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.95	
Ingestion rate	0.88635	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.154147826	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	0.478	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.083130435	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0	
Fraction of food intake rate	0	
Ingestion rate	0	kg dry-wt/day
Fraction from site	0	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-fsh)	0	kg/kg-day

Jacques Whitford's Ecological Risk Assessment Model (Version 1.21)

Intake Parameters for the Arctic Hare

Receptor Name	Arctic Hare	
Name of Area	FOX-C	
Receptor Type	2	(1-Bird, 2-Mammal)
Small Mammal Type	1	(1-General, 2- Herbivore, 3-Insectivore) Default value should be 1
Benthic invertebrates, fish and aquatic plants based on Sediment or Surface Water Uptake	1	(1-Sediment, 2-Surface Water) Default value should be 1
General Parameters		
Body weight	4.3	kg
Food intake rate	1.149	kg wet-wt/day
Water intake rate	0.368	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.22	
Fraction of food intake rate	0.024	
Ingestion rate	0.00606672	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	0.001410865	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.95	
Ingestion rate	1.09155	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.253848837	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ti)	0	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	0.05	
Ingestion rate	0.05745	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.013360465	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	0.368	L/day
Fraction from site	1	
Intake factor (IFing-sw)	0.085581395	L/kg-day
Ingestion of Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0	
Fraction of food intake rate	0	
Ingestion rate	0	kg dry-wt/day
Fraction from site	0	
Intake factor (IFing-sed)	0	kg/kg-day
Ingestion of Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ap)	0	kg/kg-day
Ingestion of Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-ai)	0	kg/kg-day
Ingestion of Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0	
Ingestion rate	0	kg wet-wt/day
Fraction from site	0	
Intake factor (IFing-fsh)	0	kg/kg-day

Final Exposure Point Concentrations for FOX-C - Upper Site

Constituent	CAS-RN	Soil Conc. (mg/kg)	Terrestrial Plant Conc. (mg/Kg)	Terrestrial Invertebrate Conc. (mg/Kg)	Terrestrial Mammal Conc. (mg/Kg)	Surface Water Conc. (mg/L)
TPH - CCME CWS						
Aliph>C06-C08 - F1	0.55 0.36 0.09	1.01E+00	3.63E-02	1.01E-01	9.12E-04	3.85E-02
Aliph>C08-C10 - F1		6.62E-01	6.28E-03	6.62E-02	4.51E-03	2.52E-02
Arom>C08-C10 - F1		1.66E-01	2.25E-02	1.66E-02	2.88E-05	6.30E-03
F1 - Total		7.66E+01	3.78E-01	7.66E+00	2.13E-01	1.80E-02
Aliph>C10-C12 - F2	0.36 0.44 0.09 0.11	9.36E+01	7.98E-02	9.36E+00	2.59E+00	2.20E-02
Aliph>C12-C16 - F2		1.91E+01	1.41E+00	1.91E+00	3.84E-03	4.50E-03
Arom>C10-C12 - F2		2.34E+01	1.16E+00	2.34E+00	6.62E-03	5.50E-03
Arom>C12-C16 - F2		6.98E+02	3.45E-02	6.98E+01	1.06E+01	2.80E-02
F2 - Total	2.99E+02	5.03E-05	2.99E+01	1.80E+00	1.20E-02	
Aliph>C16-C21-F3	0.24 0.14 0.06	1.75E+02	4.37E+00	1.75E+01	9.28E-02	7.00E-03
Aliph>C21-C34 - F3		7.48E+01	5.58E-01	7.48E+00	1.57E-01	3.00E-03
F3 - Total		2.04E+02	1.21E-05	2.04E+01	6.31E-01	4.00E-02
Aliph>C34-C50 - F4		5.09E+01	1.28E-01	5.09E+00	5.04E-01	1.00E-02
Arom>C34-C50 - F4	0.80 0.20					
F4 - Total						
Organics						
Aroclor 1254 (Total PCBs)	11097691	2.00E-01	8.18E-02	7.33E-02	5.57E-01	5.00E-05
Inorganics						
Beryllium	7440439 7440508 7439921 7440666	2.91E-01	5.53E-04	2.10E-03	1.08E-04	5.00E-05
Cadmium		1.67E-01	3.25E-01	3.19E-01	8.71E-02	6.00E-05
Chromium (Total)		3.64E+01	1.48E+01	1.50E+00	1.04E+00	1.10E-03
Copper		2.60E+01	1.18E+01	2.02E+00	3.95E+00	4.00E-03
Lead		1.87E+01	7.85E+00	1.36E+00	1.26E+00	1.00E-03
Zinc		5.80E+01	8.39E+01	5.18E+01	3.78E+01	5.60E-02

Final Exposure Point Concentrations for FOX-C - Lower Site

Constituent	CAS-RN	Soil Conc. (mg/kg)	Terrestrial Plant Conc. (mg/Kg)	Terrestrial Invertebrate Conc. (mg/Kg)	Terrestrial Mammal Conc. (mg/Kg)	Surface Water Conc. (mg/L)
TPH - CCME CWS	% Composition					
Aliph>C06-C08 - F1	0.55	3.90E+00	1.40E-01	3.90E-01	2.00E-03	3.85E-02
Aliph>C08-C10 - F1	0.36	2.55E+00	2.42E-02	2.55E-01	7.43E-03	2.52E-02
Arom>C08-C10 - F1	0.09	6.38E-01	8.66E-02	6.38E-02	8.60E-05	6.30E-03
F1 - Total						
Aliph>C10-C12 - F2	0.36	5.46E+01	2.69E-01	5.46E+00	1.53E-01	1.80E-02
Aliph>C12-C16 - F2	0.44	6.67E+01	5.68E-02	6.67E+00	1.87E+00	2.20E-02
Arom>C10-C12 - F2	0.09	1.36E+01	1.00E+00	1.36E+00	2.74E-03	4.50E-03
Arom>C12-C16 - F2	0.11	1.67E+01	8.23E-01	1.67E+00	4.73E-03	5.50E-03
F2 - Total						
Aliph>C16-C21-F3	0.56	1.71E+02	8.46E-03	1.71E+01	2.66E+00	2.80E-02
Aliph>C21-C34 - F3	0.24	7.34E+01	1.23E-05	7.34E+00	4.53E-01	1.20E-02
Arom>C16-C21 - F3	0.14	4.28E+01	1.07E+00	4.28E+00	2.29E-02	7.00E-03
Arom>C21-C34 - F3	0.06	1.84E+01	1.37E-01	1.84E+00	3.89E-02	3.00E-03
F3 - Total						
Aliph>C34-C50 - F4	0.80	8.87E+01	5.28E-06	8.87E+00	2.88E-01	4.00E-02
Arom>C34-C50 - F4	0.20	2.22E+01	5.56E-02	2.22E+00	2.27E-01	1.00E-02
F4 - Total						
Organics						
Aroclor 1254 (Total PCBs)	11097691	5.00E-02	8.18E-02	1.11E-02	5.48E-01	5.00E-05
Inorganics						
Beryllium		5.43E-01	1.03E-03	3.91E-03	2.00E-04	5.00E-05
Cadmium	7440439	8.22E-02	3.25E-01	1.82E-01	6.17E-02	6.00E-05
Chromium (Total)		7.94E+01	1.48E+01	1.43E+00	1.84E+00	1.10E-03
Copper	7440508	3.02E+01	1.18E+01	2.10E+00	4.03E+00	4.00E-03
Lead	7439921	1.08E+01	7.85E+00	8.78E-01	9.89E-01	1.00E-03
Zinc	7440666	8.02E+01	8.39E+01	5.77E+01	3.87E+01	5.60E-02

Reference Toxicity Doses for Bird Species Exposed to Constituents fo Concern from FOX-C

Constituent	Test Species	Test Species Body Weight (kg wet)	Body Weight Reference	Effect	Reference	Endpoint	Daily Dose (mg/kg-day)	Total Uncertainty Factor (a)	Chronic LOAEL- Test Species (b) (mg/kg-day)	Receptor Species	Body Weight Scaling Factor	Reference Toxicity Dose (mg/kg-day)
TPH - CCME CWS												
Aliph>C06-C08 - F1	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+02	1	5.00E+02	Ptarmigan	8.71E-01	4.35E+02
Aliph>C08-C10 - F1	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+02	1	5.00E+02	Ptarmigan	8.71E-01	4.35E+02
Arom>C08-C10 - F1	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+01	1	5.00E+01	Ptarmigan	8.71E-01	4.35E+01
F1 - Total							--		--			--
Aliph>C10-C12 - F2	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+02	1	5.00E+02	Ptarmigan	8.71E-01	4.35E+02
Aliph>C12-C16 - F2	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+02	1	5.00E+02	Ptarmigan	8.71E-01	4.35E+02
Arom>C10-C12 - F2	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+01	1	5.00E+01	Ptarmigan	8.71E-01	4.35E+01
Arom>C12-C16 - F2	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	5.00E+01	1	5.00E+01	Ptarmigan	8.71E-01	4.35E+01
F2 - Total							--		--			--
Aliph>C16-C21-F3	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	1.00E+03	1	1.00E+03	Ptarmigan	8.71E-01	8.71E+02
Aliph>C21-C34 - F3	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	1.50E+02	1	1.50E+02	Ptarmigan	8.71E-01	1.31E+02
Arom>C16-C21 -F3	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	1.00E+02	1	1.00E+02	Ptarmigan	8.71E-01	8.71E+01
Arom>C21-C34 -F3	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	1.50E+02	1	1.50E+02	Ptarmigan	8.71E-01	1.31E+02
F3 - Total							--		--			--
Aliph>C34-C50 -F4	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	3.00E+03	1	3.00E+03	Ptarmigan	8.71E-01	2.61E+03
Arom>C34-C50 -F4	Mallard Duck	1	Heinz et al. 1989	Liver hypertrophy and splenic atrophy	Adapted from Szaro et al. (1978)	chronic LOAEL	1.50E+02	1	1.50E+02	Ptarmigan	8.71E-01	1.31E+02
F4 - Total							--		--			--
Organics												
Aroclor 1254 (Total PCBs)	Ring-necked Pheasant	1	EPA 1993e	reproductive	Dahlgren et al 1972, Sample et al., 1996	chronic LOAEL	1.80E+00	1	1.80E+00	Ptarmigan	8.71E-01	1.57E+00
Inorganics												
Beryllium	Rat	0.35	USEPA (1988a)	longevity, weight loss (sub lethal)	Sample et al. (1996), ORNL ES/ER/TM-86/R3	chronic NOAEL	6.60E-01	1	6.60E-01	Ptarmigan	1.07E+00	7.09E-01
Cadmium	Mallard duck	1	Heinz et al. 1989	reproduction	White & Finley (1978), Sample et al. (1996)	chronic LOAEL	2.00E+01	1	2.00E+01	Ptarmigan	8.71E-01	1.74E+01
Chromium (Total)	Black duck	1.25	Dunning 1984	reproduction	Sample et al. (1996)	chronic LOAEL	5.00E+00	1	5.00E+00	Ptarmigan	8.33E-01	4.16E+00
Copper	Chicken (chicks)	0.121	EPA 1988a	growth, mortality	Mehring et al. (1960), Sample et al. (1996)	chronic LOAEL	6.17E+01	1	6.17E+01	Ptarmigan	1.33E+00	8.19E+01
Lead	Japanese quail	0.15	Vos et al. 1971	reproduction	Edens et al. (1976), Sample et al. (1996)	chronic LOAEL	1.13E+01	1	1.13E+01	Ptarmigan	1.27E+00	1.44E+01
Zinc	White Leghorn hen	1.851	Sample et al. 1996	reproduction	Stahl et al. (1990), Sample et al. (1996)	chronic LOAEL	1.31E+02	1	1.31E+02	Ptarmigan	7.70E-01	1.01E+02

Notes:

(a) The following uncertainty factors are used: 5 for subchronic to chronic; 0.2 for NOAEL to LOAEL (5 for LOAEL to NOAEL); 6 for LD₅₀ or LD₀₁ to LOAEL; 5 for mammal to bird.

(b) The chronic LOAEL is calculated as the Daily Dose divided by the Total Uncertainty Factor.

NA - Not Available

Reference Toxicity Doses for Test Organisms - Mammals - Exposed to Constituents to Concern from FOX-C												
Constituent	Test Species	Test Species Body Weight (kg wet)	Body Weight Reference	Effect	Reference	Endpoint	Daily Dose (mg/kg-day)	Total Uncertainty Factor (a)	Chronic LOAEL - Test Species (b) (mg/kg-day)	Receptor Species	Body Weight Scaling Factor	Reference Toxicity Dose (mg/kg-day)
TPH - CCME CWS												
Aliph>C06-C08 - F1	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	2.00E+02	1	2.00E+02	Arctic Fox	7.30E-01	1.46E+02
Aliph>C08-C10 -F1	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	2.00E+02	1	2.00E+02	Arctic Fox	7.30E-01	1.46E+02
Arom>C08-C10 -F1	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	5.00E+01	1	5.00E+01	Arctic Fox	7.30E-01 0.00E+00	3.65E+01 --
F1 - Total							--		--			
Aliph>C10-C12 -F2	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	2.00E+02	1	2.00E+02	Arctic Fox	7.30E-01	1.46E+02
Aliph>C12-C16 -F2	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	2.00E+02	1	2.00E+02	Arctic Fox	7.30E-01	1.46E+02
Arom>C10-C12 -F2	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	1.00E+02	1	1.00E+02	Arctic Fox	7.30E-01	7.30E+01
Arom>C12-C16 -F2	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	1.00E+02	1	1.00E+02	Arctic Fox	7.30E-01 0.00E+00	7.30E+01 --
F2 - Total							--		--			
Aliph>C16-C21-F3	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	4.00E+02	1	4.00E+02	Arctic Fox	7.30E-01	2.92E+02
Aliph>C21-C34 -F3	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	4.00E+02	1	4.00E+02	Arctic Fox	7.30E-01	2.92E+02
Arom>C16-C21 -F3	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	1.00E+02	1	1.00E+02	Arctic Fox	7.30E-01	7.30E+01
Arom>C21-C34 -F3	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	1.00E+02	1	1.00E+02	Arctic Fox	7.30E-01 0.00E+00	7.30E+01 --
F3 - Total							--		--			
Aliph>C34-C50 -F4	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	1.00E+03	1	1.00E+03	Arctic Fox	7.30E-01	7.30E+02
Arom>C34-C50 -F4	Mouse	0.03	USEPA (1988a)	Various	Weight of Evidence from ATSDR (200X), TPHCWG (1997), Hutcheson et al. (1996) and CWS (2001)	chronic LOAEL	1.00E+02	1	1.00E+02	Arctic Fox	7.30E-01 0.00E+00	7.30E+01 --
F4 - Total							--		--			

Reference Toxicity Doses for Test Organisms - Mammals - Exposed to Constituents to Concern from FOX-C

Constituent	Test Species	Test Species Body Weight (kg wet)	Body Weight Reference	Effect	Reference	Endpoint	Daily Dose (mg/kg-day)	Total Uncertainty Factor (a)	Chronic LOAEL - Test Species (b) (mg/kg-day)	Receptor Species	Body Weight Scaling Factor	Reference Toxicity Dose (mg/kg-day)
Organics												
Aroclor 1254 (Total PCBs)	Mink	1	USEPA (1988a)	reproduction	Sample et al. (1996)	chronic LOAEL	6.85E-01	1	6.85E-01	Arctic Fox	9.00E-01	6.17E-01
Inorganics												
Beryllium	Rat	0.35	USEPA (1988a)	longevity, weight loss	Schroeder & Mitchner (1971), Sample et al. (1996)	chronic NOAEL	6.60E-01	0.2	3.30E+00	Arctic Fox	8.45E-01	2.79E+00
Cadmium	Rat	0.35	USEPA (1988a)	reproduction	Sutou et al. (1980), Sample et al. (1996)	chronic LOAEL	1.00E+01	1	1.00E+01	Arctic Fox	8.45E-01	8.45E+00
Chromium (Total)	Rat	0.35	USEPA (1988a)	reproduction	Ivanovic & Preussmann (1975), Sample et al. (1996)	chronic NOAEL	2.74E+03	0.2	1.37E+04	Arctic Fox	8.45E-01	1.16E+04
Cobalt	Rat	0.35	USEPA (1988a)	reproduction	ATSDR (2001)	chronic LOAEL	1.00E+01	1	1.00E+01	Arctic Fox	8.45E-01	8.45E+00
Copper	Mink	1	USEPA (1988a)	reproduction	Aulrich et al. (1982), Sample et al. (1996)	chronic LOAEL	1.51E+01	1	1.51E+01	Arctic Fox	9.00E-01	1.36E+01
Cyanide	Rat	0.35	USEPA (1988a)	reproduction	Tewe & Maner (1981), Sample et al. (1996)	chronic NOAEL	6.87E+01	0.2	3.44E+02	Arctic Fox	8.45E-01	2.90E+02
Iron	Mouse	0.03	USEPA (1988a)	not specified	British Journal of Pharmacology (1965), Ramamoorthy et al. (1995)	chronic LD ₅₀	6.80E+02	6	1.13E+02	Arctic Fox	7.30E-01	8.27E+01
Lead	Rat	0.35	USEPA (1988a)	reproduction	Azar et al. (1973), Sample et al. (1996)	chronic LOAEL	8.00E+01	1	8.00E+01	Arctic Fox	8.45E-01	6.76E+01
Lithium	Rat	0.35	USEPA (1988a)	reproduction	Marathe & Thomas (1986), Sample et al. (1996)	chronic LOAEL	1.88E+01	1	1.88E+01	Arctic Fox	8.45E-01	1.59E+01
Manganese	Rat	0.35	USEPA (1988a)	reproduction	Laskey et al. (1982), Sample et al. (1996)	chronic LOAEL	2.84E+02	1	2.84E+02	Arctic Fox	8.45E-01	2.40E+02
Mercury - Inorganic	Rat	0.35	USEPA (1988a)	reproduction	Verschuuren et al. (1976), Sample (1996)	chronic LOAEL	1.60E-01	1	1.60E-01	Arctic Fox	8.45E-01	1.35E-01
Molybdenum	Mouse	0.03	USEPA (1988a)	reproduction	Schroeder & Mitchner (1971), Sample et al. (1996)	chronic LOAEL	2.60E+00	1	2.60E+00	Arctic Fox	7.30E-01	1.90E+00
Nickel	Rat	0.35	USEPA (1988a)	reproduction	Ambrose et al. (1976), Sample et al. (1996)	chronic LOAEL	8.00E+01	1	8.00E+01	Arctic Fox	8.45E-01	6.76E+01
Selenium	Rat	0.35	USEPA (1988a)	reproduction	Rosenfeld & Beath (1954), Sample et al. (1996)	chronic LOAEL	3.30E-01	1	3.30E-01	Arctic Fox	8.45E-01	2.79E-01
Silver	Mouse	0.03	USEPA (1988a)	mortality	Silver nitrate solutions and concentrations MSDS	chronic LD ₅₀	9.20E+00	6	1.53E+00	Arctic Fox	7.30E-01	1.12E+00
Strontium	Rat	0.35	USEPA (1988a)	body weight & bone change	Skoryna (1981), Sample et al. (1996)	chronic NOAEL	2.63E+02	0.2	1.32E+03	Arctic Fox	8.45E-01	1.11E+03
Thallium	Rat	0.35	USEPA (1988a)	reproduction	Fornigli et al. (1986), Sample et al. (1996)	subchronic LOAEL	7.40E-01	5	1.48E-01	Arctic Fox	8.45E-01	1.25E-01
Uranium	Mouse	0.03	USEPA (1988a)	reproduction	Paternain et al. (1989), Sample et al. (1996)	chronic LOAEL	6.13E+00	1	6.13E+00	Arctic Fox	7.30E-01	4.47E+00
Vanadium	Rat	0.35	USEPA (1988a)	reproduction	Domingo et al. (1986), Sample et al. (1996)	chronic LOAEL	2.10E+00	1	2.10E+00	Arctic Fox	8.45E-01	1.78E+00
Zinc	Rat	0.35	USEPA (1988a)	reproduction	Schlicker & Cox (1968), Sample et al. (1996)	chronic LOAEL	3.20E+02	1	3.20E+02	Arctic Fox	8.45E-01	2.71E+02

Notes:

(a) The following uncertainty factors are used: 5 for subchronic to chronic; 0.2 for NOAEL to LOAEL (5 for LOAEL to NOAEL); 6 for LD₅₀ or LD₀₁ to LOAEL.

(b) The chronic LOAEL is calculated as the Daily Dose divided by the Total Uncertainty Factor

NA - Not Available

Ecological Hazard Quotients for the Plarmigan Exposed to Constituents of Interest in the FOX-C Upper Site

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Plant Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Invert. Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Mammal Hazard Quotient	Average Daily Dose (mg/kg-day)	Surface Water Hazard Quotient	Hazard Quotients and Index
TPH - CCOME CWS												
Aliph>C08-C08 - F1	4.35E+02	1.51E-03	3.48E-06	9.00E-03	2.07E-05	2.51E-03	5.77E-06	2.85E-03	--	--	6.55E-06	3.65E-05
Aliph>C08-C10 - F1	4.35E+02	9.86E-04	2.28E-06	1.58E-03	3.58E-06	1.64E-03	3.77E-06	1.88E-03	--	--	4.28E-06	1.39E-05
Arom>C08-C10 - F1	4.35E+01	2.48E-04	5.86E-06	5.58E-03	1.28E-04	4.11E-04	9.44E-06	4.66E-04	--	--	1.07E-05	1.54E-04
F1 - Total												2.04E-04
Aliph>C10-C12 - F2	4.35E+02	1.14E-01	2.62E-04	9.38E-02	2.15E-04	1.90E-01	4.36E-04	1.33E-03	--	--	3.08E-06	9.17E-04
Aliph>C12-C16 - F2	4.35E+02	1.39E-01	3.20E-04	1.98E-02	4.54E-05	2.32E-01	5.33E-04	1.63E-03	--	--	3.74E-06	9.02E-04
Arom>C10-C12 - F2	4.35E+01	2.85E-02	6.54E-04	3.49E-01	8.03E-03	4.75E-02	1.09E-03	3.33E-04	--	--	7.65E-06	9.78E-03
Arom>C12-C16 - F2	4.35E+01	3.48E-02	8.00E-04	2.86E-01	6.58E-03	5.80E-02	1.33E-03	4.07E-04	--	--	9.35E-06	8.72E-03
F2 - Total												2.03E-02
Aliph>C16-C21-F3	8.71E+02	1.04E+00	1.19E-03	8.55E-03	9.82E-06	1.73E+00	1.99E-03	2.07E-03	--	--	2.38E-06	3.19E-03
Aliph>C21-C34 - F3	1.31E+02	4.45E-01	3.41E-03	1.25E-05	9.55E-08	7.42E-01	5.88E-03	8.88E-04	--	--	6.80E-06	9.10E-03
Arom>C16-C21 - F3	8.71E+01	2.60E-01	2.98E-03	1.08E+00	1.25E-02	4.33E-01	4.97E-03	5.18E-04	--	--	5.95E-06	2.04E-02
Arom>C21-C34 - F3	1.31E+02	1.11E-01	8.52E-04	1.38E-01	1.06E-03	1.85E-01	1.42E-03	2.22E-04	--	--	1.70E-06	3.33E-03
F3 - Total												3.80E-02
Aliph>C34-C50 - F4	2.61E+03	3.03E-01	1.18E-04	3.01E-06	1.15E-09	5.05E-01	1.93E-04	2.98E-03	--	--	1.13E-06	3.11E-04
Arom>C34-C50 - F4	1.31E+02	7.58E-02	5.80E-04	3.18E-02	2.42E-04	1.26E-01	9.87E-04	7.40E-04	--	--	5.67E-06	1.79E-03
F4 - Total												2.11E-03
Organics												
Aroclor 1254 (Total PCBs)	1.57E+00	2.98E-04	1.90E-04	2.03E-02	1.29E-02	1.82E-03	1.16E-03	3.70E-06	--	--	2.36E-06	1.43E-02
Inorganics												
Beryllium	7.09E-01	4.33E-04	6.11E-04	1.37E-04	1.93E-04	5.20E-05	7.33E-05	3.70E-06	--	--	5.22E-06	8.83E-04
Cadmium	1.74E+01	2.48E-04	1.43E-05	8.06E-02	4.63E-03	7.92E-03	4.55E-04	4.44E-06	--	--	2.55E-07	5.10E-03
Chromium (Total)	4.16E+00	5.41E-02	1.30E-02	3.67E+00	8.82E-01	3.73E-02	8.96E-03	8.14E-05	--	--	1.96E-05	9.04E-01
Copper	8.19E+01	3.87E-02	4.72E-04	2.93E+00	3.57E-02	5.01E-02	6.11E-04	2.98E-04	--	--	3.61E-06	3.68E-02
Lead	1.44E+01	2.78E-02	1.93E-03	1.95E+00	1.35E-01	3.38E-02	2.35E-03	7.40E-05	--	--	5.15E-06	1.40E-01
Zinc	1.01E+02	8.62E-02	8.55E-04	2.08E+01	2.06E-01	1.29E+00	1.27E-02	4.14E-03	--	--	4.11E-05	2.20E-01

Ecological Hazard Quotients for the Ermine Exposed to Constituents of Interest in the FOX-C Upper Site

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Plant Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Invert. Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Mammal Hazard Quotient	Average Daily Dose (mg/kg-day)	Surface Water Hazard Quotient	Hazard Quotients and Index
TPH - CCME CWS												
Aliph-C08-C08 - F1	1.83E+02	1.75E-03	9.54E-08	3.73E-04	2.04E-06	2.08E-03	1.14E-05	1.80E-04	8.70E-07	2.79E-03	1.52E-05	3.90E-05
Aliph-C08-C10 - F1	1.83E+02	1.14E-03	6.24E-06	6.46E-05	3.52E-07	1.36E-03	7.43E-06	7.88E-04	4.30E-06	1.83E-03	9.98E-06	2.83E-05
Arom-C08-C10 - F1	4.58E+01	2.86E-04	6.24E-06	2.31E-04	5.05E-06	3.41E-04	7.43E-06	5.03E-06	1.10E-07	4.56E-04	9.98E-06	2.88E-05
F1 - Total												9.61E-05
Aliph-C10-C12 - F2	1.83E+02	1.32E-01	7.22E-04	3.89E-03	2.12E-05	1.58E-01	8.59E-04	3.72E-02	2.03E-04	1.30E-03	7.11E-06	1.81E-03
Aliph-C12-C16 - F2	1.83E+02	1.62E-01	8.82E-04	8.21E-04	4.48E-06	1.93E-01	1.05E-03	4.53E-01	2.47E-03	1.59E-03	8.69E-06	4.42E-03
Arom-C10-C12 - F2	9.17E+01	3.31E-02	3.61E-04	1.45E-02	1.58E-04	3.94E-02	4.30E-04	6.71E-04	7.32E-06	3.26E-04	3.58E-06	9.80E-04
Arom-C12-C16 - F2	9.17E+01	4.04E-02	4.41E-04	1.19E-02	1.30E-04	4.81E-02	5.25E-04	1.16E-03	1.26E-05	3.98E-04	4.35E-06	1.11E-03
F2 - Total												8.30E-03
Aliph-C16-C21-F3	3.67E+02	1.21E+00	3.29E-03	3.55E-04	9.67E-07	1.44E+00	3.92E-03	1.85E+00	5.05E-03	2.03E-03	5.53E-06	1.23E-02
Aliph-C21-C34 - F3	3.67E+02	5.17E-01	1.41E-03	5.17E-07	1.41E-09	6.16E-01	1.88E-03	3.15E-01	8.60E-04	8.69E-04	2.37E-06	3.98E-03
Arom-C16-C21 - F3	9.17E+01	3.02E-01	3.29E-03	4.50E-02	4.91E-04	3.59E-01	3.92E-03	1.82E-02	1.77E-04	5.07E-04	5.53E-06	7.88E-03
Arom-C21-C34 - F3	9.17E+01	1.29E-01	1.41E-03	5.74E-03	6.26E-05	1.54E-01	1.88E-03	2.74E-02	2.99E-04	2.17E-04	2.37E-06	3.45E-03
F3 - Total												2.75E-02
Aliph-C34-C50 - F4	9.17E+02	3.52E-01	3.84E-04	1.25E-07	1.36E-10	4.19E-01	4.57E-04	1.10E-01	1.20E-04	2.90E-03	3.18E-06	9.69E-04
Arom-C34-C50 - F4	9.17E+01	8.80E-02	9.60E-04	1.31E-03	1.43E-05	1.05E-01	1.14E-03	8.82E-02	9.62E-04	7.24E-04	7.90E-06	3.09E-03
F4 - Total												4.05E-03
Organics												
Aroclor 1254 (Total PCBs)	7.75E-01	3.46E-04	4.46E-04	8.42E-04	1.09E-03	1.51E-03	1.95E-03	9.73E-02	1.28E-01	3.62E-06	4.67E-06	1.29E-01
Inorganics												
Beryllium	3.51E+00	5.03E-04	1.43E-04	5.69E-06	1.82E-06	4.31E-05	1.23E-05	1.90E-05	5.41E-06	3.62E-06	1.03E-06	1.64E-04
Cadmium	1.06E+01	2.89E-04	2.72E-05	3.34E-03	3.15E-04	6.57E-03	6.19E-04	1.52E-02	1.43E-03	4.35E-06	4.09E-07	2.39E-03
Chromium (Total)	1.45E+04	6.29E-02	4.33E-06	1.52E-01	1.05E-05	3.09E-02	2.13E-06	1.82E-01	1.25E-05	7.97E-05	5.48E-09	2.94E-05
Copper	1.71E+01	4.49E-02	2.62E-03	1.21E-01	7.09E-03	4.15E-02	2.43E-03	6.90E-01	4.03E-02	2.90E-04	1.69E-05	5.28E-02
Lead	8.50E+01	3.22E-02	3.79E-04	8.08E-02	9.50E-04	2.81E-02	3.30E-04	2.20E-01	2.59E-03	7.24E-05	8.53E-07	4.25E-03
Zinc	3.40E+02	1.00E-01	2.95E-04	8.63E-01	2.54E-03	1.07E+00	3.14E-03	6.61E+00	1.94E-02	4.06E-03	1.19E-05	2.54E-02

Ecological Hazard Quotients for the Arctic Fox Exposed to Constituents of Interest in the FOX-C Upper Site

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Plant Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Invert. Hazard Quotient	Average Daily Dose (mg/kg-day)	Terr. Mammal Hazard Quotient	Average Daily Dose (mg/kg-day)	Surface Water Hazard Quotient	Hazard Quotients and Index
TPH - CCME CWS												
Aliph>C06-C08 - F1	1.46E+02	1.53E-03	1.05E-05	2.95E-04	2.02E-06	--	--	1.41E-04	9.64E-07	3.20E-03	2.19E-05	2.67E-02
Aliph>C08-C10 -F1	1.46E+02	1.00E-03	6.85E-06	5.09E-05	3.49E-07	--	--	6.95E-04	4.76E-06	2.09E-03	1.44E-05	3.54E-05
Arom>C08-C10 -F1	3.65E+01	2.50E-04	6.85E-06	1.82E-04	5.00E-06	--	--	4.44E-06	1.22E-07	5.24E-04	1.44E-05	2.63E-05
F1 - Total												
Aliph>C10-C12 -F2	1.46E+02	1.16E-01	7.92E-04	3.07E-03	2.10E-05	--	--	3.28E-02	2.25E-04	1.50E-03	1.03E-05	8.80E-05
Aliph>C12-C16 -F2	1.46E+02	1.41E-01	9.68E-04	6.47E-04	4.44E-06	--	--	3.99E-01	2.74E-03	1.83E-03	1.25E-05	1.05E-03
Arom>C10-C12 -F2	7.30E+01	2.89E-02	3.96E-04	1.14E-02	1.57E-04	--	--	5.91E-04	8.11E-06	3.74E-04	5.13E-06	3.72E-03
Arom>C12-C16 -F2	7.30E+01	3.53E-02	4.84E-04	9.37E-03	1.28E-04	--	--	1.02E-03	1.40E-05	4.57E-04	6.27E-06	5.66E-04
F2 - Total												
Aliph>C16-C21-F3	2.92E+02	1.05E+00	3.61E-03	2.80E-04	9.59E-07	--	--	1.63E+00	5.59E-03	2.33E-03	7.98E-06	6.33E-04
Aliph>C21-C34 -F3	2.92E+02	4.51E-01	1.55E-03	4.08E-07	1.40E-09	--	--	2.78E-01	9.53E-04	9.98E-04	3.42E-06	5.97E-03
Arom>C16-C21 -F3	7.30E+01	2.63E-01	3.61E-03	3.55E-02	4.86E-04	--	--	1.43E-02	1.96E-04	5.82E-04	7.98E-06	9.21E-03
Arom>C21-C34 -F3	7.30E+01	1.13E-01	1.55E-03	4.53E-03	6.20E-05	--	--	2.41E-02	3.31E-04	2.49E-04	3.42E-06	2.50E-03
F3 - Total												
Aliph>C34-C50 -F4	7.30E+02	3.07E-01	4.21E-04	9.84E-08	1.35E-10	--	--	9.73E-02	1.33E-04	3.33E-03	4.58E-06	4.30E-03
Arom>C34-C50 -F4	7.30E+01	7.68E-02	1.05E-03	1.03E-03	1.42E-05	--	--	7.77E-02	1.07E-03	8.31E-04	1.14E-05	1.80E-02
F4 - Total												
Organics												
Aroclor 1254 (Total PCBs)	6.17E-01	3.02E-04	4.89E-04	6.64E-04	1.08E-03	--	--	8.58E-02	1.39E-01	4.16E-06	6.74E-06	5.59E-04
Inorganics												
Beryllium	2.79E+00	4.39E-04	1.57E-04	4.49E-06	1.61E-06	--	--	1.67E-05	5.99E-06	4.16E-06	1.49E-06	2.14E-03
Cadmium	8.45E+00	2.52E-04	2.98E-05	2.64E-03	3.12E-04	--	--	1.34E-02	1.59E-03	4.99E-06	5.90E-07	1.66E-04
Chromium (Total)	1.16E+04	5.49E-02	4.75E-06	1.20E-01	1.04E-05	--	--	1.60E-01	1.38E-05	9.14E-05	7.90E-09	1.93E-03
Copper	1.36E+01	3.92E-02	2.88E-03	9.57E-02	7.02E-03	--	--	6.08E-01	4.46E-02	3.33E-04	2.44E-05	2.90E-05
Lead	6.76E+01	2.81E-02	4.16E-04	6.37E-02	9.42E-04	--	--	1.94E-01	2.87E-03	8.31E-05	1.23E-06	5.46E-02
Zinc	2.71E+02	8.74E-02	3.23E-04	6.81E-01	2.52E-03	--	--	5.82E+00	2.15E-02	4.66E-03	1.72E-05	4.23E-03
												2.44E-02