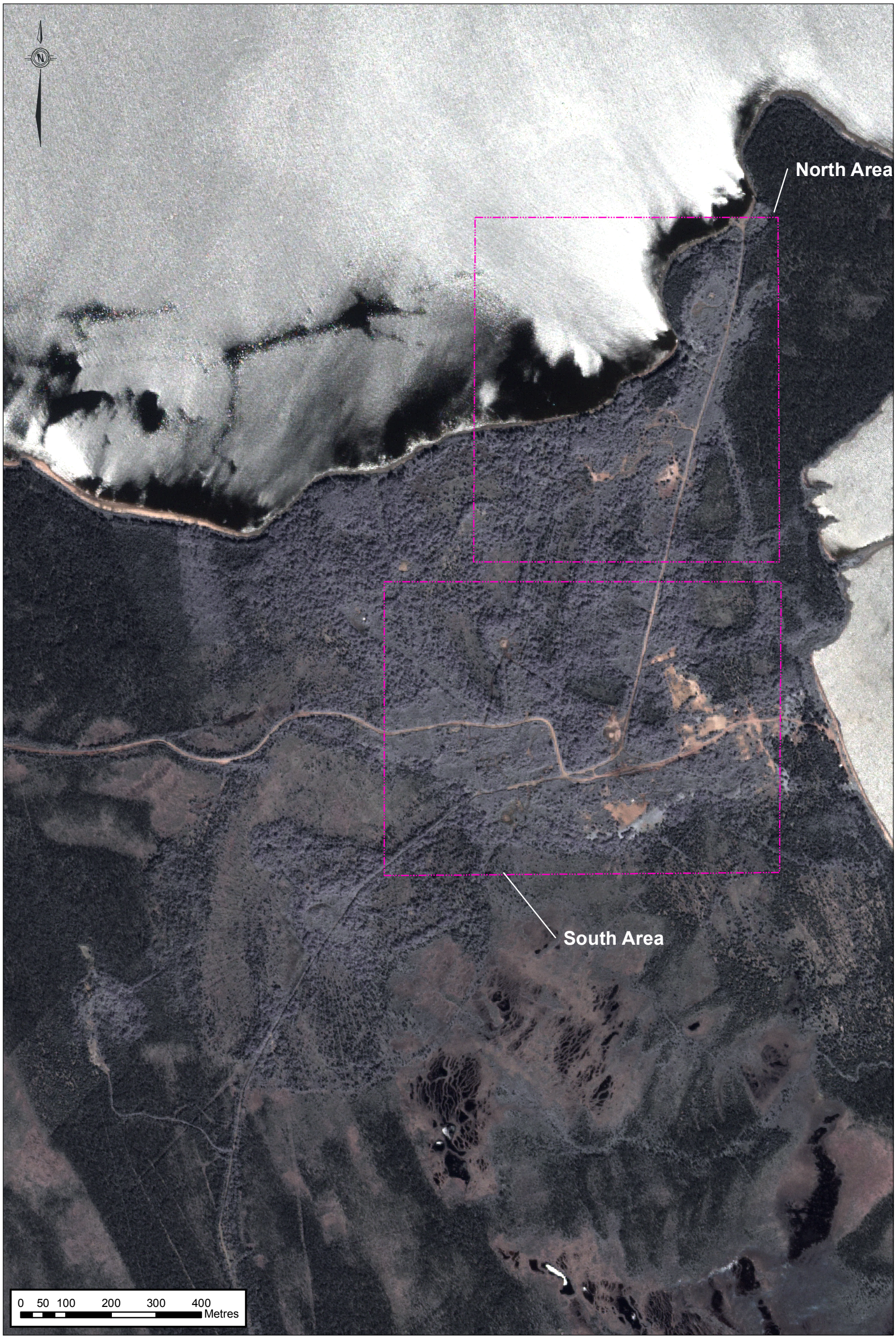
Appendix 24

Ecological Risk Assessment

Drawing



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Newfoundland Labrador

CLIENT: NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

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Stantec

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Aquatic Screening and Risk Assessment Tables

Table 24.1 Sediment Screening and Risk Assessment Table

Chemical	Screening					Risk Assessment				Comments
	Maximum (mg/kg)	Sample	Screening Value (mg/kg) [1]	Background Values (mg/kg)	Carried Forward as COC?	EPC (mg/kg) [2]	Toxicity Value (mg/kg) [3]	Hazard Quotient	Potential Unacceptable Risk?	
Benzene	<0.03	-	na	-	no	-	46	-	NO	Benzene was not detected
Toluene	<0.03	-	na	-	no	-	57	-	NO	Toluene was not detected
Ethylbenzene	<0.03	-	na	-	no	-	68	-	NO	Ethylbenzene was not detected
Xylene	<0.05	-	na	-	no	-	69	-	NO	Xylene was not detected
TPH	690	09-SED6	na	-	yes	690	500	1.38	YES	TPH exceeds the toxicity value
Aluminum	12000	09-SSM-1	-	-	yes	12000	53000	0.23	NO	Aluminium is less than the toxicity value
Antimony	<2	-	-	-	no	-	4300	-	NO	Antimony was not detected
Arsenic	<2	-	17	-	no	-	620	-	NO	Arsenic was not detected
Barium	160	09-SSM-1	-	-	yes	160	2500	0.064	NO	Barium is less than the toxicity value
Beryllium	<2	-	-	-	no	-	5.4	-	NO	Beryllium was not detected
Bismuth	<2	-	-	-	no	-	-	-	NO	Bismuth was not detected
Boron	<5	-	-	-	no	-	-	-	NO	Boron was not detected
Cadmium	<0.3	-	3.5	-	no	-	83	-	NO	Cadmium was not detected
Chromium	26	09-SSM-1	90	-	no	-	4300	-	NO	Chromium was less than the screening guideline
Cobalt	9	09-SSM-1	-	-	yes	9	460	0.02	NO	Cobalt is less than the toxicity value
Copper	18	09-SSM-1 09-SSM-4	197	-	no	-	98	-	NO	Copper was less than the screening guideline
Iron	17000	09-SSM-1	-	-	no	-		-	NO	Iron is considered an essential element and non-toxic
Lead	430	09-SED-6	91.3	-	yes	430	6400	0.07	NO	Lead is less than the toxicity value
Lithium	11	09-SSM-1	-	-	no	-	-	-	NO	No toxicity information exists for lithium. Lithium is often found associated with sea salt.
Manganese	280	09-SSM-1	-	-	no	-	-	-	NO	Manganese is considered an essential element and non-toxic
Mercury	<0.1	-	0.486	-	no	-	150	-	NO	Mercury was not detected
Molybdenum	<2	-	-	-	no	-	7000	-	NO	Molybdenum was not detected
Nickel	17	09-SSM-1	-	-	yes	17	300	0.06	NO	Nickel is less than the toxicity value
Rubidium	27	09-SSM-1	-	-	no	-	-	-	NO	No toxicity information exists for rubidium. Rubidium is often found associated with sea salt.
Selenium	<1	-	-	-	no	-	15	-	NO	Selenium was not detected
Silver	<0.5	-	-	-	no	-	-	-	NO	Silver was not detected
Strontium	30	09-SSM-1	-	-	no	-	-	-	NO	No toxicity information exists for strontium. Strontium is often found associated with sea salt.
Thallium	0.1	09-SSM-1	-	-	no	-	-	-	NO	Thallium concentrations are considered low (i.e., detected at the RDL of 0.1 mg/kg)
Tin	<2	-	-	-	no	-	-	-	NO	Tin was not detected
Uranium	0.6	09-SSM-4	-	-	yes	0.6	100	0.006	NO	Uranium is less than the toxicity value
Vanadium	40	09-SSM-1	-	-	yes	40	98	0.41	NO	Vanadium is less than the toxicity value
Zinc	55	09-SED6	315	-	no	-	780	-	NO	Zinc is less than the screening guideline

1. CCME Probable Effects Level
2. Where the number of samples analysed is less than 10, the EPC is the maximum concentration. Where the number of samples is ten or more, the EPC is calculated as the appropriate upper confidence limit
3. References for toxicity values are presented in Appendix 25
"-" = no applicable value or not analysed

Table 24.2. Surface Water Screening and Risk Assessment Table

Chemical	Screening					Risk Assessment				Comments
	Maximum (µg/L)	Sample	Screening Value (µg/L)[1]	Background Values	Carried Forward as COC?	EPC (µg/L)[2]	Toxicity Value (µg/L)[3]	Hazard Quotient	Potential Unacceptable Risk?	
Benzene	<1	-	370	<2	no	-	5300	-	no	Benzene was not detected
Toluene	<1	-	2	<0.22	no	-	1800	-	no	Toluene was not detected
Ethylbenzene	<1	-	90	<0.45	no	-	870	-	no	Ethylbenzene was not detected
Xylene	<2	-	na	<0.45	no	-	700	-	no	Xylene was not detected
TPH	1100	SW1, SW3	-	<105	yes	1100	1000	1.1	yes	The maximum concentration of TPH was higher than the toxicity value.
Aluminum	529	09-SW7	5-100	98, 442, 110	no	-	-	-	no	Aluminium is generally not toxic at pH greater than 6. The pH in the water bodies on the site ranged from 6.03 to 7.91, with the exception of sample 09-SWM6 where the sewer outall is present.
Antimony	<200	-	-		no	-	80	-	no	Antimony was not detected
Arsenic	<200	-	5		no	-	150	-	no	Arsenic was not detected
Barium	37	09-SW6	-	13, 6, <5	yes	37	220	0.17	no	Barium was less than the toxicity value
Beryllium	<200	-	-	<1, <1, <1	no	-	3.6	-	no	Beryllium was not detected
Bismuth	<200	-	-	<1, <1, <1	no	-	-	-	no	Bismuth was not detected
Boron	2310	09-SWM5	-		no	-	-	-	no	No toxicity information exists for boron. Boron is often found associated with sea salt.
Cadmium	0.071	09-SW6	0.0017	<0.015	yes	0.071	1.7	0.04	no	Cadmium was less than the toxicity value
Chromium	23.6	09-SWM6	8.9	<1, <1, 3	yes	23.6	74	-	no	Chromium was less than the toxicity value
Cobalt	0.94	09-SW6	-	<1, <1, <1	yes	0.94	2.8	0.34	no	Cobalt was less than the toxicity value
Copper	5	SW1	2-4	<1, <1, 5	yes	5	9	0.56	no	Copper was less than the toxicity value Copper is also comparable to one background concentration
Iron	3090	09-SW6	300	621, 1080, 281	no	-	-	-	no	Iron is considered an element of low toxicity
Lead	2.97	09-SW6	1-7	<1, <1, <1	yes	2.97	11	0.27	no	Lead was less than the toxicity value
Manganese	158	09-SWM1	-	9, 13, 19	no	-	-	-	no	Manganese is considered an element of low tox
Molybdenum	6.7	09-SW6	73	<5, <5, <5	no	-	290	-	no	Molybdenum was less than the screening guideline
Nickel	2.6	09-SW6	25-150	<5, <5, <5	no	-	52	-	no	Nickel was less than the screening guideline
Selenium	<100	-	1		no	-	5.3	-	no	Selenium was not detected
Silver	0.1	SW1	0.1	<0.1, <0.1, <0.1	no	-	-	-	no	Silver did not exceed the screening guideline
Strontium	3870	09-SWM5	-		no	-	-	-	no	No toxicity information exists for strontium. Strontium is often found associated with sea salt.
Thallium	<10	-	0.8		no	-	-	-	no	Thallium was not detected
Tin	<200	-	-		no	-	-	-	no	Tin was not detected
Titanium	8.9	09-SWM6	-		no	-	-	-	no	Titanium is not soluble and not toxic
Uranium	<10	-	-		no	-	-	-	no	Uranium was not detected
Vanadium	<200	-	-	<5, <5, <5	no	-	12	-	no	Vanadium was not detected
Zinc	26.7	09-SW6	30	1, 8, 10	no	-	120	-	no	Zinc was less than the screening guideline

1. CCME Water Quality Guidelines for the Protection of Freshwater Aquatic Life
2. Where the number of samples analysed is less than 10, the EPC is the maximum concentration. Where the number of samples is ten or more, the EPC is calculated as the appropriate upper confidence limit
3. References for toxicity values are presented in Appendix 24

Terrestrial Screening Tables

Table 24.3 Ecological Screening for Chemicals in Soil - North Area

Constituent	Maximum Concentration in Surface Soil (mg/kg)		Selected Soil Quality Guidelines - Residential/ Parkland Site (mg/kg)	Max > Guideline (or was a substance with no guideline detected)?	EPC	Is EPC> Screening Guideline (or was a substance with no guideline detected)?	Is element major mineral forming element or of low inherent toxicity?	Carried forward in ERA?
BTEX/TPH								
Benzene	<0.013	S-TP7	31 [2]	NO	-	-	-	NO
Toluene	0.018	S-TP7	75 [2]	NO	-	-	-	NO
Ethylbenzene	0.102	S-TP7	55 [2]	NO	-	-	-	NO
Xylenes	0.161	S-TP7	95 [2]	NO	-	-	-	NO
<C10	10.7	S-TP7	210 (F1) [3]	NO	10.7	YES	NO	YES
C10-C32	988	S-TP7	150 (F2) [3]	YES	988	YES	NO	YES
PAHs								
1-Methylnaphthalene	5.9	09-MW27D-SS1	N/A	YES	1.8	YES	NO	
2-Methylnaphthalene	10	09-MW27D-SS1	N/A	YES	3.1	YES	NO	
Acenaphthene	42	09-MW27D-SS1	N/A	YES	13	YES	NO	
Acenaphthylene	0.22	09-MW27D-SS1	N/A	YES	0.22	YES	NO	
Anthracene	57	09-MW27D-SS1	2.5 [2]	YES	18	YES	NO	
Benz[a]anthracene	90	09-MW27D-SS1	40 [4]	YES	84	YES	NO	
Benzo[a]pyrene	81	09-MW27D-SS1	20 [2]	YES	75	YES	NO	
Benzo[b]fluoranthene	71	09-MW27D-SS1	N/A	YES	52	YES	NO	
Benzo[k]fluoranthene	71	09-MW27D-SS1	40 [4]	YES	71	YES	NO	
Benzo[g,h,i]perylene	38	09-MW27D-SS1	40 [4]	NO	21	NO	NO	YES [6]
Chrysene	94	09-MW27D-SS1	40 [4]	YES	94	YES	NO	
Dibenz[a,h]anthracene	11	09-MW27D-SS1	N/A	YES	3.4	YES	NO	
Fluoranthene	230	09-MW27D-SS1	50 [2]	YES	218	YES	NO	
Fluorene	31	09-MW27D-SS1	N/A	YES	9.7	YES	NO	
Indeno[1,2,3-cd]pyrene	44	09-MW27D-SS1	40 [4]	YES	44	YES	NO	
Naphthalene	36	09-MW27D-SS1	40 [4]	NO	10.9	NO	NO	
Perylene	23	09-MW27D-SS1	N/A	YES	7.1	YES	NO	
Phenanthrene	210	09-MW27D-SS1	40 [4]	YES	116	YES	NO	
Pyrene	180	09-MW27D-SS1	N/A	YES	169	YES	NO	
Other								
PCBs	3.1	09-SS33	1.3 [2]	YES	3.1	YES	NO	YES
Inorganics								
Aluminium	5,600	09-SS26	N/A	YES	3715	YES	YES	NO [7]
Antimony	<2	-	20 [5]	NO	-	-	NO	NO
Arsenic	<2	-	17 [2]	NO	-	-	NO	NO
Barium	90	09-SS38	500 [5]	NO	-	-	NO	NO
Beryllium	<2	-	5 [5]	NO	-	-	NO	NO
Bismuth	<2	-	N/A	NO	-	-	NO	NO [8]
Boron	8	TP66BS1	2 [5]	YES	8 (max)	YES	NO	NO [8]
Cadmium	0.4	09-SS33	10 [2]	NO	-	-	NO	NO
Chromium (Total)	23	09-SS29	64 [2]	NO	-	-	NO	NO

Cobalt	6	09-SS38	20 [5]	NO	-	-	NO	NO
Copper	29	09-SS38	63 [2]	NO	-	-	NO	NO
Iron	15,000	09-SS38	N/A	YES	7591	YES	YES	NO[7]
Lead	93	09-SS27	300 [2]	NO	-	-	NO	NO
Lithium	5	09-SS25	N/A	YES	3.8	YES	NO	NO[8]
Manganese	410	09-SS38	N/A	YES	135	YES	YES	NO[7]
Mercury	0.2	09-SS27	12 [2]	NO	-	-	NO	NO
Molybdenum	6	09-SS28	4 [5]	YES	6 (max)	YES	NO	YES
Nickel	8	09-SS38	50 [2]	NO	-	-	NO	NO
Rubidium	10	09-SSSS25	N/A	YES	5	YES	NO	NO[8]
Selenium	<1	-	1 [2]	NO	-	-	NO	NO
Silver	<0.5	-	20 [5]	NO	-	-	NO	NO
Strontium	74	09-SS38	N/A	YES	19	-	NO	NO[8]
Thallium	0.1	09-SS25	1.4 [2]	NO	-	-	NO	NO
Tin	20	09-SS33	5 [5]	YES	20 (max)	YES	NO	YES
Uranium	0.7	09-SS38	500 [2]	NO	-	-	NO	NO
Vanadium	20	09-SS22	130 [2]	NO	-	-	NO	NO
Zinc	99	09-SS38	200 [2]	NO	-	-	NO	NO

Notes:

1. Sample analysis was conducted by AMEC (1999) and did not separate C10-C21 and C21-C32 fractions. Therefore, the most conservative screening value (F2=150 mg/kg) was used (note: where no CCME ecological guideline exists, OMOE has been consulted).

3. CCME CWS Tier 1 Levels - Ecological Soil Contact - Residential land use, coarse-grained surface soils [F1 (>C6-C10), F2 (>C10-C16), F3 (>C16-C34)]

4. Ontario Ministry of Environment Soil Standards for Use Under Part XV.1 of the Environmental Protection Act, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, Residential/Parkland/Institutional Land Use, lowest of available ecotoxicity criteria

5. Alberta Tier I Surface Soil Guidelines for Residential Land Use - Ecological guidelines

6. Even though all PAHs do not exceed applicable guidelines, all are carried forward since they act cumulatively for ecological receptors.

7. Aluminium, iron and manganese are considered major mineral forming elements of low inherent toxicity and were not carried forward.

8. There are no applicable guidelines for boron, lithium, rubidium and strontium. These elements are typically associated with seawater spray and could be expected to be present at the site due to its proximity to the ocean, and not as a result of historical site activities

ND = not detected above laboratory detection limits

N/A = no ecological-based guideline available

- = not applicable

Table 24.4 Ecological Screening for Chemicals in Soil - South Area

Constituent	Maximum Concentration in Surface Soil (mg/kg)		Selected Soil Quality Guidelines - Residential/ Parkland Site (mg/kg)	Max > Guideline (or was a substance with no guideline detected)?	EPC	Is EPC> Screening Guideline (or was a substance with no guideline detected)?	Is element major mineral forming element or of low inherent toxicity?	Carried forward in ERA?
BTEX/TPH								
Benzene	<0.03	-	31 [1]	NO	-	-	-	NO
Toluene	<0.03	-	75 [1]	NO	-	-	-	NO
Ethylbenzene	<0.03	-	55 [1]	NO	-	-	-	NO
Xylenes	<0.05	-	95 [1]	NO	-	-	-	NO
C6-C10	<3	09-SS19	210 (F1) [2]	YES	<3	YES	NO	YES
C10-C21	18,000	09-SS19	150 (F2) [2]	YES	18,000	YES	NO	YES
C21-C32	160	09-SS19	300 (F3) [2]	NO	160	YES	NO	YES
PAHs								
1-Methylnaphthalene	0.48	09-SS51	N/A	YES	0.17	YES	NO	
2-Methylnaphthalene	0.89	09-SS51	N/A	YES	0.2	YES	NO	
Acenaphthene	2.7	09-SS50	N/A	YES	0.82	YES	NO	
Acenaphthylene	0.21	09-SS50	N/A	YES	0.098	YES	NO	
Anthracene	7.6	09-SS50	2.5 [1]	NO	2.1	NO	NO	
Benz[a]anthracene	12	09-SS50	40 [3]	NO	3.5	NO	NO	
Benzo[a]pyrene	10	09-SS50	20 [1]	NO	2.8	NO	NO	
Benzo[b]fluoranthene	9.2	09-SS50	N/A	YES	2.5	YES	NO	
Benzo[k]fluoranthene	9.2	09-SS50	40 [3]	NO	2.4	NO	NO	
Benzo[g,h,i]perylene	5.5	09-SS50	40 [3]	NO	1.5	NO	NO	YES[5]
Chrysene	13	09-SS50	40 [3]	NO	3.6	NO	NO	
Dibenz[a,h]anthracene	1.6	09-SS50	N/A	YES	0.45	YES	NO	
Fluoranthene	32	09-SS50	50 [1]	NO	30	NO	NO	
Fluorene	3.2	09-SS50	N/A	YES	0.97	YES	NO	
Indeno[1,2,3-cd]pyrene	6.4	09-SS50	40 [3]	NO	5.9	NO	NO	
Naphthalene	2.8	09-SS51	40 [3]	NO	0.6	NO	NO	
Perylene	2.4	09-SS50	N/A	NO	0.65	YES	NO	
Phenanthrene	25	09-SS50	40 [3]	NO	24	NO	NO	
Pyrene	24	09-SS50	N/A	YES	22	YES	NO	
Other								
PCBs	0.16	09-SS20	1.3 [1]	NO	-	-	-	NO

Table 24.4 Ecological Screening for Chemicals in Soil - South Area

Constituent	Maximum Concentration in Surface Soil (mg/kg)		Selected Soil Quality Guidelines - Residential/ Parkland Site (mg/kg)		Max > Guideline (or was a substance with no guideline detected)?	EPC	Is EPC> Screening Guideline (or was a substance with no guideline detected)?	Is element major mineral forming element or of low inherent toxicity?	Carried forward in ERA?
Inorganics									
Aluminium	14,000	09-SS3	N/A		YES	4316	YES	YES	NO[6]
Antimony	2	09-SS44	20	[4]	NO	-	-	-	NO
Arsenic	<2	-	17	[1]	NO	-	-	-	NO
Barium	110	09-SS3	500	[4]	NO	-	-	-	NO
Beryllium	<2	-	5	[4]	NO	-	-	-	NO
Bismuth	<2	-	N/A		NO	-	-	-	NO
Boron	<5	-	2	[4]	NO	-	-	-	NO
Cadmium	1.8	09-SS55	10	[1]	NO	-	-	-	NO
Chromium (Total)	21	09-SS3	64	[1]	NO	-	-	-	NO
Cobalt	5	09-SS51	20	[4]	NO	-	-	-	NO
Copper	49	09-SS55	63	[1]	NO	-	-	-	NO
Iron	13,000	09-SS3	N/A		YES	6692	YES	YES	NO[6]
Lead	210	09-SS55	300	[1]	NO	-	-	-	NO
Lithium	6	09-SS51	N/A		YES	3.6	YES	NO	NO[7]
Manganese	160	09-SS19	N/A		YES	87	YES	YES	NO[6]
Mercury	0.2	09-SS10	12	[1]	NO	-	-	-	NO
Molybdenum	<2	-	4	[4]	NO	-	-	-	NO
Nickel	14	09-SS3	50	[1]	NO	-	-	-	NO
Rubidium	15	09-SS3	N/A		YES	7.2	YES	NO	NO[7]
Selenium	<2	-	1	[1]	NO	-	-	-	NO
Silver	<0.5	-	20	[4]	NO	-	-	-	NO
Strontium	24	09-SS3	N/A		YES	10.4	YES	NO	NO[7]
Thallium	0.1	09-SS15	1.4	[1]	NO	-	-	-	NO
Tin	20	09-SS10	5	[4]	YES	20 (max)	YES	NO	YES
Uranium	1.9	09-SS55	500	[1]	NO	-	-	-	NO
Vanadium	34	09-SS3	130	[1]	NO	-	-	-	NO
Zinc	100	09-SS53	200	[1]	NO	-	-	-	NO

Notes:

1. CCME Soil Quality Guidelines for the Protection of Environmental and Human Health - Residential/Parkland land use, non-potable groundwater (if applicable), lowest of available ecological guidelines

2. CCME CWS Tier 1 Levels - Ecological Soil Contact - Residential land use, coarse-grained surface soils [F1 (>C6-C10), F2 (>C10-C16), F3 (>C16-C34)]

3. Ontario Ministry of Environment Soil Standards for Use Under Part XV.1 of the Environmental Protection Act, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, Residential/Parkland/Institutional Land Use, lowest of available ecotoxicity criteria

4. Alberta Tier I Surface Soil Guidelines for Residential Land Use - Ecological guidelines

5. Even though all PAHs do not exceed applicable guidelines, all are carried forward since they act cumulatively for ecological receptors.

6. Aluminium, iron and manganese are considered major mineral forming elements of low inherent toxicity and were not carried forward.

7. There are no applicable guidelines for boron, lithium, rubidium and strontium. These elements are typically associated with seawater spray and could be expected to be present at the site due to its proximity to the ocean, and not as a result of historical site activities

ND = not detected above laboratory detection limits

N/A = no ecological-based guideline available

- = not applicable

Table 24.5 Ecological Screening for Chemicals in Soil - Whole Site

Constituent	Maximum Concentration in Surface Soil (mg/kg)		Selected Soil Quality Guidelines - Residential/ Parkland Site (mg/kg)	Max > Guideline (or was a substance with no guideline detected)?	EPC	Is EPC> Screening Guideline (or was a substance with no guideline detected)?	Is element major mineral forming element or of low inherent toxicity?	Carried forward in ERA?
BTEX/TPH								
Benzene	<0.013	-	31 [1]	NO	-	-	-	NO
Toluene	0.018		75 [1]	NO	-	-	-	NO
Ethylbenzene	0.102		55 [1]	NO	-	-	-	NO
Xylenes	0.161		95 [1]	NO	-	-	-	NO
C6-C10	340		210 (F1) [2]	YES	340	YES	NO	YES
C10-C21	18,000		150 (F2) [2]	YES	18,000	YES	NO	YES
C21-C32	160		300 (F3) [2]	YES	160	YES	NO	YES
PAHs								
1-Methylnaphthalene	5.9	09-MW27D-SS1	N/A	YES	0.69	YES	NO	YES [5]
2-Methylnaphthalene	10	09-MW27D-SS1	N/A	YES	1.1	YES	NO	
Acenaphthene	42	09-MW27D-SS1	N/A	YES	4.8	YES	NO	
Acenaphthylene	0.22	09-MW27D-SS1	N/A	YES	0.08	YES	NO	
Anthracene	57	09-MW27D-SS1	2.5 [1]	YES	7.7	YES	NO	
Benz[a]anthracene	90	09-MW27D-SS1	40 [3]	YES	40	NO	NO	
Benzo[a]pyrene	81	09-MW27D-SS1	20 [1]	YES	36	YES	NO	
Benzo[b]fluoranthene	71	09-MW27D-SS1	N/A	YES	31	YES	NO	
Benzo[k]fluoranthene	71	09-MW27D-SS1	40 [3]	YES	-	NO	NO	
Benzo[g,h,i]perylene	38	09-MW27D-SS1	40 [3]	NO	17	NO	NO	
Chrysene	94	09-MW27D-SS1	40 [3]	YES	20	NO	NO	
Dibenz[a,h]anthracene	11	09-MW27D-SS1	N/A	YES	4.9	YES	NO	
Fluoranthene	230	09-MW27D-SS1	50 [1]	YES	102	YES	NO	
Fluorene	31	09-MW27D-SS1	N/A	YES	3.7	YES	NO	
Indeno[1,2,3-cd]pyrene	44	09-MW27D-SS1	40 [3]	YES	32	NO	NO	
Naphthalene	36	09-MW27D-SS1	40 [3]	NO	16	NO	NO	
Perylene	23	09-MW27D-SS1	N/A	YES	2.7	YES	NO	
Phenanthrene	210	09-MW27D-SS1	40 [3]	YES	93	YES	NO	
Pyrene	180	09-MW27D-SS1	N/A	YES	80	YES	NO	
Other								
PCBs	3.1	09-SS33	1.3 [1]	YES	3	YES	NO	YES

Inorganics								
Aluminium	14,000	09-SS33	N/A	YES	3976	YES	YES	NO[6]
Antimony	2	09-SS44	20 [4]	NO	-	-	-	NO
Arsenic	<2	-	17 [1]	NO	-	-	-	NO
Barium	110	09-SS33	500 [4]	NO	-	-	-	NO
Beryllium	<2	-	5 [4]	NO	-	-	-	NO
Bismuth	<2	-	N/A	NO	-	-	-	NO[7]
Boron	8	TP66BS1	2 [4]	YES	8 (max)	YES	NO	NO[7]
Cadmium	1.8	09-SS55	10 [1]	NO	-	-	-	NO
Chromium (Total)	23	09-SS29	64 [1]	NO	-	-	-	NO
Cobalt	6	09-SS38	20 [4]	NO	-	-	-	NO
Copper	49	09-SS55	63 [1]	NO	-	-	-	NO
Iron	15,000	09-SS38	N/A	YES	6654	YES	YES	NO[6]
Lead	210	09-SS55	300 [1]	NO	-	-	-	NO
Lithium	6	09-SS51	N/A	YES	3.3	YES	NO	NO[7]
Manganese	410	09-SS38	N/A	YES	95	YES	YES	NO[6]
Mercury	0.2	09-SS27	12 [1]	NO	-	-	-	NO
Molybdenum	6	09-SS28	4 [4]	YES	6 (max)	YES	NO	YES
Nickel	14	09-SS3	50 [1]	NO	-	-	-	NO
Rubidium	15	09-SS3	N/A	YES	7.4	YES	NO	NO[7]
Selenium	<2	-	1 [1]	NO	-	-	-	NO
Silver	<0.5	-	20 [4]	NO			-	NO
Strontium	74	09-SS38	N/A	YES	13.0	YES	NO	NO[7]
Thallium	0.1	09-SS25	1.4 [1]	NO			-	NO
Tin	20	09-SS33	5 [4]	YES	4.3	NO	NO	NO
Uranium	1.9	09-SS55	500 [1]	NO	-	-	-	NO
Vanadium	34	09-SS53	130 [1]	NO	-	-	-	NO
Zinc	100	09-SS53	200 [1]	NO	-	-	-	NO

Notes:

1. CCME Soil Quality Guidelines for the Protection of Environmental and Human Health - Residential/Parkland land use, non-potable groundwater (if applicable), lowest of available ecological guidelines (note: where no CCME ecological guideline exists, OMOE has been consulted).

2. CCME CWS Tier 1 Levels - Ecological Soil Contact - Residential land use, coarse-grained surface soils [F1 (>C6-C10), F2 (>C10-C16), F3 (>C16-C34)]

3. Ontario Ministry of Environment Soil Standards for Use Under Part XV.1 of the Environmental Protection Act, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, Residential/Parkland/Institutional Land Use, lowest of available ecotoxicity criteria

4. Alberta Tier I Surface Soil Guidelines for Residential Land Use - Ecological guidelines

5. Even though all PAHs do not exceed applicable guidelines, all are carried forward since they act cumulatively for ecological receptors.

6. Aluminium, iron and manganese are considered major mineral forming elements of low inherent toxicity and were not carried forward.

7. There are no applicable guidelines for boron, lithium, rubidium and strontium. These elements are typically associated with seawater spray and could be expected to be present at the site due to its proximity to the ocean, and not as a result of historical site activities

ND = not detected above laboratory detection limits

N/A = no ecological-based guideline available

- = not applicable

Conceptual Site Model

Figure 24.1 - Conceptual Site Model for Ecological Receptors

Source Media	Exposure Media	Potential Exposure Pathways	Ecological Receptors							
			Freshwater Aquatic Organisms (fish, invertebrates)	Masked Shrew	Meadow Vole	Arctic Hare	American Robin	Red Fox	Short-eared Owl	Osprey
Surface Soil	Surface Soil	Soil Ingestion		X	X	X	X	X	X	X
	Accumulation by Plants	Ingestion of plants		X	X	X	X	X		
	Accumulation by Soil Invertebrates	Ingestion of soil invertebrates		X	X		X	X	X	
	Accumulation by Small Mammals/Birds	Ingestion of small mammal/bird prey				X		X	X	X
Surface Water	Surface Water	Direct Exposure	X							
	Drinking Water	Ingestion		X	X	X	X	X	X	X
Freshwater Sediment	Freshwater Sediment	Direct Exposure	X							
		Freshwater Sediment Ingestion								X
	Accumulation by Plants	Ingestion of freshwater plants								
	Accumulation by Invertebrates	Ingestion of freshwater invertebrates								
	Accumulation by Fish	Ingestion of freshwater fish								X

Terrestrial ERA Models

Intake Parameters for the Short-eared Owl		
Receptor Name	Short-eared Owl	
Name of Study Area	Northwest Point Entire Site	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	1	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	1	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	0.35	kg
Food intake rate	9.00E-02	kg wet-wt/day
Water intake rate	3.00E-02	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	3.24E-01	
Fraction of food intake rate	1.25E-02	
Ingestion rate	3.63E-04	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	1.04E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.00E+00	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	5.00E-02	
Ingestion rate	4.50E-03	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	1.29E-02	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.50E-01	
Ingestion rate	8.55E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	2.44E-01	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	3.00E-02	L/day
Fraction from site	1	
Intake factor (IFing-sw)	8.57E-02	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Short-eared Owl Exposed to CoPCs at Northwes Detailed Baseline Case Hazard Quotients for the Short-eared Owl Exposed to CoPCs at

Detailed Baseline Case Hazard Quotients for the Short-eared Owl Exposed to CoPCs at Northwest Point Entire Site Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS													
Aliph>C06-C08 - F1	1.00E+01	1.94E-01	1.94E-02	---	---	2.37E-01	2.37E-02	1.84E-01	1.84E-02	---	---	---	6.15E-02
Aliph>C08-C10 - F1	1.00E+01	1.27E-01	1.27E-02	---	---	1.54E-01	1.54E-02	2.93E-02	2.93E-03	---	---	---	3.10E-02
Arom>C08-C10 - F1	2.00E+01	3.18E-02	1.59E-03	---	---	3.92E-02	1.96E-03	4.50E-02	2.25E-03	---	---	---	5.80E-03
F1 - Total													9.83E-02
Aliph>C10-C12 - F2	5.00E+01	6.72E+00	1.34E-01	---	---	5.08E+00	1.02E-01	2.48E-01	4.97E-03	1.89E-03	3.77E-05	---	2.41E-01
Aliph>C12-C16 - F2	5.00E+01	8.22E+00	1.64E-01	---	---	4.97E+00	9.93E-02	1.64E-01	3.27E-03	2.23E-03	4.46E-05	---	2.67E-01
Arom>C10-C12 - F2	1.00E+01	1.68E+00	1.68E-01	---	---	1.29E+00	1.29E-01	9.95E-01	9.95E-02	4.63E-04	4.63E-05	---	3.99E-01
Arom>C12-C16 - F2	1.00E+01	2.05E+00	2.05E-01	---	---	1.56E+00	1.56E-01	8.58E-01	8.58E-02	5.66E-04	5.66E-05	---	4.48E-01
F2 - Total													1.31E+00
Aliph>C16-C21 - F3	2.00E+02	9.34E-02	4.67E-04	---	---	5.64E-02	2.82E-04	1.88E-03	9.30E-06	---	---	---	7.59E-04
Aliph>C21-C34 - F3	2.00E+02	3.94E-02	1.97E-04	---	---	1.19E-02	5.96E-05	3.93E-04	1.96E-06	---	---	---	2.59E-04
Arom>C16-C21 - F3	1.00E+01	2.32E-02	2.32E-03	---	---	1.41E-02	1.41E-03	3.61E-03	3.61E-04	---	---	---	4.09E-03
Arom>C21-C34 - F3	1.00E+01	9.96E-03	9.96E-04	---	---	6.02E-03	6.02E-04	3.83E-04	3.83E-05	---	---	---	1.64E-03
F3 - Total													6.75E-03
												Total TPH HQ =	1.33E+00
Polycyclic Aromatic Hydrocarbons													
Low Molecular Weight PAHs													
Acenaphthene	--	4.98E-03	---	---	---	2.02E-03	---	1.37E-03	---	---	---	---	---
Acenaphthylene	--	8.30E-05	---	---	---	3.36E-05	---	1.70E-04	---	---	---	---	---
Anthracene	--	7.99E-03	---	---	---	3.22E-03	---	2.55E-03	---	---	---	---	---
Fluoranthene	--	1.06E-01	---	---	---	4.26E-02	---	1.96E-02	---	---	---	---	---
Fluorene	--	3.84E-03	---	---	---	1.55E-03	---	1.41E-03	---	---	---	---	---
1-Methylnaphthalene	--	7.16E-04	---	---	---	2.91E-04	---	4.52E-04	---	---	---	---	---
2-Methylnaphthalene	--	1.14E-03	---	---	---	4.64E-04	---	5.74E-04	---	---	---	---	---
Naphthalene	--	1.66E-02	---	---	---	6.95E-03	---	1.82E-03	---	---	---	---	---
Phenanthrene	--	9.65E-02	---	---	---	3.89E-02	---	1.56E-02	---	---	---	---	---
												TOTAL LPAH HQ =	---
High Molecular Weight PAHs													
Benz(a)anthracene	--	4.15E-02	---	---	---	8.34E-03	---	2.30E-02	---	---	---	---	---
Benzo(a)pyrene	--	3.74E-02	---	---	---	3.75E-02	---	9.77E-02	---	---	---	---	---
Benzo(b)fluoranthene	--	3.22E-02	---	---	---	6.46E-03	---	1.63E-02	---	---	---	---	---
Benzo(g,h,i)perylene	--	1.76E-02	---	---	---	1.77E-02	---	3.92E-02	---	---	---	---	---
Benzo(k)fluoranthene	--	3.22E-02	---	---	---	6.46E-03	---	1.64E-02	---	---	---	---	---
Chrysene	--	2.08E-02	---	---	---	4.17E-03	---	1.18E-02	---	---	---	---	---
Dibenz(a,h)anthracene	--	5.09E-03	---	---	---	5.11E-03	---	1.19E-02	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	--	3.32E-02	---	---	---	3.34E-02	---	7.19E-02	---	---	---	---	---
Perylene	--	2.80E-03	---	---	---	2.82E-03	---	7.52E-03	---	---	---	---	---
Pyrene	--	8.30E-02	---	---	---	1.67E-02	---	4.30E-02	---	---	---	---	---
												TOTAL HPAH HQ =	---
												TOTAL PAH HQ =	---
PCB													
Aroclor 1254 (Total PCBs)	1.17E-01	3.11E-03	2.67E-02	---	---	3.76E-02	3.22E-01	8.55E-03	7.33E-02	---	---	---	4.22E-01
Inorganics													
Molybdenum	1.18E+01	6.23E-03	5.29E-04	---	---	1.18E-02	1.00E-03	6.11E-02	5.19E-03	5.74E-04	4.88E-05	---	6.77E-03

Intake Parameters for the Arctic Hare		
Receptor Name	Arctic Hare	
Name of Study Area	Northwest Point Entire Site	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	4.3	kg
Food intake rate	7.00E-01	kg wet-wt/day
Water intake rate	4.00E-01	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	3.73E-01	
Fraction of food intake rate	1.93E-02	
Ingestion rate	5.03E-03	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	1.17E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.50E-01	
Ingestion rate	6.65E-01	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	1.55E-01	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	0.00E+00	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	5.00E-02	
Ingestion rate	3.50E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	8.14E-03	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	4.00E-01	L/day
Fraction from site	1	
Intake factor (IFing-sw)	9.30E-02	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Arctic Hare Exposed to CoPCs at Northwest Poil Detailed Baseline Case Hazard Quotients for the Arctic Hare Exposed to CoPCs at North

Detailed Baseline Case Hazard Quotients for the Arctic Hare Exposed to CoPCs at Northwest Point Entire Site Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS													
Aliph>C06-C08 - F1	2.67E+01	2.19E-01	8.20E-03	4.28E+00	1.60E-01	---	---	6.13E-03	2.30E-04	---	---	---	1.69E-01
Aliph>C08-C10 - F1	2.67E+01	1.43E-01	5.37E-03	3.53E-01	1.32E-02	---	---	9.77E-04	3.66E-05	---	---	---	1.86E-02
Arom>C08-C10 - F1	5.34E+01	3.58E-02	6.71E-04	1.44E+00	2.69E-02	---	---	1.50E-03	2.80E-05	---	---	---	2.76E-02
F1 - Total													2.15E-01
Aliph>C10-C12 - F2	1.34E+02	7.59E+00	5.68E-02	1.22E+00	9.15E-03	---	---	8.28E-03	6.20E-05	2.05E-03	1.53E-05	---	6.60E-02
Aliph>C12-C16 - F2	1.34E+02	9.27E+00	6.94E-02	1.08E-01	8.06E-04	---	---	5.45E-03	4.08E-05	2.42E-03	1.81E-05	---	7.03E-02
Arom>C10-C12 - F2	2.67E+01	1.90E+00	7.10E-02	5.39E+01	2.02E+00	---	---	3.32E-02	1.24E-03	5.02E-04	1.88E-05	---	2.09E+00
Arom>C12-C16 - F2	2.67E+01	2.32E+00	8.68E-02	3.72E+01	1.39E+00	---	---	2.86E-02	1.07E-03	6.14E-04	2.30E-05	---	1.48E+00
F2 - Total													3.71E+00
Aliph>C16-C21 - F3	5.34E+02	1.05E-01	1.97E-04	1.22E-03	2.29E-06	---	---	6.20E-05	1.16E-07	---	---	---	2.00E-04
Aliph>C21-C34 - F3	5.34E+02	4.45E-02	8.33E-05	5.16E-04	9.67E-07	---	---	1.31E-05	2.45E-08	---	---	---	8.43E-05
Arom>C16-C21 - F3	2.67E+01	2.62E-02	9.82E-04	1.38E-01	5.19E-03	---	---	1.20E-04	4.50E-06	---	---	---	6.17E-03
Arom>C21-C34 - F3	2.67E+01	1.12E-02	4.21E-04	4.64E-03	1.61E-04	---	---	1.27E-05	4.77E-07	---	---	---	5.02E-04
F3 - Total													7.06E-03
												Total TPH HQ =	3.98E+00
Polycyclic Aromatic Hydrocarbons													
Low Molecular Weight PAHs													
Acenaphthene	1.70E+02	5.62E-03	3.31E-05	1.25E-02	7.43E-05	---	---	4.55E-05	2.68E-07	---	---	---	1.08E-04
Acenaphthylene	1.70E+02	9.37E-05	5.51E-07	1.97E-03	1.16E-05	---	---	5.66E-06	3.33E-08	---	---	---	1.21E-05
Anthracene	1.70E+02	9.01E-03	5.30E-05	1.57E-02	9.21E-05	---	---	8.49E-05	4.99E-07	---	---	---	1.46E-04
Fluoranthene	1.70E+02	1.19E-01	7.02E-04	5.12E-02	3.01E-04	---	---	6.53E-04	3.84E-06	---	---	---	1.01E-03
Fluorene	1.70E+02	4.33E-03	2.55E-05	1.12E-02	6.60E-05	---	---	4.68E-05	2.75E-07	---	---	---	9.18E-05
1-Methylnaphthalene	1.70E+02	8.08E-04	4.75E-06	5.23E-03	3.08E-05	---	---	1.51E-05	8.86E-08	---	---	---	3.56E-05
2-Methylnaphthalene	1.70E+02	1.29E-03	7.58E-06	6.47E-03	3.80E-05	---	---	1.91E-05	1.13E-07	---	---	---	4.57E-05
Naphthalene	1.70E+02	1.87E-02	1.10E-04	2.18E-02	1.28E-04	---	---	6.05E-05	3.56E-07	---	---	---	2.39E-04
Phenanthrene	1.70E+02	1.09E-01	6.40E-04	4.86E-02	2.86E-04	---	---	5.19E-04	3.05E-06	---	---	---	9.29E-04
												TOTAL LPAH HQ =	2.61E-03
High Molecular Weight PAHs													
Benz(a)anthracene	1.80E+01	4.68E-02	2.60E-03	1.39E-01	7.72E-03	---	---	7.65E-04	4.25E-05	---	---	---	1.04E-02
Benzo(a)pyrene	1.80E+01	4.21E-02	2.34E-03	1.26E-01	6.99E-03	---	---	3.25E-03	1.81E-04	---	---	---	9.51E-03
Benzo(b)fluoranthene	1.80E+01	3.63E-02	2.02E-03	1.09E-01	6.07E-03	---	---	5.43E-04	3.02E-05	---	---	---	8.11E-03
Benzo(g,h,i)perylene	1.80E+01	1.99E-02	1.11E-03	6.18E-02	3.43E-03	---	---	1.31E-03	7.26E-05	---	---	---	4.61E-03
Benzo(k)fluoranthene	1.80E+01	3.63E-02	2.02E-03	1.09E-01	6.07E-03	---	---	5.48E-04	3.04E-05	---	---	---	8.11E-03
Chrysene	1.80E+01	2.34E-02	1.30E-03	7.21E-02	4.01E-03	---	---	3.94E-04	2.19E-05	---	---	---	5.33E-03
Dibenz(a,h)anthracene	1.80E+01	5.74E-03	3.19E-04	1.90E-02	1.06E-03	---	---	3.97E-04	2.20E-05	---	---	---	1.40E-03
Indeno(1,2,3-cd)pyrene	1.80E+01	3.75E-02	2.08E-03	1.13E-01	6.25E-03	---	---	2.40E-03	1.33E-04	---	---	---	8.47E-03
Perylene	1.80E+01	3.16E-03	1.76E-04	1.08E-02	6.01E-04	---	---	2.50E-04	1.39E-05	---	---	---	7.91E-04
Pyrene	1.80E+01	9.37E-02	5.20E-03	2.68E-01	1.49E-02	---	---	1.43E-03	7.96E-05	---	---	---	2.02E-02
												TOTAL HPAH HQ =	7.69E-02
												TOTAL PAH HQ =	7.95E-02
PCB													
Aroclor 1254 (Total PCBs)	1.97E-01	3.51E-03	1.79E-02	2.32E-02	1.18E-01	---	---	2.85E-04	1.45E-03	---	---	---	1.37E-01
Inorganics													
Molybdenum	7.51E-01	7.02E-03	9.35E-03	3.34E-02	4.45E-02	---	---	2.03E-03	2.71E-03	6.23E-04	8.29E-04	---	5.73E-02

Intake Parameters for the American Robin		
Receptor Name	American Robin	
Name of Study Area	Northwest Point Entire Site	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	1	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	0.08	kg
Food intake rate	6.50E-02	kg wet-wt/day
Water intake rate	1.00E-02	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	2.57E-01	
Fraction of food intake rate	2.90E-02	
Ingestion rate	4.85E-04	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	6.06E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	5.23E-01	
Ingestion rate	3.40E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	4.25E-01	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	4.78E-01	
Ingestion rate	3.10E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	3.88E-01	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.00E+00	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	1.00E-02	L/day
Fraction from site	1	
Intake factor (IFing-sw)	1.25E-01	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the American Robin Exposed to CoPCs at Northwes Detailed Baseline Case Hazard Quotients for the American Robin Exposed to CoPCs at

Detailed Baseline Case Hazard Quotients for the American Robin Exposed to CoPCs at Northwest Point Entire Site Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS													
Aliph>C06-C08 - F1	3.00E+01	5.67E-01	1.89E-02	5.87E+00	1.96E-01	3.57E+00	1.19E-01	---	---	---	---	---	3.34E-01
Aliph>C08-C10 - F1	3.00E+01	3.71E-01	1.24E-02	4.84E-01	1.61E-02	2.32E+00	7.73E-02	---	---	---	---	---	1.05E-01
Arom>C08-C10 - F1	6.00E+01	9.27E-02	1.55E-03	1.97E+00	3.28E-02	5.92E-01	9.86E-03	---	---	---	---	---	4.43E-02
F1 - Total													4.84E-01
Aliph>C10-C12 - F2	1.50E+02	1.96E+01	1.31E-01	1.68E+00	1.12E-02	7.67E+01	5.11E-01	---	---	1.38E-03	9.17E-06	---	6.53E-01
Aliph>C12-C16 - F2	1.50E+02	2.40E+01	1.60E-01	1.48E-01	9.85E-04	7.49E+01	5.00E-01	---	---	1.63E-03	1.08E-05	---	6.61E-01
Arom>C10-C12 - F2	3.00E+01	4.91E+00	1.64E-01	7.40E+01	2.47E+00	1.94E+01	6.47E-01	---	---	3.38E-04	1.13E-05	---	3.28E+00
Arom>C12-C16 - F2	3.00E+01	6.00E+00	2.00E-01	5.10E+01	1.70E+00	2.36E+01	7.86E-01	---	---	4.13E-04	1.38E-05	---	2.99E+00
F2 - Total													7.28E+00
Aliph>C16-C21 - F3	6.00E+02	2.73E-01	4.54E-04	1.68E-03	2.80E-06	6.52E-01	1.42E-03	---	---	---	---	---	1.88E-03
Aliph>C21-C34 - F3	6.00E+02	1.15E-01	1.92E-04	7.09E-04	1.18E-06	1.80E-01	3.00E-04	---	---	---	---	---	4.93E-04
Arom>C16-C21 - F3	3.00E+01	6.79E-02	2.26E-03	1.90E-01	6.34E-03	2.12E-01	7.08E-03	---	---	---	---	---	1.57E-02
Arom>C21-C34 - F3	3.00E+01	2.91E-02	9.69E-04	6.64E-03	2.21E-04	9.09E-02	3.03E-03	---	---	---	---	---	4.22E-03
F3 - Total													2.23E-02
												Total TPH HQ =	7.50E+00
Polycyclic Aromatic Hydrocarbons													
Low Molecular Weight PAHs													
Acenaphthene	--	1.45E-02	---	1.73E-02	---	3.05E-02	---	---	---	---	---	---	---
Acenaphthylene	--	2.42E-04	---	2.70E-03	---	5.08E-04	---	---	---	---	---	---	---
Anthracene	--	2.33E-02	---	2.15E-02	---	4.86E-02	---	---	---	---	---	---	---
Fluoranthene	--	3.09E-01	---	7.03E-02	---	6.42E-01	---	---	---	---	---	---	---
Fluorene	--	1.12E-02	---	1.54E-02	---	2.34E-02	---	---	---	---	---	---	---
1-Methylnaphthalene	--	2.09E-03	---	7.18E-03	---	4.39E-03	---	---	---	---	---	---	---
2-Methylnaphthalene	--	3.33E-03	---	8.88E-03	---	7.00E-03	---	---	---	---	---	---	---
Naphthalene	--	4.65E-02	---	3.00E-02	---	1.05E-01	---	---	---	---	---	---	---
Phenanthrene	--	2.82E-01	---	6.67E-02	---	5.87E-01	---	---	---	---	---	---	---
												TOTAL LPAH HQ =	---
High Molecular Weight PAHs													
Benz(a)anthracene	--	1.21E-01	---	1.91E-01	---	1.26E-01	---	---	---	---	---	---	---
Benzo(a)pyrene	--	1.09E-01	---	1.73E-01	---	5.66E-01	---	---	---	---	---	---	---
Benzo(b)fluoranthene	--	9.39E-02	---	1.50E-01	---	9.75E-02	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	--	5.15E-02	---	8.49E-02	---	2.67E-01	---	---	---	---	---	---	---
Benzo(k)fluoranthene	--	9.39E-02	---	1.50E-01	---	9.75E-02	---	---	---	---	---	---	---
Chrysene	--	6.06E-02	---	9.99E-02	---	6.29E-02	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	--	1.48E-02	---	2.61E-02	---	7.71E-02	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	--	9.69E-02	---	1.54E-01	---	5.03E-01	---	---	---	---	---	---	---
Perylene	--	8.18E-03	---	1.49E-02	---	4.25E-02	---	---	---	---	---	---	---
Pyrene	--	2.42E-01	---	3.68E-01	---	2.52E-01	---	---	---	---	---	---	---
												TOTAL HPAH HQ =	---
												TOTAL PAH HQ =	---
PCB													
Aroclor 1254 (Total PCBs)	3.50E-01	9.09E-03	2.60E-02	3.18E-02	9.10E-02	5.67E-01	1.62E+00	---	---	---	---	---	1.74E+00
Inorganics													
Molybdenum	3.53E+01	1.82E-02	5.15E-04	4.58E-02	1.30E-03	1.77E-01	5.03E-03	---	---	4.19E-04	1.19E-05	---	6.85E-03

Intake Parameters for the Osprey		
Receptor Name	Osprey	
Name of Study Area	Northwest Point Entire Site	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0705	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	1	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	1.5	kg
Food intake rate	3.00E-01	kg wet-wt/day
Water intake rate	8.00E-02	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	2.85E-01	
Fraction of food intake rate	1.06E-04	
Ingestion rate	9.04E-06	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	6.02E-06	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	0.00E+00	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	0.00E+00	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1.00E-02	
Ingestion rate	3.00E-03	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	2.00E-03	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	8.00E-02	L/day
Fraction from site	1	
Intake factor (IFing-sw)	5.33E-02	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	2.85E-01	
Fraction of food intake rate	9.90E-03	
Ingestion rate	8.46E-04	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	5.64E-04	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.90E-01	
Ingestion rate	2.97E-01	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	1.98E-01	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Osprey Exposed to CoPCs at Northwest Point E Detailed Baseline Case Hazard Quotients for the Osprey Exposed to CoPCs at Northwest Point Entire Site Receptor

Detailed Baseline Case Hazard Quotients for the Osprey Exposed to CoPCs at Northwest Point Entire Site Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Average Daily Dose (mg/kg-day)	Freshwater Sediment Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS															
Aliph>C06-C08 - F1	2.71E+01	5.63E-04	2.08E-05	---	---	---	---	7.53E-04	2.78E-05	7.20E-05	2.66E-06	2.31E-04	8.53E-06	---	5.40E-04
Aliph>C08-C10 - F1	2.71E+01	3.69E-04	1.36E-05	---	---	---	---	1.20E-04	4.43E-06	4.60E-05	1.77E-06	1.52E-04	5.62E-06	---	2.57E-03
Arom>C08-C10 - F1	5.42E+01	9.22E-05	1.70E-06	---	---	---	---	1.84E-04	3.39E-06	1.20E-05	2.21E-07	3.67E-05	6.77E-07	---	2.19E-05
F1 - Total															3.13E-03
Aliph>C10-C12 - F2	1.36E+02	1.95E-02	1.44E-04	---	---	---	---	1.02E-03	7.50E-06	2.40E-04	1.77E-06	7.62E-04	5.62E-06	---	2.03E-02
Aliph>C12-C16 - F2	1.36E+02	2.39E-02	1.76E-04	---	---	---	---	6.70E-04	4.94E-06	2.93E-04	2.16E-06	9.31E-04	6.87E-06	---	4.92E-01
Arom>C10-C12 - F2	2.71E+01	4.88E-03	1.80E-04	---	---	---	---	4.07E-03	1.50E-04	5.87E-05	2.16E-06	1.89E-04	6.97E-06	---	5.86E-04
Arom>C12-C16 - F2	2.71E+01	5.96E-03	2.20E-04	---	---	---	---	3.51E-03	1.30E-04	7.20E-05	2.66E-06	2.31E-04	8.53E-06	---	9.55E-04
F2 - Total															5.14E-01
Aliph>C16-C21 - F3	5.42E+02	2.71E-04	5.00E-07	---	---	---	---	7.61E-06	1.40E-08	7.47E-04	1.38E-06	1.19E-03	2.19E-06	---	4.08E-06
Aliph>C21-C34 - F3	5.42E+02	1.14E-04	2.11E-07	---	---	---	---	1.61E-06	2.96E-09	3.20E-04	5.90E-07	5.08E-04	9.37E-07	---	1.74E-06
Arom>C16-C21 - F3	2.71E+01	6.75E-05	2.49E-06	---	---	---	---	1.49E-05	5.45E-07	1.87E-04	6.89E-06	2.82E-04	1.04E-05	---	4.97E-03
Arom>C21-C34 - F3	2.71E+01	2.89E-05	1.07E-06	---	---	---	---	1.57E-06	5.78E-08	8.00E-05	2.95E-06	1.27E-04	4.68E-06	---	1.69E-02
F3 - Total															2.16E-02
														Total TPH HQ =	5.36E-01
Polycyclic Aromatic Hydrocarbons															
Low Molecular Weight PAHs															
Acenaphthene	--	1.45E-05	---	---	---	---	---	5.59E-06	---	---	---	---	---	---	---
Acenaphthylene	--	2.41E-07	---	---	---	---	---	6.96E-07	---	---	---	---	---	---	---
Anthracene	--	2.32E-05	---	---	---	---	---	1.04E-05	---	---	---	---	---	---	---
Fluoranthene	--	3.07E-04	---	---	---	---	---	6.02E-05	---	---	---	---	---	---	---
Fluorene	--	1.11E-05	---	---	---	---	---	5.75E-06	---	---	---	---	---	---	---
1-Methylnaphthalene	--	2.08E-06	---	---	---	---	---	1.85E-06	---	---	---	---	---	---	---
2-Methylnaphthalene	--	3.31E-06	---	---	---	---	---	2.35E-06	---	---	---	---	---	---	---
Naphthalene	--	4.82E-05	---	---	---	---	---	7.44E-06	---	---	---	---	---	---	---
Phenanthrene	--	2.80E-04	---	---	---	---	---	6.38E-05	---	---	---	---	---	---	---
														TOTAL LPAH HQ =	---
High Molecular Weight PAHs															
Benz(a)anthracene	--	1.20E-04	---	---	---	---	---	9.40E-06	---	---	---	---	---	---	---
Benzo(a)pyrene	--	1.08E-04	---	---	---	---	---	4.00E-04	---	---	---	---	---	---	---
Benzo(b)fluoranthene	--	9.34E-05	---	---	---	---	---	6.68E-05	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	--	5.12E-05	---	---	---	---	---	1.61E-04	---	---	---	---	---	---	---
Benzo(k)fluoranthene	--	9.34E-05	---	---	---	---	---	6.73E-05	---	---	---	---	---	---	---
Chrysene	--	6.02E-05	---	---	---	---	---	4.84E-05	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	--	1.48E-05	---	---	---	---	---	4.88E-05	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	--	9.64E-05	---	---	---	---	---	2.95E-04	---	---	---	---	---	---	---
Perylene	--	8.13E-06	---	---	---	---	---	3.08E-05	---	---	---	---	---	---	---
Pyrene	--	2.41E-04	---	---	---	---	---	1.76E-04	---	---	---	---	---	---	---
														TOTAL HPAH HQ =	---
														TOTAL PAH HQ =	---
PCB															
Aroclor 1254 (Total PCBs)	3.16E-01	9.04E-06	2.86E-05	---	---	---	---	3.50E-05	1.11E-04	---	---	---	---	---	7.84E-02
Inorganics															
Molybdenum	3.53E+01	1.81E-05	5.12E-07	---	---	---	---	2.50E-05	7.08E-07	6.67E-05	1.89E-06	2.62E-04	7.99E-06	---	8.12E-05

Intake Parameters for the Red Fox		
Receptor Name	Red Fox	
Name of Study Area	Northwest Point North	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	4.5	kg
Food intake rate	7.60E-01	kg wet-wt/day
Water intake rate	3.83E-01	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	3.15E-01	
Fraction of food intake rate	1.25E-02	
Ingestion rate	3.00E-03	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	6.66E-04	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1.00E-01	
Ingestion rate	7.60E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	1.69E-02	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	5.00E-02	
Ingestion rate	3.80E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	8.44E-03	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	8.50E-01	
Ingestion rate	6.46E-01	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	1.44E-01	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	3.83E-01	L/day
Fraction from site	1	
Intake factor (IFing-sw)	8.51E-02	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Red Fox Exposed to CoPCs at Northwest Point North Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS											
Aliph>C06-C08 - F1	2.64E+01	3.93E-03	1.49E-04	1.47E-02	5.59E-04	4.90E-03	1.86E-04	3.41E-03	1.29E-04	---	1.04E-03
Aliph>C08-C10 - F1	2.64E+01	2.53E-03	9.58E-05	1.20E-03	4.53E-05	3.13E-03	1.19E-04	5.35E-04	2.03E-05	---	2.92E-04
Arom>C08-C10 - F1	5.28E+01	6.39E-04	1.21E-05	4.92E-03	9.31E-05	8.08E-04	1.53E-05	8.29E-04	1.57E-05	---	1.38E-04
F1 - Total											1.47E-03
Aliph>C10-C12 - F2	1.32E+02	2.37E-01	1.80E-03	7.33E-03	5.55E-05	1.83E-01	1.39E-03	8.02E-03	6.08E-05	---	3.32E-03
Aliph>C12-C16 - F2	1.32E+02	2.90E-01	2.19E-03	6.46E-04	4.89E-06	1.79E-01	1.36E-03	5.28E-03	4.00E-05	---	3.62E-03
Arom>C10-C12 - F2	2.64E+01	5.93E-02	2.24E-03	3.23E-01	1.22E-02	4.65E-02	1.76E-03	3.21E-02	1.22E-03	---	1.75E-02
Arom>C12-C16 - F2	2.64E+01	7.26E-02	2.75E-03	2.23E-01	8.48E-03	5.65E-02	2.14E-03	2.78E-02	1.05E-03	---	1.44E-02
F2 - Total											3.85E-02
Aliph>C16-C21 - F3	5.28E+02	---	---	---	---	---	---	---	---	---	9.02E-07
Aliph>C21-C34 - F3	5.28E+02	---	---	---	---	---	---	---	---	---	3.87E-07
Arom>C16-C21 - F3	2.64E+01	---	---	---	---	---	---	---	---	---	4.51E-06
Arom>C21-C34 - F3	2.64E+01	---	---	---	---	---	---	---	---	---	1.93E-06
F3 - Total											7.73E-06
										Total TPH HQ =	4.03E-02
Polycyclic Aromatic Hydrocarbons											
Low Molecular Weight PAHs											
Acenaphthene	1.70E+02	8.65E-03	5.09E-05	2.17E-03	1.28E-05	3.60E-03	2.12E-05	1.52E-03	8.93E-06	---	9.38E-05
Acenaphthylene	1.70E+02	1.46E-04	8.62E-07	3.40E-04	2.00E-06	6.08E-05	3.57E-07	1.63E-04	9.58E-07	---	4.18E-06
Anthracene	1.70E+02	1.20E-02	7.05E-05	2.52E-03	1.48E-05	4.94E-03	2.91E-05	2.64E-03	1.55E-05	---	1.30E-04
Fluoranthene	1.70E+02	1.45E-01	8.54E-04	1.20E-02	7.03E-05	5.98E-02	3.52E-04	2.46E-02	1.45E-04	---	1.42E-03
Fluorene	1.70E+02	6.45E-03	3.80E-05	1.90E-03	1.12E-05	2.67E-03	1.57E-05	1.50E-03	8.85E-06	---	7.37E-05
1-Methylnaphthalene	1.70E+02	1.20E-03	7.05E-06	8.83E-04	5.20E-06	4.99E-04	2.93E-06	4.44E-04	2.61E-06	---	1.78E-05
2-Methylnaphthalene	1.70E+02	2.06E-03	1.21E-05	1.13E-03	6.65E-06	5.59E-04	5.05E-06	6.01E-04	3.54E-06	---	2.74E-05
Naphthalene	1.70E+02	7.26E-03	4.27E-05	2.00E-03	1.18E-05	3.11E-03	1.83E-05	8.24E-04	4.85E-06	---	7.76E-05
Phenanthrene	1.70E+02	7.72E-02	4.54E-04	6.36E-03	3.74E-05	3.19E-02	1.87E-04	1.13E-02	6.63E-05	---	7.45E-04
										TOTAL LPAH HQ =	2.59E-03
High Molecular Weight PAHs											
Benz(a)anthracene	1.80E+01	5.59E-02	3.11E-03	3.06E-02	1.70E-03	1.15E-02	6.39E-04	2.75E-02	1.53E-03	---	6.98E-03
Benzo(a)pyrene	1.80E+01	4.99E-02	2.77E-03	2.75E-02	1.53E-03	5.14E-02	2.85E-03	1.16E-01	6.45E-03	---	1.36E-02
Benzo(b)fluoranthene	1.80E+01	3.46E-02	1.92E-03	1.95E-02	1.08E-03	7.12E-03	3.96E-04	1.57E-02	8.74E-04	---	4.27E-03
Benzo(g,h,i)perylene	1.80E+01	1.40E-02	7.77E-04	8.25E-03	4.58E-04	1.44E-02	7.99E-04	2.82E-02	1.57E-03	---	3.60E-03
Benzo(k)fluoranthene	1.80E+01	4.73E-02	2.63E-03	2.61E-02	1.45E-03	9.72E-03	5.40E-04	2.14E-02	1.19E-03	---	5.81E-03
Chrysene	1.80E+01	6.26E-02	3.48E-03	3.41E-02	1.89E-03	1.29E-02	7.15E-04	3.06E-02	1.70E-03	---	7.79E-03
Dibenz(a,h)anthracene	1.80E+01	2.26E-03	1.26E-04	1.47E-03	8.17E-05	2.33E-03	1.29E-04	4.93E-03	2.74E-04	---	6.11E-04
Indeno(1,2,3-cd)pyrene	1.80E+01	2.93E-02	1.63E-03	1.66E-02	9.23E-04	3.01E-02	1.67E-03	5.74E-02	3.19E-03	---	7.41E-03
Perylene	1.80E+01	4.73E-03	2.63E-04	2.95E-03	1.64E-04	4.86E-03	2.70E-04	1.12E-02	6.20E-04	---	1.32E-03
Pyrene	1.80E+01	1.13E-01	6.25E-03	6.11E-02	3.39E-03	2.32E-02	1.29E-03	5.29E-02	2.94E-03	---	1.39E-02
										TOTAL HPAH HQ =	6.53E-02
										TOTAL PAH HQ =	6.79E-02
PCB											
Aroclor 1254 (Total PCBs)	1.94E-01	2.06E-03	1.06E-02	2.53E-03	1.30E-02	2.58E-02	1.33E-01	5.02E-03	2.59E-02	---	1.82E-01
Inorganics											
Molybdenum	7.43E-01	3.99E-03	5.38E-03	3.65E-03	4.91E-03	7.73E-03	1.04E-02	3.59E-03	4.83E-03	---	2.63E-02
Tin	2.32E+01	1.33E-02	5.73E-04	1.05E-03	4.54E-05	1.22E-02	5.25E-04	3.59E-03	1.54E-04	---	1.30E-03

Intake Parameters for the Meadow Vole		
Receptor Name	Meadow Vole	
Name of Study Area	Northwest Point North	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	0.042	kg
Food intake rate	1.10E-02	kg wet-wt/day
Water intake rate	6.00E-03	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	4.80E-01	
Fraction of food intake rate	5.96E-02	
Ingestion rate	3.15E-04	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	7.49E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.80E-01	
Ingestion rate	1.08E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	2.57E-01	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	2.00E-02	
Ingestion rate	2.20E-04	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	5.24E-03	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.00E+00	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	6.00E-03	L/day
Fraction from site	1	
Intake factor (IFing-sw)	1.43E-01	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Meadow Vole Exposed to CoPCs at Northwest Point North Receptor Location

Detailed Baseline Case Hazard Quotients for the Meadow Vole Exposed to CoPCs at Northwest Point North Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS											
Aliph>C06-C08 - F1	5.00E+01	4.42E-02	8.84E-04	2.24E-01	4.48E-03	3.04E-03	6.08E-05	---	---	---	5.43E-03
Aliph>C08-C10 - F1	5.00E+01	2.85E-02	5.69E-04	1.82E-02	3.64E-04	1.94E-03	3.89E-05	---	---	---	9.72E-04
Arom>C08-C10 - F1	1.00E+02	7.19E-03	7.19E-05	7.48E-02	7.48E-04	5.01E-04	5.01E-06	---	---	---	8.24E-04
F1 - Total											7.22E-03
Aliph>C10-C12 - F2	2.50E+02	2.67E+00	1.07E-02	1.11E-01	4.46E-04	1.14E-01	4.55E-04	3.14E-03	1.26E-05	---	1.16E-02
Aliph>C12-C16 - F2	2.50E+02	3.25E+00	1.30E-02	9.81E-03	3.92E-05	1.11E-01	4.45E-04	3.71E-03	1.49E-05	---	1.35E-02
Arom>C10-C12 - F2	5.00E+01	6.67E-01	1.33E-02	4.91E+00	9.83E-02	2.88E-02	5.76E-04	7.71E-04	1.54E-05	---	1.12E-01
Arom>C12-C16 - F2	5.00E+01	8.16E-01	1.63E-02	3.40E+00	6.79E-02	3.51E-02	7.01E-04	9.43E-04	1.89E-05	---	8.50E-02
F2 - Total											2.22E-01
Aliph>C16-C21 - F3	1.00E+03	---	---	---	---	---	---	---	---	---	---
Aliph>C21-C34 - F3	1.00E+03	---	---	---	---	---	---	---	---	---	---
Arom>C16-C21 - F3	5.00E+01	---	---	---	---	---	---	---	---	---	---
Arom>C21-C34 - F3	5.00E+01	---	---	---	---	---	---	---	---	---	---
F3 - Total											---
										Total TPH HQ =	2.29E-01
Polycyclic Aromatic Hydrocarbons											
Low Molecular Weight PAHs											
Acenaphthene	1.70E+02	9.74E-02	5.73E-04	3.30E-02	1.94E-04	2.23E-03	1.31E-05	---	---	---	7.80E-04
Acenaphthylene	1.70E+02	1.65E-03	9.69E-06	5.17E-03	3.04E-05	3.77E-05	2.22E-07	---	---	---	4.03E-05
Anthracene	1.70E+02	1.35E-01	7.93E-04	3.82E-02	2.25E-04	3.07E-03	1.80E-05	---	---	---	1.04E-03
Fluoranthene	1.70E+02	1.63E+00	9.61E-03	1.82E-01	1.07E-03	3.71E-02	2.18E-04	---	---	---	1.09E-02
Fluorene	1.70E+02	7.27E-02	4.27E-04	2.89E-02	1.70E-04	1.66E-03	9.75E-06	---	---	---	6.07E-04
1-Methylnaphthalene	1.70E+02	1.35E-02	7.93E-05	1.34E-02	7.90E-05	3.09E-04	1.82E-06	---	---	---	1.60E-04
2-Methylnaphthalene	1.70E+02	2.32E-02	1.37E-04	1.72E-02	1.01E-04	5.33E-04	3.13E-06	---	---	---	2.41E-04
Naphthalene	1.70E+02	8.16E-02	4.80E-04	3.04E-02	1.79E-04	1.93E-03	1.14E-05	---	---	---	6.71E-04
Phenanthrene	1.70E+02	8.69E-01	5.11E-03	9.67E-02	5.69E-04	1.98E-02	1.16E-04	---	---	---	5.80E-03
										TOTAL LPAH HQ =	2.02E-02
High Molecular Weight PAHs											
Benz(a)anthracene	1.80E+01	6.29E-01	3.50E-02	4.66E-01	2.59E-02	7.14E-03	3.97E-04	---	---	---	6.12E-02
Benzo(a)pyrene	1.80E+01	5.62E-01	3.12E-02	4.18E-01	2.32E-02	3.19E-02	1.77E-03	---	---	---	5.62E-02
Benzo(b)fluoranthene	1.80E+01	3.90E-01	2.16E-02	2.96E-01	1.64E-02	4.42E-03	2.45E-04	---	---	---	3.83E-02
Benzo(g,h,i)perylene	1.80E+01	1.57E-01	8.74E-03	1.25E-01	6.96E-03	8.92E-03	4.96E-04	---	---	---	1.62E-02
Benzo(k)fluoranthene	1.80E+01	5.32E-01	2.95E-02	3.97E-01	2.21E-02	6.03E-03	3.35E-04	---	---	---	5.19E-02
Chrysene	1.80E+01	7.04E-01	3.91E-02	5.18E-01	2.88E-02	7.99E-03	4.44E-04	---	---	---	6.83E-02
Dibenz(a,h)anthracene	1.80E+01	2.55E-02	1.41E-03	2.24E-02	1.24E-03	1.44E-03	8.02E-05	---	---	---	2.74E-03
Indeno(1,2,3-cd)pyrene	1.80E+01	3.30E-01	1.83E-02	2.52E-01	1.40E-02	1.87E-02	1.04E-03	---	---	---	3.34E-02
Perylene	1.80E+01	5.32E-02	2.95E-03	4.49E-02	2.49E-03	3.02E-03	1.68E-04	---	---	---	5.62E-03
Pyrene	1.80E+01	1.27E+00	7.03E-02	9.28E-01	5.16E-02	1.44E-02	7.98E-04	---	---	---	1.23E-01
										TOTAL HPAH HQ =	4.57E-01
										TOTAL PAH HQ =	4.77E-01
PCB											
Aroclor 1254 (Total PCBs)	6.25E-01	2.32E-02	3.71E-02	3.85E-02	6.16E-02	1.60E-02	2.56E-02	---	---	---	1.24E-01
Inorganics											
Molybdenum	2.39E+00	4.49E-02	1.88E-02	5.54E-02	2.32E-02	4.79E-03	2.00E-03	9.57E-04	4.00E-04	---	4.44E-02
Tin	4.40E+01	1.50E-01	3.40E-03	1.60E-02	3.64E-04	7.56E-03	1.72E-04	1.43E-04	3.25E-06	---	3.94E-03

Intake Parameters for the Masked Shrew		
Receptor Name	Masked Shrew	
Name of Study Area	Northwest Point North	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	0.005	kg
Food intake rate	3.00E-03	kg wet-wt/day
Water intake rate	1.00E-03	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	3.02E-01	
Fraction of food intake rate	4.89E-02	
Ingestion rate	4.44E-05	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	8.87E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	2.50E-02	
Ingestion rate	7.50E-05	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	1.50E-02	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.75E-01	
Ingestion rate	2.93E-03	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	5.85E-01	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.00E+00	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	1.00E-03	L/day
Fraction from site	1	
Intake factor (IFing-sw)	2.00E-01	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Masked Shrew Exposed to CoPCs at Northwest Point North Receptor Location

Detailed Baseline Case Hazard Quotients for the Masked Shrew Exposed to CoPCs at Northwest Point North Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS											
Aliph>C06-C08 - F1	5.00E+01	5.24E-02	1.05E-03	1.31E-02	2.62E-04	3.40E-01	6.79E-03	---	---	---	8.10E-03
Aliph>C08-C10 - F1	5.00E+01	3.37E-02	6.74E-04	1.06E-03	2.13E-05	2.17E-01	4.34E-03	---	---	---	5.04E-03
Arom>C08-C10 - F1	1.00E+02	8.52E-03	8.52E-05	4.37E-03	4.37E-05	5.60E-02	5.60E-04	---	---	---	6.89E-04
F1 - Total											1.38E-02
Aliph>C10-C12 - F2	2.50E+02	3.16E+00	1.26E-02	6.51E-03	2.60E-05	1.27E+01	5.08E-02	4.40E-03	1.76E-05	---	6.35E-02
Aliph>C12-C16 - F2	2.50E+02	3.86E+00	1.54E-02	5.73E-04	2.29E-06	1.24E+01	4.97E-02	5.20E-03	2.08E-05	---	6.51E-02
Arom>C10-C12 - F2	5.00E+01	7.90E-01	1.58E-02	2.87E-01	5.74E-03	3.22E+00	6.44E-02	1.08E-03	2.16E-05	---	8.59E-02
Arom>C12-C16 - F2	5.00E+01	9.67E-01	1.93E-02	1.98E-01	3.97E-03	3.91E+00	7.83E-02	1.32E-03	2.64E-05	---	1.02E-01
F2 - Total											3.16E-01
Aliph>C16-C21 - F3	1.00E+03	---	---	---	---	---	---	---	---	---	---
Aliph>C21-C34 - F3	1.00E+03	---	---	---	---	---	---	---	---	---	---
Arom>C16-C21 - F3	5.00E+01	---	---	---	---	---	---	---	---	---	---
Arom>C21-C34 - F3	5.00E+01	---	---	---	---	---	---	---	---	---	---
F3 - Total											---
										Total TPH HQ =	3.30E-01
Polycyclic Aromatic Hydrocarbons											
Low Molecular Weight PAHs											
Acenaphthene	1.70E+02	1.15E-01	6.79E-04	1.93E-03	1.13E-05	2.49E-01	1.47E-03	---	---	---	2.16E-03
Acenaphthylene	1.70E+02	1.95E-03	1.15E-05	3.02E-04	1.78E-06	4.21E-03	2.48E-05	---	---	---	3.80E-05
Anthracene	1.70E+02	1.60E-01	9.40E-04	2.23E-03	1.31E-05	3.42E-01	2.01E-03	---	---	---	2.97E-03
Fluoranthene	1.70E+02	1.93E+00	1.14E-02	1.06E-02	6.24E-05	4.14E+00	2.44E-02	---	---	---	3.58E-02
Fluorene	1.70E+02	8.61E-02	5.06E-04	1.69E-03	9.92E-06	1.85E-01	1.09E-03	---	---	---	1.60E-03
1-Methylnaphthalene	1.70E+02	1.60E-02	9.40E-05	7.85E-04	4.62E-06	3.45E-02	2.03E-04	---	---	---	3.02E-04
2-Methylnaphthalene	1.70E+02	2.75E-02	1.62E-04	1.00E-03	5.91E-06	5.95E-02	3.50E-04	---	---	---	5.18E-04
Naphthalene	1.70E+02	9.67E-02	5.69E-04	1.78E-03	1.05E-05	2.16E-01	1.27E-03	---	---	---	1.85E-03
Phenanthrene	1.70E+02	1.03E+00	6.06E-03	5.65E-03	3.32E-05	2.21E+00	1.30E-02	---	---	---	1.91E-02
										TOTAL LPAH HQ =	6.43E-02
High Molecular Weight PAHs											
Benz(a)anthracene	1.80E+01	7.45E-01	4.14E-02	2.72E-02	1.51E-03	7.97E-01	4.43E-02	---	---	---	8.72E-02
Benzo(a)pyrene	1.80E+01	6.66E-01	3.70E-02	2.44E-02	1.36E-03	3.56E+00	1.98E-01	---	---	---	2.36E-01
Benzo(b)fluoranthene	1.80E+01	4.61E-01	2.56E-02	1.73E-02	9.60E-04	4.93E-01	2.74E-02	---	---	---	5.40E-02
Benzo(g,h,i)perylene	1.80E+01	1.86E-01	1.04E-02	7.32E-03	4.07E-04	9.96E-01	5.53E-02	---	---	---	6.61E-02
Benzo(k)fluoranthene	1.80E+01	6.30E-01	3.50E-02	2.32E-02	1.29E-03	6.74E-01	3.74E-02	---	---	---	7.37E-02
Chrysene	1.80E+01	8.34E-01	4.63E-02	3.03E-02	1.68E-03	8.92E-01	4.96E-02	---	---	---	9.76E-02
Dibenz(a,h)anthracene	1.80E+01	3.02E-02	1.68E-03	1.31E-03	7.26E-05	1.61E-01	8.96E-03	---	---	---	1.07E-02
Indeno(1,2,3-cd)pyrene	1.80E+01	3.90E-01	2.17E-02	1.48E-02	8.20E-04	2.09E+00	1.16E-01	---	---	---	1.38E-01
Perylene	1.80E+01	6.30E-02	3.50E-03	2.62E-03	1.46E-04	3.37E-01	1.87E-02	---	---	---	2.24E-02
Pyrene	1.80E+01	1.50E+00	8.33E-02	5.43E-02	3.01E-03	1.61E+00	8.92E-02	---	---	---	1.76E-01
										TOTAL HPAH HQ =	9.62E-01
										TOTAL PAH HQ =	1.03E+00
PCB											
Aroclor 1254 (Total PCBs)	6.80E-01	2.75E-02	4.05E-02	2.25E-03	3.31E-03	1.79E+00	2.63E+00	---	---	---	2.67E+00
Inorganics											
Molybdenum	2.60E+00	5.32E-02	2.05E-02	3.24E-03	1.25E-03	5.35E-01	2.06E-01	1.34E-03	5.15E-04	---	2.28E-01
Tin	4.40E+01	1.77E-01	4.03E-03	9.36E-04	2.13E-05	8.44E-01	1.92E-02	2.00E-04	4.55E-06	---	2.32E-02

Intake Parameters for the Red Fox		
Receptor Name	Red Fox	
Name of Study Area	Northwest Point South	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	4.5	kg
Food intake rate	7.60E-01	kg wet-wt/day
Water intake rate	3.83E-01	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	3.15E-01	
Fraction of food intake rate	1.25E-02	
Ingestion rate	3.00E-03	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	6.66E-04	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	1.00E-01	
Ingestion rate	7.60E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	1.69E-02	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	5.00E-02	
Ingestion rate	3.80E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	8.44E-03	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	8.50E-01	
Ingestion rate	6.46E-01	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	1.44E-01	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	3.83E-01	L/day
Fraction from site	1	
Intake factor (IFing-sw)	8.51E-02	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Red Fox Exposed to CoPCs at Northwest Point S **Detailed Baseline Case Hazard Quotients for the Red Fox Exposed to CoPCs at Northwest Point South Receptor**

Detailed Baseline Case Hazard Quotients for the Red Fox Exposed to CoPCs at Northwest Point South Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Average Daily Dose (mg/kg-day)	Marine Sediment Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS															
Aliph>C06-C08 - F1	2.64E+01	1.24E-01	4.71E-03	4.67E-01	1.77E-02	1.55E-01	5.88E-03	1.08E-01	4.10E-03	---	---	4.68E-04	1.77E-05	---	3.24E-02
Aliph>C08-C10 - F1	2.64E+01	8.15E-02	3.09E-03	3.85E-02	1.46E-03	1.01E-01	3.82E-03	1.72E-02	6.52E-04	---	---	3.06E-04	1.16E-05	---	9.03E-03
Arom>C08-C10 - F1	5.28E+01	2.04E-02	3.86E-04	1.57E-01	2.97E-03	2.58E-02	4.88E-04	2.64E-02	5.00E-04	---	---	7.66E-05	1.45E-06	---	4.34E-03
F1 - Total															4.58E-02
Aliph>C10-C12 - F2	1.32E+02	4.31E+00	3.27E-02	1.33E-01	1.01E-03	3.34E+00	2.53E-02	1.46E-01	1.11E-03	1.99E-02	1.48E-04	3.06E-04	2.32E-06	---	6.02E-02
Aliph>C12-C16 - F2	1.32E+02	5.27E+00	3.99E-02	1.18E-02	8.90E-05	3.26E+00	2.47E-02	9.62E-02	7.28E-04	2.38E-02	1.81E-04	3.74E-04	2.84E-06	---	6.56E-02
Arom>C10-C12 - F2	2.64E+01	1.08E+00	4.08E-02	5.88E+00	2.23E-01	8.46E-01	3.20E-02	5.85E-01	2.21E-02	4.94E-03	1.87E-04	7.66E-05	2.90E-06	---	3.18E-01
Arom>C12-C16 - F2	2.64E+01	1.32E+00	4.99E-02	4.06E+00	1.54E-01	1.03E+00	3.89E-02	5.04E-01	1.91E-02	5.96E-03	2.26E-04	9.36E-05	3.54E-06	---	2.62E-01
F2 - Total															7.06E-01
Aliph>C16-C21 - F3	5.28E+02	5.99E-02	1.13E-04	1.34E-04	2.53E-07	3.71E-02	7.02E-05	1.09E-03	2.07E-06	2.21E-02	4.19E-05	4.76E-04	9.02E-07	---	2.29E-04
Aliph>C21-C34 - F3	5.28E+02	2.53E-02	4.79E-05	5.64E-05	1.07E-07	7.83E-03	1.48E-05	2.31E-04	4.37E-07	9.36E-03	1.77E-05	2.04E-04	3.87E-07	---	8.14E-05
Arom>C16-C21 - F3	2.64E+01	1.49E-02	5.65E-04	1.51E-02	5.73E-04	9.25E-03	3.50E-04	2.12E-03	8.03E-05	5.45E-03	2.06E-04	1.19E-04	4.51E-06	---	1.78E-03
Arom>C21-C34 - F3	2.64E+01	6.39E-03	2.42E-04	5.28E-04	2.00E-05	3.90E-03	1.50E-04	2.25E-04	8.51E-06	2.38E-03	9.03E-05	5.10E-05	1.93E-06	---	5.13E-04
F3 - Total															2.69E-03
														Total TPH HQ =	7.54E-01
Polycyclic Aromatic Hydrocarbons															
Low Molecular Weight PAHs															
Acenaphthene	1.70E+02	5.48E-04	3.21E-06	6.18E-04	3.64E-06	2.27E-04	1.34E-06	2.97E-04	1.75E-06	---	---	---	---	---	9.93E-06
Acenaphthylene	1.70E+02	6.52E-05	3.84E-07	2.35E-04	1.38E-06	2.71E-05	1.59E-07	1.10E-04	6.47E-07	---	---	---	---	---	2.57E-06
Anthracene	1.70E+02	1.40E-03	8.22E-06	9.48E-04	5.57E-06	5.77E-04	3.39E-06	6.86E-04	4.04E-06	---	---	---	---	---	2.12E-05
Fluoranthene	1.70E+02	2.00E-02	1.17E-04	3.17E-03	1.87E-05	8.22E-03	4.84E-05	4.42E-03	2.60E-05	---	---	---	---	---	2.10E-04
Fluorene	1.70E+02	6.46E-04	3.80E-06	6.67E-04	3.92E-06	2.67E-04	1.57E-06	3.90E-04	2.30E-06	---	---	---	---	---	1.16E-05
1-Methylnaphthalene	1.70E+02	1.13E-04	6.66E-07	3.02E-04	1.78E-06	4.71E-05	2.77E-07	1.32E-04	7.74E-07	---	---	---	---	---	3.50E-06
2-Methylnaphthalene	1.70E+02	1.33E-04	7.83E-07	3.26E-04	1.91E-06	5.54E-05	3.26E-07	1.41E-04	8.32E-07	---	---	---	---	---	3.86E-06
Naphthalene	1.70E+02	3.99E-04	2.35E-05	5.36E-04	3.15E-06	1.71E-04	1.01E-06	1.54E-04	9.06E-07	---	---	---	---	---	7.42E-06
Phenanthrene	1.70E+02	1.60E-02	9.40E-05	2.87E-03	1.69E-05	6.59E-03	3.88E-05	3.23E-03	1.90E-05	---	---	---	---	---	1.69E-04
														TOTAL LPAH HQ =	4.39E-04
High Molecular Weight PAHs															
Benz(a)anthracene	1.80E+01	2.33E-03	1.29E-04	1.51E-03	8.40E-05	4.79E-04	2.66E-05	1.31E-03	7.26E-05	---	---	---	---	---	3.13E-04
Benzo(a)pyrene	1.80E+01	1.86E-03	1.04E-04	1.22E-03	6.80E-05	1.92E-03	1.07E-04	4.97E-03	2.76E-04	---	---	---	---	---	5.54E-04
Benzo(b)fluoranthene	1.80E+01	1.66E-03	9.25E-05	1.10E-03	6.11E-05	3.42E-04	1.90E-05	8.58E-04	4.77E-05	---	---	---	---	---	2.20E-04
Benzo(g,h,i)perylene	1.80E+01	9.99E-04	5.55E-05	6.78E-04	3.76E-05	1.03E-03	5.71E-05	2.25E-03	1.25E-04	---	---	---	---	---	2.75E-04
Benzo(k)fluoranthene	1.80E+01	1.60E-03	8.88E-05	1.06E-03	5.88E-05	3.29E-04	1.83E-05	8.32E-04	4.62E-05	---	---	---	---	---	2.12E-04
Chrysene	1.80E+01	2.40E-03	1.33E-04	1.55E-03	8.62E-05	4.93E-04	2.74E-05	1.34E-03	7.46E-05	---	---	---	---	---	3.21E-04
Dibenz(a,h)anthracene	1.80E+01	3.00E-04	1.66E-05	2.17E-04	1.20E-05	3.08E-04	1.71E-05	7.11E-04	3.95E-05	---	---	---	---	---	8.53E-05
Indeno(1,2,3-cd)pyrene	1.80E+01	3.93E-03	2.18E-04	2.48E-03	1.38E-04	4.04E-03	2.24E-04	8.36E-03	4.65E-04	---	---	---	---	---	1.04E-03
Perylene	1.80E+01	4.33E-04	2.40E-05	3.07E-04	1.71E-05	4.45E-04	2.47E-05	1.13E-03	6.28E-05	---	---	---	---	---	1.29E-04
Pyrene	1.80E+01	1.46E-02	8.14E-04	8.62E-03	4.79E-04	3.02E-03	1.68E-04	7.33E-03	4.07E-04	---	---	---	---	---	1.87E-03
														TOTAL HPAH HQ =	5.02E-03
														TOTAL PAH HQ =	5.46E-03
Inorganics															
Tin	2.32E+01	1.33E-02	5.73E-04	4.22E-03	1.82E-04	1.22E-02	5.25E-04	2.64E-01	1.14E-02	8.51E-05	3.66E-05	8.51E-06	3.66E-07	---	1.27E-02

Intake Parameters for the Masked Shrew

Receptor Name	Masked Shrew	
Name of Study Area	Northwest Point South	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	0.005	kg
Food intake rate	3.00E-03	kg wet-wt/day
Water intake rate	1.00E-03	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	3.02E-01	
Fraction of food intake rate	4.89E-02	
Ingestion rate	4.44E-05	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-si)	8.87E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	2.50E-02	
Ingestion rate	7.50E-05	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	1.50E-02	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.75E-01	
Ingestion rate	2.93E-03	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	5.85E-01	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.00E+00	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	1.00E-03	L/day
Fraction from site	1	
Intake factor (IFing-sw)	2.00E-01	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Masked Shrew Exposed to CoPCs at Northwest Point South Receptor Location

Detailed Baseline Case Hazard Quotients for the Masked Shrew Exposed to CoPCs at Northwest Point South Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS											
Aliph>C06-C08 - F1	5.00E+01	1.65E+00	3.32E-02	4.15E-01	8.30E-03	1.08E+01	2.15E-01	---	---	---	2.57E-01
Aliph>C08-C10 - F1	5.00E+01	1.09E+00	2.17E-02	3.42E-02	6.85E-04	6.99E+00	1.40E-01	---	---	---	1.62E-01
Arom>C08-C10 - F1	1.00E+02	2.72E-01	2.72E-03	1.39E-01	1.39E-03	1.78E+00	1.78E-02	---	---	---	2.20E-02
F1 - Total											4.41E-01
Aliph>C10-C12 - F2	2.50E+02	5.75E+01	2.30E-01	1.19E-01	4.74E-04	2.31E+02	9.25E-01	4.60E-02	1.84E-04	---	1.16E+00
Aliph>C12-C16 - F2	2.50E+02	7.03E+01	2.81E-01	1.04E-02	4.18E-05	2.26E+02	9.04E-01	5.60E-02	2.24E-04	---	1.19E+00
Arom>C10-C12 - F2	5.00E+01	1.44E+01	2.88E-01	5.23E+00	1.05E-01	5.86E+01	1.17E+00	1.16E-02	2.32E-04	---	1.56E+00
Arom>C12-C16 - F2	5.00E+01	1.76E+01	3.51E-01	3.60E+00	7.21E-02	7.11E+01	1.42E+00	1.40E-02	2.80E-04	---	1.85E+00
F2 - Total											5.75E+00
Aliph>C16-C21 - F3	1.00E+03	7.99E-01	7.99E-04	1.19E-04	1.19E-07	2.57E+00	2.57E-03	5.20E-02	5.20E-05	---	3.42E-03
Aliph>C21-C34 - F3	1.00E+03	3.37E-01	3.37E-04	5.01E-05	5.01E-08	5.42E-01	5.42E-04	2.20E-02	2.20E-05	---	9.01E-04
Arom>C16-C21 - F3	5.00E+01	1.99E-01	3.98E-03	1.34E-02	2.69E-04	6.41E-01	1.28E-02	1.28E-02	2.56E-04	---	1.73E-02
Arom>C21-C34 - F3	5.00E+01	8.52E-02	1.70E-03	4.69E-04	9.38E-06	2.74E-01	5.48E-03	5.60E-03	1.12E-04	---	7.31E-03
F3 - Total											2.89E-02
										Total TPH HQ =	9.22E+00
Polycyclic Aromatic Hydrocarbons											
Low Molecular Weight PAHs											
Acenaphthene	1.70E+02	7.28E-03	4.28E-05	5.49E-04	3.23E-06	1.57E-02	9.25E-05	---	---	---	1.39E-04
Acenaphthylene	1.70E+02	8.70E-04	5.12E-06	2.09E-04	1.23E-06	1.88E-03	1.10E-05	---	---	---	1.74E-05
Anthracene	1.70E+02	1.86E-02	1.10E-04	8.42E-04	4.95E-06	4.00E-02	2.35E-04	---	---	---	3.50E-04
Fluoranthene	1.70E+02	2.66E-01	1.57E-03	2.82E-03	1.66E-05	5.70E-01	3.35E-03	---	---	---	4.93E-03
Fluorene	1.70E+02	8.61E-03	5.06E-05	5.92E-04	3.49E-06	1.85E-02	1.09E-04	---	---	---	1.63E-04
1-Methylnaphthalene	1.70E+02	1.51E-03	8.87E-06	2.69E-04	1.58E-06	3.26E-03	1.92E-05	---	---	---	2.96E-05
2-Methylnaphthalene	1.70E+02	1.77E-03	1.04E-05	2.89E-04	1.70E-06	3.84E-03	2.26E-05	---	---	---	3.47E-05
Naphthalene	1.70E+02	5.32E-03	3.13E-05	4.76E-04	2.80E-06	1.19E-02	6.98E-05	---	---	---	1.04E-04
Phenanthrene	1.70E+02	2.13E-01	1.25E-03	2.55E-03	1.50E-05	4.57E-01	2.69E-03	---	---	---	3.95E-03
										TOTAL LPAH HQ =	9.72E-03
High Molecular Weight PAHs											
Benz(a)anthracene	1.80E+01	3.11E-02	1.73E-03	1.34E-03	7.46E-05	3.32E-02	1.85E-03	---	---	---	3.65E-03
Benzo(a)pyrene	1.80E+01	2.48E-02	1.38E-03	1.09E-03	6.04E-05	1.33E-01	7.38E-03	---	---	---	8.62E-03
Benzo(b)fluoranthene	1.80E+01	2.22E-02	1.23E-03	9.76E-04	5.42E-05	2.37E-02	1.32E-03	---	---	---	2.60E-03
Benzo(g,h,i)perylene	1.80E+01	1.33E-02	7.39E-04	6.02E-04	3.34E-05	7.12E-02	3.95E-03	---	---	---	4.73E-03
Benzo(k)fluoranthene	1.80E+01	2.13E-02	1.18E-03	9.39E-04	5.22E-05	2.28E-02	1.27E-03	---	---	---	2.50E-03
Chrysene	1.80E+01	3.19E-02	1.77E-03	1.38E-03	7.66E-05	3.42E-02	1.90E-03	---	---	---	3.75E-03
Dibenz(a,h)anthracene	1.80E+01	3.99E-03	2.22E-04	1.92E-04	1.07E-05	2.13E-02	1.19E-03	---	---	---	1.42E-03
Indeno(1,2,3-cd)pyrene	1.80E+01	5.24E-02	2.91E-03	2.20E-03	1.22E-04	2.80E-01	1.55E-02	---	---	---	1.86E-02
Perylene	1.80E+01	5.77E-03	3.20E-04	2.73E-04	1.51E-05	3.08E-02	1.71E-03	---	---	---	2.05E-03
Pyrene	1.80E+01	1.95E-01	1.08E-02	7.65E-03	4.25E-04	2.09E-01	1.16E-02	---	---	---	2.29E-02
										TOTAL HPAH HQ =	7.10E-02
										TOTAL PAH HQ =	8.07E-02
Inorganics											
Tin	4.40E+01	1.77E-01	4.03E-03	3.75E-03	8.52E-05	8.44E-01	1.92E-02	2.00E-04	4.55E-06	---	2.33E-02

Intake Parameters for the Meadow Vole		
Receptor Name	Meadow Vole	
Name of Study Area	Northwest Point South	
Entire Local Study Area or Project Alone	Baseline Case	
Does the OMOE 511/09 regulation apply to this site?	No	
Fraction of organic carbon in the soil	0.01	(unitless)
Fraction organic carbon in freshwater (dry) sediment	0.0706	(unitless, usual range is 0.003 to 0.03)
Fraction organic carbon in marine (dry) sediment	0.01	(unitless, usual range is 0.003 to 0.03)
Fraction lipid in freshwater invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Fraction lipid in marine invertebrates (wet weight)	0.017	(unitless, usual range is 0.012 to 0.025)
Soil Moisture Content	0.25	(cm^3/cm^3) or (ml/cm^3)
Soil Bulk Density	1.487	(g/cm^3)
Calculate TU based on	1	(1-top 5% most sensitive species, 2-Rainbow Trout, 3-Daphnia magna)
Receptor Type	2	(1-Bird, 2-Mammal)
Is Receptor Sensitive Species for the Project?	0	(1-Yes, 0-No)
Small Mammal Type	1	(1-General, 2-Herbivore, 3-Insectivore) Default value should be 1
Fish based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Benthic Invertebrates based on Sediment or Surface Water Uptake	1	(1-Freshwater Sediment, 2-Surface Water) Default value should be 1
Aquatic Plants based on Sediment or Surface Water Uptake	2	(1-Freshwater Sediment, 2-Surface Water) Default value should be 2
Fish based on Sediment or Seawater Uptake	2	(1-Marine Sediment, 2-Seawater) Default value should be 2
Marine Benthic Invertebrates based on Sediment or Seawater Uptake	1	(1-Marine Sediment, 2-Seawater) Default value should be 1
General Parameters		
Body weight	0.042	kg
Food intake rate	1.10E-02	kg wet-wt/day
Water intake rate	6.00E-03	L/day
Ingestion of Soil		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction diet that is dry solid	4.80E-01	
Fraction of food intake rate	5.96E-02	
Ingestion rate	3.15E-04	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sl)	7.49E-03	kg/kg-day
Ingestion of Terrestrial Plants		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	9.80E-01	
Ingestion rate	1.08E-02	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tp)	2.57E-01	kg/kg-day
Ingestion of Terrestrial Invertebrates		
Applicable pathway?	1	(0 = no, 1 = yes)
Fraction of food intake rate	2.00E-02	
Ingestion rate	2.20E-04	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ti)	5.24E-03	kg/kg-day
Ingestion of Terrestrial Mammals/Birds		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-tm)	0.00E+00	kg/kg-day
Ingestion of Surface Water		
Applicable pathway?	1	(0 = no, 1 = yes)
Ingestion rate	6.00E-03	L/day
Fraction from site	1	
Intake factor (IFing-sw)	1.43E-01	L/kg-day
Ingestion of Freshwater Sediment		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction diet that is dry solid	0.00E+00	
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg dry-wt/day
Fraction from site	1	
Intake factor (IFing-sed)	0.00E+00	kg/kg-day
Ingestion of Freshwater Aquatic Plants		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ap)	0.00E+00	kg/kg-day
Ingestion of Freshwater Benthic Invertebrates		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-ai)	0.00E+00	kg/kg-day
Ingestion of Freshwater Fish		
Applicable pathway?	0	(0 = no, 1 = yes)
Fraction of food intake rate	0.00E+00	
Ingestion rate	0.00E+00	kg wet-wt/day
Fraction from site	1	
Intake factor (IFing-fsh)	0.00E+00	kg/kg-day

Detailed Baseline Case Hazard Quotients for the Meadow Vole Exposed to CoPCs at Northwest P Detailed Baseline Case Hazard Quotients for the Meadow Vole Exposed to CoPCs at No

Detailed Baseline Case Hazard Quotients for the Meadow Vole Exposed to CoPCs at Northwest Point South Receptor Location

Constituent	Reference Toxicity Dose (mg/kg-day)	Average Daily Dose (mg/kg-day)	Surface Soil Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Plant Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Invertebrate Ingestion HQ	Average Daily Dose (mg/kg-day)	Terrestrial Mammal Ingestion HQ	Average Daily Dose (mg/kg-day)	Surface Water Ingestion HQ	Marine Fish Ingestion HQ	Total Hazard Quotient
TPH - CCME CWS													
Aliph>C06-C08 - F1	5.00E+01	1.40E+00	2.80E-02	7.10E+00	1.42E-01	9.64E-02	1.93E-03	---	---	---	---	---	1.72E-01
Aliph>C08-C10 - F1	5.00E+01	9.17E-01	1.83E-02	5.86E-01	1.17E-02	6.26E-02	1.25E-03	---	---	---	---	---	3.13E-02
Arom>C08-C10 - F1	1.00E+02	2.29E-01	2.29E-03	2.38E+00	2.38E-02	1.60E-02	1.60E-04	---	---	---	---	---	2.63E-02
F1 - Total													2.30E-01
Aliph>C10-C12 - F2	2.50E+02	4.85E+01	1.94E-01	2.03E+00	8.11E-03	2.07E+00	8.28E-03	---	---	3.29E-02	1.31E-04	---	2.11E-01
Aliph>C12-C16 - F2	2.50E+02	5.93E+01	2.37E-01	1.79E-01	7.15E-04	2.02E+00	8.09E-03	---	---	4.00E-02	1.60E-04	---	2.46E-01
Arom>C10-C12 - F2	5.00E+01	1.21E+01	2.43E-01	8.94E+01	1.79E+00	5.25E-01	1.05E-02	---	---	8.29E-03	1.66E-04	---	2.01E+00
Arom>C12-C16 - F2	5.00E+01	1.48E+01	2.97E-01	6.17E+01	1.23E+00	6.37E-01	1.27E-02	---	---	1.00E-02	2.00E-04	---	1.54E+00
F2 - Total													4.04E+00
Aliph>C16-C21 - F3	1.00E+03	6.74E-01	6.74E-04	2.03E-03	2.03E-06	2.30E-02	2.30E-05	---	---	3.71E-02	3.71E-05	---	7.36E-04
Aliph>C21-C34 - F3	1.00E+03	2.85E-01	2.85E-04	8.57E-04	8.57E-07	4.85E-03	4.85E-06	---	---	1.57E-02	1.57E-05	---	3.06E-04
Arom>C16-C21 - F3	5.00E+01	1.68E-01	3.36E-03	2.30E-01	4.60E-03	5.74E-03	1.15E-04	---	---	9.14E-03	1.83E-04	---	8.25E-03
Arom>C21-C34 - F3	5.00E+01	7.19E-02	1.44E-03	8.03E-03	1.61E-04	2.45E-03	4.91E-05	---	---	4.00E-03	8.00E-05	---	1.73E-03
F3 - Total													1.10E-02
												Total TPH HQ =	4.28E+00
Polycyclic Aromatic Hydrocarbons													
Low Molecular Weight PAHs													
Acenaphthene	1.70E+02	6.14E-03	3.61E-05	9.39E-03	5.53E-05	1.41E-04	8.28E-07	---	---	---	---	---	9.22E-05
Acenaphthylene	1.70E+02	7.34E-04	4.32E-06	3.58E-03	2.10E-05	1.68E-05	9.88E-08	---	---	---	---	---	2.55E-05
Anthracene	1.70E+02	1.57E-02	9.25E-05	1.44E-02	8.47E-05	3.58E-04	2.10E-06	---	---	---	---	---	1.79E-04
Fluoranthene	1.70E+02	2.25E-01	1.32E-03	4.82E-02	2.84E-04	5.10E-03	3.00E-05	---	---	---	---	---	1.64E-03
Fluorene	1.70E+02	7.27E-03	4.27E-05	1.01E-02	5.96E-05	1.66E-04	9.75E-07	---	---	---	---	---	1.03E-04
1-Methylnaphthalene	1.70E+02	1.27E-03	7.49E-06	4.60E-03	2.70E-05	2.92E-05	1.72E-07	---	---	---	---	---	3.47E-05
2-Methylnaphthalene	1.70E+02	1.50E-03	8.81E-06	4.95E-03	2.91E-05	3.44E-05	2.02E-07	---	---	---	---	---	3.81E-05
Naphthalene	1.70E+02	4.49E-03	2.64E-05	8.15E-03	4.79E-05	1.06E-04	6.25E-07	---	---	---	---	---	7.50E-05
Phenanthrene	1.70E+02	1.80E-01	1.06E-03	4.36E-02	2.56E-04	4.09E-03	2.41E-05	---	---	---	---	---	1.34E-03
												TOTAL LPAH HQ =	3.52E-03
High Molecular Weight PAHs													
Benz(a)anthracene	1.80E+01	2.62E-02	1.46E-03	2.30E-02	1.28E-03	2.97E-04	1.65E-05	---	---	---	---	---	2.75E-03
Benzo(a)pyrene	1.80E+01	2.10E-02	1.17E-03	1.86E-02	1.03E-03	1.19E-03	6.61E-05	---	---	---	---	---	2.25E-03
Benzo(b)fluoranthene	1.80E+01	1.87E-02	1.04E-03	1.67E-02	9.28E-04	2.12E-04	1.18E-05	---	---	---	---	---	1.98E-03
Benzo(g,h,i)perylene	1.80E+01	1.12E-02	6.24E-04	1.03E-02	5.72E-04	6.37E-04	3.54E-05	---	---	---	---	---	1.23E-03
Benzo(k)fluoranthene	1.80E+01	1.80E-02	9.99E-04	1.61E-02	8.93E-04	2.04E-04	1.13E-05	---	---	---	---	---	1.90E-03
Chrysene	1.80E+01	2.70E-02	1.50E-03	2.36E-02	1.31E-03	3.06E-04	1.70E-05	---	---	---	---	---	2.83E-03
Dibenz(a,h)anthracene	1.80E+01	3.37E-03	1.87E-04	3.29E-03	1.83E-04	1.91E-04	1.06E-05	---	---	---	---	---	3.81E-04
Indeno(1,2,3-cd)pyrene	1.80E+01	4.42E-02	2.46E-03	3.77E-02	2.09E-03	2.51E-03	1.39E-04	---	---	---	---	---	4.69E-03
Perylene	1.80E+01	4.87E-03	2.70E-04	4.67E-03	2.59E-04	2.76E-04	1.53E-05	---	---	---	---	---	5.45E-04
Pyrene	1.80E+01	1.65E-01	9.16E-03	1.31E-01	7.28E-03	1.87E-03	1.04E-04	---	---	---	---	---	1.65E-02
												TOTAL HPAH HQ =	3.51E-02
												TOTAL PAH HQ =	3.86E-02
Inorganics													
Tin	4.40E+01	1.50E-01	3.40E-03	6.42E-02	1.46E-03	7.56E-03	1.72E-04	---	---	1.43E-04	3.25E-06	---	5.04E-03