

# Meliadine Extension – FEIS Addendum

## Supporting Files for the Human Health and Ecological Risk Assessment

- Appendix H-12-A: Soil Screening – Ecological Health**
- Appendix H-12-B: Water Quality Screening – Ecological Health**
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**APPENDIX H-12-A****Soil Screening – Ecological Health****Table H-12-A-1: Soil Loss Constants (Ks) for Polycyclic Aromatic Hydrocarbons****Table H-12-A-2a: Estimation of Soil Concentrations - Scenario 1****Table H-12-A-2b: Estimation of Soil Concentrations - Scenario 2****Table H-12-A-2c: Estimation of Soil Concentrations - Scenario 3****Table H-12-A-2d: Estimation of Soil Concentrations - Scenario 4****Table H-12-A-2e: Estimation of Soil Concentrations - Scenario 5****Table H-12-A-2f: Estimation of Soil Concentrations - Scenario 6****Table H-12-A-3a: Comparison of Soil Concentrations to Ecological Guidelines - Scenario 1****Table H-12-A-3b: Comparison of Soil Concentrations to Ecological Guidelines - Scenario 2****Table H-12-A-3c: Comparison of Soil Concentrations to Ecological Guidelines - Scenario 3****Table H-12-A-3d: Comparison of Soil Concentrations to Ecological Guidelines - Scenario 4****Table H-12-A-3e: Comparison of Soil Concentrations to Ecological Guidelines - Scenario 5****Table H-12-A-3f: Comparison of Soil Concentrations to Ecological Guidelines - Scenario 6**

**Table H-12-A-1: Soil Loss Constants (Ks) for Polycyclic Aromatic Hydrocarbons**

<b>Parameter</b>	<b>Soil Loss Constant (Ks)<sup>a</sup> (1/yr)</b>
Benzo(a)pyrene	0.48
Naphthalene	5.27
Phenanthrene	1.26
Anthracene	0.55
Fluorene	4.22
Pyrene	0.13
Thiophenes	NA
Benz(a)anthracene	0.37
Acenaphthene	2.48
Acenaphthylene	NA
Fluoranthene	0.57
Benzo(b)fluoranthene	0.41
Benzo(g,h,i)perylene	NA
Benzo(k)fluoranthene	0.12
Chrysene	0.25
Dibenzo(a,h)anthracene	0.27
Indeno(1,2,3-cd)pyrene	0.35

<sup>a</sup> Soil loss constants taken from Howard et al. 1991 as cited in USEPA 2005.

NA = Not available. Ks conservatively set at 0 as loss constants are not available.

Prepared by: SG

Checked by: TMG

Chemical	Baseline Soil Concentration <sup>a</sup> (mg/kg)	Wet Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Dry Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Incremental Soil Concentration <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)
<b>Total Metals</b>					
Aluminum (Al)	9670	2.09E-02	4.22E-02	5.04E+01	9720
Antimony (Sb)	0.113	1.18E-06	2.38E-06	2.85E-03	0.116
Arsenic (As)	59.9	3.34E-05	6.76E-05	8.09E-02	60.0
Barium (Ba)	119	1.18E-04	2.38E-04	2.85E-01	119
Beryllium (Be)	3.71	2.19E-07	4.43E-07	5.30E-04	3.71
Bismuth (Bi)	0.15	6.02E-08	1.22E-07	1.46E-04	0.15
Cadmium (Cd)	0.8	9.73E-05	2.16E-05	9.51E-02	0.90
Calcium (Ca)	26700	1.19E-02	2.41E-02	2.88E+01	26729
Chromium (Cr)	51.3	5.56E-05	1.05E-04	1.28E-01	51.4
Cobalt (Co)	45	8.07E-06	1.63E-05	1.95E-02	45
Copper (Cu)	72	2.13E-05	4.32E-05	5.16E-02	72
Gold (Au)**	0.005	2.33E-08	4.72E-08	5.64E-05	0.005
Iron (Fe)	21300	2.29E-02	4.63E-02	5.53E+01	21355
Lead (Pb)	10	1.90E-05	1.08E-05	2.39E-02	10
Lithium (Li)	13.1	9.74E-06	1.97E-05	2.35E-02	13.1
Magnesium (Mg)	7080	6.31E-03	1.28E-02	1.53E+01	7095
Manganese (Mn)	425	2.37E-04	4.80E-04	5.74E-01	426
Molybdenum (Mo)	7	3.61E-07	7.31E-07	8.74E-04	7.0
Nickel (Ni)	48	2.09E-05	4.23E-05	5.06E-02	48
Potassium (K)	2670	3.99E-03	8.08E-03	9.66E+00	2680
Selenium (Se)	1.2	3.60E-07	7.29E-07	8.71E-04	1.2
Silver (Ag)	0.5	8.87E-08	1.79E-07	2.14E-04	0.5
Sodium (Na)	320	4.77E-03	9.65E-03	1.15E+01	332
Strontium (Sr)	195	6.38E-05	1.29E-04	1.54E-01	195
Thallium (Tl)	0.5	9.21E-08	1.86E-07	2.23E-04	0.50
Tin (Sn)	2.5	3.25E-07	6.57E-07	7.85E-04	2.5
Titanium (Ti)	945	1.05E-03	2.12E-03	2.54E+00	948
Uranium (U)	1.97	2.93E-07	5.92E-07	7.08E-04	1.97
Vanadium (V)	39	3.86E-05	7.81E-05	9.33E-02	39
Yttrium (Y)**	23	2.85E-06	5.76E-06	6.89E-03	23
Zinc (Zn)	70	1.37E-04	8.60E-05	1.79E-01	70
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene*	0.025	1.78E-07	3.93E-08	2.18E-05	0.025
Naphthalene*	0.025	7.06E-05	1.56E-05	8.61E-03	0.034
Phenanthrene*	0.025	5.83E-06	1.29E-06	7.11E-04	0.026
Anthracene*	0.025	6.50E-07	1.43E-07	7.94E-05	0.025
Fluorene*	0.025	2.84E-06	6.27E-07	3.47E-04	0.025
Pyrene*	0.025	2.13E-06	4.70E-07	2.31E-04	0.025
Thiophene*	0.025	3.69E-08	8.15E-09	3.61E-05	0.025
Benzo(a)anthracene*	0.025	8.46E-08	1.87E-08	1.03E-05	0.025
Acenaphthene*	0.025	5.48E-07	1.21E-07	6.69E-05	0.025
Acenaphthylene*	0.025	1.99E-06	4.39E-07	1.94E-03	0.027
Fluoranthene*	0.025	2.12E-06	4.67E-07	2.59E-04	0.025
Benzo(b)fluoranthene*	0.025	3.93E-07	8.67E-08	4.80E-05	0.025
Benzo(g,h,i)perylene*	0.025	7.47E-09	1.65E-09	7.29E-06	0.025
Benzo(k)fluoranthene*	0.025	4.47E-08	9.87E-09	4.61E-06	0.025
Chrysene*	0.025	9.51E-08	2.10E-08	1.16E-05	0.025
Dibenzo(a,h)anthracene*	0.025	1.24E-07	2.73E-08	1.51E-05	0.025
Indeno(1,2,3-c,d)pyrene*	0.025	7.87E-08	1.74E-08	9.60E-06	0.025

<sup>a</sup> Maximum measured baseline soil concentration.

<sup>b</sup> The maximum wet/dry deposition rate of all modelled locations.

<sup>c</sup> The maximum incremental soil concentration of all modelled locations.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.  
mg/kg = milligram per kilogram; gram per square metre per year.

Prepared by: SG  
Checked by: TMG/BP

Chemical	Baseline Soil Concentration <sup>a</sup> (mg/kg)	Wet Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Dry Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Incremental Soil Concentration <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)
<b>Total Metals</b>					
Aluminum (Al)	9670	2.51E-02	7.76E-02	8.21E+01	9752
Antimony (Sb)	0.113	1.42E-06	4.39E-06	4.65E-03	0.12
Arsenic (As)	59.9	4.03E-05	1.24E-04	1.32E-01	60.0
Barium (Ba)	119	1.42E-04	4.38E-04	4.64E-01	119
Beryllium (Be)	3.71	2.64E-07	8.16E-07	8.64E-04	3.71
Bismuth (Bi)	0.15	7.25E-08	2.24E-07	2.37E-04	0.15
Cadmium (Cd)	0.8	9.73E-05	2.16E-05	9.51E-02	0.90
Calcium (Ca)	26700	1.43E-02	4.43E-02	4.69E+01	26747
Chromium (Cr)	51.3	6.18E-05	1.87E-04	1.99E-01	51.5
Cobalt (Co)	45	9.71E-06	3.00E-05	3.18E-02	45
Copper (Cu)	72	2.57E-05	7.94E-05	8.41E-02	72
Gold (Au)**	0.005	2.81E-08	8.68E-08	9.19E-05	0.005
Iron (Fe)	21300	2.76E-02	8.52E-02	9.02E+01	21390
Lead (Pb)	10	1.90E-05	1.42E-05	2.66E-02	10
Lithium (Li)	13.1	1.17E-05	3.62E-05	3.84E-02	13
Magnesium (Mg)	7080	7.60E-03	2.35E-02	2.49E+01	7105
Manganese (Mn)	425	2.86E-04	8.83E-04	9.35E-01	426
Molybdenum (Mo)	7	4.35E-07	1.34E-06	1.42E-03	7
Nickel (Ni)	48	2.52E-05	7.79E-05	8.25E-02	48
Potassium (K)	2670	4.81E-03	1.49E-02	1.57E+01	2686
Selenium (Se)	1.2	4.34E-07	1.34E-06	1.42E-03	1.2
Silver (Ag)	0.5	1.07E-07	3.30E-07	3.49E-04	0.5
Sodium (Na)	320	5.74E-03	1.78E-02	1.88E+01	339
Strontium (Sr)	195	7.68E-05	2.37E-04	2.51E-01	195
Thallium (Tl)	0.5	1.11E-07	3.43E-07	3.63E-04	0.5
Tin (Sn)	2.5	3.91E-07	1.21E-06	1.28E-03	2.5
Titanium (Ti)	945	1.26E-03	3.91E-03	4.14E+00	949
Uranium (U)	1.97	3.53E-07	1.09E-06	1.15E-03	1.97
Vanadium (V)	39	4.65E-05	1.44E-04	1.52E-01	39
Yttrium (Y)**	23	3.43E-06	1.06E-05	1.12E-02	23
Zinc (Zn)	70	1.37E-04	1.18E-04	2.04E-01	70
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene*	0.025	1.78E-07	3.92E-08	2.18E-05	0.025
Naphthalene*	0.025	7.06E-05	1.55E-05	8.61E-03	0.034
Phenanthrene*	0.025	5.83E-06	1.28E-06	7.11E-04	0.026
Anthracene*	0.025	6.50E-07	1.43E-07	7.93E-05	0.025
Fluorene*	0.025	2.84E-06	6.26E-07	3.47E-04	0.025
Pyrene*	0.025	2.13E-06	4.69E-07	2.30E-04	0.025
Thiophene*	0.025	3.69E-08	8.13E-09	3.61E-05	0.025
Benzo(a)anthracene*	0.025	8.46E-08	1.86E-08	1.03E-05	0.025
Acenaphthene*	0.025	5.48E-07	1.21E-07	6.69E-05	0.025
Acenaphthylene*	0.025	1.99E-06	4.38E-07	1.94E-03	0.027
Fluoranthene*	0.025	2.12E-06	4.66E-07	2.58E-04	0.025
Benzo(b)fluoranthene*	0.025	3.93E-07	8.65E-08	4.80E-05	0.025
Benzo(g,h,i)perylene*	0.025	7.47E-09	1.64E-09	7.29E-06	0.025
Benzo(k)fluoranthene*	0.025	4.47E-08	9.84E-09	4.61E-06	0.025
Chrysene*	0.025	9.51E-08	2.09E-08	1.16E-05	0.025
Dibenzo(a,h)anthracene*	0.025	1.24E-07	2.72E-08	1.51E-05	0.025
Indeno(1,2,3-c,d)pyrene*	0.025	7.87E-08	1.73E-08	9.60E-06	0.025

<sup>a</sup> Maximum measured baseline soil concentration.

<sup>b</sup> The maximum wet/dry deposition rate of all modelled locations.

<sup>c</sup> The maximum incremental soil concentration of all modelled locations.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.  
mg/kg = milligram per kilogram; gram per square metre per year.

Prepared by: SG

Checked by: TMG/BP

Chemical	Baseline Soil Concentration <sup>a</sup> (mg/kg)	Wet Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Dry Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Incremental Soil Concentration <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)
<b>Total Metals</b>					
Aluminum (Al)	9670	3.44E-02	4.13E-02	6.06E+01	9731
Antimony (Sb)	0.113	1.95E-06	2.33E-06	3.42E-03	0.116
Arsenic (As)	59.9	5.52E-05	6.62E-05	9.71E-02	60.0
Barium (Ba)	119	1.94E-04	2.33E-04	3.42E-01	119
Beryllium (Be)	3.71	3.62E-07	4.34E-07	6.36E-04	3.71
Bismuth (Bi)	0.15	9.94E-08	1.19E-07	1.75E-04	0.15
Cadmium (Cd)	0.8	9.72E-05	2.16E-05	9.50E-02	0.9
Calcium (Ca)	26700	1.96E-02	2.36E-02	3.46E+01	26735
Chromium (Cr)	51.3	8.48E-05	1.03E-04	1.50E-01	51.5
Cobalt (Co)	45	1.33E-05	1.60E-05	2.34E-02	45
Copper (Cu)	72	3.52E-05	4.22E-05	6.20E-02	72
Gold (Au)**	0.005	3.85E-08	4.61E-08	6.77E-05	0.005
Iron (Fe)	21300	3.78E-02	4.53E-02	6.64E+01	21366
Lead (Pb)	10	1.89E-05	1.07E-05	2.37E-02	10
Lithium (Li)	13.1	1.61E-05	1.93E-05	2.83E-02	13.1
Magnesium (Mg)	7080	1.04E-02	1.25E-02	1.83E+01	7098
Manganese (Mn)	425	3.92E-04	4.70E-04	6.89E-01	426
Molybdenum (Mo)	7	5.96E-07	7.15E-07	1.05E-03	7
Nickel (Ni)	48	3.45E-05	4.14E-05	6.08E-02	48
Potassium (K)	2670	6.59E-03	7.91E-03	1.16E+01	2682
Selenium (Se)	1.2	5.95E-07	7.13E-07	1.05E-03	1.2
Silver (Ag)	0.5	1.46E-07	1.76E-07	2.57E-04	0.5
Sodium (Na)	320	7.87E-03	9.44E-03	1.39E+01	334
Strontium (Sr)	195	1.05E-04	1.26E-04	1.85E-01	195
Thallium (Tl)	0.5	1.52E-07	1.82E-07	2.67E-04	0.5
Tin (Sn)	2.5	5.36E-07	6.42E-07	9.42E-04	2.5
Titanium (Ti)	945	1.73E-03	2.08E-03	3.05E+00	948
Uranium (U)	1.97	4.83E-07	5.80E-07	8.50E-04	1.97
Vanadium (V)	39	6.37E-05	7.64E-05	1.12E-01	39
Yttrium (Y)**	23	4.70E-06	5.64E-06	8.27E-03	23
Zinc (Zn)	70	1.36E-04	8.46E-05	1.77E-01	70
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene*	0.025	1.78E-07	3.92E-08	2.17E-05	0.025
Naphthalene*	0.025	7.05E-05	1.55E-05	8.60E-03	0.034
Phenanthrene*	0.025	5.82E-06	1.28E-06	7.11E-04	0.026
Anthracene*	0.025	6.50E-07	1.43E-07	7.93E-05	0.025
Fluorene*	0.025	2.84E-06	6.26E-07	3.47E-04	0.025
Pyrene*	0.025	2.13E-06	4.69E-07	2.30E-04	0.025
Thiophene*	0.025	3.69E-08	8.13E-09	3.60E-05	0.025
Benzo(a)anthracene*	0.025	8.45E-08	1.86E-08	1.03E-05	0.025
Acenaphthene*	0.025	5.48E-07	1.21E-07	6.68E-05	0.025
Acenaphthylene*	0.025	1.99E-06	4.38E-07	1.94E-03	0.027
Fluoranthene*	0.025	2.12E-06	4.66E-07	2.58E-04	0.025
Benzo(b)fluoranthene*	0.025	3.93E-07	8.65E-08	4.79E-05	0.025
Benzo(g,h,i)perylene*	0.025	7.46E-09	1.64E-09	7.29E-06	0.025
Benzo(k)fluoranthene*	0.025	4.47E-08	9.84E-09	4.60E-06	0.025
Chrysene*	0.025	9.50E-08	2.09E-08	1.16E-05	0.025
Dibenzo(a,h)anthracene*	0.025	1.24E-07	2.72E-08	1.51E-05	0.025
Indeno(1,2,3-c,d)pyrene*	0.025	7.86E-08	1.73E-08	9.59E-06	0.025

<sup>a</sup> Maximum measured baseline soil concentration.

<sup>b</sup> The maximum wet/dry deposition rate of all modelled locations.

<sup>c</sup> The maximum incremental soil concentration of all modelled locations.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.  
mg/kg = milligram per kilogram; gram per square metre per year.

Prepared by: SG  
Checked by: TMG/BP

Chemical	Baseline Soil Concentration <sup>a</sup> (mg/kg)	Wet Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Dry Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Incremental Soil Concentration <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)
<b>Total Metals</b>					
Aluminum (Al)	9670	1.51E-02	3.96E-02	4.38E+01	9714
Antimony (Sb)	0.113	8.49E-07	2.24E-06	2.47E-03	0.115
Arsenic (As)	59.9	2.41E-05	6.34E-05	7.00E-02	60.0
Barium (Ba)	119	8.48E-05	2.23E-04	2.47E-01	119
Beryllium (Be)	3.71	1.58E-07	4.16E-07	4.59E-04	3.71
Bismuth (Bi)	0.15	4.34E-08	1.14E-07	1.26E-04	0.15
Cadmium (Cd)	0.8	9.69E-05	2.15E-05	9.47E-02	0.9
Calcium (Ca)	26700	8.57E-03	2.26E-02	2.49E+01	26725
Chromium (Cr)	51.3	5.22E-05	9.86E-05	1.21E-01	51
Cobalt (Co)	45	5.81E-06	1.53E-05	1.69E-02	45
Copper (Cu)	72	1.54E-05	4.05E-05	4.47E-02	72
Gold (Au)**	0.005	1.68E-08	4.42E-08	4.88E-05	0.005
Iron (Fe)	21300	1.65E-02	4.34E-02	4.79E+01	21348
Lead (Pb)	10	1.87E-05	1.04E-05	2.33E-02	10
Lithium (Li)	13.1	7.01E-06	1.85E-05	2.04E-02	13.1
Magnesium (Mg)	7080	4.55E-03	1.20E-02	1.32E+01	7093
Manganese (Mn)	425	1.71E-04	4.50E-04	4.97E-01	425
Molybdenum (Mo)	7	2.60E-07	6.85E-07	7.56E-04	7
Nickel (Ni)	48	1.51E-05	3.97E-05	4.38E-02	48
Potassium (K)	2670	2.88E-03	7.58E-03	8.36E+00	2678
Selenium (Se)	1.2	2.59E-07	6.84E-07	7.55E-04	1.2
Silver (Ag)	0.5	6.38E-08	1.68E-07	1.86E-04	0.5
Sodium (Na)	320	3.43E-03	9.05E-03	9.99E+00	330
Strontium (Sr)	195	4.59E-05	1.21E-04	1.33E-01	195
Thallium (Tl)	0.5	6.63E-08	1.75E-07	1.93E-04	0.5
Tin (Sn)	2.5	2.34E-07	6.16E-07	6.80E-04	2.5
Titanium (Ti)	945	7.56E-04	1.99E-03	2.20E+00	947
Uranium (U)	1.97	2.11E-07	5.56E-07	6.13E-04	2.0
Vanadium (V)	39	2.78E-05	7.32E-05	8.08E-02	39
Yttrium (Y)**	23	2.05E-06	5.40E-06	5.96E-03	23
Zinc (Zn)	70	1.35E-04	8.21E-05	1.73E-01	70
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene*	0.025	1.78E-07	3.92E-08	2.17E-05	0.025
Naphthalene*	0.025	7.03E-05	1.55E-05	8.58E-03	0.034
Phenanthrene*	0.025	5.81E-06	1.28E-06	7.09E-04	0.026
Anthracene*	0.025	6.48E-07	1.43E-07	7.90E-05	0.025
Fluorene*	0.025	2.83E-06	6.24E-07	3.46E-04	0.025
Pyrene*	0.025	2.12E-06	4.68E-07	2.30E-04	0.025
Thiophene*	0.025	3.68E-08	8.11E-09	3.59E-05	0.025
Benzo(a)anthracene*	0.025	8.43E-08	1.86E-08	1.03E-05	0.025
Acenaphthene*	0.025	5.46E-07	1.20E-07	6.66E-05	0.025
Acenaphthylene*	0.025	1.98E-06	4.37E-07	1.94E-03	0.027
Fluoranthene*	0.025	2.11E-06	4.65E-07	2.57E-04	0.025
Benzo(b)fluoranthene*	0.025	3.92E-07	8.63E-08	4.78E-05	0.025
Benzo(g,h,i)perylene*	0.025	7.44E-09	1.64E-09	7.27E-06	0.025
Benzo(k)fluoranthene*	0.025	4.45E-08	9.82E-09	4.59E-06	0.025
Chrysene*	0.025	9.47E-08	2.09E-08	1.15E-05	0.025
Dibenzo(a,h)anthracene*	0.025	1.23E-07	2.72E-08	1.50E-05	0.025
Indeno(1,2,3-c,d)pyrene*	0.025	7.84E-08	1.73E-08	9.56E-06	0.025

<sup>a</sup> Maximum measured baseline soil concentration.

<sup>b</sup> The maximum wet/dry deposition rate of all modelled locations.

<sup>c</sup> The maximum incremental soil concentration of all modelled locations.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

mg/kg = milligram per kilogram; gram per square metre per year.

Prepared by: SG

Checked by: TMG/BP

Chemical	Baseline Soil Concentration <sup>a</sup> (mg/kg)	Wet Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Dry Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Incremental Soil Concentration <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)
<b>Total Metals</b>					
Aluminum (Al)	9670	2.64E-02	1.08E-01	1.08E+02	9778
Antimony (Sb)	0.113	1.49E-06	6.13E-06	6.10E-03	0.12
Arsenic (As)	59.9	4.23E-05	1.74E-04	1.73E-01	60
Barium (Ba)	119	1.49E-04	6.13E-04	6.09E-01	120
Beryllium (Be)	3.71	2.77E-07	1.14E-06	1.13E-03	3.71
Bismuth (Bi)	0.15	7.62E-08	3.13E-07	3.12E-04	0.15
Cadmium (Cd)	0.8	9.75E-05	2.16E-05	9.53E-02	0.90
Calcium (Ca)	26700	1.51E-02	6.19E-02	6.16E+01	26762
Chromium (Cr)	51.3	6.54E-05	2.62E-04	2.62E-01	52
Cobalt (Co)	45	1.02E-05	4.20E-05	4.17E-02	45
Copper (Cu)	72	2.70E-05	1.11E-04	1.10E-01	72
Gold (Au)**	0.005	2.95E-08	1.21E-07	1.21E-04	0.005
Iron (Fe)	21300	2.90E-02	1.19E-01	1.18E+02	21418
Lead (Pb)	10	1.91E-05	2.01E-05	3.14E-02	10
Lithium (Li)	13.1	1.23E-05	5.06E-05	5.04E-02	13.2
Magnesium (Mg)	7080	7.99E-03	3.28E-02	3.27E+01	7113
Manganese (Mn)	425	3.00E-04	1.23E-03	1.23E+00	426
Molybdenum (Mo)	7	4.57E-07	1.88E-06	1.87E-03	7.0
Nickel (Ni)	48	2.65E-05	1.09E-04	1.08E-01	48
Potassium (K)	2670	5.06E-03	2.08E-02	2.07E+01	2691
Selenium (Se)	1.2	4.56E-07	1.88E-06	1.86E-03	1.2
Silver (Ag)	0.5	1.12E-07	4.61E-07	4.59E-04	0.5
Sodium (Na)	320	6.04E-03	2.48E-02	2.47E+01	345
Strontium (Sr)	195	8.07E-05	3.32E-04	3.30E-01	195
Thallium (Tl)	0.5	1.17E-07	4.79E-07	4.76E-04	0.5
Tin (Sn)	2.5	4.11E-07	1.69E-06	1.68E-03	2.5
Titanium (Ti)	945	1.33E-03	5.46E-03	5.43E+00	950
Uranium (U)	1.97	3.71E-07	1.52E-06	1.52E-03	1.97
Vanadium (V)	39	4.89E-05	2.01E-04	2.00E-01	39
Yttrium (Y)**	23	3.61E-06	1.48E-05	1.47E-02	23
Zinc (Zn)	70	1.38E-04	1.67E-04	2.43E-01	70
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene*	0.025	1.79E-07	3.94E-08	2.18E-05	0.025
Naphthalene*	0.025	7.07E-05	1.56E-05	8.63E-03	0.034
Phenanthrene*	0.025	5.84E-06	1.29E-06	7.13E-04	0.026
Anthracene*	0.025	6.52E-07	1.44E-07	7.95E-05	0.025
Fluorene*	0.025	2.85E-06	6.28E-07	3.48E-04	0.025
Pyrene*	0.025	2.14E-06	4.70E-07	2.31E-04	0.025
Thiophene*	0.025	3.70E-08	8.16E-09	3.62E-05	0.025
Benzo(a)anthracene*	0.025	8.48E-08	1.87E-08	1.03E-05	0.025
Acenaphthene*	0.025	5.49E-07	1.21E-07	6.70E-05	0.025
Acenaphthylene*	0.025	2.00E-06	4.39E-07	1.95E-03	0.027
Fluoranthene*	0.025	2.12E-06	4.68E-07	2.59E-04	0.025
Benzo(b)fluoranthene*	0.025	3.94E-07	8.68E-08	4.81E-05	0.025
Benzo(g,h,i)perylene*	0.025	7.49E-09	1.65E-09	7.31E-06	0.025
Benzo(k)fluoranthene*	0.025	4.48E-08	9.87E-09	4.62E-06	0.025
Chrysene*	0.025	9.54E-08	2.10E-08	1.16E-05	0.025
Dibenzo(a,h)anthracene*	0.025	1.24E-07	2.73E-08	1.51E-05	0.025
Indeno(1,2,3-c,d)pyrene*	0.025	7.89E-08	1.74E-08	9.62E-06	0.025

<sup>a</sup> Maximum measured baseline soil concentration.

<sup>b</sup> The maximum wet/dry deposition rate of all modelled locations.

<sup>c</sup> The maximum incremental soil concentration of all modelled locations.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.  
mg/kg = milligram per kilogram; gram per square metre per year.

Prepared by: SG  
Checked by: TMG/BP

Chemical	Baseline Soil Concentration <sup>a</sup> (mg/kg)	Wet Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Dry Deposition Rate <sup>b</sup> (g/m <sup>2</sup> /yr)	Incremental Soil Concentration <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)
<b>Total Metals</b>					
Aluminum (Al)	9670	1.34E-02	3.81E-02	4.12E+01	9711
Antimony (Sb)	0.113	7.53E-07	2.15E-06	2.32E-03	0.115
Arsenic (As)	59.9	2.14E-05	6.11E-05	6.59E-02	60.0
Barium (Ba)	119	7.52E-05	2.15E-04	2.32E-01	119
Beryllium (Be)	3.71	1.40E-07	4.00E-07	4.32E-04	3.71
Bismuth (Bi)	0.15	3.85E-08	1.10E-07	1.19E-04	0.15
Cadmium (Cd)	0.8	9.69E-05	2.15E-05	9.47E-02	0.89
Calcium (Ca)	26700	7.60E-03	2.17E-02	2.35E+01	26723
Chromium (Cr)	51.3	4.81E-05	9.50E-05	1.14E-01	51.4
Cobalt (Co)	45	5.15E-06	1.47E-05	1.59E-02	45
Copper (Cu)	72	1.36E-05	3.90E-05	4.21E-02	72
Gold (Au)**	0.005	1.49E-08	4.26E-08	4.60E-05	0.005
Iron (Fe)	21300	1.46E-02	4.18E-02	4.51E+01	21345
Lead (Pb)	10	1.84E-05	1.01E-05	2.28E-02	10
Lithium (Li)	13.1	6.22E-06	1.78E-05	1.92E-02	13.1
Magnesium (Mg)	7080	4.03E-03	1.15E-02	1.24E+01	7092
Manganese (Mn)	425	1.52E-04	4.33E-04	4.68E-01	425
Molybdenum (Mo)	7	2.31E-07	6.60E-07	7.12E-04	7.0
Nickel (Ni)	48	1.34E-05	3.82E-05	4.13E-02	48
Potassium (K)	2670	2.55E-03	7.29E-03	7.88E+00	2678
Selenium (Se)	1.2	2.30E-07	6.58E-07	7.11E-04	1.2
Silver (Ag)	0.5	5.66E-08	1.62E-07	1.75E-04	0.50
Sodium (Na)	320	3.05E-03	8.71E-03	9.41E+00	329
Strontium (Sr)	195	4.07E-05	1.16E-04	1.26E-01	195
Thallium (Tl)	0.5	5.88E-08	1.68E-07	1.82E-04	0.50
Tin (Sn)	2.5	2.07E-07	5.93E-07	6.40E-04	2.5
Titanium (Ti)	945	6.70E-04	1.92E-03	2.07E+00	947
Uranium (U)	1.97	1.87E-07	5.35E-07	5.77E-04	1.97
Vanadium (V)	39	2.47E-05	7.05E-05	7.61E-02	39
Yttrium (Y)**	23	1.82E-06	5.20E-06	5.62E-03	23
Zinc (Zn)	70	1.32E-04	7.99E-05	1.70E-01	70
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene*	0.025	1.78E-07	3.91E-08	2.17E-05	0.025
Naphthalene*	0.025	7.03E-05	1.55E-05	8.57E-03	0.034
Phenanthrene*	0.025	5.80E-06	1.28E-06	7.08E-04	0.026
Anthracene*	0.025	6.47E-07	1.43E-07	7.90E-05	0.025
Fluorene*	0.025	2.83E-06	6.24E-07	3.46E-04	0.025
Pyrene*	0.025	2.12E-06	4.67E-07	2.29E-04	0.025
Thiophene*	0.025	3.68E-08	8.11E-09	3.59E-05	0.025
Benzo(a)anthracene*	0.025	8.42E-08	1.86E-08	1.03E-05	0.025
Acenaphthene*	0.025	5.46E-07	1.20E-07	6.66E-05	0.025
Acenaphthylene*	0.025	1.98E-06	4.37E-07	1.93E-03	0.027
Fluoranthene*	0.025	2.11E-06	4.65E-07	2.57E-04	0.025
Benzo(b)fluoranthene*	0.025	3.91E-07	8.63E-08	4.78E-05	0.025
Benzo(g,h,i)perylene*	0.025	7.44E-09	1.64E-09	7.26E-06	0.025
Benzo(k)fluoranthene*	0.025	4.45E-08	9.82E-09	4.59E-06	0.025
Chrysene*	0.025	9.47E-08	2.09E-08	1.15E-05	0.025
Dibenzo(a,h)anthracene*	0.025	1.23E-07	2.72E-08	1.50E-05	0.025
Indeno(1,2,3-c,d)pyrene*	0.025	7.83E-08	1.73E-08	9.56E-06	0.025

<sup>a</sup> Maximum measured baseline soil concentration.

<sup>b</sup> The maximum wet/dry deposition rate of all modelled locations.

<sup>c</sup> The maximum incremental soil concentration of all modelled locations.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

mg/kg = milligram per kilogram; gram per square metre per year.

Prepared by: SG

Checked by: TMG/BP

Chemical	CCME SQ <sub>E</sub> <sup>a</sup> (mg/kg)	USEPA Eco-SSL <sup>b</sup> (mg/kg)	Baseline Soil Concentration + 10% <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)	COPC? <sup>e</sup>	Rationale
<b>Total Metals</b>						
Aluminum (Al)	NV	NV	10637	9720	No	NG, < B + 10%
Antimony (Sb)	NV	0.27	0.12	0.12	No	< G/SL
Arsenic (As)	17	--	66	60	No	< B + 10%
Barium (Ba)	NV	2000	131	119	No	< G/SL
Beryllium (Be)	NV	21	4.1	3.7	No	< G/SL
Bismuth (Bi)	NV	NV	0.17	0.15	No	NG, < B + 10%
Cadmium (Cd)	10	--	0.88	0.90	No	< G/SL
Calcium (Ca)	NV	NV	29370	26729	No	NG, < B + 10%
Chromium (Cr)	64	--	56	51	No	< G/SL
Cobalt (Co)	NV	120	50	45	No	< G/SL
Copper (Cu)	63	--	79	72	No	< B + 10%
Gold (Au)**	NV	NV	0.006	0.005	No	NG, < B + 10%
Iron (Fe)	NV	NV	23430	21355	No	NG, < B + 10%
Lead (Pb)	300	--	11	10	No	< G/SL
Lithium (Li)	NV	NV	14	13	No	NG, < B + 10%
Magnesium (Mg)	NV	NV	7788	7095	No	NG, < B + 10%
Manganese (Mn)	NV	4000	468	426	No	< G/SL
Molybdenum (Mo)	NV	NV	7.7	7.0	No	NG, < B + 10%
Nickel (Ni)	45	--	53	48	No	< B + 10%
Potassium (K)	NV	NV	2937	2680	No	NG, < B + 10%
Selenium (Se)	1	--	1.3	1.2	No	< B + 10%
Silver (Ag)	NV	4.2	0.55	0.50	No	< G/SL
Sodium (Na)	NV	NV	352	332	No	NG, < B + 10%
Strontium (Sr)	NV	NV	215	195	No	NG, < B + 10%
Thallium (Tl)	1.4	--	0.55	0.50	No	< G/SL
Tin (Sn)	NV	NV	2.8	2.5	No	NG, < B + 10%
Titanium (Ti)	NV	NV	1040	948	No	NG, < B + 10%
Uranium (U)	500	--	2.2	2.0	No	< G/SL
Vanadium (V)	130	--	43	39	No	< G/SL
Yttrium (Y)**	NV	NV	25	23	No	NG, < B + 10%
Zinc (Zn)	250	--	77	70	No	< G/SL
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene*	20	--	0.028	0.025	No	< G/SL
Naphthalene*	8.8 <sup>f</sup>	--	0.028	0.034	No	< G/SL
Phenanthrene*	43 <sup>f</sup>	--	0.028	0.026	No	< G/SL
Anthracene*	2.5	--	0.028	0.025	No	< G/SL
Fluorene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Pyrene*	10	--	0.028	0.025	No	< G/SL
Thiophene*	NV	NV	0.028	0.025	No	NG, < B + 10%
Benzo(a)anthracene*	1	--	0.028	0.025	No	< G/SL
Acenaphthene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Acenaphthylene*	NV	see Eco-SSL for HWM PAHs	0.028	0.026	No	see rationale for HMW PAHs
Fluoranthene*	50	--	0.028	0.025	No	< G/SL
Benzo(b)fluoranthene <sup>g</sup>	1	--	0.028	0.025	No	< G/SL
Benzo(g,h,i)perylene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Benzo(k)fluoranthene <sup>g</sup>	1	--	0.028	0.025	No	< G/SL
Chrysene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Dibenzo(a,h)anthracene <sup>g</sup>	1	--	0.028	0.025	No	< G/SL
Indeno(1,2,3-c,d)pyrene <sup>g</sup>	1	--	0.028	0.025	No	< G/SL
LMW PAHs	NV	100 <sup>g</sup>	0.25	0.23	No	< G/SL
HMW PAHs	NV	1.1 <sup>g</sup>	0.19	0.19	No	< G/SL

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines for the Protection of Environmental Health (SQ<sub>E</sub>) (CCME 2021, internet site). Residential/parkland land use.

<sup>b</sup> United States Environmental Protection Agency (USEPA) Ecological Soil Screening Levels (Eco-SSLs) (Avian and Mammalian) (USEPA 2021, internet site). The lower of the avian and mammalian Eco-SSL was chosen as the screening level.

<sup>c</sup> Maximum measured baseline soil concentration + 10%.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

<sup>e</sup> Yes = the predicted soil concentration is greater than the guideline/screening level and the maximum measured baseline soil concentration +10% and therefore the chemical was identified as a COPC; No = the predicted soil concentration is less than the guideline/screening level and/or maximum measured baseline soil concentration +10% and therefore the chemical was not identified as a COPC.

<sup>f</sup> SQG for soil and food ingestion.

<sup>g</sup> Low molecular weight PAHs includes those with less than four rings (i.e., acenaphthene, acenaphthylene, fluoranthene, anthracene, fluorene, naphthalene and phenanthrene). High molecular weight PAHs includes those with four or more rings (i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and pyrene). NV = no value, COPC = chemical of potential concern; mg/kg = milligram per kilogram; -- = value not required; < = less than; B = maximum measured baseline soil concentration + 10%; G/SL = CCME SQ<sub>E</sub>/USEPA Eco-SSL; NG = no guideline.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

Prepared by: SG/BP  
Checked by: TMG/SG

Chemical	CCME SQG <sub>E</sub> <sup>a</sup> (mg/kg)	USEPA Eco-SSL <sup>b</sup> (mg/kg)	Baseline Soil Concentration + 10% <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)	COPC? <sup>e</sup>	Rationale
<b>Total Metals</b>						
Aluminum (Al)	NV	NV	10637	9752	No	NG, < B + 10%
Antimony (Sb)	NV	0.27	0.12	0.12	No	< G/SL
Arsenic (As)	17	--	66	60	No	< B + 10%
Barium (Ba)	NV	2000	131	119	No	< G/SL
Beryllium (Be)	NV	21	4.1	3.7	No	< G/SL
Bismuth (Bi)	NV	NV	0.17	0.15	No	NG, < B + 10%
Cadmium (Cd)	10	--	0.88	0.90	No	< G/SL
Calcium (Ca)	NV	NV	29370	26747	No	NG, < B + 10%
Chromium (Cr)	64	--	56	52	No	< G/SL
Cobalt (Co)	NV	120	50	45	No	< G/SL
Copper (Cu)	63	--	79	72	No	< B + 10%
Gold (Au)**	NV	NV	0.006	0.005	No	NG, < B + 10%
Iron (Fe)	NV	NV	23430	21390	No	NG, < B + 10%
Lead (Pb)	300	--	11	10	No	< G/SL
Lithium (Li)	NV	NV	14	13	No	NG, < B + 10%
Magnesium (Mg)	NV	NV	7788	7105	No	NG, < B + 10%
Manganese (Mn)	NV	4000	468	426	No	< G/SL
Molybdenum (Mo)	NV	NV	7.7	7.0	No	NG, < B + 10%
Nickel (Ni)	45	--	53	48	No	< B + 10%
Potassium (K)	NV	NV	2937	2686	No	NG, < B + 10%
Selenium (Se)	1	--	1.3	1.2	No	< B + 10%
Silver (Ag)	NV	4.2	0.55	0.50	No	< G/SL
Sodium (Na)	NV	NV	352	339	No	NG, < B + 10%
Strontium (Sr)	NV	NV	215	195	No	NG, < B + 10%
Thallium (Tl)	1.4	--	0.55	0.50	No	< G/SL
Tin (Sn)	NV	NV	2.8	2.5	No	NG, < B + 10%
Titanium (Ti)	NV	NV	1040	949	No	NG, < B + 10%
Uranium (U)	500	--	2.2	2.0	No	< G/SL
Vanadium (V)	130	--	43	39	No	< G/SL
Yttrium (Y)**	NV	NV	25	23	No	NG, < B + 10%
Zinc (Zn)	250	--	77	70	No	< G/SL
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene*	20	--	0.028	0.025	No	< G/SL
Naphthalene*	8.8 <sup>f</sup>	--	0.028	0.034	No	< G/SL
Phenanthrene*	43 <sup>f</sup>	--	0.028	0.026	No	< G/SL
Anthracene*	2.5	--	0.028	0.025	No	< G/SL
Fluorene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Pyrene*	10	--	0.028	0.025	No	< G/SL
Thiophene*	NV	NV	0.028	0.025	No	NG, < B + 10%
Benzo(a)anthracene*	1	--	0.028	0.025	No	< G/SL
Acenaphthene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Acenaphthylene*	NV	see Eco-SSL for HWM PAHs	0.028	0.027	No	see rationale for HMW PAHs
Fluoranthene*	50	--	0.028	0.025	No	< G/SL
Benzo(b)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Benzo(g,h,i)perylene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Benzo(k)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Chrysene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Dibenzo(a,h)anthracene*	1	--	0.028	0.025	No	< G/SL
Indeno(1,2,3-c,d)pyrene*	1	--	0.028	0.025	No	< G/SL
LMW PAHs	NV	100 <sup>g</sup>	0.25	0.23	No	< G/SL
HMW PAHs	NV	1.1 <sup>g</sup>	0.19	0.19	No	< G/SL

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines for the Protection of Environmental Health (SQG<sub>E</sub>) (CCME 2021, internet site). Residential/parkland land use.

<sup>b</sup> United States Environmental Protection Agency (USEPA) Ecological Soil Screening Levels (Eco-SSLs) (Avian and Mammalian) (USEPA 2021, internet site). The lower of the avian and mammalian Eco-SSL was chosen as the screening level.

<sup>c</sup> Maximum measured baseline soil concentration + 10%.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

<sup>e</sup> Yes = the predicted soil concentration is greater than the guideline/screening level and the maximum measured baseline soil concentration +10% and therefore the chemical was identified as a COPC; No = the predicted soil concentration is less than the guideline/screening level and/or maximum measured baseline soil concentration +10% and therefore the chemical was not identified as a COPC.

<sup>f</sup> SQG for soil and food ingestion.

NV = no value; COPC = chemical of potential concern; mg/kg = milligram per kilogram; -- = value not required; < = less than; B = maximum measured baseline soil concentration + 10%; G/SL = CCME SQG<sub>E</sub>/USEPA Eco-SSL; NG = no guideline.

<sup>g</sup> Low molecular weight PAHs includes those with less than four rings (i.e., acenaphthene, acenaphthylene, fluoranthene, anthracene, fluorene, naphthalene and phenanthrene). High molecular weight PAHs includes those with four or more rings (i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and pyrene).

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

Prepared by: SG/BP  
Checked by: TMG/SG

Chemical	CCME SQG <sub>E</sub> <sup>a</sup> (mg/kg)	USEPA Eco-SSL <sup>b</sup> (mg/kg)	Baseline Soil Concentration + 10% <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)	COPC? <sup>e</sup>	Rationale
<b>Total Metals</b>						
Aluminum (Al)	NV	NV	10637	9731	No	NG, < B + 10%
Antimony (Sb)	NV	0.27	0.12	0.12	No	< G/SL
Arsenic (As)	17	--	66	60	No	< B + 10%
Barium (Ba)	NV	2000	131	119	No	< G/SL
Beryllium (Be)	NV	21	4.1	3.7	No	< G/SL
Bismuth (Bi)	NV	NV	0.17	0.15	No	NG, < B + 10%
Cadmium (Cd)	10	--	0.88	0.90	No	< G/SL
Calcium (Ca)	NV	NV	29370	26735	No	NG, < B + 10%
Chromium (Cr)	64	--	56	52	No	< G/SL
Cobalt (Co)	NV	120	50	45	No	< G/SL
Copper (Cu)	63	--	79	72	No	< B + 10%
Gold (Au)**	NV	NV	0.006	0.005	No	NG, < B + 10%
Iron (Fe)	NV	NV	23430	21366	No	NG, < B + 10%
Lead (Pb)	300	--	11	10	No	< G/SL
Lithium (Li)	NV	NV	14	13	No	NG, < B + 10%
Magnesium (Mg)	NV	NV	7788	7098	No	NG, < B + 10%
Manganese (Mn)	NV	4000	468	426	No	< G/SL
Molybdenum (Mo)	NV	NV	7.7	7.0	No	NG, < B + 10%
Nickel (Ni)	45	--	53	48	No	< B + 10%
Potassium (K)	NV	NV	2937	2682	No	NG, < B + 10%
Selenium (Se)	1	--	1.3	1.2	No	< B + 10%
Silver (Ag)	NV	4.2	0.55	0.50	No	< G/SL
Sodium (Na)	NV	NV	352	334	No	NG, < B + 10%
Strontium (Sr)	NV	NV	215	195	No	NG, < B + 10%
Thallium (Tl)	1.4	--	0.55	0.50	No	< G/SL
Tin (Sn)	NV	NV	2.8	2.5	No	NG, < B + 10%
Titanium (Ti)	NV	NV	1040	948	No	NG, < B + 10%
Uranium (U)	500	--	2.2	2.0	No	< G/SL
Vanadium (V)	130	--	43	39	No	< G/SL
Yttrium (Y)**	NV	NV	25	23	No	NG, < B + 10%
Zinc (Zn)	250	--	77	70	No	< G/SL
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene*	20	--	0.028	0.025	No	< G/SL
Naphthalene*	8.8 <sup>f</sup>	--	0.028	0.034	No	< G/SL
Phenanthrene*	43 <sup>f</sup>	--	0.028	0.026	No	< G/SL
Anthracene*	2.5	--	0.028	0.025	No	< G/SL
Fluorene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Pyrene*	10	--	0.028	0.025	No	< G/SL
Thiophene*	NV	NV	0.028	0.025	No	< B + 10%
Benzo(a)anthracene*	1	--	0.028	0.025	No	< G/SL
Acenaphthene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Acenaphthylene*	NV	see Eco-SSL for HWM PAHs	0.028	0.027	No	see rationale for HMW PAHs
Fluoranthene*	50	--	0.028	0.025	No	< G/SL
Benzo(b)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Benzo(g,h,i)perylene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Benzo(k)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Chrysene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Dibenzo(a,h)anthracene*	1	--	0.028	0.025	No	< G/SL
Indeno(1,2,3-c,d)pyrene*	1	--	0.028	0.025	No	< G/SL
LMW PAHs	NV	100 <sup>g</sup>	0.25	0.23	No	< G/SL
HMW PAHs	NV	1.1 <sup>g</sup>	0.19	0.19	No	< G/SL

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines for the Protection of Environmental Health (SQG<sub>E</sub>) (CCME 2021, internet site). Residential/parkland land use.

<sup>b</sup> United States Environmental Protection Agency (USEPA) Ecological Soil Screening Levels (Eco-SSLs) (Avian and Mammalian) (USEPA 2021, internet site). The lower of the avian and mammalian Eco-SSL was chosen as the screening level.

<sup>c</sup> Maximum measured baseline soil concentration + 10%.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

<sup>e</sup> Yes = the predicted soil concentration is greater than the guideline/screening level and the maximum measured baseline soil concentration +10% and therefore the chemical was identified as a COPC; No = the predicted soil concentration is less than the guideline/screening level and/or maximum measured baseline soil concentration +10% and therefore the chemical was not identified as a COPC.

<sup>f</sup> SQG for soil and food ingestion.

NV = no value; COPC = chemical of potential concern; mg/kg = milligram per kilogram; -- = value not required; < = less than; B = maximum measured baseline soil concentration + 10%; G/SL = CCME SQG<sub>E</sub>/USEPA Eco-SSL; NG = no guideline.

<sup>g</sup> Low molecular weight PAHs includes those with less than four rings (i.e., acenaphthene, acenaphthylene, fluoranthene, anthracene, fluorene, naphthalene and phenanthrene). High molecular weight PAHs includes those with four or more rings (i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and pyrene).

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

Prepared by: SG/BP  
Checked by: TMG/SG

Chemical	CCME SQG <sub>E</sub> <sup>a</sup> (mg/kg)	USEPA Eco-SSL <sup>b</sup> (mg/kg)	Baseline Soil Concentration + 10% <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)	COPC? <sup>e</sup>	Rationale
<b>Total Metals</b>						
Aluminum (Al)	NV	NV	10637	9714	No	NG, < B + 10%
Antimony (Sb)	NV	0.27	0.12	0.12	No	< G/SL
Arsenic (As)	17	--	66	60	No	< B + 10%
Barium (Ba)	NV	2000	131	119	No	< G/SL
Beryllium (Be)	NV	21	4.1	3.7	No	< G/SL
Bismuth (Bi)	NV	NV	0.17	0.15	No	NG, < B + 10%
Cadmium (Cd)	10	--	0.88	0.90	No	< G/SL
Calcium (Ca)	NV	NV	29370	26725	No	NG, < B + 10%
Chromium (Cr)	64	--	56	51	No	< G/SL
Cobalt (Co)	NV	120	50	45	No	< G/SL
Copper (Cu)	63	--	79	72	No	< B + 10%
Gold (Au)**	NV	NV	0.006	0.005	No	NG, < B + 10%
Iron (Fe)	NV	NV	23430	21348	No	NG, < B + 10%
Lead (Pb)	300	--	11	10	No	< G/SL
Lithium (Li)	NV	NV	14	13	No	NG, < B + 10%
Magnesium (Mg)	NV	NV	7788	7093	No	NG, < B + 10%
Manganese (Mn)	NV	4000	468	425	No	< G/SL
Molybdenum (Mo)	NV	NV	7.7	7.0	No	NG, < B + 10%
Nickel (Ni)	45	--	53	48	No	< B + 10%
Potassium (K)	NV	NV	29370	2678	No	NG, < B + 10%
Selenium (Se)	1	--	1.3	1.2	No	< B + 10%
Silver (Ag)	NV	4.2	0.55	0.50	No	< G/SL
Sodium (Na)	NV	NV	352	330	No	NG, < B + 10%
Strontium (Sr)	NV	NV	215	195	No	NG, < B + 10%
Thallium (Tl)	1.4	--	0.55	0.50	No	< G/SL
Tin (Sn)	NV	NV	2.8	2.5	No	NG, < B + 10%
Titanium (Ti)	NV	NV	1040	947	No	NG, < B + 10%
Uranium (U)	500	--	2.2	2.0	No	< G/SL
Vanadium (V)	130	--	43	39	No	< G/SL
Yttrium (Y)**	NV	NV	25	23	No	NG, < B + 10%
Zinc (Zn)	250	--	77	70	No	< G/SL
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene*	20	--	0.028	0.025	No	< G/SL
Naphthalene*	8.8 <sup>f</sup>	--	0.028	0.034	No	< G/SL
Phenanthrene*	43 <sup>f</sup>	--	0.028	0.026	No	< G/SL
Anthracene*	2.5	--	0.028	0.025	No	< G/SL
Fluorene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Pyrene*	10	--	0.028	0.025	No	< G/SL
Thiophene*	NV	NV	0.028	0.025	No	< B + 10%
Benzo(a)anthracene*	1	--	0.028	0.025	No	< G/SL
Acenaphthene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Acenaphthylene*	NV	see Eco-SSL for HWM PAHs	0.028	0.027	No	see rationale for HMW PAHs
Fluoranthene*	50	--	0.028	0.025	No	< G/SL
Benzo(b)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Benzo(g,h,i)perylene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Benzo(k)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Chrysene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Dibenzo(a,h)anthracene*	1	--	0.028	0.025	No	< G/SL
Indeno(1,2,3-c,d)pyrene*	1	--	0.028	0.025	No	< G/SL
LMW PAHs	NV	100 <sup>g</sup>	0.25	0.23	No	< G/SL
HMW PAHs	NV	1.1 <sup>g</sup>	0.19	0.19	No	< G/SL

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines for the Protection of Environmental Health (SQG<sub>E</sub>) (CCME 2021, internet site). Residential/parkland land use.

<sup>b</sup> United States Environmental Protection Agency (USEPA) Ecological Soil Screening Levels (Eco-SSLs) (Avian and Mammalian) (USEPA 20212, internet site). The lower of the avian and mammalian Eco-SSL was chosen as the screening level.

<sup>c</sup> Maximum measured baseline soil concentration + 10%.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

<sup>e</sup> Yes = the predicted soil concentration is greater than the guideline/screening level and the maximum measured baseline soil concentration +10% and therefore the chemical was identified as a COPC; No = the predicted soil concentration is less than the guideline/screening level and/or maximum measured baseline soil concentration +10% and therefore the chemical was not identified as a COPC.

<sup>f</sup> SQG for soil and food ingestion.

<sup>g</sup> Low molecular weight PAHs includes those with less than four rings (i.e., acenaphthene, acenaphthylene, fluoranthene, anthracene, fluorene, naphthalene and phenanthrene). High molecular weight PAHs includes those with four or more rings (i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene).

NV = no value; COPC = chemical of potential concern; mg/kg = milligram per kilogram; -- = value not required; < = less than; B = maximum measured baseline soil concentration + 10%; G/SL = CCME SQG<sub>E</sub>/USEPA Eco-SSL; NG = no guideline.

<sup>h</sup> The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

<sup>\*\*</sup>There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

Prepared by: SG/BP  
Checked by: TMG/SG



Chemical	CCME SQG <sub>E</sub> <sup>a</sup> (mg/kg)	USEPA Eco-SSL <sup>b</sup> (mg/kg)	Baseline Soil Concentration + 10% <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)	COPC? <sup>e</sup>	Rationale
<b>Total Metals</b>						
Aluminum (Al)	NV	NV	10637	9778	No	NG, < B + 10%
Antimony (Sb)	NV	0.27	0.12	0.12	No	< G/SL
Arsenic (As)	17	--	66	60	No	< B + 10%
Barium (Ba)	NV	2000	131	120	No	< G/SL
Beryllium (Be)	NV	21	4.1	3.7	No	< G/SL
Bismuth (Bi)	NV	NV	0.17	0.15	No	NG, < B + 10%
Cadmium (Cd)	10	--	0.88	0.90	No	< G/SL
Calcium (Ca)	NV	NV	29370	26762	No	NG, < B + 10%
Chromium (Cr)	64	--	56	52	No	< G/SL
Cobalt (Co)	NV	120	50	45	No	< G/SL
Copper (Cu)	63	--	79	72	No	< B + 10%
Gold (Au)**	NV	NV	0.006	0.005	No	NG, < B + 10%
Iron (Fe)	NV	NV	23430	21418	No	NG, < B + 10%
Lead (Pb)	300	--	11	10	No	< G/SL
Lithium (Li)	NV	NV	14	13	No	NG, < B + 10%
Magnesium (Mg)	NV	NV	7788	7113	No	NG, < B + 10%
Manganese (Mn)	NV	4000	468	426	No	< G/SL
Molybdenum (Mo)	NV	NV	7.7	7.0	No	NG, < B + 10%
Nickel (Ni)	45	--	53	48	No	< B + 10%
Potassium (K)	NV	NV	2937	2691	No	NG, < B + 10%
Selenium (Se)	1	--	1.3	1.2	No	< B + 10%
Silver (Ag)	NV	4.2	0.55	0.50	No	< G/SL
Sodium (Na)	NV	NV	352	345	No	NG, < B + 10%
Strontium (Sr)	NV	NV	215	195	No	NG, < B + 10%
Thallium (Tl)	1.4	--	0.55	0.50	No	< G/SL
Tin (Sn)	NV	NV	2.8	2.5	No	NG, < B + 10%
Titanium (Ti)	NV	NV	1040	950	No	NG, < B + 10%
Uranium (U)	500	--	2.2	2.0	No	< G/SL
Vanadium (V)	130	--	43	39	No	< G/SL
Yttrium (Y)**	NV	NV	25	23	No	NG, < B + 10%
Zinc (Zn)	250	--	77	70	No	< G/SL
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene*	20	--	0.028	0.025	No	< G/SL
Naphthalene*	8.8 <sup>f</sup>	--	0.028	0.034	No	< G/SL
Phenanthrene*	43 <sup>f</sup>	--	0.028	0.026	No	< G/SL
Anthracene*	2.5	--	0.028	0.025	No	< G/SL
Fluorene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Pyrene*	10	--	0.028	0.025	No	< G/SL
Thiophene*	NV	NV	0.028	0.025	No	< B + 10%
Benzo(a)anthracene*	1	--	0.028	0.025	No	< G/SL
Acenaphthene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Acenaphthylene*	NV	see Eco-SSL for HWM PAHs	0.028	0.027	No	see rationale for HMW PAHs
Fluoranthene*	50	--	0.028	0.025	No	< G/SL
Benzo(b)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Benzo(g,h,i)perylene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Benzo(k)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Chrysene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Dibenzo(a,h)anthracene*	1	--	0.028	0.025	No	< G/SL
Indeno(1,2,3-c,d)pyrene*	1	--	0.028	0.025	No	< G/SL
LMW PAHs	NV	100 <sup>g</sup>	0.25	0.23	No	< G/SL
HMW PAHs	NV	1.1 <sup>g</sup>	0.19	0.19	No	< G/SL

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines for the Protection of Environmental Health (SQG) (CCME 2021, internet site). Residential/parkland land use.

<sup>b</sup> United States Environmental Protection Agency (USEPA) Ecological Soil Screening Levels (Eco-SSLs) (Avian and Mammalian) (USEPA 2021, internet site). The lower of the avian and mammalian Eco-SSL was chosen as the screening level.

<sup>c</sup> Maximum measured baseline soil concentration + 10%.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

<sup>e</sup> Yes = the predicted soil concentration is greater than the guideline/screening level and the maximum measured baseline soil concentration +10% and therefore the chemical was identified as a COPC; No = the predicted soil concentration is less than the guideline/screening level and/or maximum measured baseline soil concentration +10% and therefore the chemical was not identified as a COPC.

<sup>f</sup> SQG for soil and food ingestion.

<sup>g</sup> Low molecular weight PAHs includes those with less than four rings (i.e., acenaphthene, acenaphthylene, fluoranthene, anthracene, fluorene, naphthalene and phenanthrene). High molecular weight PAHs includes those with four or more rings (i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene). NV = no value; COPC = chemical of potential concern; mg/kg = milligram per kilogram; -- = value not required; < = less than; B = maximum measured baseline soil concentration + 10%; G/SL = CCME SQG<sub>E</sub>/USEPA Eco-SSL; NG = no guideline.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

Prepared by: SG/BP  
Checked by: TMG/SG

Chemical	CCME SQG <sub>E</sub> <sup>a</sup> (mg/kg)	USEPA Eco-SSL <sup>b</sup> (mg/kg)	Baseline Soil Concentration + 10% <sup>c</sup> (mg/kg)	Predicted Soil Concentration <sup>d</sup> (mg/kg)	COPC? <sup>e</sup>	Rationale
<b>Total Metals</b>						
Aluminum (Al)	NV	NV	10637	9711	No	NG, < B + 10%
Antimony (Sb)	NV	0.27	0.12	0.12	No	< G/SL
Arsenic (As)	17	--	66	60	No	< B + 10%
Barium (Ba)	NV	2000	131	119	No	< G/SL
Beryllium (Be)	NV	21	4.1	3.7	No	< G/SL
Bismuth (Bi)	NV	NV	0.17	0.15	No	NG, < B + 10%
Cadmium (Cd)	10	--	0.88	0.89	No	< G/SL
Calcium (Ca)	NV	NV	29370	26723	No	NG, < B + 10%
Chromium (Cr)	64	--	56	51	No	< G/SL
Cobalt (Co)	NV	120	50	45	No	< G/SL
Copper (Cu)	63	--	79	72	No	< B + 10%
Gold (Au)**	NV	NV	0.006	0.005	No	NG, < B + 10%
Iron (Fe)	NV	NV	23430	21345	No	NG, < B + 10%
Lead (Pb)	300	--	11	10	No	< G/SL
Lithium (Li)	NV	NV	14	13	No	NG, < B + 10%
Magnesium (Mg)	NV	NV	7788	7092	No	NG, < B + 10%
Manganese (Mn)	NV	4000	468	425	No	< G/SL
Molybdenum (Mo)	NV	NV	7.7	7.0	No	NG, < B + 10%
Nickel (Ni)	45	--	53	48	No	< B + 10%
Potassium (K)	NV	NV	2937	2678	No	NG, < B + 10%
Selenium (Se)	1	--	1.3	1.2	No	< B + 10%
Silver (Ag)	NV	4.2	0.55	0.50	No	< G/SL
Sodium (Na)	NV	NV	352	329	No	NG, < B + 10%
Strontium (Sr)	NV	NV	215	195	No	NG, < B + 10%
Thallium (Tl)	1.4	--	0.55	0.50	No	< G/SL
Tin (Sn)	NV	NV	2.8	2.5	No	NG, < B + 10%
Titanium (Ti)	NV	NV	1040	947	No	NG, < B + 10%
Uranium (U)	500	--	2.2	2.0	No	< G/SL
Vanadium (V)	130	--	43	39	No	< G/SL
Yttrium (Y)**	NV	NV	25	23	No	NG, < B + 10%
Zinc (Zn)	250	--	77	70	No	< G/SL
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene*	20	--	0.028	0.025	No	< G/SL
Naphthalene*	8.8 <sup>f</sup>	--	0.028	0.034	No	< G/SL
Phenanthrene*	43 <sup>f</sup>	--	0.028	0.026	No	< G/SL
Anthracene*	2.5	--	0.028	0.025	No	< G/SL
Fluorene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Pyrene*	10	--	0.028	0.025	No	< G/SL
Thiophene*	NV	NV	0.028	0.025	No	NG, < B + 10%
Benzo(a)anthracene*	1	--	0.028	0.025	No	< G/SL
Acenaphthene*	NV	see Eco-SSL for HWM PAHs	0.028	0.025	No	see rationale for HMW PAHs
Acenaphthylene*	NV	see Eco-SSL for HWM PAHs	0.028	0.027	No	see rationale for HMW PAHs
Fluoranthene*	50	--	0.028	0.025	No	< G/SL
Benzo(b)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Benzo(g,h,i)perylene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Benzo(k)fluoranthene*	1	--	0.028	0.025	No	< G/SL
Chrysene*	NV	see Eco-SSL for LMW PAHs	0.028	0.025	No	see rationale for LMW PAHs
Dibenzo(a,h)anthracene*	1	--	0.028	0.025	No	< G/SL
Indeno(1,2,3-c,d)pyrene*	1	--	0.028	0.025	No	< G/SL
LMW PAHs	NV	100 <sup>g</sup>	0.25	0.23	No	< G/SL
HMW PAHs	NV	1.1 <sup>g</sup>	0.19	0.19	No	< G/SL

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines for the Protection of Environmental Health (SQG<sub>E</sub>) (CCME 2021, internet site). Residential/parkland land use.

<sup>b</sup> United States Environmental Protection Agency (USEPA) Ecological Soil Screening Levels (Eco-SSLs) (Avian and Mammalian) (USEPA 2021, internet site). The lower of the avian and mammalian Eco-SSL was chosen as the screening level.

<sup>c</sup> Maximum measured baseline soil concentration + 10%.

<sup>d</sup> The predicted soil concentration is calculated as the sum of the maximum measured baseline soil concentration and the incremental soil concentration from particulate deposition.

<sup>e</sup> Yes = the predicted soil concentration is greater than the guideline/screening level and the maximum measured baseline soil concentration +10% and therefore the chemical was identified as a COPC; No = the predicted soil concentration is less than the guideline/screening level and/or maximum measured baseline soil concentration +10% and therefore the chemical was not identified as a COPC.

<sup>f</sup> SQG for soil and food ingestion.

<sup>g</sup> Low molecular weight PAHs includes those with less than four rings (i.e., acenaphthene, acenaphthylene, fluoranthene, anthracene, fluorene, naphthalene and phenanthrene). High molecular weight PAHs includes those with four or more rings (i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and pyrene). NV = no value; COPC = chemical of potential concern; mg/kg = milligram per kilogram; -- = value not required; < = less than; B = maximum measured baseline soil concentration + 10% G/SL = CCME SQG<sub>E</sub>/USEPA Eco-SSL; NG = no guideline.

\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of 1/2 the typical method detection limit (typical method detection limit = 0.05 mg/kg) and the incremental soil concentration from particulate deposition.

\*\*There is no measured baseline soil concentration for this parameter. The predicted soil concentration is shown as the sum of the typical average soil concentration and the incremental soil concentration from particulate deposition.

Prepared by: SG/BP  
Checked by: TMG/SG

## APPENDIX H-12-B

## Water Quality Screening – Ecological Health

**Table H-12-B-1: Surface Water Screening for Aquatic Life for End of Pipe Discharge to Meliadine Lake**

**Table H-12-B-2a: Surface Water Screening for Wildlife for Meliadine Lake**

**Table H-12-B-2b: Calculation of Toxicological Benchmarks for Water for Wildlife - Ingestion of Drinking Water**

**Table H-12-B-3: Surface Water Screening for Aquatic Life for Meliadine Lake**

**Table H-12-B-4a: Surface Water Screening for Wildlife for Small Waterbodies - CP1**

**Table H-12-B-4b: Surface Water Screening for Wildlife for Small Waterbodies - B7**

**Table H-12-B-4c: Surface Water Screening for Wildlife for Small Waterbodies - B45**

**Table H-12-B-4d: Surface Water Screening for Wildlife for Small Waterbodies - B4**

**Table H-12-B-4e: Surface Water Screening for Wildlife for Small Waterbodies - B2**

**Table H-12-B-4f: Surface Water Screening for Wildlife for Small Waterbodies - A8 West**

**Table H-12-B-4g: Surface Water Screening for Wildlife for Small Waterbodies - A1**

**Table H-12-B-4h: Surface Water Screening for Wildlife for Small Waterbodies - CH6**

**Table H-12-B-5a: Surface Water Screening for Wildlife for Pit Lakes - NORWES Pit Lake**

**Table H-12-B-5b: Surface Water Screening for Wildlife for Pit Lakes - TIRI Pit Lake**

**Table H-12-B-5c: Surface Water Screening for Wildlife for Pit Lakes - TIR02**

**Table H-12-B-5d: Surface Water Screening for Wildlife for Pit Lakes - TIR04**

**Table H-12-B-5e: Surface Water Screening for Wildlife for Pit Lakes - Pump Pit Lake**

**Table H-12-B-5f: Surface Water Screening for Wildlife for Pit Lakes - F-Zone Lake**

**Table H-12-B-5g: Surface Water Screening for Wildlife for Pit Lakes - Discovery**

**Table H-12-B-6a: Surface Water Screening for Aquatic Life for Small Waterbodies - CP1**

**Table H-12-B-6b: Surface Water Screening for Aquatic Life for Small Waterbodies - B45**

**Table H-12-B-6c: Surface Water Screening for Aquatic Life for Small Waterbodies - B2**

**Table H-12-B-6d: Surface Water Screening for Aquatic Life for Small Waterbodies - A8 West**

**Table H-12-B-6e: Surface Water Screening for Aquatic Life for Small Waterbodies - A1**

**Table H-12-B-6f: Surface Water Screening for Aquatic Life for Small Waterbodies - CH6**

**Table H-12-B-7a: Surface Water Screening for Aquatic Life for Pit Lake - NORWES Pit Lake**

**Table H-12-B-7b: Surface Water Screening for Aquatic Life for Pit Lake - TIRI Pit Lake**

**Table H-12-B-7c: Surface Water Screening for Aquatic Life for Pit Lake - Pump Pit Lake**

**Table H-12-B-7d: Surface Water Screening for Aquatic Life for Pit Lake - F-Zone Pit Lake**

**Table H-12-B-7e: Surface Water Screening for Aquatic Life for Pit Lake - Discovery Pit Lake**

**Table H-12-B-8: Surface Water Screening for Aquatic Life for Waterline End of Pipe Discharge to Itivia Harbour**

**Table H-12-B-9: Surface Water Screening for Aquatic Life for Itivia Harbour (Edge of Mixing Zone)**

Chemical	Unit	Schedule 4 MDMER <sup>a</sup>	Potential Acute Screening Values			Selected Screening Value <sup>e</sup>	Source	Existing Concentration <sup>f</sup>	Predicted Concentration <sup>g</sup>	COPC <sup>h</sup>	Rationale
			CCME (2021) freshwater, short term <sup>b</sup>	BC ENV (2021) <sup>c</sup>	US EPA (2021) <sup>d</sup>						
Total Dissolved Solids	mg/L	NV	NV	NV	NV	--	41	1846	No	NG	
Calcium	mg/L	NV	NV	NV	NV	--	6.7	96	No	Essential nutrient/ameliorates toxicity	
Chloride	mg/L	NV	640,000	--	--	640,000	CCME (2021)	9.2	916	No	< G
Fluoride	mg/L	NV	NV	$[-51.73 + 92.57 \log_{10}(\text{Hardness})] \times 0.01$	--	0.73	BC ENV (2021)	0.020	0.22	No	< G
Sodium	mg/L	NV	NV	NV	NV	--	4.7	510	No	Essential nutrient/ameliorates toxicity	
Sulphate	mg/L	NV	NV	NV	NV	--	3.8	238	No	NG	
Total Ammonia as Nitrogen	mg/L	NV	NV	13.1	--	13.1	BC ENV (2021) <sup>i</sup>	0.0061	11	No	< G
Nitrate as Nitrogen	mg/L	NV	124	--	--	124	CCME (2021)	0.022	17	No	< G
Nitrite as Nitrogen	mg/L	NV	NV	0.3	--	0.3	BC ENV (2021) <sup>j</sup>	0.0033	0.21	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	0.85	30	No	Essential nutrient/ameliorates toxicity
Total cyanide	µg/L	500	--	--	--	500	MDMER	2.0	5.0	No	< G
Free cyanide	µg/L	NV	NV	10	--	10	BC ENV (2021)	2.0	1.2	No	< G
Aluminum	µg/L	NV	NV	100	--	100	BC ENV (2021) <sup>d,k</sup>	1.1	955	No	Dissolved concentration is below criteria <sup>k</sup>
Antimony	µg/L	NV	NV	NV	NV	NV	--	0.020	1.6	No	NG
Arsenic	µg/L	300	--	--	--	300	MDMER	0.34	31	No	< G
Barium	µg/L	NV	NV	NV	NV	NV	--	7.0	54	No	NG
Beryllium	µg/L	NV	NV	NV	NV	NV	--	0.010	0.033	No	NG
Boron	µg/L	NV	29000	--	--	29000	CCME (2021)	6.1	282	No	< G
Cadmium	µg/L	NV	$10^{(1.016[\log(\text{hardness})] - 1.71)}$	--	--	0.45	CCME (2021) <sup>l</sup>	0.0050	0.083	No	< G
Chromium	µg/L	NV	NV	NV	16	16	US EPA (2021) <sup>d,m</sup>	0.060	2.6	No	< G
Cobalt	µg/L	NV	NV	110	--	110	BC ENV (2021)	0.010	5.4	No	< G
Copper	µg/L	300	--	--	--	300	MDMER	0.70	3.9	No	< G
Iron	µg/L	NV	NV	1000	--	1000	BC ENV (2021)	5.8	1227	Yes	> G
Lead	µg/L	100	NV	$e^{(1.273[\ln(\text{hardness})] - 1.460)}$	--	11.3	BC ENV (2021) <sup>n</sup>	0.010	0.48	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	1200	47393	No	Essential nutrient/ameliorates toxicity
Manganese	µg/L	NV	$e^{(0.878[\ln(\text{hardness})] + 4.76)}$	--	--	1769	CCME (2021) <sup>o</sup>	0.95	621	No	< G
Mercury	µg/L	NV	NV	NV	1.4	1.4	US EPA (2021)	0.00050	0.021	No	< G
Molybdenum	µg/L	NV	NV	46,000	--	46000	BC ENV (2021)	0.064	3.2	No	< G
Nickel	µg/L	500	--	--	--	500	MDMER	0.55	17	No	< G
Selenium	µg/L	NV	NV	NV	NV	NV	--	0.040	0.75	No	NG
Silver	µg/L	NV	NV	0.1	--	0.1	BC ENV (2021)	0.0050	0.015	No	< G
Strontium	µg/L	NV	NV	NV	NV	NV	--	31	2318	No	NG
Thallium	µg/L	NV	NV	NV	NV	NV	--	0.0050	0.13	No	NG
Uranium	µg/L	NV	33	--	--	33	CCME (2021)	0.013	3.6	No	< G
Vanadium	µg/L	NV	NV	NV	NV	NV	--	0.050	3.3	No	NG
Zinc	µg/L	500	--	--	--	500	MDMER	0.80	4.8	No	< G
Ra226	Bq/L	0.37	NV	NV	NV	0.37	MDMER	0	0.0034	No	< G

<sup>a</sup> Metal and Diamond Mine Effluent Regulations. SOR/2002-222. Fisheries Act. Schedule 4, Table 2, Maximum Authorized Monthly Mean Concentration (Government of Canada, 2021). Accessed online at: <https://laws-lois.justice.gc.ca/eng/regulations/sor-2002-222/FullText.html>

<sup>b</sup> Canadian Council of Ministers of the Environment (CCME). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, short term.

<sup>c</sup> BC ENV (British Columbia Ministry of Environment and Climate Change Strategy). 2021. Approved Water Quality Guidelines.

<sup>d</sup> US EPA (United States Environmental Protection Agency). 2021. National Recommended Water Quality Criteria - Aquatic Life Criteria Table.

<sup>e</sup> Predicted surface water concentrations were compared to the following screening values, in order of preference: 1) MDMER limits, 2) acute water quality criteria from CCME, BC ENV or US EPA. If no screening value was available, the parameter was not assessed for acute toxicity.

<sup>f</sup> Maximum predicted existing surface water concentration.

<sup>g</sup> Predicted maximum surface water concentration for effluent discharge to Meliadine Lake (end of pipe).

<sup>h</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>i</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7 and a temperature of 15°C. The total ammonia guideline of 13.1 mg/L NH<sub>3</sub> as nitrogen was applied.

<sup>j</sup> The freshwater short-term guideline for nitrite is 0.3 mg/L as nitrogen for water with chloride concentrations of 8-10 mg/L.

<sup>k</sup> Aluminum guideline is pH dependent. At pH=6.5, guideline is 100 µg/L (dissolved aluminum). Consistent with the 2020 AEMP, the minimum pH in Meliadine Lake was 7.5, therefore a guideline of 100 µg/L was used. While the concentration of total aluminum is above the guideline, the predicted dissolved concentration of aluminum of 13.6 µg/L is below the guideline. Therefore, aluminum was not retained as a COPC.

<sup>l</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation:  $CWQG(\text{cadmium}, \mu\text{g/L}) = 10^{(1.016[\log(\text{hardness})] - 1.71)}$ . The lowest predicted hardness value in Meliadine Lake was 22.1 mg CaCO<sub>3</sub>/L, therefore a guideline of 0.45 µg/L was used.

<sup>m</sup> Guideline for chromium, hexavalent ([Cr VI]) (dissolved).

<sup>n</sup> Lead guideline is hardness dependent and is calculated according to the following equation:  $e^{(1.273[\ln(\text{hardness})] - 1.460)}$ . The minimum hardness in Meliadine Lake was 22.1 mg CaCO<sub>3</sub>/L, therefore a guideline of 11.3 µg/L was used.

<sup>o</sup> Manganese guideline is hardness dependent and is calculated according to the following equation:  $CWQG(\text{manganese}, \mu\text{g/L}) = e^{(0.878[\ln(\text{hardness})] + 4.76)}$ . The minimum hardness in Meliadine Lake was 22.1 mg CaCO<sub>3</sub>/L, therefore a guideline of 1769 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; Bq/L = becquerel per litre.

**Bold + Shaded** = predicted concentration is above screening value for the protection of aquatic life

Prepared by: BP  
Checked by: SG

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Existing Concentration <sup>c</sup>	Predicted Concentration <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	3000	--	--	41	68	No	< G
Calcium	mg/L	1000	--	--	6.7	7.8	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	9.2	21	No	< G
Fluoride	mg/L	2 <sup>j</sup>	--	--	0.020	0.024	No	< G
Sodium	mg/L	NV	NV	NV	4.7	11	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	3.8	7.2	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	0.0061	0.16	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.022	0.29	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.0033	0.0074	No	< G
Potassium	mg/L	NV	NV	NV	0.85	1.2	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	2.0	2.0	No	< G
Free cyanide	µg/L	NV	NV	NV	2.0	2.0	No	see total cyanide
Aluminum	µg/L	5000	--	--	1.1	41	No	< G
Antimony	µg/L	NV	4167	--	0.020	0.044	No	< G
Arsenic	µg/L	25	--	--	0.34	0.61	No	< G
Barium	µg/L	NV	66,000	--	7.0	7.9	No	< G
Beryllium	µg/L	100	--	--	0.010	0.010	No	< G
Boron	µg/L	5000	--	--	6.1	11	No	< G
Cadmium	µg/L	80	--	--	0.0050	0.0065	No	< G
Chromium	µg/L	50 <sup>g</sup>	--	--	0.060	0.16	No	< G
Cobalt	µg/L	1000	--	--	0.010	0.091	No	< G
Copper	µg/L	500 <sup>h</sup>	--	--	0.70	0.77	No	< G
Iron	µg/L	NV	NV	300 <sup>j</sup>	5.8	54	No	< G
Lead	µg/L	100	--	--	0.010	0.020	No	< G
Magnesium	µg/L	NV	NV	NV	1200	1626	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	0.95	11	No	< G
Mercury	µg/L	3	--	--	0.00050	0.00095	No	< G
Molybdenum	µg/L	500	--	--	0.064	0.12	No	< G
Nickel	µg/L	1000	--	--	0.55	0.87	No	< G
Selenium	µg/L	50	--	--	0.040	0.049	No	< G
Silver	µg/L	NV	NV	70,000 <sup>k</sup>	0.0050	0.0051	No	< G
Strontium	µg/L	NV	876,667	--	31	77	No	< G
Thallium	µg/L	NV	247	--	0.0050	0.0074	No	< G
Uranium	µg/L	200	--	--	0.013	0.065	No	< G
Vanadium	µg/L	100	--	--	0.050	0.16	No	< G
Zinc	µg/L	50,000	--	--	0.80	0.91	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Maximum predicted existing surface water concentration for Meliadine Lake. Existing concentrations were provided for context and were not used for screening COPCs.

<sup>d</sup> Predicted maximum surface water concentration for Meliadine Lake edge of mixing zone.

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>g</sup> Guideline for chromium, trivalent (Cr III).

<sup>h</sup> Most stringent of the guidelines provided (for sheep).

<sup>i</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>j</sup> CCME guideline for the protection of aquatic life

<sup>k</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; ND = no data; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; B = maximum measured baseline surface water concentration; G = guideline; NG = no guideline.

Prepared by: BP

Checked by: SG

Table H-12-B-2b: Calculation of Toxicological Benchmarks for Water for Wildlife - Ingestion of Drinking Water

Parameter	Mammal TRV (mg/kg-d) <sup>(a)</sup>	Bird TRV (mg/kg-d) <sup>(a)</sup>	Toxicological Benchmark for Water Ingestion (mg/L) <sup>(c)</sup>							
			Short-tailed Shrew	Little Brown Bat	Meadow Vole	White-footed Mouse	Eastern Cottontail	Mink	Red Fox	White-tailed Deer
Nitrate as Nitrogen	1130	NV	5136	7063	8287	3767	11690	11414	13382	17255
Total cyanide	68.7	NV	312	429	504	229	711	694	814	1049
Antimony	1.25	NV	5.7	7.8	9.2	4.2	13	13	15	19
Barium	19.8	41.7	90	124	145	66	205	200	234	302
Manganese	284	977	1291	1775	2083	947	2938	2869	3363	4337
Strontium	263	NV	1195	1644	1929	877	2721	2657	3114	4016
Thallium	0.074	3.5	0.34	0.46	0.54	0.25	0.77	0.75	0.88	1.1
		Body Weight (kg) <sup>(b)</sup>	0.015	0.0075	0.044	0.022	1.2	1.0	4.5	56.5
		Water Intake (L/d) <sup>(b)</sup>	0.0033	0.0012	0.006	0.0066	0.116	0.099	0.38	3.7

**Notes:**

mg/L - milligram per litre; TRV = toxicity reference value; mg/kg-d = milligrams per kilogram per day; kg = kilogram; L/d = litres per day; NV = no value; '-' = not calculated because no TRV available; LOAEL = lowest observed adverse effect level; NOAEL = no observed adverse effect level.

<sup>(a)</sup> TRVs were taken from Sample et al. (1996). In the absence of a TRV from Sample et al. (1996), TRVs were taken from Los Alamos National Laboratory (LANL, 2017; thallium). Where available, LOAEL-based TRVs were used. Where lacking, NOAEL-based TRVs were used.

<sup>(b)</sup> Body weights and water intakes were taken from Sample et al. (1996).

<sup>(c)</sup> Toxicological benchmarks were calculated as follows: LOAEL of test species (in mg/kg/d) x body weight of wildlife species (in kg) / water intake of wildlife species (in L/d).

Table H-12-B-2b: Calculation of Toxicological Benchmarks for Water for Wildlife - Ingestion of Drinking Water

Parameter	Mammal TRV (mg/kg-d) <sup>(a)</sup>	Bird TRV (mg/kg-d) <sup>(a)</sup>	Toxicological Benchmark for Water Ingestion (mg/L) <sup>(c)</sup>								Toxicological Benchmark for Water Ingestion (mg/L) <sup>(c)</sup>		
			American Robin	Rough-winged Swallow	American Woodcock	Wild Turkey	Belted Kingfisher	Great Blue Heron	Barred Owl	Barn Owl	Cooper's Hawk	Red-tailed Hawk	Osprey
Nitrate as Nitrogen	1130	NV	--	--	--	--	--	--	--	--	--	--	--
Total cyanide	68.7	NV	--	--	--	--	--	--	--	--	--	--	--
Antimony	1.25	NV	--	--	--	--	--	--	--	--	--	--	--
Barium	19.8	41.7	303	179	413	1273	386	942	636	555	538	734	812
Manganese	284	977	7097	4198	9672	29824	9037	22070	14904	13008	12615	17189	19032
Strontium	263	NV	--	--	--	--	--	--	--	--	--	--	--
Thallium	0.074	3.5	25	15	35	107	32	79	53	47	45	62	68
		Body Weight (kg) <sup>(b)</sup>	0.077	0.0159	0.198	5.8	0.148	2.39	0.717	0.466	0.439	1.126	1.5
		Water Intake (L/d) <sup>(b)</sup>	0.0106	0.0037	0.02	0.19	0.016	0.1058	0.047	0.035	0.034	0.064	0.077

**Notes:**

mg/L - milligram per litre; TRV = toxicity reference value; mg/kg-d = milligrams per kilogram per day; kg = kilogram; L/d = litres per day; NV = no value; '--' = not calculated because no TRV available; LOAEL = lowest observed adverse effect level; NOAEL = no observed adverse effect level.

<sup>(a)</sup> TRVs were taken from Sample et al. (1996). In the absence of a TRV from Sample et al. (1996), TRVs were taken from Los Alamos National Laboratory (LANL, 2017; thallium). Where available, LOAEL-based TRVs were used. Where lacking, NOAEL-based TRVs were used.

<sup>(b)</sup> Body weights and water intakes were taken from Sample et al. (1996).

<sup>(c)</sup> Toxicological benchmarks were calculated as follows: LOAEL of test species (in mg/kg/d) x body weight of wildlife species (in kg) / water intake of wildlife species (in L/d).

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>a</sup>	Source	Existing Concentration <sup>b</sup>	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021) Value	AEMP Benchmarks (Azimuth 2021) Source						
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	41	68	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	6.7	7.8	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	9.2	21	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.020	0.024	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	4.7	11	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	3.8	7.2	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.0061	0.16	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.93	CCME (2021)	0.022	0.29	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0033	0.0074	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	0.85	1.2	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	NV	NV	5.2	BC ENV (2021)	2.0	2.0	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	2.0	2.0	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	1.1	41	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.020	0.044	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	0.34	0.61	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	7.0	7.9	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.010	0.010	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	6.1	11	No	< G
Cadmium	µg/L	NV	$10^{(0.83(\log(\text{hardness})) - 2.46)}$	--	--	0.043	CCME	0.052	CCME (2021) <sup>i</sup>	0.0050	0.0065	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.060	0.16	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.010	0.091	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	0.70	0.77	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	5.8	54	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.13	FEQG <sup>l</sup>	0.010	0.020	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	1200	1626	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	260	CCME (2021) <sup>m</sup>	0.95	11	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.00050	0.0009	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	0.064	0.12	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	0.55	0.87	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.040	0.049	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0050	0.0051	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	31	77	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0050	0.0074	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.013	0.065	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.050	0.156	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	3.76	CCME (2021) <sup>D,o</sup>	0.80	0.91	No	< G

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Maximum predicted existing surface water concentration in Meliadine Lake. Existing concentrations were provided for context and were not used for screening COPCs.

<sup>c</sup> Maximum predicted surface water concentration for operations phase (2024-2043).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the screening value and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the screening value and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness < 30 mg/L as CaCO<sub>3</sub>) is applicable based on a minimum predicted hardness of 22.1 mg/L as CaCO<sub>3</sub> in Meliadine Lake.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH in Meliadine Lake was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in Meliadine Lake was 26.1 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.052 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at Meliadine Lake is lower than the minimum valid hardness for the equation. Therefore, a default hardness of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in Meliadine Lake was 26.1 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.13 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 26.1 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 260 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Meliadine Lake was 26.1 mg/L as CaCO<sub>3</sub>, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Meliadine Lake was 26.1 mg/L as CaCO<sub>3</sub>, therefore the guideline of 3.76 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP  
Checked by: SG

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum All Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale <sup>h</sup>
					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	1846	427	161	1846	No	< G
Calcium	mg/L	1000	--	--	96	28	26	96	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	<b>916</b>	181	19	<b>916</b>	Yes	> G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.22	0.077	0.046	0.22	No	< G
Sodium	mg/L	NV	NV	NV	509	103	17	509	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	238	77	77	238	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	<b>37</b>	<b>15</b>	1.0	<b>37</b>	Yes	> G
Nitrate as Nitrogen	mg/L	NV	3767	--	39	17	1.2	39	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.22	0.059	0.014	0.22	No	< G
Potassium	mg/L	NV	NV	NV	30	6.3	5.7	30	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	5.0	2.1	2.2	5.0	No	< G
Free cyanide	µg/L	NV	NV	NV	1.2	1.1	1.1	1.2	No	see total cyanide
Aluminum (total)	µg/L	5000	--	--	14	8.8	7.5	14	No	< G
Antimony (total)	µg/L	NV	4167	--	1.5	1.0	0.58	1.5	No	< G
Arsenic (total)	µg/L	25	--	--	<b>30</b>	7.8	8.7	<b>30</b>	Yes	> G
Barium (total)	µg/L	NV	66,000	--	50	28	22	50	No	< G
Beryllium (total)	µg/L	100	--	--	0.025	0.0084	0.0070	0.025	No	< G
Boron (total)	µg/L	5000	--	--	282	100	62	282	No	< G
Cadmium (total)	µg/L	80	--	--	0.080	0.034	0.026	0.080	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.55	0.40	0.32	0.55	No	< G
Cobalt (total)	µg/L	1000	--	--	4.9	1.2	0.73	4.9	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	2.8	1.9	0.99	2.8	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	116	148	112	148	No	< G
Lead (total)	µg/L	100	--	--	0.37	0.51	0.38	0.51	No	< G
Magnesium (total)	µg/L	NV	NV	NV	47059	10806	4605	47059	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	613	157	61	613	No	< G
Mercury (total)	µg/L	3	--	--	0.019	0.016	0.012	0.019	No	< G
Molybdenum (total)	µg/L	500	--	--	3.2	1.5	1.1	3.2	No	< G
Nickel (total)	µg/L	1000	--	--	16	7.3	3.7	16	No	< G
Selenium (total)	µg/L	50	--	--	0.74	0.36	0.34	0.74	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.015	0.0057	0.0049	0.015	No	< G
Strontium (total)	µg/L	NV	876,667	--	2,392	579	191	2392	No	< G
Thallium (total)	µg/L	NV	247	--	0.13	0.029	0.014	0.13	No	< G
Uranium (total)	µg/L	200	--	--	3.6	1.0	0.78	3.6	No	< G
Vanadium (total)	µg/L	100	--	--	1.3	0.95	0.71	1.3	No	< G
Zinc (total)	µg/L	50000	--	--	3.5	2.2	1.9	3.5	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentration for operations (2024-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2024-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> Other references were sourced in the event that no value was available from CCME or Sample et al. (1996).

<sup>i</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>j</sup> CCME guideline for the protection of aquatic life

<sup>k</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline; BC ENC = British Columbia Ministry of the Environment Climate Change Strategy; LANL ESL = Los Alamos National Laboratory Ecological Screening Level.

**Bold + shaded** = exceeds screening value for protection of wildlife

Prepared by: SG  
 Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum All Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale <sup>h</sup>
					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	<b>51517</b>	<b>3290</b>	733	<b>51517</b>	Yes	> G
Calcium	mg/L	1000	--	--	1491	177	104	1491	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	NV	600 <sup>i</sup>	<b>30136</b>	<b>1649</b>	61	<b>30136</b>	Yes	> G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.18	0.17	0.29	0.29	No	< G
Sodium	mg/L	NV	NV	NV	13806	890	63	13806	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	<b>2947</b>	350	432	<b>2947</b>	Yes	> G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	<b>53</b>	<b>13</b>	0.4	<b>53</b>	Yes	> G
Nitrate as Nitrogen	mg/L	NV	3767	--	69	21	0.9	69	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	2.4	0.162	0.057	2.4	No	< G
Potassium	mg/L	NV	NV	NV	429	49	40	429	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	47	11	7.8	47	No	< G
Free cyanide	µg/L	NV	NV	NV	5.9	2.2	2.0	5.9	No	see total cyanide
Aluminum (total)	µg/L	5000	--	--	40	24	19	40	No	< G
Antimony (total)	µg/L	NV	4167	--	23.0	2.3	4.05	23	No	< G
Arsenic (total)	µg/L	25	--	--	<b>130</b>	<b>48</b>	<b>45</b>	<b>130</b>	Yes	> G
Barium (total)	µg/L	NV	66,000	--	309	61	72	309	No	< G
Beryllium (total)	µg/L	100	--	--	0.074	0.038	0.023	0.074	No	< G
Boron (total)	µg/L	5000	--	--	1134	295	525	1134	No	< G
Cadmium (total)	µg/L	80	--	--	0.14	0.073	0.10	0.14	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	9.2	1.0	0.90	9.2	No	< G
Cobalt (total)	µg/L	1000	--	--	19	10	4.1	19	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	5.2	2.8	3.8	5.2	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	122	93	125	125	No	< G
Lead (total)	µg/L	100	--	--	0.44	0.20	0.41	0.44	No	< G
Magnesium (total)	µg/L	NV	NV	NV	164160	84107	29739	164160	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	1,687	899	285	1687	No	< G
Mercury (total)	µg/L	3	--	--	0.020	0.025	0.042	0.042	No	< G
Molybdenum (total)	µg/L	500	--	--	69	4.8	7.7	69	No	< G
Nickel (total)	µg/L	1000	--	--	62	26	19	62	No	< G
Selenium (total)	µg/L	50	--	--	6.7	1.2	2.0	6.7	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.37	0.04	0.0087	0.37	No	< G
Strontium (total)	µg/L	NV	876,667	--	37,899	1,654	1,519	37899	No	< G
Thallium (total)	µg/L	NV	247	--	0.10	0.035	0.063	0.10	No	< G
Uranium (total)	µg/L	200	--	--	11	4.4	8.0	11	No	< G
Vanadium (total)	µg/L	100	--	--	12	2.4	1.8	12	No	< G
Zinc (total)	µg/L	50000	--	--	37	4.4	3.7	37	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentration for operations (2024-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2024-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> Other references were sourced in the event that no value was available from CCME or Sample et al. (1996).

<sup>i</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>j</sup> CCME guideline for the protection of aquatic life

<sup>k</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline; BC ENC = British Columbia Ministry of the Environment Climate Change Strategy; LANL ESL = Los Alamos National Laboratory Ecological Screening Level.

**Bold + shaded** = exceeds screening value for protection of wildlife

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum All Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale <sup>h</sup>
					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	67	63	93	93	No	< G
Calcium	mg/L	1000	--	--	24	22	34	34	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	NV	600 <sup>i</sup>	15	14	22	22	No	> G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.04	0.039	0.042	0.042	No	< G
Sodium	mg/L	NV	NV	NV	5.4	5.1	8.0	8.0	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	5.4	4.8	15	15	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	0.09	0.08	0.10	0.10	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.016	0.015	0.023	0.023	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.00	0.001	0.0013	0.0013	No	< G
Potassium	mg/L	NV	NV	NV	1.6	1.5	2.1	2.1	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.1	1.1	1.2	1.2	No	< G
Free cyanide	µg/L	NV	NV	NV	1.1	1.1	1.2	1.2	No	see total cyanide
Aluminum (total)	µg/L	5000	--	--	8.2	8.0	8.3	8.3	No	< G
Antimony (total)	µg/L	NV	4167	--	0.23	0.22	0.28	0.28	No	< G
Arsenic (total)	µg/L	25	--	--	1.4	1.4	1.8	1.8	No	< G
Barium (total)	µg/L	NV	66,000	--	29	27	41	41	No	< G
Beryllium (total)	µg/L	100	--	--	0.006	0.0055	0.0061	0.0061	No	< G
Boron (total)	µg/L	5000	--	--	12	12	15	15	No	< G
Cadmium (total)	µg/L	80	--	--	0.02	0.022	0.02	0.023	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.41	0.38	0.63	0.63	No	< G
Cobalt (total)	µg/L	1000	--	--	0.34	0.32	0.47	0.47	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	1.0	1.0	1.3	1.3	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	167	157	223	223	No	< G
Lead (total)	µg/L	100	--	--	0.58	0.53	0.75	0.75	No	< G
Magnesium (total)	µg/L	NV	NV	NV	3154	2940	4694	4694	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	68	62	105	105	No	< G
Mercury (total)	µg/L	3	--	--	0.011	0.011	0.012	0.012	No	< G
Molybdenum (total)	µg/L	500	--	--	0.49	0.43	0.61	0.61	No	< G
Nickel (total)	µg/L	1000	--	--	1.5	1.4	2.5	2.5	No	< G
Selenium (total)	µg/L	50	--	--	0.09	0.09	0.12	0.12	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.0056	0.0055	0.0060	0.0060	No	< G
Strontium (total)	µg/L	NV	876,667	--	124	116	178	178	No	< G
Thallium (total)	µg/L	NV	247	--	0.002	0.002	0.002	0.0024	No	< G
Uranium (total)	µg/L	200	--	--	0.081	0.078	0.12	0.12	No	< G
Vanadium (total)	µg/L	100	--	--	0.92	0.87	1.2	1.2	No	< G
Zinc (total)	µg/L	50000	--	--	2.1	2.1	2.2	2.2	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentration for operations (2024-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2024-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> Other references were sourced in the event that no value was available from CCME or Sample et al. (1996).

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Checked by: SG

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum All Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale <sup>h</sup>
					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	<b>3023</b>	418	102	<b>3023</b>	Yes	> G
Calcium	mg/L	1000	--	--	103	35	30	103	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	<b>1738</b>	178	23	<b>1738</b>	Yes	> G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.11	0.098	0.040	0.11	No	< G
Sodium	mg/L	NV	NV	NV	799	75	9.9	799	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	198	99	16	198	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	2.4	0.69	0.079	2.4	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	2.8	1.3	0.071	2.8	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.12	0.034	0.0023	0.12	No	< G
Potassium	mg/L	NV	NV	NV	27	5.1	2.1	27	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	4.6	1.0	1.3	4.6	No	< G
Free cyanide	µg/L	NV	NV	NV	1.4	1.0	1.3	1.4	No	see total cyanide
Aluminum (total)	µg/L	5000	--	--	9.2	9.1	9.6	10	No	< G
Antimony (total)	µg/L	NV	4167	--	1.9	1.3	0.42	1.9	No	< G
Arsenic (total)	µg/L	25	--	--	10	3.7	2.0	10	No	< G
Barium (total)	µg/L	NV	66,000	--	42	22	33	42	No	< G
Beryllium (total)	µg/L	100	--	--	0.029	0.0083	0.0074	0.029	No	< G
Boron (total)	µg/L	5000	--	--	148	132	21	148	No	< G
Cadmium (total)	µg/L	80	--	--	0.042	0.039	0.024	0.042	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.89	0.45	0.52	0.89	No	< G
Cobalt (total)	µg/L	1000	--	--	0.88	0.72	0.64	0.88	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	2.7	2.5	1.5	2.7	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	152	110	190	190	No	< G
Lead (total)	µg/L	100	--	--	0.45	0.28	0.58	0.58	No	< G
Magnesium (total)	µg/L	NV	NV	NV	13487	12147	4412	13487	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	120	108	81	120	No	< G
Mercury (total)	µg/L	3	--	--	0.020	0.019	0.013	0.020	No	< G
Molybdenum (total)	µg/L	500	--	--	6.9	2.0	0.57	6.9	No	< G
Nickel (total)	µg/L	1000	--	--	12	11	5.6	12	No	< G
Selenium (total)	µg/L	50	--	--	0.58	0.48	0.15	0.58	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.015	0.0060	0.0070	0.015	No	< G
Strontium (total)	µg/L	NV	876,667	--	2,394	457	160	2394	No	< G
Thallium (total)	µg/L	NV	247	--	0.012	0.010	0.0027	0.012	No	< G
Uranium (total)	µg/L	200	--	--	1.1	0.87	0.19	1.1	No	< G
Vanadium (total)	µg/L	100	--	--	1.9	1.2	1.2	1.9	No	< G
Zinc (total)	µg/L	50000	--	--	4.2	2.3	2.4	4.2	No	< G

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<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

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**Bold + shaded** = exceeds screening value for protection of wildlife

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum All Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale <sup>h</sup>
					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	66	55	89	89	No	< G
Calcium	mg/L	1000	--	--	23	18	31	31	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	15	12	21	21	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.032	0.031	0.039	0.039	No	< G
Sodium	mg/L	NV	NV	NV	5.4	4.4	7.5	7.5	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	5.4	4.3	11	11	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	0.06	0.05	0.085	0.085	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.014	0.011	0.023	0.023	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.00	0.001	0.0013	0.0013	No	< G
Potassium	mg/L	NV	NV	NV	1.6	1.3	2.0	2.0	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.2	1.1	1.1	1.2	No	< G
Free cyanide	µg/L	NV	NV	NV	1.2	1.1	1.1	1.2	No	see total cyanide
Aluminum (total)	µg/L	5000	--	--	8.3	8.1	8.2	8.3	No	< G
Antimony (total)	µg/L	NV	4167	--	0.2	0.2	0.25	0.25	No	< G
Arsenic (total)	µg/L	25	--	--	1.4	1.3	1.8	1.8	No	< G
Barium (total)	µg/L	NV	66,000	--	27	21	38	38	No	< G
Beryllium (total)	µg/L	100	--	--	0.006	0.0057	0.0058	0.0058	No	< G
Boron (total)	µg/L	5000	--	--	12	12	13	13	No	< G
Cadmium (total)	µg/L	80	--	--	0.022	0.021	0.022	0.022	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.35	0.25	0.56	0.56	No	< G
Cobalt (total)	µg/L	1000	--	--	0.32	0.27	0.45	0.45	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	1.1	0.92	1.3	1.3	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	158	127	210	210	No	< G
Lead (total)	µg/L	100	--	--	0.46	0.30	0.76	0.76	No	< G
Magnesium (total)	µg/L	NV	NV	NV	2944	2240	4323	4323	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	56	38	93	93	No	< G
Mercury (total)	µg/L	3	--	--	0.012	0.011	0.011	0.012	No	< G
Molybdenum (total)	µg/L	500	--	--	0.3	0.3	0.49	0.49	No	< G
Nickel (total)	µg/L	1000	--	--	1.4	1.3	2.3	2.3	No	< G
Selenium (total)	µg/L	50	--	--	0.08	0.07	0.12	0.12	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.006	0.0057	0.0057	0.0058	No	< G
Strontium (total)	µg/L	NV	876,667	--	117	90	165	165	No	< G
Thallium (total)	µg/L	NV	247	--	0.002	0.002	0.0023	0.0023	No	< G
Uranium (total)	µg/L	200	--	--	0.076	0.068	0.10	0.10	No	< G
Vanadium (total)	µg/L	100	--	--	0.79	0.64	1.1	1.1	No	< G
Zinc (total)	µg/L	50000	--	--	2.1	2.0	2.1	2.1	No	< G

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					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	153	95	170	170	No	< G
Calcium	mg/L	1000	--	--	36	29	34	36	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	68	21	24	68	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.066	0.058	0.066	0.066	No	< G
Sodium	mg/L	NV	NV	NV	41	10	15.8	41	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	22	20	72	72	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	0.41	0.25	0.13	0.41	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.53	0.24	0.12	0.53	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.013	0.0068	0.0087	0.013	No	< G
Potassium	mg/L	NV	NV	NV	2.5	2.0	7.0	7.0	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.8	1.5	2.0	2.0	No	< G
Free cyanide	µg/L	NV	NV	NV	1.8	1.5	1.3	1.8	No	see total cyanide
Aluminum (total)	µg/L	5000	--	--	12.2	10.8	9.3	12	No	< G
Antimony (total)	µg/L	NV	4167	--	0.48	0.46	0.78	0.78	No	< G
Arsenic (total)	µg/L	25	--	--	2.3	1.9	7.4	7.4	No	< G
Barium (total)	µg/L	NV	66,000	--	44	34	30	44	No	< G
Beryllium (total)	µg/L	100	--	--	0.016	0.0085	0.0087	0.016	No	< G
Boron (total)	µg/L	5000	--	--	93	29	83	93	No	< G
Cadmium (total)	µg/L	80	--	--	0.033	0.027	0.027	0.033	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.58	0.50	0.43	0.66	No	< G
Cobalt (total)	µg/L	1000	--	--	0.72	0.67	0.92	0.92	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	1.7	1.5	1.5	1.7	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	255	193	128	255	No	< G
Lead (total)	µg/L	100	--	--	0.78	0.66	0.39	0.97	No	< G
Magnesium (total)	µg/L	NV	NV	NV	4734	3981	6684	6684	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	94	82	84	112	No	< G
Mercury (total)	µg/L	3	--	--	0.018	0.015	0.014	0.018	No	< G
Molybdenum (total)	µg/L	500	--	--	1.6	0.86	1.39	1.6	No	< G
Nickel (total)	µg/L	1000	--	--	8.0	7.2	6.6	8.0	No	< G
Selenium (total)	µg/L	50	--	--	0.14	0.13	0.39	0.39	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.0094	0.0078	0.0072	0.0094	No	< G
Strontium (total)	µg/L	NV	876,667	--	194	151	295	295	No	< G
Thallium (total)	µg/L	NV	247	--	0.004	0.003	0.0105	0.011	No	< G
Uranium (total)	µg/L	200	--	--	0.4	0.24	1.18	1.2	No	< G
Vanadium (total)	µg/L	100	--	--	1.3	1.1	0.9	1.3	No	< G
Zinc (total)	µg/L	50000	--	--	3.2	2.8	2.1	3.2	No	< G

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					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	68	61	121	121	No	< G
Calcium	mg/L	1000	--	--	24	21	32	32	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	16	13	22	22	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.043	0.042	0.048	0.048	No	< G
Sodium	mg/L	NV	NV	NV	5.7	4.9	11	11	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	5.8	4.9	35	35	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	0.10	0.088	0.082	0.10	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.015	0.014	0.046	0.046	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.0011	0.0011	0.0036	0.0036	No	< G
Potassium	mg/L	NV	NV	NV	1.6	1.4	3.6	3.6	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.1	1.1	1.3	1.3	No	< G
Free cyanide	µg/L	NV	NV	NV	1.1	1.1	1.2	1.2	No	See total cyanide
Aluminum (total)	µg/L	5000	--	--	8.3	8.1	8.0	8.3	No	< G
Antimony (total)	µg/L	NV	4167	--	0.23	0.23	0.46	0.46	No	< G
Arsenic (total)	µg/L	25	--	--	1.4	1.3	3.6	3.6	No	< G
Barium (total)	µg/L	NV	66,000	--	29	25	33	33	No	< G
Beryllium (total)	µg/L	100	--	--	0.0055	0.0055	0.0067	0.0067	No	< G
Boron (total)	µg/L	5000	--	--	12	12	39	39	No	< G
Cadmium (total)	µg/L	80	--	--	0.023	0.022	0.023	0.023	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.39	0.35	0.51	0.51	No	< G
Cobalt (total)	µg/L	1000	--	--	0.33	0.31	0.64	0.64	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	1.1	1.0	1.4	1.4	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	161	151	169	169	No	< G
Lead (total)	µg/L	100	--	--	0.55	0.49	0.58	0.58	No	< G
Magnesium (total)	µg/L	NV	NV	NV	3106	2771	5425	5425	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	65	59	89	89	No	< G
Mercury (total)	µg/L	3	--	--	0.011	0.011	0.012	0.012	No	< G
Molybdenum (total)	µg/L	500	--	--	0.54	0.49	0.87	0.87	No	< G
Nickel (total)	µg/L	1000	--	--	1.4	1.4	3.9	3.9	No	< G
Selenium (total)	µg/L	50	--	--	0.089	0.083	0.21	0.21	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.0055	0.0055	0.0060	0.0060	No	< G
Strontium (total)	µg/L	NV	876,667	--	123	109	204	204	No	< G
Thallium (total)	µg/L	NV	247	--	0.0022	0.0022	0.0049	0.0049	No	< G
Uranium (total)	µg/L	200	--	--	0.084	0.080	0.49	0.49	No	< G
Vanadium (total)	µg/L	100	--	--	0.91	0.85	1.1	1.1	No	< G
Zinc (total)	µg/L	50000	--	--	2.1	2.1	2.1	2.1	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentration for operations (2024-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2024-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> Other references were sourced in the event that no value was available from CCME or Sample et al. (1996).

<sup>i</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>j</sup> CCME guideline for the protection of aquatic life

<sup>k</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline; BC ENC = British Columbia Ministry of the Environment Climate Change Strategy; LANL ESL = Los Alamos National Laboratory Ecological Screening Level.

**Bold + shaded** = exceeds screening value for protection of wildlife

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum All Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale <sup>h</sup>
					Operations	Active Closure	Post-Closure			
Total Dissolved Solids	mg/L	3000	--	--	66	54	76	76	No	< G
Calcium	mg/L	1000	--	--	23	18	27	27	No	< G
Chloride	mg/L	NV	NV	600 <sup>i</sup>	15	12	18	18	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.032	0.031	0.034	0.034	No	< G
Sodium	mg/L	NV	NV	NV	5.4	4.4	6.5	6.5	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	5.3	4.3	6.7	6.7	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>j</sup>	0.063	0.047	0.075	0.075	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.014	0.011	0.017	0.017	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.0011	0.0011	0.0012	0.0012	No	< G
Potassium	mg/L	NV	NV	NV	1.6	1.3	1.8	1.8	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.1	1.1	1.2	1.2	No	< G
Free cyanide	µg/L	NV	NV	NV	1.1	1.1	1.2	1.2	No	See total cyanide
Aluminum (total)	µg/L	5000	--	--	8.2	8.0	8.1	8.2	No	< G
Antimony (total)	µg/L	NV	4167	--	0.20	0.19	0.22	0.22	No	< G
Arsenic (total)	µg/L	25	--	--	1.4	1.2	1.6	1.6	No	< G
Barium (total)	µg/L	NV	66,000	--	27	21	32	32	No	< G
Beryllium (total)	µg/L	100	--	--	0.0057	0.0056	0.0059	0.0059	No	< G
Boron (total)	µg/L	5000	--	--	11	12	12	12	No	< G
Cadmium (total)	µg/L	80	--	--	0.022	0.020	0.022	0.022	No	< G
Chromium (total)	µg/L	50 <sup>f</sup>	--	--	0.35	0.25	0.45	0.45	No	< G
Cobalt (total)	µg/L	1000	--	--	0.32	0.27	0.37	0.37	No	< G
Copper (total)	µg/L	500 <sup>g</sup>	--	--	1.0	0.91	1.2	1.2	No	< G
Iron (total)	µg/L	NV	NV	300 <sup>j</sup>	157	127	180	180	No	< G
Lead (total)	µg/L	100	--	--	0.46	0.30	0.59	0.59	No	< G
Magnesium (total)	µg/L	NV	NV	NV	2929	2227	3567	3567	No	Essential nutrient/ameliorates metal toxicity
Manganese (total)	µg/L	NV	946,667	--	56	38	72	72	No	< G
Mercury (total)	µg/L	3	--	--	0.011	0.011	0.012	0.012	No	< G
Molybdenum (total)	µg/L	500	--	--	0.30	0.27	0.39	0.39	No	< G
Nickel (total)	µg/L	1000	--	--	1.4	1.3	1.6	1.6	No	< G
Selenium (total)	µg/L	50	--	--	0.084	0.068	0.10	0.10	No	< G
Silver (total)	µg/L	NV	NV	70,000 <sup>k</sup>	0.0057	0.0056	0.0059	0.0059	No	< G
Strontium (total)	µg/L	NV	876,667	--	116	90	141	141	No	< G
Thallium (total)	µg/L	NV	247	--	0.0023	0.0022	0.0024	0.0024	No	< G
Uranium (total)	µg/L	200	--	--	0.075	0.067	0.13	0.13	No	< G
Vanadium (total)	µg/L	100	--	--	0.78	0.63	0.92	0.92	No	< G
Zinc (total)	µg/L	50000	--	--	2.1	2.0	2.0	2.1	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentration for operations (2024-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2024-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> Other references were sourced in the event that no value was available from CCME or Sample et al. (1996).

<sup>i</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>j</sup> CCME guideline for the protection of aquatic life

<sup>k</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline; BC ENC = British Columbia Ministry of the Environment Climate Change Strategy; LANL ESL = Los Alamos National Laboratory Ecological Screening Level.

**Bold + shaded** = exceeds screening value for protection of wildlife

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
					Post-Closure		
Total Dissolved Solids	mg/L	3000	--	--	84	No	< G
Calcium	mg/L	1000	--	--	22	No	< G
Chloride	mg/L	NV	NV	600 <sup>h</sup>	20	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.034	No	< G
Sodium	mg/L	NV	NV	NV	9.1	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	16.6	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	0.053	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.020	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.0013	No	< G
Potassium	mg/L	NV	NV	NV	1.8	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.0	No	< G
Free cyanide	µg/L	NV	NV	NV	1.0	No	See total cyanide
Aluminum	µg/L	5000	--	--	6.9	No	< G
Antimony	µg/L	NV	4167	--	0.38	No	< G
Arsenic	µg/L	25	--	--	1.5	No	< G
Barium	µg/L	NV	66,000	--	24	No	< G
Beryllium	µg/L	100	--	--	0.0061	No	< G
Boron	µg/L	5000	--	--	22	No	< G
Cadmium	µg/L	80	--	--	0.017	No	< G
Chromium	µg/L	50 <sup>j</sup>	--	--	0.38	No	< G
Cobalt	µg/L	1000	--	--	0.54	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	1.3	No	< G
Iron	µg/L	NV	NV	300 <sup>i</sup>	127	No	< G
Lead	µg/L	100	--	--	0.38	No	< G
Magnesium	µg/L	NV	NV	NV	3577	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	58	No	< G
Mercury	µg/L	3	--	--	0.0093	No	< G
Molybdenum	µg/L	500	--	--	0.51	No	< G
Nickel	µg/L	1000	--	--	5.3	No	< G
Selenium	µg/L	50	--	--	0.13	No	< G
Silver	µg/L	NV	NV	70,000 <sup>j</sup>	0.0056	No	< G
Strontium	µg/L	NV	876,667	--	128	No	< G
Thallium	µg/L	NV	247	--	0.0022	No	< G
Uranium	µg/L	200	--	--	0.21	No	< G
Vanadium	µg/L	100	--	--	0.9	No	< G
Zinc	µg/L	50000	--	--	1.7	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for post-closure (2051-2119) phase.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>g</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>h</sup> Most stringent of the guidelines provided (for sheep).

<sup>i</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>j</sup> CCME guideline for the protection of aquatic life

<sup>k</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
					Post-Closure		
Total Dissolved Solids	mg/L	3000	--	--	248	No	< G
Calcium	mg/L	1000	--	--	41	No	< G
Chloride	mg/L	NV	NV	600 <sup>h</sup>	25	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.093	No	< G
Sodium	mg/L	NV	NV	NV	22	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	128	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	0.043	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.17	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.016	No	< G
Potassium	mg/L	NV	NV	NV	12	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	2.8	No	< G
Free cyanide	µg/L	NV	NV	NV	1.2	No	See total cyanide
Aluminum	µg/L	5000	--	--	8.5	No	< G
Antimony	µg/L	NV	4167	--	1.2	No	< G
Arsenic	µg/L	25	--	--	13	No	< G
Barium	µg/L	NV	66,000	--	31	No	< G
Beryllium	µg/L	100	--	--	0.011	No	< G
Boron	µg/L	5000	--	--	145	No	< G
Cadmium	µg/L	80	--	--	0.033	No	< G
Chromium	µg/L	50 <sup>j</sup>	--	--	0.44	No	< G
Cobalt	µg/L	1000	--	--	1.4	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	1.7	No	< G
Iron	µg/L	NV	NV	300 <sup>i</sup>	97	No	< G
Lead	µg/L	100	--	--	0.30	No	< G
Magnesium	µg/L	NV	NV	NV	9396	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	104	No	< G
Mercury	µg/L	3	--	--	0.015	No	< G
Molybdenum	µg/L	500	--	--	2.3	No	< G
Nickel	µg/L	1000	--	--	7.5	No	< G
Selenium	µg/L	50	--	--	0.63	No	< G
Silver	µg/L	NV	NV	70,000 <sup>j</sup>	0.0060	No	< G
Strontium	µg/L	NV	876,667	--	443	No	< G
Thallium	µg/L	NV	247	--	0.018	No	< G
Uranium	µg/L	200	--	--	2.2	No	< G
Vanadium	µg/L	100	--	--	0.95	No	< G
Zinc	µg/L	50000	--	--	1.9	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for post-closure (2051-2119) phase.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>g</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>i</sup> CCME guideline for the protection of aquatic life

<sup>j</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
					Active Closure		
Total Dissolved Solids	mg/L	3000	--	--	591	No	< G
Calcium	mg/L	1000	--	--	71	No	< G
Chloride	mg/L	NV	NV	600 <sup>h</sup>	96	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.23	No	< G
Sodium	mg/L	NV	NV	NV	33	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	302	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	0.25	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.30	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.010	No	< G
Potassium	mg/L	NV	NV	NV	30	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.0	No	< G
Free cyanide	µg/L	NV	NV	NV	1.0	No	See total cyanide
Aluminum	µg/L	5000	--	--	14	No	< G
Antimony	µg/L	NV	4167	--	3.1	No	< G
Arsenic	µg/L	25	--	--	14	No	< G
Barium	µg/L	NV	66,000	--	62	No	< G
Beryllium	µg/L	100	--	--	0.013	No	< G
Boron	µg/L	5000	--	--	379	No	< G
Cadmium	µg/L	80	--	--	0.090	No	< G
Chromium	µg/L	50 <sup>f</sup>	--	--	0.38	No	< G
Cobalt	µg/L	1000	--	--	3.0	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	2.2	No	< G
Iron	µg/L	NV	NV	300 <sup>j</sup>	42	No	< G
Lead	µg/L	100	--	--	0.095	No	< G
Magnesium	µg/L	NV	NV	NV	36109	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	184	No	< G
Mercury	µg/L	3	--	--	0.039	No	< G
Molybdenum	µg/L	500	--	--	6.8	No	< G
Nickel	µg/L	1000	--	--	10	No	< G
Selenium	µg/L	50	--	--	1	No	< G
Silver	µg/L	NV	NV	70,000 <sup>k</sup>	0.0050	No	< G
Strontium	µg/L	NV	876,667	--	1516	No	< G
Thallium	µg/L	NV	247	--	0.0045	No	< G
Uranium	µg/L	200	--	--	7.4	No	< G
Vanadium	µg/L	100	--	--	0.64	No	< G
Zinc	µg/L	50000	--	--	2.1	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for active closure (2044-2050) phase.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>i</sup> CCME guideline for the protection of aquatic life

<sup>j</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
					Active Closure		
Total Dissolved Solids	mg/L	3000	--	--	1375	No	< G
Calcium	mg/L	1000	--	--	51	No	< G
Chloride	mg/L	NV	NV	600 <sup>b</sup>	770	Yes	> G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.20	No	< G
Sodium	mg/L	NV	NV	NV	266	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	215	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	2.1	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	2.7	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.091	No	< G
Potassium	mg/L	NV	NV	NV	23	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	0.97	No	< G
Free cyanide	µg/L	NV	NV	NV	0.93	No	See total cyanide
Aluminum	µg/L	5000	--	--	14	No	< G
Antimony	µg/L	NV	4167	--	3.1	No	< G
Arsenic	µg/L	25	--	--	10	No	< G
Barium	µg/L	NV	66,000	--	47	No	< G
Beryllium	µg/L	100	--	--	0.010	No	< G
Boron	µg/L	5000	--	--	321	No	< G
Cadmium	µg/L	80	--	--	0.084	No	< G
Chromium	µg/L	50 <sup>f</sup>	--	--	0.47	No	< G
Cobalt	µg/L	1000	--	--	2.2	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	3.1	No	< G
Iron	µg/L	NV	NV	300 <sup>h</sup>	66	No	< G
Lead	µg/L	100	--	--	0.16	No	< G
Magnesium	µg/L	NV	NV	NV	25793	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	167	No	< G
Mercury	µg/L	3	--	--	0.036	No	< G
Molybdenum	µg/L	500	--	--	5.4	No	< G
Nickel	µg/L	1000	--	--	14	No	< G
Selenium	µg/L	50	--	--	1.2	No	< G
Silver	µg/L	NV	NV	70,000 <sup>j</sup>	0.0050	No	< G
Strontium	µg/L	NV	876,667	--	1,218	No	< G
Thallium	µg/L	NV	247	--	0.011	No	< G
Uranium	µg/L	200	--	--	5.7	No	< G
Vanadium	µg/L	100	--	--	0.96	No	< G
Zinc	µg/L	50000	--	--	2.1	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for active closure (2044-2050) phase.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>i</sup> CCME guideline for the protection of aquatic life

<sup>j</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
					Post-Closure		
Total Dissolved Solids	mg/L	3000	--	--	193	No	< G
Calcium	mg/L	1000	--	--	39	No	< G
Chloride	mg/L	NV	NV	600 <sup>h</sup>	35	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.046	No	< G
Sodium	mg/L	NV	NV	NV	15	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	80	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	0.064	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.054	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.0020	No	< G
Potassium	mg/L	NV	NV	NV	2.1	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.0	No	< G
Free cyanide	µg/L	NV	NV	NV	1.0	No	See total cyanide
Aluminum	µg/L	5000	--	--	8.1	No	< G
Antimony	µg/L	NV	4167	--	0.93	No	< G
Arsenic	µg/L	25	--	--	2.0	No	< G
Barium	µg/L	NV	66,000	--	24	No	< G
Beryllium	µg/L	100	--	--	0.0072	No	< G
Boron	µg/L	5000	--	--	47	No	< G
Cadmium	µg/L	80	--	--	0.023	No	< G
Chromium	µg/L	50 <sup>j</sup>	--	--	0.53	No	< G
Cobalt	µg/L	1000	--	--	0.92	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	2.1	No	< G
Iron	µg/L	NV	NV	300 <sup>i</sup>	134	No	< G
Lead	µg/L	100	--	--	0.39	No	< G
Magnesium	µg/L	NV	NV	NV	9712	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	90	No	< G
Mercury	µg/L	3	--	--	0.012	No	< G
Molybdenum	µg/L	500	--	--	1.2	No	< G
Nickel	µg/L	1000	--	--	10	No	< G
Selenium	µg/L	50	--	--	0.26	No	< G
Silver	µg/L	NV	NV	70,000 <sup>j</sup>	0.0056	No	< G
Strontium	µg/L	NV	876,667	--	170	No	< G
Thallium	µg/L	NV	247	--	0.0023	No	< G
Uranium	µg/L	200	--	--	0.39	No	< G
Vanadium	µg/L	100	--	--	1.5	No	< G
Zinc	µg/L	50000	--	--	2.5	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for post-closure (2051-2119) phases.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>i</sup> CCME guideline for the protection of aquatic life

<sup>j</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>	COPC <sup>d</sup>	Rationale
					Post-Closure		
Total Dissolved Solids	mg/L	3000	--	--	133	No	< G
Calcium	mg/L	1000	--	--	30	No	< G
Chloride	mg/L	NV	NV	600 <sup>h</sup>	21	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.050	No	< G
Sodium	mg/L	NV	NV	NV	12	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	49	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	0.058	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	0.056	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.0049	No	< G
Potassium	mg/L	NV	NV	NV	4.3	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	1.5	No	< G
Free cyanide	µg/L	NV	NV	NV	1.1	No	See total cyanide
Aluminum	µg/L	5000	--	--	7.6	No	< G
Antimony	µg/L	NV	4167	--	0.58	No	< G
Arsenic	µg/L	25	--	--	4.5	No	< G
Barium	µg/L	NV	66,000	--	27	No	< G
Beryllium	µg/L	100	--	--	0.0071	No	< G
Boron	µg/L	5000	--	--	52	No	< G
Cadmium	µg/L	80	--	--	0.022	No	< G
Chromium	µg/L	50 <sup>j</sup>	--	--	0.41	No	< G
Cobalt	µg/L	1000	--	--	0.72	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	1.4	No	< G
Iron	µg/L	NV	NV	300 <sup>i</sup>	131	No	< G
Lead	µg/L	100	--	--	0.39	No	< G
Magnesium	µg/L	NV	NV	NV	5638	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	74	No	< G
Mercury	µg/L	3	--	--	0.011	No	< G
Molybdenum	µg/L	500	--	--	1.0	No	< G
Nickel	µg/L	1000	--	--	4.9	No	< G
Selenium	µg/L	50	--	--	0.26	No	< G
Silver	µg/L	NV	NV	70,000 <sup>j</sup>	0.0056	No	< G
Strontium	µg/L	NV	876,667	--	210	No	< G
Thallium	µg/L	NV	247	--	0.0063	No	< G
Uranium	µg/L	200	--	--	0.69	No	< G
Vanadium	µg/L	100	--	--	0.94	No	< G
Zinc	µg/L	50000	--	--	1.9	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for post-closure (2051-2119) phase.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>i</sup> CCME guideline for the protection of aquatic life

<sup>j</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: SG

Checked by: BP

Chemical	Unit	CCME Guideline <sup>a</sup>	Sample et al. (1996) Toxicological Benchmark <sup>b</sup>	Other	Predicted Concentration <sup>c</sup>		COPC <sup>d</sup>	Rationale
					Active Closure	Post-Closure		
Total Dissolved Solids	mg/L	3000	--	--	724	69	No	< G
Calcium	mg/L	1000	--	--	35	11	No	< G
Chloride	mg/L	NV	NV	600 <sup>h</sup>	348	19	No	< G
Fluoride	mg/L	2 <sup>e</sup>	--	--	0.22	0.035	No	< G
Sodium	mg/L	NV	NV	NV	122	10	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	1000	--	--	155	20	No	< G
Total Ammonia as Nitrogen	mg/L	NV	NV	7 <sup>i</sup>	0.94	0.020	No	< G
Nitrate as Nitrogen	mg/L	NV	3767	--	1.3	0.026	No	< G
Nitrite as Nitrogen	mg/L	10	--	--	0.040	0.0015	No	< G
Potassium	mg/L	NV	NV	NV	27	3.5	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	229,000	--	0.98	1.0	No	< G
Free cyanide	µg/L	NV	NV	NV	0.98	1.0	No	See total cyanide
Aluminum	µg/L	5000	--	--	14	4.4	No	< G
Antimony	µg/L	NV	4,166.67	--	3.6	0.58	No	< G
Arsenic	µg/L	25	--	--	6.0	0.82	No	< G
Barium	µg/L	NV	66,000	--	50	11	No	< G
Beryllium	µg/L	100	--	--	0.017	0.010	No	< G
Boron	µg/L	5000	--	--	383	29	No	< G
Cadmium	µg/L	80	--	--	0.081	0.0081	No	< G
Chromium	µg/L	50 <sup>f</sup>	--	--	0.56	0.20	No	< G
Cobalt	µg/L	1000	--	--	3.0	0.35	No	< G
Copper	µg/L	500 <sup>g</sup>	--	--	2.0	1.0	No	< G
Iron	µg/L	NV	NV	300 <sup>j</sup>	14	19	No	< G
Lead	µg/L	100	--	--	0.060	0.062	No	< G
Magnesium	µg/L	NV	NV	NV	17770	2521	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	946,667	--	164	16	No	< G
Mercury	µg/L	3	--	--	0.032	0.0027	No	< G
Molybdenum	µg/L	500	--	--	9.4	1.7	No	< G
Nickel	µg/L	1000	--	--	14	4.3	No	< G
Selenium	µg/L	50	--	--	1.2	0.14	No	< G
Silver	µg/L	NV	NV	70,000 <sup>k</sup>	0.0049	0.0049	No	< G
Strontium	µg/L	NV	876,667	--	1,304	124	No	< G
Thallium	µg/L	NV	247	--	0.0047	0.0027	No	< G
Uranium	µg/L	200	--	--	9.2	1.6	No	< G
Vanadium	µg/L	100	--	--	1.1	0.46	No	< G
Zinc	µg/L	50000	--	--	2.2	1.2	No	< G

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Agricultural Water Uses - Livestock Water (CCME 2021, internet site)

<sup>b</sup> Sample et al. (1996) Toxicological Benchmarks for Wildlife. Most conservative of the available toxicity benchmarks was selected as the screening value. Calculation of the the toxicity benchmarks is presented in Table H-12-B-2b.

<sup>c</sup> Predicted maximum surface water concentrations for post-closure (2051-2119) phase.

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> Guideline assuming feed of animals does not contain fluoride.

<sup>f</sup> Guideline for chromium, trivalent ([Cr III]).

<sup>g</sup> Most stringent of the guidelines provided (for sheep).

<sup>h</sup> British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) guideline for wildlife

<sup>i</sup> CCME guideline for the protection of aquatic life

<sup>j</sup> Los Alamos National Laboratory (LANL) Ecological Screening Level (ESL) for wildlife.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: SG

Checked by: BP

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration <sup>c</sup> Post-Closure	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	161	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	26	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	19	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.046	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	17	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	218	BC ENV (2021) <sup>e</sup>	77	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>		--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	1.0	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	1.2	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.014	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	5.7	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	2.2	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.1	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	7.5	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.58	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	8.7	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	22	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.0070	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	62	No	< G
Cadmium	µg/L	NV	$10^{(0.83(\log[\text{hardness}]) - 2.46)}$	--	--	0.043	CCME	0.063	CCME (2021) <sup>i</sup>	0.026	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.32	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.73	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	0.99	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	112	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.24	FEQG <sup>D, l</sup>	0.38	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	4605	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	350	CCME (2021) <sup>D, m</sup>	61	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.012	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	1.1	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	3.7	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.34	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0049	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	191	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.014	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.78	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.71	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	4.73	CCME (2021) <sup>D, o</sup>	1.9	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.00042	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values: SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group, March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 218 mg/L (hardness of 31-75 mg/L as CaCO<sub>3</sub>) is applicable based on a minimum predicted hardness in CP1 of 33.2 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in CP1 is 33.2 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.063 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at CP1 is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in CP1 was 33.2 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.24 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 33.2 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in CP1 was 33.2 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at CP1 was 33.2 mg/L as CaCO<sub>3</sub>, therefore the guideline of 4.73 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP

Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration <sup>c</sup> Post Closure	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	93	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	34	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	22	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.042	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	8.0	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	15	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.10	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.023	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0013	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	2.1	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.2	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.2	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	8.3	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.28	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	1.8	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	41	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.0061	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	15	No	< G
Cadmium	µg/L	NV	$10^{(0.83(\log[\text{hardness}]) - 2.46)}$	--	--	0.043	CCME	0.059	CCME (2021) <sup>i</sup>	0.023	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.63	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.47	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.3	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	223	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC}]) + 0.214[\ln(\text{hardness})] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.20	FEQG <sup>D, l</sup>	0.75	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	4694	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	350	CCME (2021) <sup>D, m</sup>	105	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.012	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	0.61	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	2.5	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.12	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0060	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	178	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0024	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.12	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	1.2	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC}]) + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	4.34	CCME (2021) <sup>D, o</sup>	2.2	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.000054	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values: SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness of 0-30 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in Lake B45 of 30.3 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in Lake B45 is 30.3 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.059 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at Lake B45 is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC}]) + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in Lake B45 was 30.3 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.20 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 30.3 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Lake B45 was 30.3 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC}]) + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Lake B45 was 30.3 mg/L as CaCO<sub>3</sub>, therefore the guideline of 4.34 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP

Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration <sup>c</sup> Post Closure	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	89	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	31	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	21	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.039	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	7.5	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	218	BC ENV (2021) <sup>e</sup>	11	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.085	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.023	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0013	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	2.0	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.1	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.1	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	8.2	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.25	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	1.8	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	38	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.006	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	13	No	< G
Cadmium	µg/L	NV	$10^{(0.83(\log(\text{hardness})) - 2.46)}$	--	--	0.043	CCME	0.062	CCME (2021) <sup>i</sup>	0.022	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.56	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414(\ln(\text{hardness})) - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.45	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.3	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	210	No	< G
Lead	µg/L	NV	1	$4[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})]$	--	3.31 <sup>D</sup>	FEQG	2.23	FEQG <sup>D, l</sup>	0.76	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	4323	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	260	CCME (2021) <sup>D, m</sup>	93	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.011	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	0.49	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	2.3	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.12	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0057	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	165	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0023	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.10	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	1.1	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})) - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	4.57	CCME (2021) <sup>D, o</sup>	2.1	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.000031	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

- SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.
- CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).
- ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines.
- Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).
- AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 218 mg/L (hardness of 31-75 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in Lake B2 of 32.02 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH ≥6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in Lake B2 is 32.02 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.062 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at Lake B2 is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.4152)}$ . The minimum predicted hardness in Lake B2 was 32.02 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.23 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 32.0 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Lake B2 was 32.02 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Lake B2 was 32.02 mg/L as CaCO<sub>3</sub>, therefore the guideline of 4.57 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP  
Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration <sup>c</sup> Post Closure	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	170	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	34	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	24	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.066	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	16	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	218	BC ENV (2021) <sup>e</sup>	72	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.13	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.12	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0087	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	7.0	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	2.0	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.3	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	9.3	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.78	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	7.4	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	30	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.009	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	83	No	< G
Cadmium	µg/L	NV	$10^{(0.83[\log(\text{hardness})] - 2.46)}$	--	--	0.043	CCME	0.063	CCME (2021) <sup>i</sup>	0.027	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.43	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.92	Yes	> G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.5	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	128	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.24	FEQG <sup>D, l</sup>	0.39	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	6684	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	260	CCME (2021) <sup>D, m</sup>	84	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.014	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	1.39	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	6.6	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.39	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0072	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	295	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.011	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	1.2	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.94	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC}]) + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	4.71	CCME (2021) <sup>D, o</sup>	2.1	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.00061	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 218 mg/L (hardness of 31-75 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in Lake A8 West of 33.1 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in Lake A8 West is 33.1 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.063 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at Lake A8 West is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC}]) + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in Lake A8 West was 33.1 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.24 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 33.1 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Lake A8 West was 33.1 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenerios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC}]) + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Lake A8 West was 33.1 mg/L as CaCO<sub>3</sub>, therefore the guideline of 4.71 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP

Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum ALL Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)				Operations	Active Closure	Post Closure			
						Value	Source								
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	68	61	121	121	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	24	21	32	32	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	16	13	22	22	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.043	0.042	0	0.048	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	5.7	4.9	11	11	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	5.8	4.9	35	35	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.10	0.088	0.082	0.10	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.015	0.014	0.046	0.046	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0011	0.0011	0.0036	0.0036	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	1.6	1.4	3.6	3.6	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.1	1.1	1.3	1.3	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.1	1.1	1.2	1.2	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	8.3	8.1	8.0	8.3	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.23	0.23	0.46	0.46	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	1.4	1.3	3.6	3.6	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	29	25	33	33	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.0055	0.0055	0.0067	0.0067	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	12	12	39	39	No	< G
Cadmium	µg/L	NV	$10^{(0.83(\log(\text{hardness}) - 2.46))}$	--	--	0.043	CCME	0.058	CCME (2021) <sup>i</sup>	0.023	0.022	0.023	0.023	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.39	0.35	0.51	0.51	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.33	0.31	0.64	0.64	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.1	0.96	1.4	1.4	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	161	151	169	169	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC}) + 0.214[\ln(\text{hardness})] + 0.415)]}$	--	3.31 <sup>D</sup>	FEQG	2.19	FEQG <sup>D, l</sup>	0.55	0.49	0.58	0.58	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	3106	2771	5425	5425	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	260	CCME (2021) <sup>D, m</sup>	65	59	89	89	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.011	0.011	0.012	0.012	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	0.54	0.49	0.87	0.87	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	1.4	1.4	3.9	3.9	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.089	0.083	0.21	0.21	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0055	0.0055	0.0060	0.0060	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	123	109	204	204	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0022	0.0022	0.0049	0.0049	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.084	0.080	0.49	0.49	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.91	0.85	1.1	1.1	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	4.23	CCME (2021) <sup>D, o</sup>	2.1	2.1	2.1	2.1	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0	0	0.00028	0.00028	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Predicted maximum surface water concentration for operations (2020-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2020-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness of 0-30 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in Lake A1 of 29.5 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in Lake A1 is 29.5 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.058 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at Lake B7 is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in Lake A1 was 29.5 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.19 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 29.5 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Lake A1 was 29.5 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Lake A1 was 29.5 mg/L as CaCO<sub>3</sub>, therefore the guideline of 4.23 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP

Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>a</sup>	Source	Predicted Concentration <sup>c</sup>			Predicted Concentration (Maximum ALL Phases) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)				Operations	Active Closure	Post Closure			
						Value	Source								
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	66	54	76	76	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	23	18	27	27	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	15	12	18	18	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.032	0.031	0.034	0.034	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	5.4	4.4	6.5	6.5	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	5.3	4.3	6.7	6.7	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.063	0.047	0.075	0.075	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.014	0.011	0.017	0.017	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0011	0.0011	0.0012	0.0012	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	1.6	1.3	1.8	1.8	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.1	1.1	1.2	1.2	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.1	1.1	1.2	1.2	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	8.2	8.0	8.1	8.2	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.20	0.19	0.22	0.22	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	1.4	1.2	1.6	1.6	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	27	21	32	32	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.006	0.006	0.006	0.0059	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	11	12	12	12	No	< G
Cadmium	µg/L	NV	$10^{(0.83[\ln(\text{hardness})] - 2.46)}$	--	--	0.043	CCME	0.071	CCME (2021) <sup>i</sup>	0.022	0.020	0.022	0.022	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.35	0.25	0.45	0.45	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.32	0.27	0.37	0.37	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.05	0.91	1.17	1.2	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	156.84	126.67	179.74	180	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.31	FEQG <sup>D, l</sup>	0.46	0.30	0.59	0.59	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	2928.81	2226.74	3566.67	3567	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	260	CCME (2021) <sup>D, m</sup>	55.68	37.96	72.25	72	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.01	0.01	0.01	0.012	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	0.30	0.27	0.39	0.39	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	1.43	1.27	1.64	1.6	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.084	0.068	0.10	0.10	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0057	0.0056	0.0059	0.0059	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	116.31	89.70	141.07	141	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0023	0.0022	0.0024	0.0024	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.075	0.067	0.13	0.13	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.78	0.63	0.92	0.92	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	--	--	3.91 <sup>D</sup>	CCME	5.41	CCME (2021) <sup>D, o</sup>	2.1	2.0	2.0	2.1	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0	0	0.000015	0.000015	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values: SSWQO (Site specific water quality objective), 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project. CCME (Canadian Council of Ministers of the Environment), 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site). ECCC (Environment and Climate Change Canada). Federal Environmental Quality Guidelines. Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation). AEMP (Aquatic Effects Monitoring Program), 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group, March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Predicted maximum surface water concentration for operations (2020-2043), active closure (2044-2050), post-closure (2051-2119) or all phases (2020-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 218 mg/L (hardness of 31-75 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in CH6 of 38.3 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\ln(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in CH6 is 38.3 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.071 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at CH6 is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in CH6 was 38.3 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.31 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 38.3 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in CH6 was 38.3 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at CH6 was 38.3 mg/L as CaCO<sub>3</sub>, therefore the guideline of 5.41 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

Prepared by: BP  
Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration (Post Closure) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	84	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	22	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	20	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.034	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	9.1	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	17	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.053	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.020	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0013	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	1.8	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.0	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.0	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	6.9	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.38	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	1.5	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	24	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.0061	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	22	No	< G
Cadmium	µg/L	NV	10 <sup>(0.83[log(hardness)] - 2.46)</sup>	--	--	0.043	CCME	0.051	CCME (2021) <sup>i</sup>	0.017	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.38	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.88)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.54	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.3	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	127	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC}) + 0.214[\ln(\text{hardness})] + 0.415]}$	--	3.31 <sup>D</sup>	FEQG	2.12	FEQG <sup>D,1</sup>	0.38	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	3577	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	350	CCME (2021) <sup>D,m</sup>	58	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.0093	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	0.51	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	5.3	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.13	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0056	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	128	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0022	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.21	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.92	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	3.68	CCME (2021) <sup>D,o</sup>	1.7	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.00019	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). 2021. Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group, March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness of 0-30 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in NORWES Pit Lake of 25.5 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) = 10<sup>(0.86[log(hardness)] - 2.46)</sup>. The lowest predicted hardness value in NORWES Pit Lake is 25.5 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.051 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) = e<sup>(0.414[ln(hardness)] - 1.887)</sup>. The lowest hardness at NORWES Pit Lake is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) = e<sup>(0.514[ln(DOC)] + 0.214[ln(hardness)] + 0.4152)</sup>. The minimum predicted hardness in NORWES Pit Lake was 25.5 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.12 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 25.5 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in NORWES Pit Lake was 25.5 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) = exp(0.947[ln(hardness)] - 0.815[pH] + 0.398[ln(DOC)] + 4.625). The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at NORWES Pit Lake was 25.5 mg/L as CaCO<sub>3</sub>, therefore the guideline of 3.68 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

**Bold + shaded** = exceeds screening value for protection of aquatic life

Prepared by: BP  
Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration (Post Closure) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	248	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	41	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	25	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.093	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	22	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	128	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.043	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.2	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.016	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	12	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	2.8	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.2	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	8.5	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	1.2	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	13	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	31	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.011	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	145	No	< G
Cadmium	µg/L	NV	$10^{(0.63[\ln(\text{hardness})] - 2.46)}$	--	--	0.043	CCME	0.052	CCME (2021) <sup>i</sup>	0.033	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.44	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.88)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	<b>1.4</b>	<b>Yes</b>	<b>&gt; G</b>
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.7	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	97	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.14	FEQG <sup>D, l</sup>	0.30	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	9396	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	350	CCME (2021) <sup>D, m</sup>	104	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.015	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	2.3	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	7.5	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.63	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0060	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	443	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.018	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	2.2	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.95	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	3.81	CCME (2021) <sup>D, o</sup>	1.9	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.0011	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values: SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). 2021. Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness of 0-30 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in TIRI Pit Lake of 26.4 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\ln(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in TIRI Pit Lake is 26.4 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.052 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at TIRI Pit Lake is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC})] + 0.214[\ln(\text{hardness})] + 0.415)}$ . The minimum predicted hardness in TIRI Pit Lake was 26.4 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.14 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 26.4 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in TIRI Pit Lake was 26.4 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at TIRI Pit Lake was 26.4 mg/L as CaCO<sub>3</sub>, therefore the guideline of 3.81 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

**Bold + shaded** = exceeds screening value for protection of aquatic life

Prepared by: BP  
Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration (Post Closure) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	193	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	39	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	35	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.046	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	15	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	218	BC ENV (2021) <sup>e</sup>	80	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.064	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.054	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0020	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	2.1	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.0	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.0	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	8.1	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.93	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	2.0	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	24	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.0072	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	47	No	< G
Cadmium	µg/L	NV	10 <sup>(0.83[ln(hardness)] - 2.46)</sup>	--	--	0.043	CCME	0.079	CCME (2021) <sup>i</sup>	0.023	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.53	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[ln(hardness)] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	<b>0.92</b>	<b>Yes</b>	<b>&gt; G</b>
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	<b>2.1</b>	<b>Yes</b>	<b>&gt; G</b>
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	134	No	< G
Lead	µg/L	NV	1	$e^{(0.514[ln(DOC)] + 0.214[ln(hardness)] + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.37	FEQG <sup>D, l</sup>	0.39	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	9712	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	350	CCME (2021) <sup>D, m</sup>	90	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.012	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	1.2	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	10	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.26	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0056	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	170	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0023	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.39	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	1.5	No	< G
Zinc	µg/L	NV	$e^{(0.947[ln(hardness)] - 0.815[pH] + 0.398[ln(DOC)] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	6.07	CCME (2021) <sup>D, o</sup>	2.5	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.00076	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values: SSWQO (Site specific water quality objective), 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment), 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site). ECCC (Environment and Climate Change Canada), 2021. Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation). AEMP (Aquatic Effects Monitoring Program), 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group, March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 218 mg/L (hardness of 31-75 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in Pump Pit Lake of 43.2 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) = 10<sup>(0.86[ln(hardness)] - 2.46)</sup>. The lowest predicted hardness value in Pump Pit Lake is 43.2 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.079 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) = e<sup>(0.414[ln(hardness)] - 1.887)</sup>. The lowest hardness at Pump Pit Lake is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) = e<sup>(0.514[ln(DOC)] + 0.214[ln(hardness)] + 0.4152)</sup>. The minimum predicted hardness in Pump Pit Lake was 43.2 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.37 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 43.2 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Pump Lake was 43.2 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) = exp(0.947[ln(hardness)] - 0.815[pH] + 0.398[ln(DOC)] + 4.625). The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Pump Pit Lake was 43.2 mg/L as CaCO<sub>3</sub>, therefore the guideline of 6.04 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

**Bold + shaded** = exceeds screening value for protection of aquatic life

Prepared by: BP  
Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration (Post Closure) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	133	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	30	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	21	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.050	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	12	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	49	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.058	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.056	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0049	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	4.3	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.5	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.1	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	7.6	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.58	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	4.5	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	27	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.0071	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	52	No	< G
Cadmium	µg/L	NV	$10^{(0.83(\log[\text{hardness}]) - 2.46)}$	--	--	0.043	CCME	0.057	CCME (2021) <sup>i</sup>	0.022	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.41	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness}]) - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.72	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	1.4	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	131	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC}]) + 0.214[\ln(\text{hardness}]) + 0.415)}$	--	3.31 <sup>D</sup>	FEQG	2.18	FEQG <sup>D, l</sup>	0.39	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	5638	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	350	CCME (2021) <sup>D, m</sup>	74	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.011	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	1.0	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	4.9	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.26	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0056	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	210	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0063	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	0.69	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.94	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness}]) - 0.815[\text{pH}] + 0.398[\ln(\text{DOC}]) + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	4.15	CCME (2021) <sup>D, o</sup>	1.9	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.00041	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). 2021. Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group. March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness of 0-30 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in F-Zone Pit Lake of 28.9 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH >=6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\log(\text{hardness}]) - 2.46)}$ . The lowest predicted hardness value in F-Zone Pit Lake was 28.9 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.057 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness}]) - 1.887)}$ . The lowest hardness at F-Zone Pit Lake is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC}]) + 0.214[\ln(\text{hardness}]) + 0.415)}$ . The minimum predicted hardness in F-Zone Pit Lake was 28.9 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.18 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 28.9 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 350 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in F-Zone Pit Lake was 29.1 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness}]) - 0.815[\text{pH}] + 0.398[\ln(\text{DOC}]) + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at F-Zone Pit Lake was 28.9 mg/L as CaCO<sub>3</sub>, therefore the guideline of 4.15 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

**Bold + shaded** = exceeds screening value for protection of aquatic life

Prepared by: BP

Checked by: SG

Chemical	Unit	Potential Chronic Screening Values <sup>a</sup>						Selected Screening Value <sup>b</sup>	Source	Predicted Concentration (Post Closure) <sup>c</sup>	COPC <sup>d</sup>	Rationale
		SSWQO	CCME (2021) freshwater longterm	ECCC FEQG	Other (e.g., BC ENV)	AEMP Benchmarks (Azimuth 2021)						
						Value	Source					
Total Dissolved Solids (TDS)	mg/L	1000	NV	NV	NV	500	ADEC 2012	500	ADEC 2012	69	No	< G
Calcium	mg/L	NV	NV	NV	NV	NV	--	NV	--	11	No	Essential nutrient/ameliorates metal toxicity
Chloride	mg/L	NV	120	--	--	120	CCME	120	CCME (2021)	19	No	< G
Fluoride	mg/L	2.8	1.2	--	--	2.8	SSWQO	2.8	SSWQO	0.035	No	< G
Sodium	mg/L	NV	NV	NV	NV	NV	--	NV	--	10	No	Essential nutrient/ameliorates metal toxicity
Sulphate	mg/L	NV	NV	NV	128-218	128-218	BC ENV 2018	128	BC ENV (2021) <sup>e</sup>	20	No	< G
Total Ammonia as Nitrogen	mg/L	NV	Temperature and pH dependant <sup>f</sup>	--	--	0.58	CCME	1.83	CCME (2021) <sup>f</sup>	0.020	No	< G
Nitrate as Nitrogen	mg/L	NV	3	--	--	2.93	CCME	2.9	CCME (2021)	0.026	No	< G
Nitrite as Nitrogen	mg/L	NV	0.06	--	--	0.06	CCME	0.06	CCME (2021)	0.0015	No	< G
Potassium	mg/L	NV	NV	NV	NV	NV	--	NV	--	3.5	No	Essential nutrient/ameliorates metal toxicity
Total cyanide	µg/L	NV	NV	NV	5.2	5.2	BC ENV	5.2	BC ENV (2021)	1.0	No	< G
Free cyanide	µg/L	NV	5	--	--	NV	--	5	CCME (2021)	1.0	No	< G
Aluminum	µg/L	NV	100 <sup>h</sup>	--	--	100	CCME	100	CCME (2021) <sup>h</sup>	4.4	No	< G
Antimony	µg/L	NV	NV	NV	NV	9	BC ENV	9	BC ENV (2021)	0.58	No	< G
Arsenic	µg/L	25	5	--	--	25	SSWQO	25	SSWQO	0.82	No	< G
Barium	µg/L	NV	NV	NV	1000	1000	BC ENV	1000	BC ENV (2021)	11	No	< G
Beryllium	µg/L	NV	NV	NV	0.13	NV	NV	0.13	BC ENV (2021)	0.010	No	< G
Boron	µg/L	NV	1500	--	--	1,500	CCME	1,500	CCME (2021)	29	No	< G
Cadmium	µg/L	NV	$10^{(0.83[\ln(\text{hardness})] - 2.46)}$	--	--	0.043	CCME	0.048	CCME (2021) <sup>i</sup>	0.0081	No	< G
Chromium	µg/L	NV	5 (CrVI); 8.9 (CrIII)	--	--	5	CCME (CrVI)	5	CCME (2021)	0.20	No	< G
Cobalt	µg/L	NV	NV	$e^{(0.414[\ln(\text{hardness})] - 1.887)}$	--	0.78	FEQG	0.78	FEQG <sup>j</sup>	0.35	No	< G
Copper	µg/L	NV	2	--	--	2	CCME	2	CCME (2021) <sup>k</sup>	0.97	No	< G
Iron	µg/L	1060	300	--	--	1060	SSWQO	1060	SSWQO	19	No	< G
Lead	µg/L	NV	1	$e^{(0.514[\ln(\text{DOC}) + 0.214[\ln(\text{hardness})] + 0.415]}$	--	3.31 <sup>D</sup>	FEQG	2.09	FEQG <sup>D, l</sup>	0.062	No	< G
Magnesium	µg/L	NV	NV	NV	NV	NV	--	NV	--	2521	No	Essential nutrient/ameliorates metal toxicity
Manganese	µg/L	NV	CCME Calculator	--	--	210 <sup>D</sup>	CCME	260	CCME (2021) <sup>D, m</sup>	16	No	< G
Mercury	µg/L	NV	0.026	--	--	0.026	CCME	0.026	CCME (2021)	0.0027	No	< G
Molybdenum	µg/L	NV	73	--	--	73	CCME	73	CCME (2021)	1.7	No	< G
Nickel	µg/L	NV	25	--	--	25	CCME	25	CCME (2021) <sup>n</sup>	4.3	No	< G
Selenium	µg/L	NV	1	--	NV	1	CCME	1	CCME (2021)	0.14	No	< G
Silver	µg/L	NV	0.25	--	--	0.25	CCME	0.25	CCME (2021)	0.0049	No	< G
Strontium	µg/L	NV	NV	2500 <sup>D</sup>	--	2500 <sup>D</sup>	FEQG	2500	FEQG <sup>D</sup>	124	No	< G
Thallium	µg/L	NV	0.8	--	--	0.8	CCME	0.8	CCME (2021)	0.0027	No	< G
Uranium	µg/L	NV	15	--	--	15	CCME	15	CCME (2021)	1.6	No	< G
Vanadium	µg/L	NV	NV	120	--	120	FEQG	120	FEQG	0.46	No	< G
Zinc	µg/L	NV	$e^{(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)}$	NV	--	3.91 <sup>D</sup>	CCME	3.46	CCME (2021) <sup>D, o</sup>	1.2	No	< G
Ra226	Bq/L	NV	NV	NV	NV	NV	--	NV	--	0.00037	No	Not evaluated for aquatic life

<sup>D</sup> = dissolved

<sup>a</sup> Selected screening values were consistent with the AEMP Benchmarks developed by Azimuth (2021) and were updated for predicted hardness. The AEMP benchmarks were based on the following sources of potential chronic screening values:

SSWQO (Site specific water quality objective). 2020. Derived in: Aquatic Effects Monitoring Program, 2020 Annual Report, Meliadine Gold Project.

CCME (Canadian Council of Ministers of the Environment). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life - Freshwater, Long-term (CCME 2021, internet site).

ECCC (Environment and Climate Change Canada). 2021. Federal Environmental Quality Guidelines.

Other jurisdictions including BC ENV (British Columbia Ministry of Environment and Climate Change Strategy) and ADEC (Alaska Department of Environmental Conservation).

AEMP (Aquatic Effects Monitoring Program). 2021. 2020 Annual Report, Meliadine Gold Project. Prepared by Azimuth Consulting Group, March 2021.

<sup>b</sup> Selected screening values were consistent with the AEMP Benchmarks and were updated for predicted hardness.

<sup>c</sup> Maximum predicted surface water concentration for post closure phase (2051-2119).

<sup>d</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>e</sup> The guideline for sulphate is hardness-dependent. The guideline of 128 mg/L (hardness of 0-30 mg/L as CaCO<sub>3</sub>) is applicable based on the minimum predicted hardness in Discovery Pit Lake of 23.9 mg/L as CaCO<sub>3</sub>.

<sup>f</sup> Toxicity of ammonia relates primarily to concentration of the unionized form, which increases with increasing temperature and pH. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and a temperature of 15°C. The total ammonia guideline of 2.22 mg/L NH<sub>3</sub> was multiplied by 0.8224 to convert it to 1.83 mg/L of NH<sub>3</sub> as N.

<sup>h</sup> Aluminum guideline is pH dependent. At pH <6.5, guideline is 5 µg/L. At pH ≥6.5, guideline is 100 µg/L. Consistent with the 2020 AEMP, the minimum pH was assumed to be 7.5, therefore a guideline of 100 µg/L was used.

<sup>i</sup> Cadmium guideline is hardness dependent and is calculated according to the following equation: CWQG(cadmium, µg/L) =  $10^{(0.86[\ln(\text{hardness})] - 2.46)}$ . The lowest predicted hardness value in Discovery Pit Lake was 23.9 mg/L as CaCO<sub>3</sub>, therefore a guideline of 0.048 µg/L was used.

<sup>j</sup> Cobalt guideline is hardness dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.414[\ln(\text{hardness})] - 1.887)}$ . The lowest hardness at Discovery Pit Lake is lower than the minimum valid hardness for the equation. Therefore, a hardness default of 52 mg/L was used.

<sup>k</sup> Copper guideline is hardness dependent. At water hardness of 0 to <82 mg/L as CaCO<sub>3</sub>, the guideline is 2 µg/L.

<sup>l</sup> Lead guideline is hardness and DOC dependent and is calculated according to the following equation: FEQG (µg/L) =  $e^{(0.514[\ln(\text{DOC}) + 0.214[\ln(\text{hardness})] + 0.415]}$ . The minimum predicted hardness in Discovery Pit Lake was 23.9 mg/L as CaCO<sub>3</sub>, therefore a guideline of 2.09 µg/L was used.

<sup>m</sup> Manganese guideline is hardness and pH dependent. Consistent with the 2020 AEMP, the guideline was conservatively set for water with pH = 7.5 and the minimum predicted hardness of 23.9 mg/L as CaCO<sub>3</sub>. Therefore the guideline was 2600 µg/L.

<sup>n</sup> Nickel guideline is hardness dependent. At water hardness of 0 to <60 mg/L as CaCO<sub>3</sub>, the guideline is 25 µg/L. The minimum hardness in Discovery Pit Lake was 23.9 mg CaCO<sub>3</sub>/L, therefore a guideline of 25 µg/L was used.

<sup>o</sup> Zinc guideline is dependent on hardness, DOC, and pH and is calculated using the following equation (for chronic scenarios): CWQG (zinc, µg/L) =  $\exp(0.947[\ln(\text{hardness})] - 0.815[\text{pH}] + 0.398[\ln(\text{DOC})] + 4.625)$ . The equation is only valid between hardness values of 23.4-339 mg/L as CaCO<sub>3</sub>. The minimum predicted hardness at Discovery Pit Lake was 23.9 mg/L as CaCO<sub>3</sub>, therefore the guideline of 3.46 µg/L was used.

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; CaCO<sub>3</sub> = calcium carbonate; < = less than; G = guideline; SSWQO = site specific water quality objective; DOC = dissolved organic carbon.

**Bold + shaded** = exceeds screening value for protection of aquatic life

Prepared by: BP

Checked by: SG

Chemical	Unit	CCME (2021) Marine long-term <sup>a</sup>	BC ENV (2021) <sup>b</sup>	USEPA (2021) <sup>c</sup>	Selected Screening Value <sup>d</sup>	Source	Existing Concentration <sup>e</sup>	Predicted Concentration <sup>f</sup>	COPC <sup>g</sup>	Rationale
Total Dissolved Solids (TDS)	mg/L	NV	NV	NV	NV	--	34300	34300	No	Below Existing Concentration
Calcium	mg/L	NV	NV	NV	NV	--	404	407	No	NG
Chloride	mg/L	NV	* see note	NV	NV	--	20133	20133	No	Below Existing Concentration
Fluoride	mg/L	NV	NV	NV	NV	--	0	0.0017	No	NG
Sodium	mg/L	NV	NV	NV	NV	--	10867	10867	No	Below Existing Concentration
Sulphate	mg/L	NV	NV	NV	NV	--	2890	2890	No	Below Existing Concentration
Total Ammonia as Nitrogen	mg/L	NV	NV	NV	NV	--	0	0.077	No	NG
Nitrate as Nitrogen	mg/L	45	--	--	45	CCME (2021)	2.5	3.1	No	< G
Nitrite as Nitrogen	mg/L	NV	NV	NV	NV	--	2.5	2.5	No	Below Existing Concentration
Phosphorus (total)	mg/L	NV	NV	NV	NV	--	6.0	6.0	No	Below Existing Concentration
Potassium	mg/L	NV	NV	NV	NV	--	394	394	No	Below Existing Concentration
Total cyanide	µg/L	NV	NV	NV	NV	--	0	0.16	No	NG
Free cyanide	µg/L	NV	1	--	1	BC ENV (2021)	0	0.022	No	< G
Aluminum	µg/L	NV	NV	NV	NV	--	0	14	No	NG
Antimony	µg/L	NV	NV	NV	NV	--	1.0	1.1	No	NG
Arsenic	µg/L	12.5	--	--	12.5	CCME (2021)	0	0.38	No	< G
Barium	µg/L	NV	NV	NV	NV	--	10	11	No	NG
Beryllium	µg/L	NV	NV	NV	NV	--	0.5	0.50	No	Below Existing Concentration
Boron	µg/L	NV	1200	--	1,200	BC ENV (2021)	4790	<b>4790</b>	No	Below Existing Concentration
Cadmium	µg/L	0.12	--	--	0.12	CCME (2021)	0.50	<b>0.50</b>	No	Below Existing Concentration
Chromium	µg/L	1.5	--	--	1.5	CCME (2021) <sup>h</sup>	50	<b>50</b>	No	Below Existing Concentration
Cobalt	µg/L	NV	NV	NV	NV	--	0	0.054	No	NG
Copper	µg/L	NV	2	--	2	BC ENV (2021)	0	0.048	No	< G
Iron	µg/L	NV	NV	NV	NV	--	600	608	No	NG
Lead	µg/L	NV	2	--	2	BC ENV (2021)	0	0.0033	No	< G
Magnesium	µg/L	NV	NV	NV	NV	--	1310000	1310000	No	Below Existing Concentration
Manganese	µg/L	NV	NV	NV	NV	--	20	25	No	NG
Mercury	µg/L	0.016	--	--	0.016	CCME (2021)	0.050	<b>0.050</b>	No	Below Existing Concentration
Molybdenum	µg/L	NV	NV	NV	NV	--	11	11	No	Below Existing Concentration
Nickel	µg/L	NV	NV	8.2	8.2	US EPA (2021) <sup>d</sup>	0	0.22	No	< G
Selenium	µg/L	NV	NV	71	71	US EPA (2021) <sup>d</sup>	20	20	No	< G
Silver	µg/L	NV	1.5	--	1.5	BC ENV (2021)	0	0.00060	No	< G
Strontium	µg/L	NV	NV	NV	NV	--	7270	7364	No	NG
Thallium	µg/L	NV	NV	NV	NV	--	0.20	0.20	No	Below Existing Concentration
Uranium	µg/L	NV	NV	NV	NV	--	3.1	3.1	No	Below Existing Concentration
Vanadium	µg/L	NV	NV	NV	NV	--	5.0	5.0	No	Below Existing Concentration
Zinc	µg/L	NV	10	--	10	BC ENV (2021)	0	0.14	No	< G
Ra226	Bq/L	NV	NV	NV	NV	--	0	0.00092	No	NG

<sup>d</sup> = dissolved

<sup>a</sup> Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Aquatic Life - Marine, Long term (CCME 2021, internet site).

<sup>b</sup> BC ENV (British Columbia Ministry of Environment and Climate Change Strategy). 2021. Approved Water Quality Guidelines.

<sup>c</sup> US EPA (United States Environmental Protection Agency). 2021. National Recommended Water Quality Criteria - Aquatic Life Criteria Table.

<sup>d</sup> Predicted surface water concentrations were compared to the following screening values, in order of preference: CCME, BC ENV or US EPA.

<sup>e</sup> Maximum predicted existing surface water concentration.

<sup>f</sup> Predicted maximum surface water concentration at edge of mixing zone.

<sup>g</sup> Yes = the predicted surface water concentration is greater than the guideline and the maximum predicted existing surface water concentration and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and/or maximum predicted existing surface water concentration and therefore the chemical was not identified as a COPC.

<sup>h</sup> Guideline for chromium, hexavalent ([Cr VI]).

-- = not required; NV = no value; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline; NG = no guideline; Bq/L = becquerel per litre.

**Bold + Shaded** = predicted concentration is above screening value for the protection of aquatic life

Prepared by: BP  
Checked by: SG

**APPENDIX H-12-C**

**Copper Low Effect Threshold – Aquatic  
Health**

## APPENDIX H-12-C COPPER LOW EFFECTS THRESHOLD

### 1.0 INTRODUCTION

This appendix describes the derivation of a low effects threshold for aquatic life for copper completed in support of the residual impact assessment in the Human Health and Ecological Risk Assessment (HHERA) for the Meliadine Expansion Project. The HHERA identified potential risks to aquatic life based on a comparison of the predicted copper concentrations in Pump Pit Lake during post-closure to the biotic ligand model (BLM)-based toxicity benchmark representing the concentration below which no effects on aquatic life would be expected. As such, copper was carried through to the residual impact assessment. To provide further context on the likelihood of potential effects from copper exposure on the health of aquatic life, the derivation of a low effects threshold for copper was undertaken using the multiple linear regression (MLR) model of Brix et al. (2021).

### 2.0 METHODS

#### 2.1 Multiple Linear Regression Model Overview

The MLR model is based on the same principles of the BLM of predicting copper toxicity under various water chemistry conditions. The MLR requires fewer water chemistry inputs and can be executed in an Excel spreadsheet, making it simpler to use than the BLM. A key difference between the MLR model and the Environment and Climate Change Canada (ECCC) BLM, that was used in the derivation of the copper toxicity benchmark in the HHERA, is the underlying toxicity dataset. The MLR model developed by Brix et al. (2021) uses low level effects concentrations, whereas the ECCC BLM uses no effect concentrations. This difference is useful in the interpretation of the likelihood of potential adverse effects to aquatic life exposed to copper concentrations that are above a no effect threshold (i.e., BLM-based toxicity benchmark). In addition, both models produce species sensitivity distributions (SSDs), which allow for an evaluation of what species are most sensitive and the magnitude of the potential adverse effects at a particular predicted copper concentration.

To develop the MLR model, Brix et al. (2017) first identified the exposure and toxicity modifying factors (ETMFs) that influence copper bioavailability the most, starting with the list of ETMFs that are considered as part of the United States Environmental Protection Agency (US EPA) BLM. Based on their evaluation, pH, dissolved organic carbon (DOC), and hardness were selected for use in deriving a MLR model. Using the same methodology that US EPA used to derive the hardness-based copper regression equation, Brix et al. (2021) developed a regression equation that incorporated all three ETMFs. Relationships between toxicity and hardness or DOC tend to be linear, whereas a linear relationship between toxicity and pH is observed when toxicity is transformed (Brix et al. 2017). Thus, toxicity, hardness, and DOC were log transformed, but pH was not transformed in the final model. The statistical methods to develop and select the best-fitting model are provided by Brix et al. (2017, 2021).

Similar to the BLM, the MLR model normalizes toxicity data to a consistent set of exposure conditions, specifically those for pH, DOC, and hardness. The MLR model uses a database of toxicological data compiled by the US EPA (2007) and subsequently updated by Brix et al. (2017) to include more recent studies that meet US EPA (1985) test acceptability guidelines. The data compilation also considered the chronic toxicity dataset compiled by ECCC (2021). The MLR model database includes chronic toxicity data for 26 fish, amphibian, and invertebrate species. The chronic endpoints include EC<sub>20</sub> (20% effect concentration), EC<sub>25</sub> (25% effect concentration), maximum acceptable toxicant concentration (MATC), and lowest observed effect concentration (LOEC). CCME (2007)

considers these endpoints to represent low effects thresholds. Low level adverse effects may occur to sensitive species in long-term exposures if predicted copper concentrations are at or above low effects thresholds.

Table S5 in the supplemental information provided by Brix et al. (2021) provides the chronic copper SSDs based on moderately hard water (i.e., pH 7.5, DOC of 0.5 mg/L, hardness of 85 mg/L). Specifically, the individual normalized toxicity values and the species mean values based on this set of exposure conditions were calculated based on the MLR equation provided in the spreadsheet. By changing the water chemistry values used to normalize the data, the spreadsheet can provide a revised list of species mean values based on a new set of exposure conditions.

To develop the low effects threshold for this assessment, the species mean values generated by the MLR model were used to develop SSDs using the SSD Master software (Intrinsik 2013). Four models were fit to the data. The Gumbel model provided the best fit to the data and was selected over other functional forms based on the comparison of the Anderson-Darling goodness of fit ( $A^2$ ), mean squared error, mean squared error for the lower tail of the distribution (where model fit is more important in an SSD), and visual evaluation of goodness of fit. The fifth percentile of the fitted Gumbel distribution ( $HC_5$ ) was selected as the low effects threshold.

## 2.2 Model Inputs

Hardness in Pump Pit Lake was calculated from predicted calcium and magnesium concentrations and ranged from 43.2 to 137.1 mg/L as  $CaCO_3$  over the post-closure period. Three representative time periods of the post-closure phase, each consisting of 3 years of modelled data, were selected and the average hardness from each time period was used to derive a low effects threshold for that period. The average hardness concentrations used in the MLR model were as follows:

- Early post-closure (2051 to 2053): 47.8 mg/L as  $CaCO_3$
- Mid post-closure (2084 to 2086): 106.5 mg/L as  $CaCO_3$
- End post-closure (2117 to 2119): 135.4 mg/L as  $CaCO_3$

Water quality predictions are not available for pH and temperature in Pump Pit Lake during the post-closure phase, therefore, the same assumptions as used in the Aquatic Effects Monitoring Plan (AEMP) benchmarks were used (e.g., pH of 7.5, temperature of 15°C and dissolved organic carbon [DOC] of 0.5 mg/L).

## 3.0 RESULTS

Copper toxicity in Pump Pit Lake was modelled using the MLR approach to evaluate how predicted copper concentration above the BLM-based toxicity benchmark might adversely affect aquatic life. The results were interpreted as follows:

- Predicted copper concentrations that are at or below the no effect threshold are not expected to result in adverse effects on aquatic life.
- Predicted concentrations that are between the no effect and low effects thresholds are unlikely to result in adverse effects because the magnitude of effects, if any, are likely to be within the range of background variability and unlikely to be measurable. This interpretation is consistent with ecological risk assessment guidance. The low effect thresholds were developed using 20% to 25% level of effect, which is consistent

with guidance for a permissible level of effect (Suter et al. 1995). Mebane (2010) also supports the use of an effects level of 20% for protection against unacceptable adverse effects on invertebrate and fish populations. A 20% difference in response to a test is widely considered to be within the range of natural variability often observed in the field among normal, unexposed populations. ECCC recommends the use of 25% for reporting the results of sublethal toxicity testing and  $IC_{25s}$  and/or  $EC_{25s}$  are commonly reported in the literature. Population or community level effects would not be expected to occur at or below the low effects thresholds.

- Predicted concentrations above the low effects threshold may result in potential adverse effects on sensitive aquatic receptors. In this case, further evaluation of the SSD is required to describe what species may be affected and the level of effect, including whether community level effects may be observed.

Based on the water quality predictions for Pump Pit Lake during post-closure, predicted copper concentrations would exceed the no effect threshold of 0.38  $\mu\text{g/L}$  (derivation discussed in Section 10.2.7.5.2 of the HHERA) throughout the post-closure phase (2051 to 2119). However, copper concentrations are not predicted to exceed the low effects threshold during any of the representative periods during the post-closure phase (Table 1). Therefore, adverse effects to aquatic life from long-term exposure to copper in Pump Pit Lake are not expected.

**Table 1: Comparison of Predicted Copper Concentrations in Pump Pit Lake to Low Effects Thresholds**

Representative period of Post-Closure Phase	Low Effects Threshold ( $\mu\text{g/L}$ )	Predicted Concentration ( $\mu\text{g/L}$ )
Early (2051 to 2053)	1.8	0.99 – 1.1
Mid (2084 to 2086)	2.1	1.7 – 1.7
End (2117 to 2119)	2.2	2.0 – 2.1

## 4.0 UNCERTAINTY

The following uncertainties are associated with the derivation of low effects thresholds for copper:

- Use of assumed pH and temperature: Predicted pH and temperature in Pump Pit Lake during the post-closure phase are not available. The use of pH 7.5 and 15°C was consistent with the approach used for the BLM in the derivation of the toxicity benchmark. These are considered reasonable assumptions for a pit lake in post-closure. The reasonableness of the input parameters used in this assessment can be assessed over time through ongoing monitoring of the pit lakes during post-closure.
- Use of predicted water quality for post-closure: Uncertainties associated with the water quality predictions are discussed in Sections 10.2.8 and 10.2.10 of the HHERA. Water quality modelling incorporated conservative assumptions.
- Use of the MLR model to derive low effects thresholds: The MLR model was derived using the same principles of the BLM, which incorporates the latest scientific understanding of copper bioavailability and toxicity. The toxicity database of low effects concentrations was recently compiled according to federal and international standards and provides sufficient information to evaluate predicted copper concentrations.

## 5.0 REFERENCES

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## APPENDIX H-12-D

## Air Screening

**Table H-12-D-1: Surface Water Screening for Aquatic Life for End of Pipe Discharge to Meliadine Lake**

**Table H-12-D-2a: Surface Water Screening for Wildlife for Meliadine Lake**

**Table H-12-D-2b: Calculation of Toxicological Benchmarks for Water for Wildlife - Ingestion of Drinking Water**

**Table H-12-D-3: Surface Water Screening for Aquatic Life for Meliadine Lake**

**Table H-12-D-4a: Surface Water Screening for Wildlife for Small Waterbodies - CP1**

**Table H-12-D-4b: Surface Water Screening for Wildlife Small Waterbodies - B7**

**Table H-12-D-4c: Surface Water Screening for Wildlife for Small Waterbodies - B45**

**Table H-12-D-4d: Surface Water Screening for Wildlife for Small Waterbodies - B4**

**Table H-12-D-4f: Surface Water Screening for Wildlife for Small Waterbodies - B2**

**Table H-12-D-4f: Surface Water Screening for Wildlife for Small Waterbodies - A8 West**

**Table H-12-D-4g: Surface Water Screening for Wildlife for Small Waterbodies - A1**

**Table H-12-D-4h: Surface Water Screening for Wildlife for Small Waterbodies - CH6**

**Table H-12-D-5a: Surface Water Screening for Wildlife for Pit Lakes - NORWES Pit Lake**

**Table H-12-D-5b: Surface Water Screening for Wildlife for Pit Lakes - TIRI Pit Lake**

**H-12-D-5c: Surface Water Screening for Wildlife for Pit Lakes - TIR02**

**Table H-12-D-5d: Surface Water Screening for Wildlife for Pit Lakes - TIR04**

**Table H-12-D-5e: Surface Water Screening for Wildlife for Pit Lakes - Pump Pit Lake**

**Table H-12-D-5f: Surface Water Screening for Wildlife for Pit Lakes - F-Zone Lake**

**H-12-D-5g: Surface Water Screening for Wildlife for Pit Lakes - Discovery**

**Table H-12-D-6a: Surface Water Screening for Aquatic Life for Small Waterbodies - CP1**

**Table H-12-D-6b: Surface Water Screening for Aquatic Life for Small Waterbodies - B45**

**Table H-12-D-6c: Surface Water Screening for Aquatic Life for Small Waterbodies - B2**

**Table H-12-D-6d: Surface Water Screening for Aquatic Life for Small Waterbodies - A8 West**

**Table H-12-D-6e: Surface Water Screening for Aquatic Life for Small Waterbodies - A1**

**Table H-12-D-6f: Surface Water Screening for Aquatic Life for Small Waterbodies - CH6**

**Table H-12-D-7a: Surface Water Screening for Aquatic Life for Pit Lake - NORWES Pit Lake**

**Table H-12-D-7b: Surface Water Screening for Aquatic Life for Pit Lake - TIRI Pit Lake**

**Table H-12-D-7c: Surface Water Screening for Aquatic Life for Pit Lake - Pump Pit Lake**

**Table H-12-D-7d: Surface Water Screening for Aquatic Life for Pit Lake - F-Zone Pit Lake**

**Table H-12-D-7e: Surface Water Screening for Aquatic Life for Pit Lake - Discovery Pit Lake**

**Table H-12-D-8: Surface Water Screening for Aquatic Life for Waterline End of Pipe Discharge to Itivia**

**Harbour Table H-12-D-9: Surface Water Screening for Aquatic Life for Itivia Harbour (Edge of Mixing Zone)**

## APPENDIX H-12-D

## Air Screening

Table H-12-D-10a: Screening of Predicted Annual Air Concentrations for the Chronic Air Quality Risk Assessment - Scenario 1  
Table 1H-12-D-10b: Screening of Predicted Annual Air Concentrations for the Chronic Air Quality Risk Assessment - Scenario 2  
Table H-12-D-10c: Screening of Predicted Annual Air Concentrations for the Chronic Air Quality Risk Assessment - Scenario 3  
Table H-12-D-10d: Screening of Predicted Annual Air Concentrations for the Chronic Air Quality Risk Assessment - Scenario 4  
Table H-12-D-10e: Screening of Predicted Annual Air Concentrations for the Chronic Air Quality Risk Assessment - Scenario 5  
Table H-12-D-10f: Screening of Predicted Annual Air Concentrations for the Chronic Air Quality Risk Assessment - Scenario 6

Table H-12-D-11a: Exposure Doses for the Chronic 24-hour Air Quality Risk Assessment - Scenario 1  
Table H-12-D-11b: Exposure Doses for the Chronic 24-hour Air Quality Risk Assessment - Scenario 2  
Table H-12-D-11c: Exposure Doses for the Chronic 24-hour Air Quality Risk Assessment - Scenario 3  
Table H-12-D-11d: Exposure Doses for the Chronic 24-hour Air Quality Risk Assessment - Scenario 4  
Table H-12-D-11e: Exposure Doses for the Chronic 24-hour Air Quality Risk Assessment - Scenario 5  
Table H-12-D-11f: Exposure Doses for the Chronic 24-hour Air Quality Risk Assessment - Scenario 6

Table H-12-D-12a: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 1  
Table H-12-D-12b: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 2  
Table H-12-D-12c: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 3  
Table H-12-D-12d: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 4  
Table H-12-D-12e: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 5  
Table H-12-D-12f: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 6

Table H-12-D-13a: Exposure Doses for the Chronic Annual Air Quality Risk Assessment - Scenario 1  
Table H-12-D-13b: Exposure Doses for the Particulate Matter Risk Assessment - Scenario 2  
Table H-12-D-13c: Exposure Doses for the Particulate Matter Risk Assessment - Scenario 3  
Table H-12-D-13d: Exposure Doses for the Particulate Matter Risk Assessment - Scenario 4  
Table H-12-D-13e: Exposure Doses for the Particulate Matter Risk Assessment - Scenario 5  
Table H-12-D-13f: Exposure Estimates for the Particulate Matter Risk Assessment - Scenario 6

Table H-12-D-14a: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - Scenario 1  
Table H-12-D-14b: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - Scenario 2  
Table H-12-D-14c: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - Scenario 3

Table H-12-D-15a: Hazard Quotients for the Chronic 24-hour Air Quality Risk Assessment - Scenario 1  
Table H-12-D-15b: Hazard Quotients for the Chronic 24-hour Air Quality Risk Assessment - Scenario 2  
Table H-12-D-15c: Hazard Quotients for the Chronic 24-hour Air Quality Risk Assessment - Scenario 3  
Table H-12-D-15d: Hazard Quotients for the Chronic 24-hour Air Quality Risk Assessment - Scenario 4  
Table H-12-D-15e: Hazard Quotients for the Chronic 24-hour Air Quality Assessment - Scenario 5  
Table H-12-D-15f: Hazard Quotients for the Chronic 24-hour Air Quality Risk Assessment - Scenario 6

Table H-12-D-16a: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 1  
Table H-12-D-16b: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 2  
Table H-12-D-16c: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 3  
Table H-12-D-16d: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 4  
Table H-12-D-16e: Hazard Quotients for the Chronic Annual Air Quality Assessment - PM10 and PM2.5 - Scenario 5  
Table H-12-D-16f: Hazard Quotients for the Chronic Annual Air Quality Risk Assessment - PM10 and PM2.5 - Scenario 6

**APPENDIX H-12-D****Air Screening**

**Table H-12-D-17a: Incremental Lifetime Cancer Risks for the Particulate Matter Risk Assessment - Scenario 1**

**Table H-12-D-17b: Incremental Lifetime Cancer Risks for the Particulate Matter Risk Assessment - Scenario 2**

**Table H-12-D-17c: Incremental Lifetime Cancer Risks for the Particulate Matter Risk Assessment - Scenario 3**

**Table H-12-D-17d: Incremental Lifetime Cancer Risks for the Particulate Matter Risk Assessment - Scenario 4**

**Table H-12-D-17e: Incremental Lifetime Cancer Risks for the Particulate Matter Risk Assessment - Scenario 5**

**Table H-12-D-17f: Incremental Lifetime Cancer Risks for the Particulate Matter Risk Assessment - Scenario 6**

Parameter	Acute Inhalation 1-Hour Health Based Thresholds (µg/m <sup>3</sup> )								Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	CCME (1999, 2017) NAAQS and CAAQS <sup>(2)</sup>	MECP ACB <sup>(3)</sup>	WHO AQG <sup>(4,5)</sup>	CalEPA REL <sup>(6)</sup>	ATSDR MRL <sup>(7)</sup>	TCEQ ESL <sup>(8)</sup>	TCEQ ESL <sup>(8)</sup> Adjusted	
<b>Metals</b>									
aluminum	NA	NA	30	NA	NA	NA	15	50	MECP - Health TCEQ - PM <sub>10</sub> , health
antimony	NA	NA	63	NA	NA	NA	5	17	MECP - Health TCEQ - PM <sub>10</sub> , health
arsenic	NA	NA	0.83	NA	0.2	NA	3	10.00	MECP - Health CalEPA - decreased fetal weight in mice TCEQ - PM <sub>10</sub> , health
barium	NA	NA	25	NA	NA	NA	5	17	MECP - Health TCEQ - PM <sub>10</sub> , health
beryllium	NA	NA	0.025	NA	NA	NA	0.02	0.07	MECP - Health TCEQ - health
Bismuth	NA	NA	6.3	NA	NA	NA	50	167	MECP - Health TCEQ - PM <sub>10</sub> , health
Cadmium	NA	NA	0.063	NA	NA	0.03	5.4	18.0	ATSDR - A LOAEL of 0.088 mg/m <sup>3</sup> was used to derive the MRL. The LOAEL was adjusted for duration, resulting in an adjusted LOAEL of 0.01 mg/m <sup>3</sup> . An uncertainty factor of 300 was then applied. MECP - Health TCEQ - PM <sub>10</sub> , health
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	No 1 hour thresholds are available
chromium	NA	NA	1.3	NA	NA	NA	3.6	12	MECP - Health TCEQ - PM <sub>10</sub> , health, final
chromium VI	NA	NA	0.0175	NA	NA	NA	0.39	1.3	MECP - Health TCEQ - PM <sub>10</sub> , health, under review
cobalt	NA	NA	0.25	NA	NA	NA	0.21	0.70	MECP - Health TCEQ - PM <sub>10</sub> , health, final
copper	NA	NA	83	NA	100	NA	10	33	MECP - Health CalEPA - The CalEPA threshold is based on respiratory system effects. TCEQ - PM <sub>10</sub> , health, final
gold	NA	NA	3.1	NA	NA	NA	25	83	MECP - Health TCEQ - PM <sub>10</sub> , health, final
iron	NA	NA	8.3	NA	NA	NA	10	33	MECP - Health TCEQ - PM <sub>10</sub> , health, final
lead	NA	NA	1.2	NA	NA	NA	0.15 (quarterly average), 1.5 (three-month)	0.5 (quarterly average), 5 (three-month)	MECP - Health TCEQ - health, criteria pollutant, must meet US NAAQS. Texas defers to the US National Ambient Air Quality Standards for lead (1.5 µg/m <sup>3</sup> as the quarterly average primary standard, and 0.15 µg/m <sup>3</sup> as the rolling three month average primary standard).
Lithium	NA	NA	50	NA	NA	NA	2	7	MECP - Health TCEQ - PM <sub>10</sub> , health
magnesium	NA	NA	NA	NA	NA	NA	50	167	TCEQ - PM <sub>10</sub> , health
manganese	NA	NA	1	NA	NA	NA	2.7	9.0	MECP - Health TCEQ - PM <sub>10</sub> , health
molybdenum	NA	NA	83	NA	NA	NA	45	150	MECP - Health TCEQ - PM <sub>10</sub> , health
nickel	NA	NA	0.5	NA	0.2	NA	0.33	1.1	MECP - Health CalEPA - immune system effects in mice TCEQ - PM <sub>10</sub> , health, final
potassium	NA	NA	NA	NA	NA	NA	20	67	TCEQ - PM <sub>10</sub> , health
selenium	NA	NA	17	NA	NA	NA	2	7	MECP - Health TCEQ - PM <sub>10</sub> , health
silver	NA	NA	2.5	NA	NA	NA	0.1	0.3	MECP - Health TCEQ - PM <sub>10</sub> , health
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	No 1 hour thresholds are available
strontium	NA	NA	83	NA	NA	NA	20	67	MECP - Health TCEQ - PM <sub>10</sub> , health
thallium	NA	NA	1.3	NA	NA	NA	1	3	MECP - Health TCEQ - PM <sub>10</sub> , health
tin	NA	NA	25	NA	NA	NA	20	67	MECP - Health TCEQ - PM <sub>10</sub> , health
titanium	NA	NA	83	NA	NA	NA	50	167	MECP - Health TCEQ - PM <sub>10</sub> , health
uranium	NA	NA	0.38	NA	NA	NA	2 (insoluble), 0.5 (soluble)	7 (insoluble), 2 (soluble)	MECP - Health TCEQ - PM <sub>10</sub> , health
vanadium	NA	NA	4	NA	30	0.8	0.66	2	MECP - Health CalEPA - The CalEPA OEHHA threshold is based on eye irritation and coughing and increased mucus production in humans exposed to vanadium pentoxide. An uncertainty factor of 10 was applied to account for intraspecies variation. ATSDR - A LOAEL of 0.56 mg/m <sup>3</sup> for lung inflammation was converted to a human equivalent concentration of 0.073 mg/m <sup>3</sup> and an uncertainty factor of 90 applied. TCEQ - PM <sub>10</sub> , health
yttrium	NA	NA	NA	NA	NA	NA	10	33	TCEQ - PM <sub>10</sub> , health
zinc	NA	NA	83	NA	NA	NA	20	67	MECP - Health TCEQ - PM <sub>10</sub> , health
<b>Polycyclic Aromatic Hydrocarbons</b>									
Acenaphthene	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
Methyl acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	-
Acenaphthylene	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
2-Methylantracene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Anthracene	NA	NA	NA	NA	NA	NA	1	3	TCEQ - health
C2 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	NA	-
C3 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	NA	-
C4 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	NA	-
Methyl phenanthrene/anthracene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
1,6-dinitropyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
1,8-dinitropyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Nitropyrene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
3-Methylcholanthrene	NA	NA	NA	NA	NA	NA	0.02	0.07	TCEQ - health
7H-Dibenzo(c,g)carbazole	NA	NA	NA	NA	NA	NA	NA	NA	-
Benzo(a)pyrene	NA	NA	0.0013	NA	NA	NA	NA	NA	MECP - Health TCEQ - health, under review
Benzo(b)fluorene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Benzo(e)pyrene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Cyclopenta(c,d)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
nitrobenzanthrone	NA	NA	NA	NA	NA	NA	NA	NA	-
Nitro-pyrene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
7,12-dimethylbenz(a)anthracene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
C2 sub'd B(a)A/chrysene	NA	NA	NA	NA	NA	NA	NA	NA	-
Chrysene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Methyl B(a)A/chrysene	NA	NA	NA	NA	NA	NA	NA	NA	-
dibenz(a,h)acridine	NA	NA	NA	NA	NA	NA	NA	NA	-
dibenz(a,j)acridine	NA	NA	NA	NA	NA	NA	NA	NA	-
picene	NA	NA	NA	NA	NA	NA	NA	NA	-
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Acphenanthrylene	NA	NA	NA	NA	NA	NA	NA	NA	-
Benzo(a)fluorene	NA	NA	NA	NA	NA	NA	NA	NA	-
Benzo(g,h)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	-
Fluoranthene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
2-Methylfluorene	NA	NA	NA	NA	NA	NA	NA	NA	-
C2 sub'd fluorene	NA	NA	NA	NA	NA	NA	NA	NA	-
carbazole	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
Fluorene	NA	NA	NA	NA	NA	NA	10	33	TCEQ - health
Methyl fluorene	NA	NA	NA	NA	NA	NA	NA	NA	-
Dibenzo(a,j)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
Indeno(1,2,3-cd)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Indeno(1,2,3-W)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
1-methylnaphthalene	NA	NA	NA	NA	NA	NA	30	100	TCEQ - health
2-methylnaphthalene	NA	NA	NA	NA	NA	NA	30	100	TCEQ - health
C2 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	-
C3 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	-
C4 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	-
Indole	NA	NA	NA	NA	NA	NA	20	67	TCEQ - health
Methyl naphthalene	NA	NA	NA	NA	NA	NA	30	100	TCEQ - health
Naphthalene	NA	NA	50 <sup>(9)</sup>	NA	NA	NA	440	1467	MECP - odour TCEQ - odour, under review
1-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	-
4-9-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	-
phenanthrene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
Retene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-Methylpyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
Methyl fluoranthene/pyrene	NA	NA	NA	NA	NA	NA	NA	NA	-
Pyrene	NA	NA	NA	NA	NA	NA	0.5	2	TCEQ - health
2,5-dimethylthiophene	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
3-Methylbenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA	-
4-Methylbenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA	-
C2 sub'd benzothiophene	NA	NA	NA	NA	NA	NA	NA	NA	-
C3 sub'd benzothiophene	NA	NA	NA	NA	NA	NA	NA	NA	-
C4 sub'd benzothiophene	NA	NA	NA	NA	NA	NA	NA	NA	-
Dibenzothiophene	NA	NA	NA	NA	NA	NA	25	83	TCEQ - health
Methyl dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Acute Inhalation 1-Hour Health Based Thresholds (µg/m <sup>3</sup> )								Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	CCME (1999, 2017) NAAQO and CAAQS <sup>(2)</sup>	MECP ACB <sup>(3)</sup>	WHO AQG <sup>(4,5)</sup>	CalEPA REL <sup>(6)</sup>	ATSDR MRL <sup>(7)</sup>	TCEQ ESL <sup>(8)</sup>	TCEQ ESL <sup>(8)</sup> Adjusted	
<b>Volatile Organic Compounds</b>									
1,1,1-Trichloroethane	NA	NA	NA	NA	68000	10910	2800 (health), 2100000 (odour)	9332 (health), 6999300 (odour)	CalEPA - mild CNS effects in humans ATSDR - The MRL was based on a LOAEL of 175 ppm for reduced performance of psychomotor tests in humans exposed to 350 ppm 1,1,1-trichloroethane for 3.5 hours. An uncertainty factor of 100 was applied. TCEQ - health, final; odour, final
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	550	1833	TCEQ - health, under review
1,2-Dichloropropane	NA	NA	NA	NA	NA	230	460	1533	ATSDR - The ATSDR threshold was based on respiratory effects and an uncertainty factor of 1000 was applied.
1,3-Butadiene	NA	NA	NA	NA	NA	220	1100 (health), 510 (odour)	3666 (health), 1700 (odour)	ATSDR - The MRL was based on a LOAEL 40 ppm for reduced male fetal body weight gain from exposed pregnant mice. The LOAEL was adjusted for intermittent exposure (6 h/day), resulting in adjusted LOAEL of 10 ppm. An uncertainty factor of 90 was applied. TCEQ - health, final; odour, final
2,5,5-TRIMETHYL-1,6-HEPTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,5,5-TRIMETHYL-1,6-HEPTADIENE (B)	NA	NA	NA	NA	NA	NA	NA	NA	-
2,5-dimethyl-1,3-hexadiene	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
2-METHYL-4,5-NONADIENE	NA	NA	NA	NA	NA	NA	NA	NA	-
3-ETHYL-2-METHYL-1,3-HEXADIENE	NA	NA	NA	NA	NA	NA	NA	NA	-
4,8-DIMETHYL-1,7-NONADIENE	NA	NA	NA	NA	NA	NA	NA	NA	-
4-METHYL-2,7-OCTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	-
5-METHYL-1,4-HEXADIENE	NA	NA	NA	NA	NA	NA	NA	NA	-
1,2-Butadiene	NA	NA	NA	NA	NA	NA	1100	3666	TCEQ - health
1,2-Pentadiene	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
1,4-Pentadiene	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
2,3-Pentadiene	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
2-Methyl-1,3-butadiene	NA	NA	NA	NA	NA	NA	80	200	TCEQ - health, under review
3-Methyl-1,2-butadiene	NA	NA	NA	NA	NA	NA	1100	3666	TCEQ - health
cis-1,3-Pentadiene	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
Cyclopentadiene	NA	NA	NA	NA	NA	NA	2000	6666	TCEQ - health
trans-1,3-Pentadiene	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
Acetaldehyde	NA	NA	500 <sup>(9)</sup>	NA	470	NA	90	300	CalEPA - The CalEPA OEHHA threshold is based on a LOAEL from a human study. The critical effects of the study include sensory irritation in bronchi, eyes, nose and throat. TCEQ - odour, under review TCEQ - health, under review
Acetone	NA	NA	NA	NA	NA	NA	5900	19665	MECP - health
Acrolein	NA	NA	4.5	NA	2.5	6.9	3.2 (health), 8.2 (odour)	10.7 (health), 27.3 (odour)	CalEPA - The CalEPA OEHHA threshold was based on a geometric mean of two reference exposure levels (2.3 µg/m <sup>3</sup> and 2.7 µg/m <sup>3</sup> ) from two studies for subjective ocular irritation in human volunteers. ATSDR - The ATSDR threshold was based on the LOAEL for a decrease in respiratory rate and nose and throat irritation in a study of human volunteers. The LOAEL was corrected for intermittent exposure and an uncertainty factor was applied. TCEQ - health, final; odour, final
Methacrolein	NA	NA	NA	NA	NA	NA	16 (health), 24 (odour)	53 (health), 80 (odour)	TCEQ - health, final; odour, final
2,5-dimethylbenzaldehyde	NA	NA	NA	NA	NA	NA	NA	300	TCEQ - health
3-Methylbutanal	NA	NA	NA	NA	NA	NA	1800	5999	TCEQ - health
benzaldehyde	NA	NA	NA	NA	NA	NA	22	73	TCEQ - odour, under review
butanal	NA	NA	NA	NA	NA	NA	NA	NA	-
crotonaldehyde	NA	NA	NA	NA	NA	NA	9	30	TCEQ - health
decanal	NA	NA	NA	NA	NA	NA	40	133	TCEQ - health
dodecanal	NA	NA	NA	NA	NA	NA	40	133	TCEQ - health
heptanal	NA	NA	NA	NA	NA	NA	240	800	TCEQ - odour, under review
isobutyraldehyde	NA	NA	NA	NA	NA	NA	140	467	TCEQ - odour, under review
nonanal	NA	NA	NA	NA	NA	NA	1500	5000	TCEQ - health
octanal	NA	NA	NA	NA	NA	NA	15	50	TCEQ - odour
propanal	NA	NA	10 <sup>(10)</sup>	NA	NA	NA	20	67	MECP - odour TCEQ - odour, under review
tridecanal	NA	NA	NA	NA	NA	NA	NA	NA	-
undecanal	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
Benzene	NA	NA	58	NA	27	28.75	170	567	CalEPA - The LOAEL was based on a concentration of 16 mg/m <sup>3</sup> (5ppm) resulting in decreased red cell count ATSDR - The MRL was based on a LOAEL of 10.2 for reduced lymphocyte proliferation following mitogen stimulation in mice. The LOAEL was adjusted for intermittent exposure (6 h/day), resulting in a LOAEL of 2.55 ppm. An uncertainty factor of 300 was applied. TCEQ - health, final
2,4-DIETHYL-1-METHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2,7-TRIMETHYL-3-OCTYNE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2-DIMETHYL-3-DECENE	NA	NA	NA	NA	NA	NA	NA	NA	-
3-DODECENE	NA	NA	NA	NA	NA	NA	NA	NA	-
7-METHYL-5-UNDECENE	NA	NA	NA	NA	NA	NA	NA	NA	-
dodecane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
hexacyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
pentacyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
undecane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3-Ethylnonane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
4-Methyldecane	NA	NA	NA	NA	NA	NA	NA	NA	-
5-Methyldecane	NA	NA	NA	NA	NA	NA	NA	NA	-
C11-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA	-
C12-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Dodecane	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Undecane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Methyl-2-(4-methylpentyl)-cyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-pentyl-2-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,6,10-trimethyltridecane	NA	NA	NA	NA	NA	NA	NA	NA	-
3,3,8-trimethyldecane	NA	NA	NA	NA	NA	NA	NA	NA	-
AMORPHANE B	NA	NA	NA	NA	NA	NA	NA	NA	-
decylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
farnesane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
heptylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
Hexadecane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
nonylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
norfarnesane	NA	NA	NA	NA	NA	NA	NA	NA	-
n-pentadecane	NA	NA	NA	NA	NA	NA	NA	NA	-
octylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
Tetradecane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
Tridecane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
VALENCANE	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Tridecane	NA	NA	NA	NA	NA	NA	NA	NA	-
1,2,4-TMB+n-Decane	NA	NA	NA	NA	NA	NA	NA	NA	-
1,2,3-TMB+P-C	NA	NA	NA	NA	NA	NA	NA	NA	-
Decylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
fluorenone	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Octylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
xanthone	NA	NA	NA	NA	NA	NA	NA	NA	-
3-EICOSYNE	NA	NA	NA	NA	NA	NA	NA	NA	-
6-EICOSYNE	NA	NA	NA	NA	NA	NA	NA	NA	-
5-EICOSYNE (B)	NA	NA	NA	NA	NA	NA	NA	NA	-
dodecylcyclohexane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
n-eicosane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
n-heneicosane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
n-heptadecane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
n-nonadecane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
n-octadecane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
norpristane	NA	NA	NA	NA	NA	NA	NA	NA	-
pentadecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
phytane	NA	NA	NA	NA	NA	NA	NA	NA	-
pristane	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health
tetradecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
tridecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
undecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
9b,13a-dimethyl-14b-n-butylpodocarpene	NA	NA	NA	NA	NA	NA	NA	NA	-
9b,13a-dimethyl-14b-n-butylpodocarpene	NA	NA	NA	NA	NA	NA	NA	NA	-
1-methyl-1-(2-methylene)cyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-4-(1-METHYLENE)CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-4-(1-METHYLENE)CYCLOHEXENE	NA	NA	NA	NA	NA	NA	NA	NA	-
1-PROPYLENE	NA	NA	NA	NA	NA	NA	16400	54661	TCEQ - health
2,2-DIMETHYLPROPANE	NA	NA	NA	NA	NA	NA	60000	199980	TCEQ - health, final
2-ethyl-2-hexene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-Methyl pentane,2,3-Dimethylbutane	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-1-butene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-1-pentene + 1-hexene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-4-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-METHYLBICYCLO[4.4.0]HEPTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-1-butene	NA	NA	NA	NA	NA	NA	720	2400	TCEQ - odour, under review
4-METHYL-1-(1-METHYLENE)CYCLOHEXENE	NA	NA	NA	NA	NA	NA	NA	NA	-
ACETYLENE + ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	-
Butane	NA	NA	NA	NA	NA	NA	23750	79159	TCEQ - health
Butene	NA	NA	NA	NA	NA	NA	820	2733	TCEQ - odour
cis-2-butene	NA	NA	NA	NA	NA	NA	10000 (health), 4800 (odour)	33330 (health), 15998 (odour)	TCEQ - health, final; odour, final
cyclopentane	NA	NA	NA	NA	NA	NA	3400	11332	TCEQ - health
ethane	NA	NA	NA	NA	NA	NA	Simple asphyxiant	NA	-
ethyne	NA	NA	NA	NA	NA	NA	26600	88658	TCEQ - health
n-butane	NA	NA	NA	NA	NA	NA	4800	15998	TCEQ - odour, under review
isobutene	NA	NA	NA	NA	NA	NA	320000 (health), 3000 (odour)	106560 (health), 9999 (odour)	TCEQ - health, final; odour, final
isopentane	NA	NA	NA	NA	NA	NA	60000 (health), 3800 (odour)	199980 (health), 12665 (odour)	TCEQ - health, final; odour, final
pentane	NA	NA	NA	NA	NA	NA	60000 (health), 4100 (odour)	199980 (health), 13665 (odour)	TCEQ - health, final; odour, final
pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
Propane	NA	NA	NA	NA	NA	NA	Simple asphyxiant	NA	-
propene	NA	NA	NA	NA	NA	NA	Simple asphyxiant	NA	-
trans-2-butene	NA	NA	NA	NA	NA	NA	10000 (health), 4800 (odour)	33330 (health), 15998 (odour)	TCEQ - health, final; odour, final
trans-2-pentene	NA	NA	NA	NA	NA	NA	7500	24998	TCEQ - health, final
1,2-Butane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Butene	NA	NA	NA	NA	NA	NA	34000 (health), 820 (odour)	113322 (health), 2733 (odour)	T

Parameter	Acute Inhalation 1-Hour Health Based Thresholds (µg/m <sup>3</sup> )								Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	CCME (1999, 2017) NAAQO and CAAQS <sup>(2)</sup>	MECP ACB <sup>(3)</sup>	WHO AQG <sup>(4,5)</sup>	CalEPA REL <sup>(6)</sup>	ATSDR MRL <sup>(7)</sup>	TCEQ ESL <sup>(8)</sup>	TCEQ ESL <sup>(8)</sup> Adjusted	
1-Pentene	NA	NA	NA	NA	NA	NA	1000	3333	TCEQ - health
2-Butanol	NA	NA	NA	NA	NA	NA	1240	4133	TCEQ - odour, under review
2-Butyne	NA	NA	NA	NA	NA	NA	14400	47995	TCEQ - health
2-Methyl-2-butene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-Methyl-2-butene	NA	NA	NA	NA	NA	NA	NA	NA	-
4-Methyl-1-cyclopentene	NA	NA	NA	NA	NA	NA	8100	26997	TCEQ - health
C8-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-2-Pentene	NA	NA	NA	NA	NA	NA	7500	24998	TCEQ - health, final
Cyclopentene	NA	NA	NA	NA	NA	NA	3400	11332	TCEQ - health
Ethene	NA	NA	NA	NA	NA	NA	1400	4666	TCEQ - vegetation
Isobutane	NA	NA	NA	NA	NA	NA	4800	15998	TCEQ - odour, under review
Isobutanol	NA	NA	2340 <sup>(9)</sup>	NA	NA	NA	1520	5066	MECP - odour TCEQ - health
Methyl-tert-butyl ether	NA	NA	NA	NA	NA	7210	450	1500	ATSDR - A NOAEL of 800 ppm based on no CNS sedation in rats was used to derive the MRL. An uncertainty factor of 100 was applied. TCEQ - odour, under review
Naphthene	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Butane	NA	NA	NA	NA	NA	NA	23750	79159	TCEQ - health
n-Butanol	NA	NA	2100 <sup>(9)</sup>	NA	NA	NA	610	2033	MECP - odour TCEQ - health
n-Pentane	NA	NA	NA	NA	NA	NA	4100	13665	TCEQ - odour
n-Propanol	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,2-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,3-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,5-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-ethyl-1-methylcyclopropane	NA	NA	NA	NA	NA	NA	70	233	-
1-HEXENE	NA	NA	NA	NA	NA	NA	70	233	TCEQ - odour, under review
1-METHYL-2-METHYLENE CYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2,3-TRIMETHYLBUTANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,2-dimethylbutane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,3-dimethylbutane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,3-dimethylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,4-dimethyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
2,4-dimethylpentane	NA	NA	NA	NA	NA	NA	NA	NA	-
2-hexene	NA	NA	NA	NA	NA	NA	70	233	TCEQ - health
2-methyl-2-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-3-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methylhexane	NA	NA	NA	NA	NA	NA	3070	10232	TCEQ - health
2-methylpentane	NA	NA	NA	NA	NA	NA	290	967	TCEQ - health
3,3-DIMETHYL-1-BUTENE	NA	NA	NA	NA	NA	NA	NA	NA	-
3,3-DIMETHYLPENTANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,4-dimethyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-1,3-pentadiene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-1-hexene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-2-hexene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-METHYL-2-HEXENE (B)	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-2-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methylcyclopentene	NA	NA	NA	NA	NA	NA	8100	26997	TCEQ - health
3-methylhexane	NA	NA	NA	NA	NA	NA	3070	10232	TCEQ - health
3-methylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
4,4-dimethylcyclopentene	NA	NA	NA	NA	NA	NA	NA	NA	-
4-methylcyclohexene	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-2-hexene	NA	NA	NA	NA	NA	NA	70	233	TCEQ - odour, under review
Cyclohexane	NA	NA	NA	NA	NA	NA	3400	11332	TCEQ - health
Cyclohexene	NA	NA	NA	NA	NA	NA	600	2000	TCEQ - odour
ethylcyclopentane	NA	NA	NA	NA	NA	NA	16300	54328	TCEQ - health
heptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
hexanal	NA	NA	NA	NA	NA	NA	80	267	TCEQ - odour
Methylcyclohexane	NA	NA	NA	NA	NA	NA	600	2000	TCEQ - odour
Methylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - odour
t-1,3-DIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
trans-2-hexene	NA	NA	NA	NA	NA	NA	70	233	TCEQ - odour, under review
1,1,3-TRIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,1-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,2,3-trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1,2,4-trimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,2-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,4-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,2,3-TRIMETHYLPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2,4-trimethylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,3,4-trimethylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,3-dimethylhexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,4-dimethylhexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,5-dimethylhexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2-ethyl-3-methylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-1-pentene	NA	NA	NA	NA	NA	NA	1000	3333	TCEQ - health
2-methylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2-octene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-ethylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-
3-Methylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
4-methyl-3-heptene	NA	NA	NA	NA	NA	NA	NA	NA	-
4-METHYLHEPTANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cyclooctane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
methylcyclohexene	NA	NA	NA	NA	NA	NA	NA	NA	-
OCTAHYDROPENTALENE	NA	NA	NA	NA	NA	NA	NA	NA	-
octane	NA	NA	61800 <sup>(9)</sup>	NA	NA	NA	3500	11666	MECP - odour TCEQ - health
OCTYNE	NA	NA	NA	NA	NA	NA	NA	NA	-
Propane + Propylene	NA	NA	NA	NA	NA	NA	NA	NA	-
Propylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
t-1,3-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1-Heptene	NA	NA	NA	NA	NA	NA	16	53	TCEQ - odour, under review
1-Methyl-1-ethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1-Methyl-2-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-trans-3-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Octene	NA	NA	NA	NA	NA	NA	20	67	TCEQ - odour
2,2-Dimethylhexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,2-Dimethylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,3,3-Trimethylpentane	NA	NA	NA	NA	NA	NA	NA	NA	-
2-Methyl-3-ethylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,4-Dimethylhexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3-Ethylpentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
C7-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-
C8-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-
C8-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA	-
cis,cis-1,2,3-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cis,trans-1,2,4-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cis-1,2-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cis-1,3-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cis-2-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-2-Octene	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-3-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-
Ethylcyclohexane	NA	NA	NA	NA	NA	NA	18700	62327	TCEQ - health
Isopropylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
n-Heptane	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Octane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans,cis-1,2,3-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans,cis-1,2,4-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-1,2-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
trans-1,2-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
trans-1,3-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
trans-1,4-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
trans-2-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-2-Octene	NA	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Acute Inhalation 1-Hour Health Based Thresholds (µg/m <sup>3</sup> )								Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	CCME (1999, 2017) NAAQO and CAAQS <sup>(2)</sup>	MECP ACB <sup>(3)</sup>	WHO AQG <sup>(4,5)</sup>	CalEPA REL <sup>(6)</sup>	ATSDR MRL <sup>(7)</sup>	TCEQ ESL <sup>(8)</sup>	TCEQ ESL <sup>(8)</sup> Adjusted	
trans-3-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1,2,3-TETRAMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1,3,4-TETRAMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1,3,5-TETRAMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1,3-TRIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,1,4-TRIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
1,3-DIMETHYL-2-(1-METHYLENE)CYCLOPENTENE	NA	NA	NA	NA	NA	NA	NA	NA	-
1-ETHYL-2,3-DIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1-ethyl-2,4-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-ETHYL-2-PROPYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-4-(1-METHYLETHYL) CYCLOHEXANE	NA	NA	NA	NA	NA	NA	1100	3666	TCEQ - health
2,2,5-trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2-DIMETHYL-3-OCTYNE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,3,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,3-dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,5,5-TRIMETHYL-1-HEXENE	NA	NA	NA	NA	NA	NA	NA	NA	-
2,6-dimethyl-2-octene	NA	NA	NA	NA	NA	NA	NA	NA	-
2,6-dimethyl-4-octene	NA	NA	NA	NA	NA	NA	NA	NA	-
2,6-dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2+4-Methyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
2-methyloctyne	NA	NA	NA	NA	NA	NA	NA	NA	-
2-METHYLPROPYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
3,3,4-trimethylhexane + benzene	NA	NA	NA	NA	NA	NA	NA	NA	-
3,4,4-trimethylcyclohexene	NA	NA	NA	NA	NA	NA	NA	NA	-
3,7,7-TRIMETHYL BICYCLO[4.1.0]HEPTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
3,7-dimethyl-1-octene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-ETHYL-2-METHYL-2-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	-
3-ethyl-3-octene	NA	NA	NA	NA	NA	NA	NA	NA	-
3-methyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
4-ethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
4-methyloctane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
BICYCLO[3.3.1]NONANE	NA	NA	NA	NA	NA	NA	NA	NA	-
BICYCLO[3.3.1]NONANE	NA	NA	NA	NA	NA	NA	NA	NA	-
BUTYLIDENECYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
c-1,3-DIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
c-1,3-BUTYL-2-METHYLCYCLOPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	-
decane	NA	NA	NA	NA	NA	NA	10000	33330	TCEQ - health
ETHYLIDENECYCLOHEPTANE	NA	NA	NA	NA	NA	NA	NA	NA	-
isocamphane	NA	NA	NA	NA	NA	NA	NA	NA	-
nonane	NA	NA	NA	NA	NA	NA	10500	34997	TCEQ - health
1-Decene	NA	NA	NA	NA	NA	NA	116	367	TCEQ - odour, under review
1-Methyl-1-ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-1-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-4-isopropylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Nonene	NA	NA	NA	NA	NA	NA	30	100	TCEQ - odour, under review
2,2,3,4-Tetramethylpentane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,2-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,2-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,3,3-Trimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,3,5-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,4,4-Trimethylheptane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,4-Dimethyloctane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,5-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2,5-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
2,6-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
2-Methylnonane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
2-Methyloctane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,3,4-Trimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,3,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-
3,3,5-Trimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,3-Diethylpentane	NA	NA	NA	NA	NA	NA	NA	NA	-
3,3-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,3-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
3,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,5-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3,6-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA	-
3-Ethyloctane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
3-Methyl-5-ethylheptane	NA	NA	NA	NA	NA	NA	NA	NA	-
3-Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
3-Methylnonane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
4-Ethylheptane	NA	NA	NA	NA	NA	NA	NA	NA	-
5-Methylnonane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
Butylcyclopentane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
C10-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-
C10-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA	-
C9-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-
C9-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-1,2,4-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cis-1,3,5-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
cis-1-Ethyl-2-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-1-Ethyl-4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-1-Ethyl-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-2-nonene	NA	NA	NA	NA	NA	NA	NA	NA	-
cis-3-Nonene	NA	NA	NA	NA	NA	NA	NA	NA	-
isobutylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
isobutylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
isopropylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
n-Decane	NA	NA	60000	NA	NA	NA	NA	NA	MECP - health
n-Nonane	NA	NA	NA	NA	NA	NA	NA	NA	-
Propylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
q,q,2-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
sec-Butylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
sec-Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
tert-Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-1,2,4-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
trans-1-Ethyl-4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Methyl-2-methyl-4-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Methyl-2-propylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-2-nonene	NA	NA	NA	NA	NA	NA	NA	NA	-
trans-3-Nonene	NA	NA	NA	NA	NA	NA	NA	NA	-
1,1,2,3-TETRAMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
1,2-DIETHYL-1-METHYL-CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	-
2-Ethyl-toluene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
3-Ethyl-toluene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
4-Ethyl-toluene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
indanone	NA	NA	NA	NA	NA	NA	NA	NA	-
methylpropylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
n-Butylbenzene	NA	NA	NA	NA	NA	NA	2740	9132	TCEQ - health
p-Xylene	NA	NA	NA	NA	NA	NA	2750	9166	TCEQ - health
Propylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1,2,3,4-tetrahydronaphthalene	NA	NA	NA	NA	NA	NA	3000	9999	TCEQ - health
1,2,3,4-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1,2,3,5-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1,2,4,5-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1,3-Diethylbenzene	NA	NA	NA	NA	NA	NA	2500	8333	TCEQ - health
1,3-Dimethyl-2-ethylbenzene	NA	NA	NA	NA	NA	NA	2560	8532	TCEQ - health
1,3-Dimethyl-4-ethylbenzene	NA	NA	NA	NA	NA	NA	2560	8532	TCEQ - health
1,3-Dimethyl-5-ethylbenzene	NA	NA	NA	NA	NA	NA	2560	8532	TCEQ - health
1,4-Diethylbenzene	NA	NA	NA	NA	NA	NA	2500	8333	TCEQ - health
1,4-Dimethyl-2-ethylbenzene	NA	NA	NA	NA	NA	NA	2560	8532	TCEQ - health
1-Ethyl-2-methylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1-Ethyl-3-methylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1-Ethyl-4-methylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1-Methyl-2-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-propylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1-Methyl-3-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-3-propylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1-Methyl-4-isopropylbenzene	NA	NA	NA	NA	NA	NA	2750	9166	TCEQ - health
1-Methyl-4-propylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
2,3-Dihydroindene	NA	NA	NA	NA	NA	NA	NA	NA	-
2,3-Dimethylheptane	NA	NA	NA	NA	NA	NA	3500	11666	TCEQ - health
Butylbenzene	NA	NA	NA	NA	NA	NA	2740	9132	TCEQ - health
C10-Aromatic	NA	NA	NA	NA	NA	NA	NA	NA	-
isobutylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
isopropylbenzene	NA	NA	NA	NA	NA	NA	500	1667	TCEQ - odour, under review
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	2740	9132	TCEQ - health

Parameter	Acute Inhalation 1-Hour Health Based Thresholds (µg/m <sup>3</sup> )								Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	CCME (1999, 2017) NAAQO and CAAQS <sup>(2)</sup>	MECP ACB <sup>(3)</sup>	WHO AQG <sup>(4,5)</sup>	CalEPA REL <sup>(6)</sup>	ATSDR MRL <sup>(7)</sup>	TCEQ ESL <sup>(8)</sup>	TCEQ ESL <sup>(8)</sup> Adjusted	
Ethylbenzene	NA	NA	1900 <sup>(a)</sup>	NA	NA	21710	26000 (health), 740 (odour)	86658 (health), 2466 (odour)	MECP - odour ATSDR - The MRL was based on damage to auditory capacity of rats. A human equivalency concentration of 154.26 ppm was selected and an uncertainty factor of 30 was applied. TCEQ - health, final, odour, final
ethylene	NA	NA	NA	NA	NA	NA	170000 (health), 310000 (odour), 1400 (vegetation)	56610 (health), 1033230 (odour), 4666 (vegetation)	TCEQ - health, final, odour, final, vegetation, final
Formaldehyde	NA	NA	NA	100 <sup>(b)</sup>	NA	49.13	15 (health), 620 (odour)	50 (health), 2066 (odour)	WHO - The WHO guideline is based on the lowest concentration that has been associated with nose and throat irritation in humans. This concentration would also be associated with negligible risk of upper respiratory tract cancer in humans. The WHO also reports a detection threshold of 30 to 600 µg/m <sup>3</sup> . ATSDR - The MRL was based on a LOAEL of 0.4 ppm for nasal and eye irritation. An uncertainty factor of 9 was applied. TCEQ - health, final, odour, final
3-Buten-2-one	NA	NA	NA	NA	NA	NA	6	20	TCEQ - health
acetophenone	NA	NA	1167	NA	NA	NA	490	1633	MECP - odour TCEQ - health
CAMPHOR	NA	NA	NA	NA	NA	NA	20	67	TCEQ - health
Methyl Ethyl Ketone	NA	NA	NA	NA	13000	NA	18000 (health), 1300 (odour)	59994 (health), 4333 (odour)	CalEPA - The CalEPA OEHHA threshold was based on the LOAEL for eye, nose, and throat irritation in humans. An uncertainty factor of 60 was applied; 6 for use of a LOAEL and 10 for sensitive individuals. TCEQ - health, final, odour, final
toluene	NA	NA	NA	1000	37000	3800	4500 (health), 640 (odour)	14999 (health), 2133 (odour)	WHO - The WHO threshold is based on an odour detection threshold. CalEPA - The CalEPA OEHHA threshold is based on a LOAEL (100 ppm) for headaches, dizziness, and slight eye and nose irritation in human males exposed for 6 hrs. The LOAEL was extrapolated to represent 1 hr exposure (98 ppm) and an uncertainty factor of 10 was applied for intraspecies differences. ATSDR - The MRL was based on a NOAEL of 40 ppm for neurological effects. The 40 ppm NOAEL was adjusted for duration of 5 days per week and 8 hours per day and an uncertainty factor of 10 was applied, resulting in an MRL of 1 ppm or 3.8 mg/m <sup>3</sup> . TCEQ - health, final, odour, final
1,2,3-trimethylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1,2,4-trimethylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
1,3,5-trimethylbenzene	NA	NA	NA	NA	NA	NA	1250	4166	TCEQ - health
p-Xylene	NA	NA	NA	NA	22000	8680	2200 (health), 250 (odour)	7333 (health), 833 (odour)	CalEPA - The OEHHA threshold was based on mild eye and respiratory system effects in humans. ATSDR - The MRL was based on a minimal LOAEL of 50 ppm for neurological and respiratory effects in humans exposed to m-xylene. An uncertainty factor of 30 was applied. The MRL is considered to be protective of human health under acute-duration (≤14 days) inhalation exposure to mixed xylenes or individual isomers. TCEQ - health, final, odour, final
m-xylene	NA	NA	NA	NA	22000	8680	2200 (health), 180 (odour)	7333 (health), 600 (odour)	CalEPA - The OEHHA threshold was based on mild eye and respiratory system effects in humans. ATSDR - The MRL was based on a minimal LOAEL of 50 ppm for neurological and respiratory effects in humans exposed to m-xylene. An uncertainty factor of 30 was applied. The MRL is considered to be protective of human health under acute-duration (≤14 days) inhalation exposure to mixed xylenes or individual isomers. TCEQ - health, final, odour, final
o-xylene	NA	NA	NA	NA	22000	8680	2200 (health), 1600 (odour)	7333 (health), 5333 (odour)	CalEPA - The OEHHA threshold was based on mild eye and respiratory system effects in humans. ATSDR - The MRL was based on a minimal LOAEL of 50 ppm for neurological and respiratory effects in humans exposed to m-xylene. An uncertainty factor of 30 was applied. The MRL is considered to be protective of human health under acute-duration (≤14 days) inhalation exposure to mixed xylenes or individual isomers. TCEQ - health, final, odour, final
Xylene	NA	NA	3000 <sup>(a)</sup>	NA	22000	8680	2200 (health), 350 (odour)	7333 (health), 1167 (odour)	MECP - odour CalEPA - The CalEPA OEHHA threshold is based on a LOAEL (198 ppm) for eye, nose and throat irritation in humans exposed for 30 minutes. The LOAEL was extrapolated to 1 hour (50 ppm) and an uncertainty factor of 10 was applied for intraspecies differences. ATSDR - The MRL was based on a minimal LOAEL of 50 ppm for neurological and respiratory effects in humans exposed to m-xylene. An uncertainty factor of 30 was applied. The MRL is considered to be protective of human health under acute-duration (≤14 days) inhalation exposure to mixed xylenes or individual isomers. TCEQ - health, final, odour, final
<b>Criteria Compounds</b>									
Carbon monoxide	NA	Desirable NAAQO = 15000 Acceptable NAAQO = 35000	5000	30000	23000	NA	40000	133320	NAAQO - health and environment MECP - health WHO - The WHO threshold is based on the Coburn-Foster-Kane exponential equation, which takes into account all the known physiological variables affecting carbon monoxide uptake. The threshold was determined so the carboxyhaemoglobin level of 2.5% is not exceeded, even when a subject engages in light or moderate exercise. CalEPA - The CalEPA OEHHA threshold is based on effects of angina in people with known cardiovascular diseases that are exercising heavily. TCEQ - health, criteria pollutant, must meet US NAAQS. Texas defers to the US National Ambient Air Quality Standards for NO <sub>2</sub> .
Nitrogen dioxide	400	CAAQS (2020) = 113 (60 ppb) CAAQS (2025) = 79 (42 ppb)	400	200	470	NA	188	627	Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for NO <sub>2</sub> . CAAQS - Proposed screening value for the year 2025 (supporting documentation not available) was selected as it is more conservative than the 2020 CAAQS of 113 µg/m <sup>3</sup> . The metric is the 3-year average of the 98th percentile of the nitrogen dioxide daily maximum 1-hour average concentration. The CAAQS of 60 and 42 ppb were converted to µg/m <sup>3</sup> using a molecular weight of 46.01. MECP - health WHO - The WHO threshold is based on an increase in bronchial responsiveness in asthmatics. CalEPA - The CalEPA OEHHA threshold is based on increased airway reactivity in asthmatics. TCEQ - health, criteria pollutant, must meet US NAAQS. Texas defers to the US National Ambient Air Quality Standards for NO <sub>2</sub> .
Nitrogen oxides (NO <sub>x</sub> )	NA	NA	NA	NA	NA	NA	NA	NA	No 1 hour thresholds are available Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for SO <sub>2</sub> .
Sulphur dioxide	450	CAAQS (2020) = 183 (70 ppb) CAAQS (2025) = 170 (65 ppb)	100	500 <sup>(a)</sup>	660	26 <sup>a</sup>	197	657	CAAQS - Screening value was developed based on respiratory health problems, focused on susceptible populations (e.g. asthmatic children and adults), and environmental impacts such as acid rain and smog (CCME 2017). A value of 170 µg/m <sup>3</sup> is proposed for the year 2025. It was selected as the screening value as it is more conservative than the 2020 CAAQS of 183 µg/m <sup>3</sup> . The metric is the 3-year average of the 99th percentile of the sulphur dioxide daily maximum 1-hour average concentration. The CAAQS of 70 and 65 ppb were converted to µg/m <sup>3</sup> using a molecular weight of 64.07. MECP - health & vegetation WHO - The WHO threshold is based on changes in pulmonary function and respiratory symptoms. CalEPA - The CalEPA threshold was based on an equivalent 1 hour concentration of 0.25 ppm. This value was derived from a consensus value from several studies. An uncertainty factor of 1 was applied. This REL is the California AAQS. ATSDR - The MRL was based on a minimal LOAEL of 0.1 ppm for bronchoconstriction in exercising asthmatics. An uncertainty factor of 9 was applied. TCEQ - health, criteria pollutant, must meet US NAAQS. Texas defers to the US National Ambient Air Quality Standards for SO <sub>2</sub> .
PM <sub>2.5</sub>	NA	NA	NA	NA	NA	NA	NA	NA	No 1 hour thresholds are available
PM <sub>10</sub>	NA	NA	NA	NA	NA	NA	NA	NA	No 1 hour thresholds are available
Diesel particulate matter	NA	10 (Health Canada 2016)	NA	NA	NA	NA	19	63	Health Canada - Screening value based on a LOAEL of 100 µg/m <sup>3</sup> for respiratory effects (increased airway resistance and inflammation) in healthy subjects exposed to DPM for 2 hours (Health Canada 2016). An uncertainty factor of 10 was applied (√10 for intraspecies variability and √10 for use of a LOAEL). TCEQ - PM <sub>10</sub> , health
Total suspended particulate	NA	NA	NA	NA	NA	NA	NA	NA	No 1 hour thresholds are available

**Notes:**  
 (1) Government of Nunavut. (2011). Environmental Guideline for Ambient Air Quality. Department of Environment, October 2011.  
 (2) Canadian Council of Ministers of the Environment. (1999). Canadian Environmental Quality Guidelines. Canadian National Ambient Air Quality Objectives (NAAQO). CCME. 2017. Canadian Ambient Air Quality Standards (CAAQS). CCME. <http://airquality-qualiteair.ccmec.ca/en/>  
 (3) Ontario Ministry of the Environment, Conservation and Parks (2018). Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants. Technical Assessment and Standards Development Branch, Environmental Sciences Division, Version 2.0, April 2018.  
 The ON MECP ACBs are based on health, odour, vegetation, soiling, visibility, corrosion or other effects. The ON MECP does not provide background information on how the ACBs were derived on a chemical to chemical basis.  
 (4) World Health Organization. (2000). Air Quality Guidelines for Europe, 2nd Ed. World Health Organization Regional Publications, European Series, No. 91. Copenhagen.  
 (5) World Health Organization. (2005). Air Quality Guidelines Global Update. Report on Working Group Meeting. Bonn, Germany.  
 (6) California Environmental Protection Agency. (2021). Acute, 8-Hour and Chronic Reference Exposure Levels. Office of Environmental Health Hazard Assessment, Air Toxicology and Epidemiology. Internet Site, last updated February 2012, accessed 10 November 2021.  
 (7) Agency for Toxic Substances and Disease Registry. (2021). Minimal Risk Levels. Internet Site, last updated July 2021, accessed 10 November 2021.  
 The ATSDR defines acute exposure as 14 days or less.  
 (8) Texas Commission on Environmental Quality. (2021). Texas Air Monitoring Information System (TAMIS) Web Interface. Database export: Tox ESL Detailed Report and Tox AMCV Report. Available at: https://www17.tceq.texas.gov/tamis/index.cfm?fuseaction=home.welcome. Accessed November 2021.  
 The TCEQ ESLs are based on health, odour/nuisance potential, and vegetation effects. The TCEQ ESLs are based on an HQ = 0.3 for non-carcinogens and were therefore adjusted with the following equation: threshold (µg/m<sup>3</sup>) = TCEQ value x 3.333. The TCEQ does not provide background information on how the ESLs were derived on a chemical to chemical basis. All ESLs are interim, unless otherwise stated.

NA = not available  
 (a) 10 minutes  
 (b) 30 minutes  
 Target HQ = 1.0

Air concentrations given in ppm were converted to µg/m<sup>3</sup> with the following equation: X (ppm) = Y (mg/m<sup>3</sup>)/(24.45/MW)\*1000.  
 Centre for Disease Control and Prevention. (2003). Conversion Calculator. The National Institute for Occupational Safety and Health Publication No. 2004-101.

Selection criteria:  
 The lowest health-based air standard from the first six agencies listed was selected as the guideline for screening in the HHRA. The TCEQ standard was selected if it was the only agency with a standard.  
 = selected guideline for screening in the HHRA

Updated by: BP  
 Checked by: SG

Parameter	Air Threshold		Receptor Locations														
	CAAQS (2020)	CAAQS (2025)	SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014	SR_015
<b>Criteria Pollutants</b>																	
<b>Scenario 1</b>																	
NO2	113	79	53.3	63.0	60.4	52.4	64.6	68.5	63.1	65	55.7	61.1	63.3	54.9	50.6	44	30.5
SO2	183	170	6.9	7.5	7.9	4.9	10.9	17	6.1	10.4	5.2	7.4	7.8	5.5	4.7	4.7	3.1
<b>Scenario 2</b>																	
NO2	113	79	41.4	56.7	49.3	34.3	58.6	65	46.6	55	32.5	45.8	47.6	38.1	32.5	32.9	25.4
SO2	183	170	6.9	7.5	7.9	4.9	10.9	17	6.1	10.4	5.2	7.4	7.8	5.5	4.7	4.7	3.1
<b>Scenario 3</b>																	
NO2	113	79	36.3	43.7	45	27	52.5	61.7	32.6	51.8	28.5	39.8	43.6	34.3	29.1	31.5	22.7
SO2	183	170	6.9	7.5	7.9	4.9	10.9	17	6.1	10.4	5.2	7.4	7.8	5.5	4.7	4.7	3.1

**Notes:**

All air concentrations are in units of  $\mu\text{g}/\text{m}^3$

NO2 = Nitrogen dioxide; SO2 = Sulphur Dioxide; CAAQS = Canadian Ambient Air Quality Standard; COPC = contaminant of potential concern

**3.20E-03** = greater than 1-hour air threshold

\* NO2 was retained as a COPC because it is considered a non-threshold chemical.

Prepared by: BP

Checked by: SG

Parameter	Air Th	Receptor Locations											Maximum Concentration	Maximum Above Guideline?	Retained as a COPC?		
	CAAQS (2020)	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025	Explo Camp				Main Camp	
<b>Criteria Pollutants</b>																	
<b>Scenario 1</b>																	
NO2	113	29.1	26.6	22.7	21.4	17.8	18	18.9	20.1	18.2	19.6	66.1	123.2	68.5	No	Yes*	
SO2	183	3	2.5	2.2	2.1	1.5	1.5	1.6	1.7	1.6	1.6	15.1	23.9	17.0	No	No	
<b>Scenario 2</b>																	
NO2	113	24.7	22.7	18.6	17.1	13.7	14	15.2	16.6	14.6	15.7	64.0	68.1	65.0	No	Yes*	
SO2	183	3	2.5	2.2	2.1	1.5	1.5	1.6	1.7	1.6	1.6	15.1	23.9	17.0	No	No	
<b>Scenario 3</b>																	
NO2	113	21.1	19.1	16.6	15.5	11.8	11.8	13.4	13.9	12.7	13.5	62.5	71.3	61.7	No	Yes*	
SO2	183	3	2.5	2.2	2.1	1.5	1.5	1.6	1.7	1.6	1.6	15.1	23.9	17.0	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

NO2 = Nitrogen dioxide; SO2 = Sulphur Dioxide; CAAQS = Canadian Ambient Air Quality Standard; COPC = contaminant of potential concern

**3.20E-03** = greater than 1-hour air threshold

\* NO2 was retained as a COPC because it is considered a non-threshold chemical.

Prepared by: BP

Checked by: SG

Revised by: KCS

Table H-12-C-3a:

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	NV	1.33E+02	4.07E+01	4.53E+01	4.56E+01	4.80E+01	6.18E+01	1.25E+02	1.37E+01	1.51E+01	9.56E+00	1.37E+01	1.31E+01	5.47E+01	3.61E+01	3.62E+01
DPM	10	1.44E+01	5.92E+00	5.42E+00	5.42E+00	6.31E+00	7.68E+00	8.73E+00	1.57E+00	1.67E+00	1.34E+00	1.57E+00	1.68E+00	7.97E+00	5.81E+00	5.29E+00
PM10	NV	7.18E+01	2.17E+01	2.29E+01	2.28E+01	2.48E+01	3.16E+01	6.23E+01	7.48E+00	8.69E+00	5.12E+00	7.49E+00	7.73E+00	2.81E+01	2.03E+01	1.99E+01
PM2.5	NV	2.82E+01	8.62E+00	1.06E+01	1.05E+01	1.17E+01	1.48E+01	1.57E+01	2.93E+00	3.93E+00	2.39E+00	2.94E+00	3.71E+00	1.52E+01	1.02E+01	9.29E+00
CO	15000	2.86E+02	1.11E+02	1.03E+02	1.03E+02	1.14E+02	1.39E+02	1.81E+02	3.25E+01	2.95E+01	2.42E+01	3.25E+01	3.10E+01	1.44E+02	1.08E+02	9.62E+01
<b>Metals</b>																
Aluminum	30	9.24E+00	2.82E+00	3.14E+00	3.16E+00	3.33E+00	4.28E+00	8.66E+00	9.48E-01	1.04E+00	6.63E-01	9.48E-01	9.11E-01	3.80E+00	2.50E+00	2.51E+00
Antimony	63	5.22E-04	1.59E-04	1.77E-04	1.79E-04	1.88E-04	2.42E-04	4.89E-04	5.35E-05	5.90E-05	3.74E-05	5.36E-05	5.15E-05	2.14E-04	1.41E-04	1.42E-04
Arsenic	0.2	1.48E-02	4.52E-03	5.03E-03	5.07E-03	5.33E-03	6.86E-03	1.39E-02	1.52E-03	1.67E-03	1.06E-03	1.52E-03	1.46E-03	6.08E-03	4.01E-03	4.02E-03
Barium	25	5.21E-02	1.59E-02	1.77E-02	1.78E-02	1.88E-02	2.42E-02	4.89E-02	5.35E-03	5.89E-03	3.74E-03	5.35E-03	5.14E-03	2.14E-02	1.41E-02	1.42E-02
Beryllium	0.025	9.70E-05	2.96E-05	3.30E-05	3.32E-05	3.49E-05	4.50E-05	9.09E-05	9.95E-06	1.10E-05	6.96E-06	9.96E-06	9.57E-06	3.98E-05	2.63E-05	2.64E-05
Bismuth	6.3	2.67E-05	8.14E-06	9.05E-06	9.12E-06	9.60E-06	1.24E-05	2.50E-05	2.73E-06	3.01E-06	1.91E-06	2.74E-06	2.63E-06	1.09E-05	7.22E-06	7.24E-06
Cadmium	0.03	8.67E-03	3.56E-03	3.26E-03	3.26E-03	3.80E-03	4.63E-03	5.27E-03	9.43E-04	1.01E-03	8.08E-04	9.46E-04	1.01E-03	4.80E-03	3.50E-03	3.19E-03
Calcium	NV	5.27E+00	1.61E+00	1.79E+00	1.80E+00	1.90E+00	2.44E+00	4.94E+00	5.40E-01	5.96E-01	3.78E-01	5.41E-01	5.20E-01	2.16E+00	1.43E+00	1.43E+00
Chromium	1.3	2.36E-02	7.36E-03	8.07E-03	8.13E-03	8.61E-03	1.10E-02	2.17E-02	2.43E-03	2.67E-03	1.72E-03	2.43E-03	2.35E-03	9.90E-03	6.58E-03	6.55E-03
Cobalt	0.25	3.57E-03	1.09E-03	1.21E-03	1.22E-03	1.29E-03	1.66E-03	3.35E-03	3.66E-04	4.04E-04	2.56E-04	3.67E-04	3.52E-04	1.47E-03	9.67E-04	9.70E-04
Copper	83	9.45E-03	2.88E-03	3.21E-03	3.23E-03	3.40E-03	4.38E-03	8.86E-03	9.69E-04	1.07E-03	6.77E-04	9.70E-04	9.32E-04	3.88E-03	2.56E-03	2.57E-03
Gold	3.1	1.03E-05	3.15E-06	3.51E-06	3.53E-06	3.72E-06	4.79E-06	9.67E-06	1.06E-06	1.17E-06	7.40E-07	1.06E-06	1.02E-06	4.24E-06	2.79E-06	2.80E-06
Iron	8.3	1.01E+01	3.09E+00	3.44E+00	3.47E+00	3.65E+00	4.70E+00	9.50E+00	1.04E+00	1.15E+00	7.27E-01	1.04E+00	9.99E-01	4.16E+00	2.74E+00	2.75E+00
Lead	1.2	3.03E-03	1.08E-03	1.08E-03	1.09E-03	1.20E-03	1.51E-03	2.37E-03	3.20E-04	3.47E-04	2.48E-04	3.20E-04	3.25E-04	1.45E-03	1.01E-03	9.62E-04
Lithium	50	4.31E-03	1.32E-03	1.46E-03	1.47E-03	1.55E-03	2.00E-03	4.04E-03	4.42E-04	4.87E-04	3.09E-04	4.42E-04	4.25E-04	1.77E-03	1.17E-03	1.17E-03
Magnesium	167	2.79E+00	8.53E-01	9.49E-01	9.56E-01	1.01E+00	1.30E+00	2.62E+00	2.87E-01	3.16E-01	2.00E-01	2.87E-01	2.76E-01	1.15E+00	7.57E-01	7.59E-01
Manganese	1	1.05E-01	3.21E-02	3.57E-02	3.59E-02	3.78E-02	4.87E-02	9.85E-02	1.08E-02	1.19E-02	7.53E-03	1.08E-02	1.04E-02	4.31E-02	2.84E-02	2.85E-02
Molybdenum	83	1.60E-04	4.88E-05	5.43E-05	5.47E-05	5.76E-05	7.42E-05	1.50E-04	1.64E-05	1.81E-05	1.15E-05	1.64E-05	1.58E-05	6.57E-05	4.33E-05	4.35E-05
Nickel	0.2	9.26E-03	2.83E-03	3.15E-03	3.17E-03	3.34E-03	4.30E-03	8.69E-03	9.50E-04	1.05E-03	6.64E-04	9.51E-04	9.14E-04	3.81E-03	2.51E-03	2.52E-03
Potassium	67	1.77E+00	5.40E-01	6.01E-01	6.05E-01	6.37E-01	8.20E-01	1.66E+00	1.81E-01	2.00E-01	1.27E-01	1.82E-01	1.74E-01	7.26E-01	4.79E-01	4.80E-01
Selenium	17	1.60E-04	4.87E-05	5.42E-05	5.46E-05	5.75E-05	7.40E-05	1.50E-04	1.64E-05	1.80E-05	1.14E-05	1.64E-05	1.57E-05	6.55E-05	4.32E-05	4.33E-05
Silver	2.5	3.92E-05	1.20E-05	1.33E-05	1.34E-05	1.41E-05	1.82E-05	3.68E-05	4.03E-06	4.44E-06	2.82E-06	4.03E-06	3.87E-06	1.61E-05	1.06E-05	1.07E-05
Sodium	NV	2.11E+00	6.45E-01	7.17E-01	7.23E-01	7.61E-01	9.79E-01	1.98E+00	2.17E-01	2.39E-01	1.51E-01	2.17E-01	2.08E-01	8.67E-01	5.72E-01	5.74E-01
Strontium	83	2.82E-02	8.61E-03	9.59E-03	9.66E-03	1.02E-02	1.31E-02	2.65E-02	2.89E-03	3.19E-03	2.02E-03	2.90E-03	2.78E-03	1.16E-02	7.64E-03	7.67E-03
Thallium	1.3	4.08E-05	1.24E-05	1.38E-05	1.39E-05	1.47E-05	1.89E-05	3.82E-05	4.18E-06	4.61E-06	2.92E-06	4.18E-06	4.02E-06	1.67E-05	1.10E-05	1.11E-05
Tin	25	1.44E-04	4.39E-05	4.88E-05	4.92E-05	5.17E-05	6.66E-05	1.35E-04	1.47E-05	1.62E-05	1.03E-05	1.47E-05	1.42E-05	5.90E-05	3.89E-05	3.90E-05
Titanium	83	4.65E-01	1.42E-01	1.58E-01	1.59E-01	1.67E-01	2.15E-01	4.36E-01	4.77E-02	5.25E-02	3.33E-02	4.77E-02	4.58E-02	1.91E-01	1.26E-01	1.26E-01
Uranium	0.38	1.30E-04	3.96E-05	4.40E-05	4.44E-05	4.67E-05	6.01E-05	1.22E-04	1.33E-05	1.47E-05	9.30E-06	1.33E-05	1.28E-05	5.33E-05	3.51E-05	3.52E-05
Vanadium	0.8	1.71E-02	5.22E-03	5.80E-03	5.85E-03	6.15E-03	7.92E-03	1.60E-02	1.75E-03	1.93E-03	1.23E-03	1.75E-03	1.69E-03	7.02E-03	4.63E-03	4.64E-03
Yttrium	33	1.26E-03	3.85E-04	4.28E-04	4.32E-04	4.54E-04	5.85E-04	1.18E-03	1.29E-04	1.43E-04	9.04E-05	1.29E-04	1.24E-04	5.18E-04	3.41E-04	3.43E-04
Zinc	83	2.34E-02	8.22E-03	8.33E-03	8.36E-03	9.22E-03	1.16E-02	1.86E-02	2.46E-03	2.68E-03	1.90E-03	2.47E-03	2.49E-03	1.11E-02	7.68E-03	7.33E-03
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.58E-05	6.52E-06	5.97E-06	5.96E-06	6.95E-06	8.45E-06	9.61E-06	1.72E-06	1.84E-06	1.48E-06	1.73E-06	1.85E-06	8.77E-06	6.39E-06	5.82E-06
naphthalene	50	6.27E-03	2.58E-03	2.36E-03	2.36E-03	2.75E-03	3.35E-03	3.80E-03	6.82E-04	7.27E-04	5.85E-04	6.84E-04	7.30E-04	3.47E-03	2.53E-03	2.30E-03
phenanthrene	2	5.18E-04	2.13E-04	1.95E-04	1.95E-04	2.27E-04	2.76E-04	3.14E-04	5.63E-05	6.01E-05	4.83E-05	5.65E-05	6.03E-05	2.87E-04	2.09E-04	1.90E-04
anthracene	3	5.77E-05	2.38E-05	2.18E-05	2.17E-05	2.53E-05	3.08E-05	3.50E-05	6.28E-06	6.70E-06	5.39E-06	6.30E-06	6.73E-06	3.20E-05	2.33E-05	2.12E-05
fluorene	33	2.52E-04	1.04E-04	9.51E-05	9.51E-05	1.11E-04	1.35E-04	1.53E-04	2.75E-05	2.93E-05	2.36E-05	2.76E-05	2.94E-05	1.40E-04	1.02E-04	9.29E-05
pyrene	2	1.89E-04	7.78E-05	7.12E-05	7.12E-05	8.30E-05	1.01E-04	1.15E-04	2.06E-05	2.20E-05	1.76E-05	2.06E-05	2.20E-05	1.05E-04	7.64E-05	6.96E-05
thiophenes	83	3.28E-06	1.35E-06	1.24E-06	1.24E-06	1.44E-06	1.75E-06	1.99E-06	3.57E-07	3.81E-07	3.06E-07	3.58E-07	3.82E-07	1.82E-06	1.32E-06	1.21E-06
benz(a)anthracene	2	7.51E-06	3.09E-06	2.83E-06	2.83E-06	3.30E-06	4.01E-06	4.56E-06	8.18E-07	8.72E-07	7.01E-07	8.20E-07	8.76E-07	4.16E-06	3.03E-06	2.76E-06
acenaphthene	333	4.87E-05	2.00E-05	1.83E-05	1.83E-05	2.13E-05	2.60E-05	2.95E-05	5.30E-06	5.65E-06	4.54E-06	5.31E-06	5.67E-06	2.70E-05	1.96E-05	1.79E-05
acenaphthylene	333	1.77E-04	7.27E-05	6.66E-05	6.65E-05	7.75E-05	9.44E-05	1.07E-04	1.92E-05	2.05E-05	1.65E-05	1.93E-05	2.06E-05	9.79E-05	7.14E-05	6.50E-05
fluoranthene	2	1.88E-04	7.74E-05	7.09E-05	7.08E-05	8.25E-05	1.00E-04	1.14E-04	2.05E-05	2.18E-05	1.75E-05	2.05E-05	2.19E-05	1.04E-04	7.59E-05	6.92E-05
benzo(b)fluoranthene	2	3.49E-05	1.44E-05	1.32E-05	1.31E-05	1.53E-05	1.86E-05	2.12E-05	3.80E-06	4.05E-06	3.26E-06	3.81E-06	4.07E-06	1.93E-05	1.41E-05	1.28E-05
benzo(g,h,i)perylene	NV	6.63E-07	2.73E-07	2.50E-07	2.50E-07	2.91E-07	3.54E-07	4.02E-07	7.22E-08	7.70E-08	6.19E-08	7.24E-08	7.73E-08	3.68E-07	2.68E-07	2.44E-07
benzo(k)fluoranthene	2	3.97E-06	1.63E-06	1.50E-06	1.50E-06	1.74E-06	2.12E-06	2.41E-06	4.32E-07	4.61E-07	3.70E-07	4.33E-07	4.63E-07	2.20E-06	1.60E-06	1.46E-06
chrysene	2	8.45E-06	3.48E-06	3.18E-06	3.18E-06	3.71E-06	4.51E-06	5.12E-06	9.19E-07	9.81E-07	7.88E-07					

Table H-12-D-3a: Screening of Predicted 1-Hour Air Concentrations for the Acute Air Quality Risk Assessment - Scenario 1

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	8.17E-02	3.40E-02	3.14E-02	3.13E-02	3.54E-02	4.47E-02	5.26E-02	1.00E-02	9.10E-03	7.66E-03	1.00E-02	9.50E-03	4.58E-02	3.28E-02	2.99E-02
acetaldehyde	470	1.10E+01	4.59E+00	4.23E+00	4.23E+00	4.77E+00	6.02E+00	7.09E+00	1.35E+00	1.23E+00	1.03E+00	1.35E+00	1.28E+00	6.18E+00	4.43E+00	4.03E+00
acetone	19665	5.80E+00	2.42E+00	2.23E+00	2.22E+00	2.51E+00	3.17E+00	3.73E+00	7.11E-01	6.46E-01	5.43E-01	7.12E-01	6.74E-01	3.25E+00	2.33E+00	2.12E+00
acrolein	2.5	1.95E+00	8.12E-01	7.49E-01	7.48E-01	8.44E-01	1.07E+00	1.26E+00	2.39E-01	2.17E-01	1.83E-01	2.39E-01	2.27E-01	1.09E+00	7.84E-01	7.13E-01
aldehyde	10	<b>1.47E+01</b>	6.14E+00	5.66E+00	5.65E+00	6.38E+00	8.05E+00	9.49E+00	1.81E+00	1.64E+00	1.38E+00	1.81E+00	1.71E+00	8.26E+00	5.92E+00	5.39E+00
benzene	27	7.22E-01	3.01E-01	2.77E-01	2.77E-01	3.13E-01	3.95E-01	4.65E-01	8.86E-02	8.04E-02	6.77E-02	8.86E-02	8.39E-02	4.05E-01	2.90E-01	2.64E-01
C10-C12 aliphatic	11666	1.59E-01	6.61E-02	6.09E-02	6.09E-02	6.87E-02	8.67E-02	1.02E-01	1.95E-02	1.77E-02	1.49E-02	1.95E-02	1.84E-02	8.89E-02	6.37E-02	5.80E-02
C12-C16 aliphatic	11666	9.19E-01	3.83E-01	3.53E-01	3.52E-01	3.98E-01	5.02E-01	5.91E-01	1.13E-01	1.02E-01	8.61E-02	1.13E-01	1.07E-01	5.15E-01	3.69E-01	3.36E-01
C12-C16 aromatic	4166	1.24E-02	5.16E-03	4.76E-03	4.75E-03	5.36E-03	6.77E-03	7.98E-03	1.52E-03	1.38E-03	1.16E-03	1.52E-03	1.44E-03	6.94E-03	4.98E-03	4.53E-03
C16-C21 aliphatic	333	9.20E-01	3.83E-01	3.53E-01	3.53E-01	3.98E-01	5.03E-01	5.92E-01	1.13E-01	1.02E-01	8.62E-02	1.13E-01	1.07E-01	5.16E-01	3.70E-01	3.36E-01
C2-C6 aliphatic	2100	4.38E+00	1.82E+00	1.68E+00	1.68E+00	1.90E+00	2.39E+00	2.82E+00	5.37E-01	4.88E-01	4.10E-01	5.37E-01	5.09E-01	2.45E+00	1.76E+00	1.60E+00
C6-C8 aliphatic	61800	2.99E+00	1.25E+00	1.15E+00	1.15E+00	1.30E+00	1.64E+00	1.93E+00	3.67E-01	3.33E-01	2.81E-01	3.68E-01	3.48E-01	1.68E+00	1.20E+00	1.10E+00
C8-C10 aliphatic	60000	4.22E-02	1.76E-02	1.62E-02	1.62E-02	1.83E-02	2.31E-02	2.72E-02	5.17E-03	4.70E-03	3.95E-03	5.18E-03	4.90E-03	2.36E-02	1.69E-02	1.54E-02
C8-C10 aromatic	4166	2.37E-01	9.87E-02	9.10E-02	9.10E-02	1.03E-01	1.30E-01	1.53E-01	2.91E-02	2.64E-02	2.22E-02	2.91E-02	2.76E-02	1.33E-01	9.53E-02	8.67E-02
ethylbenzene	21710	1.24E-01	5.16E-02	4.76E-02	4.75E-02	5.36E-02	6.77E-02	7.98E-02	1.52E-02	1.38E-02	1.16E-02	1.52E-02	1.44E-02	6.94E-02	4.98E-02	4.53E-02
ethylene	566610	2.26E+00	9.40E-01	8.66E-01	8.66E-01	9.77E-01	1.23E+00	1.45E+00	2.77E-01	2.51E-01	2.11E-01	2.77E-01	2.62E-01	1.26E+00	9.07E-01	8.25E-01
formaldehyde	49	5.88E+00	2.45E+00	2.26E+00	2.26E+00	2.54E+00	3.21E+00	3.78E+00	7.21E-01	6.55E-01	5.51E-01	7.21E-01	6.83E-01	3.30E+00	2.36E+00	2.15E+00
ketone	1167	3.32E+00	1.38E+00	1.28E+00	1.27E+00	1.44E+00	1.82E+00	2.14E+00	4.07E-01	3.70E-01	3.11E-01	4.08E-01	3.86E-01	1.86E+00	1.33E+00	1.21E+00
toluene	1000	1.05E+00	4.37E-01	4.03E-01	4.02E-01	4.54E-01	5.73E-01	6.75E-01	1.29E-01	1.17E-01	9.83E-02	1.29E-01	1.22E-01	5.88E-01	4.22E-01	3.84E-01
trimethylbenzene	4166	3.00E-01	1.25E-01	1.15E-01	1.15E-01	1.30E-01	1.64E-01	1.93E-01	3.69E-02	3.35E-02	2.82E-02	3.69E-02	3.49E-02	1.68E-01	1.21E-01	1.10E-01
xylene	8680	8.33E-01	3.47E-01	3.20E-01	3.20E-01	3.61E-01	4.55E-01	5.36E-01	1.02E-01	9.27E-02	7.81E-02	1.02E-01	9.68E-02	4.67E-01	3.35E-01	3.05E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Table H-12-C-3a:

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	NV	9.04E+00	6.70E+00	5.94E+00	5.68E+00	7.25E+00	9.00E+00	6.28E+01	2.74E+01	9.77E+00	1.01E+01	1.08E+01	1.33E+02	No	No	
DPM	10	2.00E+00	1.43E+00	1.29E+00	1.08E+00	1.52E+00	1.58E+00	<b>1.16E+01</b>	4.17E+00	1.40E+00	1.46E+00	1.53E+00	<b>1.44E+01</b>	Yes	Yes	
PM10	NV	5.56E+00	4.27E+00	3.81E+00	3.13E+00	4.59E+00	5.03E+00	3.31E+01	1.48E+01	5.01E+00	5.31E+00	5.59E+00	7.18E+01	No	No	
PM2.5	NV	3.01E+00	2.45E+00	2.21E+00	1.85E+00	2.62E+00	2.75E+00	1.91E+01	7.26E+00	2.55E+00	2.64E+00	2.78E+00	2.82E+01	No	No	
CO	15000	3.62E+01	2.64E+01	2.38E+01	1.98E+01	2.80E+01	2.92E+01	2.15E+02	7.64E+01	4.49E+01	4.66E+01	4.63E+01	2.86E+02	No	No	
<b>Metals</b>																
Aluminum	30	6.27E-01	4.65E-01	4.13E-01	3.94E-01	5.03E-01	6.24E-01	4.36E+00	1.90E+00	6.77E-01	7.03E-01	7.49E-01	9.24E+00	No	No	
Antimony	63	3.54E-05	2.62E-05	2.33E-05	2.22E-05	2.84E-05	3.52E-05	2.46E-04	1.07E-04	3.83E-05	3.97E-05	4.23E-05	5.22E-04	No	No	
Arsenic	0.2	1.00E-03	7.44E-04	6.60E-04	6.31E-04	8.05E-04	9.99E-04	6.98E-03	3.04E-03	1.08E-03	1.13E-03	1.20E-03	1.48E-02	No	No	
Barium	25	3.53E-03	2.62E-03	2.32E-03	2.22E-03	2.83E-03	3.52E-03	2.46E-02	1.07E-02	3.82E-03	3.96E-03	4.22E-03	5.21E-02	No	No	
Beryllium	0.025	6.58E-06	4.87E-06	4.33E-06	4.13E-06	5.28E-06	6.55E-06	4.57E-05	2.00E-05	7.11E-06	7.37E-06	7.86E-06	9.70E-05	No	No	
Bismuth	6.3	1.81E-06	1.34E-06	1.19E-06	1.14E-06	1.45E-06	1.80E-06	1.26E-05	5.48E-06	1.95E-06	2.03E-06	2.16E-06	2.67E-05	No	No	
Cadmium	0.03	1.20E-03	8.61E-04	7.77E-04	6.50E-04	9.14E-04	9.52E-04	6.95E-03	2.51E-03	8.42E-04	8.79E-04	9.21E-04	8.67E-03	No	No	
Calcium	NV	3.57E-01	2.65E-01	2.35E-01	2.24E-01	2.86E-01	3.56E-01	2.48E+00	1.08E+00	3.86E-01	4.00E-01	4.27E-01	5.27E+00	No	No	
Chromium	1.3	1.70E-03	1.26E-03	1.12E-03	1.05E-03	1.36E-03	1.65E-03	1.16E-02	4.98E-03	1.76E-03	1.83E-03	1.95E-03	2.36E-02	No	No	
Cobalt	0.25	2.42E-04	1.79E-04	1.59E-04	1.52E-04	1.94E-04	2.41E-04	1.68E-03	7.35E-04	2.62E-04	2.71E-04	2.89E-04	3.57E-03	No	No	
Copper	83	6.40E-04	4.75E-04	4.21E-04	4.02E-04	5.14E-04	6.38E-04	4.45E-03	1.94E-03	6.92E-04	7.18E-04	7.66E-04	9.45E-03	No	No	
Gold	3.1	7.00E-07	5.18E-07	4.60E-07	4.40E-07	5.61E-07	6.97E-07	4.86E-06	2.12E-06	7.56E-07	7.85E-07	8.37E-07	1.03E-05	No	No	
Iron	8.3	6.87E-01	5.09E-01	4.52E-01	4.32E-01	5.51E-01	6.84E-01	4.77E+00	2.08E+00	7.43E-01	7.70E-01	8.21E-01	<b>1.01E+01</b>	Yes	No*	
Lead	1.2	3.08E-04	2.23E-04	2.00E-04	1.76E-04	2.38E-04	2.66E-04	1.91E-03	7.44E-04	2.57E-04	2.67E-04	2.82E-04	3.03E-03	No	No	
Lithium	50	2.92E-04	2.16E-04	1.92E-04	1.84E-04	2.34E-04	2.91E-04	2.03E-03	8.86E-04	3.16E-04	3.28E-04	3.49E-04	4.31E-03	No	No	
Magnesium	167	1.89E-01	1.40E-01	1.25E-01	1.19E-01	1.52E-01	1.89E-01	1.32E+00	5.75E-01	2.05E-01	2.12E-01	2.26E-01	2.79E+00	No	No	
Manganese	1	7.12E-03	5.28E-03	4.69E-03	4.48E-03	5.71E-03	7.09E-03	4.95E-02	2.16E-02	7.70E-03	7.98E-03	8.51E-03	1.05E-01	No	No	
Molybdenum	83	1.08E-05	8.03E-06	7.13E-06	6.81E-06	8.70E-06	1.08E-05	7.54E-05	3.29E-05	1.17E-05	1.22E-05	1.30E-05	1.60E-04	No	No	
Nickel	0.2	6.28E-04	4.65E-04	4.13E-04	3.95E-04	5.04E-04	6.26E-04	4.37E-03	1.91E-03	6.79E-04	7.04E-04	7.51E-04	9.26E-03	No	No	
Potassium	67	1.20E-01	8.88E-02	7.89E-02	7.53E-02	9.61E-02	1.19E-01	8.33E-01	3.64E-01	1.30E-01	1.34E-01	1.43E-01	1.77E+00	No	No	
Selenium	17	1.08E-05	8.01E-06	7.12E-06	6.80E-06	8.67E-06	1.08E-05	7.52E-05	3.28E-05	1.17E-05	1.21E-05	1.29E-05	1.60E-04	No	No	
Silver	2.5	2.66E-06	1.97E-06	1.75E-06	1.67E-06	2.13E-06	2.65E-06	1.85E-05	8.07E-06	2.88E-06	2.98E-06	3.18E-06	3.92E-05	No	No	
Sodium	NV	1.43E-01	1.06E-01	9.42E-02	9.00E-02	1.15E-01	1.43E-01	9.95E-01	4.34E-01	1.55E-01	1.61E-01	1.71E-01	2.11E+00	No	No	
Strontium	83	1.91E-03	1.42E-03	1.26E-03	1.20E-03	1.53E-03	1.91E-03	1.33E-02	5.81E-03	2.07E-03	2.15E-03	2.29E-03	2.82E-02	No	No	
Thallium	1.3	2.76E-06	2.05E-06	1.82E-06	1.74E-06	2.22E-06	2.75E-06	1.92E-05	8.38E-06	2.99E-06	3.10E-06	3.30E-06	4.08E-05	No	No	
Tin	25	9.74E-06	7.22E-06	6.41E-06	6.12E-06	7.81E-06	9.70E-06	6.77E-05	2.96E-05	1.05E-05	1.09E-05	1.16E-05	1.44E-04	No	No	
Titanium	83	3.15E-02	2.33E-02	2.07E-02	1.98E-02	2.53E-02	3.14E-02	2.19E-01	9.56E-02	3.41E-02	3.53E-02	3.77E-02	4.65E-01	No	No	
Uranium	0.38	8.79E-06	6.51E-06	5.78E-06	5.52E-06	7.05E-06	8.75E-06	6.11E-05	2.67E-05	9.50E-06	9.86E-06	1.05E-05	1.30E-04	No	No	
Vanadium	0.8	1.16E-03	8.58E-04	7.62E-04	7.28E-04	9.29E-04	1.15E-03	8.05E-03	3.51E-03	1.25E-03	1.30E-03	1.38E-03	1.71E-02	No	No	
Yttrium	33	8.55E-05	6.34E-05	5.62E-05	5.37E-05	6.86E-05	8.51E-05	5.94E-04	2.59E-04	9.24E-05	9.59E-05	1.02E-04	1.26E-03	No	No	
Zinc	83	2.31E-03	1.67E-03	1.50E-03	1.33E-03	1.79E-03	2.01E-03	1.44E-02	5.66E-03	1.96E-03	2.04E-03	2.15E-03	2.34E-02	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	2.21E-06	1.58E-06	1.42E-06	1.19E-06	1.67E-06	1.74E-06	1.27E-05	4.59E-06	1.54E-06	1.61E-06	1.68E-06	1.58E-05	No	No	
naphthalene	50	8.73E-04	6.24E-04	5.62E-04	4.71E-04	6.62E-04	6.89E-04	5.03E-03	1.81E-03	6.09E-04	6.36E-04	6.66E-04	6.27E-03	No	No	
phenanthrene	2	7.21E-05	5.15E-05	4.65E-05	3.89E-05	5.47E-05	5.69E-05	4.16E-04	1.50E-04	5.03E-05	5.25E-05	5.50E-05	5.18E-04	No	No	
anthracene	3	8.04E-06	5.75E-06	5.18E-06	4.34E-06	6.10E-06	6.35E-06	4.64E-05	1.67E-05	5.61E-06	5.86E-06	6.14E-06	5.77E-05	No	No	
fluorene	33	3.52E-05	2.51E-05	2.27E-05	1.90E-05	2.67E-05	2.78E-05	2.03E-04	7.31E-05	2.45E-05	2.56E-05	2.68E-05	2.52E-04	No	No	
pyrene	2	2.63E-05	1.88E-05	1.70E-05	1.42E-05	2.00E-05	2.08E-05	1.52E-04	5.48E-05	1.84E-05	1.92E-05	2.01E-05	1.89E-04	No	No	
thiophenes	83	4.57E-07	3.26E-07	2.94E-07	2.46E-07	3.46E-07	3.61E-07	2.63E-06	9.50E-07	3.19E-07	3.33E-07	3.49E-07	3.28E-06	No	No	
benz(a)anthracene	2	1.05E-06	7.48E-07	6.74E-07	5.64E-07	7.93E-07	8.27E-07	6.03E-06	2.18E-06	7.30E-07	7.63E-07	7.99E-07	7.51E-06	No	No	
acenaphthene	333	6.78E-06	4.84E-06	4.37E-06	3.66E-06	5.14E-06	5.35E-06	3.91E-05	1.41E-05	4.73E-06	4.94E-06	5.17E-06	4.87E-05	No	No	
acenaphthylene	333	2.46E-05	1.76E-05	1.59E-05	1.33E-05	1.87E-05	1.94E-05	1.42E-04	5.12E-05	1.72E-05	1.79E-05	1.88E-05	1.77E-04	No	No	
fluoranthene	2	2.62E-05	1.87E-05	1.69E-05	1.41E-05	1.99E-05	2.07E-05	1.51E-04	5.45E-05	1.83E-05	1.91E-05	2.00E-05	1.88E-04	No	No	
benzo(b)fluoranthene	2	4.86E-06	3.47E-06	3.13E-06	2.62E-06	3.69E-06	3.84E-06	2.80E-05	1.01E-05	3.39E-06	3.54E-06	3.71E-06	3.49E-05	No	No	
benzo(g,h,i)perylene	NV	9.24E-08	6.60E-08	5.95E-08	4.98E-08	7.00E-08	7.30E-08	5.33E-07	1.92E-07	6.45E-08	6.73E-08	7.05E-08	6.63E-07	No	No	
benzo(k)fluoranthene	2	5.53E-07	3.95E-07	3.56E-07	2.98E-07	4.19E-07	4.37E-07	3.19E-06	1.15E-06	3.86E-07	4.03E-07	4.22E-07	3.97E-06	No	No	
chrysene	2	1.18E-06	8.41E-07	7.58E-07	6.35E-07	8.92E-07	9.29E-07	6.78E-06	2.45E-06	8.21E-07	8.57E-07	8.98E-07	8.45E-06	No	No	
dibenzo(a,h)anthracene	2	1.53E-06	1.09E-06	9.86E-07	8.26E-07	1.16E-06	1.21E-06	8.82E-06	3.18E-06	1.07E-06	1.12E-06	1.17E-06	1.10E-05	No	No	
indeno(1,2,3-cd)pyrene	2	9.73E-07	6.95E-07	6.27E-07	5.25E-07	7.38E-07	7.69E-07	5.61E-06	2.02E-06	6.79E-07	7.09E-07	7.43E-07	6.99E-06	No	No	

Table H-12-D-3a: Screening of Predicted 1-Hour Air Concentrations for the Acute Air Quality Risk Assessment - Scenario 1

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	1.09E-02	7.79E-03	7.01E-03	5.83E-03	8.23E-03	8.89E-03	6.56E-02	2.33E-02	1.35E-02	1.39E-02	1.40E-02	8.17E-02	No	No	
acetaldehyde	470	1.48E+00	1.05E+00	9.46E-01	7.87E-01	1.11E+00	1.20E+00	8.85E+00	3.14E+00	1.82E+00	1.88E+00	1.89E+00	1.10E+01	No	No	
acetone	19665	7.76E-01	5.53E-01	4.98E-01	4.14E-01	5.84E-01	6.31E-01	4.66E+00	1.65E+00	9.59E-01	9.89E-01	9.95E-01	5.80E+00	No	No	
acrolein	2.5	2.61E-01	1.86E-01	1.67E-01	1.39E-01	1.97E-01	2.12E-01	1.57E+00	5.56E-01	3.23E-01	3.33E-01	3.35E-01	1.95E+00	No	No	
aldehyde	10	1.97E+00	1.40E+00	1.26E+00	1.05E+00	1.48E+00	1.60E+00	<b>1.18E+01</b>	4.20E+00	2.44E+00	2.51E+00	2.53E+00	<b>1.47E+01</b>	Yes	Yes	
benzene	27	9.67E-02	6.88E-02	6.20E-02	5.16E-02	7.28E-02	7.86E-02	5.80E-01	2.06E-01	1.19E-01	1.23E-01	1.24E-01	7.22E-01	No	No	
C10-C12 aliphatic	11666	2.12E-02	1.51E-02	1.36E-02	1.13E-02	1.60E-02	1.73E-02	1.27E-01	4.52E-02	2.62E-02	2.71E-02	2.72E-02	1.59E-01	No	No	
C12-C16 aliphatic	11666	1.23E-01	8.76E-02	7.88E-02	6.56E-02	9.25E-02	9.99E-02	7.38E-01	2.62E-01	1.52E-01	1.57E-01	1.58E-01	9.19E-01	No	No	
C12-C16 aromatic	4166	1.66E-03	1.18E-03	1.06E-03	8.85E-04	1.25E-03	1.35E-03	9.95E-03	3.53E-03	2.05E-03	2.11E-03	2.13E-03	1.24E-02	No	No	
C16-C21 aliphatic	333	1.23E-01	8.77E-02	7.89E-02	6.57E-02	9.27E-02	1.00E-01	7.38E-01	2.62E-01	1.52E-01	1.57E-01	1.58E-01	9.20E-01	No	No	
C2-C6 aliphatic	2100	5.86E-01	4.17E-01	3.76E-01	3.13E-01	4.41E-01	4.76E-01	3.52E+00	1.25E+00	7.24E-01	7.47E-01	7.52E-01	4.38E+00	No	No	
C6-C8 aliphatic	61800	4.01E-01	2.85E-01	2.57E-01	2.14E-01	3.02E-01	3.26E-01	2.40E+00	8.54E-01	4.95E-01	5.11E-01	5.14E-01	2.99E+00	No	No	
C8-C10 aliphatic	60000	5.65E-03	4.02E-03	3.62E-03	3.01E-03	4.25E-03	4.59E-03	3.39E-02	1.20E-02	6.98E-03	7.19E-03	7.24E-03	4.22E-02	No	No	
C8-C10 aromatic	4166	3.17E-02	2.26E-02	2.03E-02	1.69E-02	2.39E-02	2.58E-02	1.90E-01	6.76E-02	3.92E-02	4.04E-02	4.07E-02	2.37E-01	No	No	
ethylbenzene	21710	1.66E-02	1.18E-02	1.06E-02	8.85E-03	1.25E-02	1.35E-02	9.95E-02	3.53E-02	2.05E-02	2.11E-02	2.13E-02	1.24E-01	No	No	
ethylene	566610	3.02E-01	2.15E-01	1.94E-01	1.61E-01	2.27E-01	2.45E-01	1.81E+00	6.43E-01	3.73E-01	3.85E-01	3.87E-01	2.26E+00	No	No	
formaldehyde	49	7.87E-01	5.60E-01	5.04E-01	4.20E-01	5.92E-01	6.39E-01	4.72E+00	1.68E+00	9.72E-01	1.00E+00	1.01E+00	5.88E+00	No	No	
ketone	1167	4.45E-01	3.17E-01	2.85E-01	2.37E-01	3.35E-01	3.61E-01	2.67E+00	9.47E-01	5.49E-01	5.67E-01	5.70E-01	3.32E+00	No	No	
toluene	1000	1.40E-01	1.00E-01	9.00E-02	7.49E-02	1.06E-01	1.14E-01	8.42E-01	2.99E-01	1.74E-01	1.79E-01	1.80E-01	1.05E+00	No	No	
trimethylbenzene	4166	4.02E-02	2.86E-02	2.58E-02	2.15E-02	3.03E-02	3.27E-02	2.41E-01	8.57E-02	4.97E-02	5.13E-02	5.16E-02	3.00E-01	No	No	
xylene	8680	1.12E-01	7.94E-02	7.15E-02	5.95E-02	8.39E-02	9.06E-02	6.69E-01	2.37E-01	1.38E-01	1.42E-01	1.43E-01	8.33E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	NV	1.41E+02	4.26E+01	4.08E+01	4.13E+01	4.38E+01	5.03E+01	7.28E+01	1.66E+01	1.96E+01	1.13E+01	1.66E+01	1.83E+01	1.00E+02	9.34E+01	7.60E+01
DPM	10	1.52E+01	5.35E+00	4.78E+00	4.50E+00	5.66E+00	6.87E+00	7.27E+00	1.53E+00	1.71E+00	1.29E+00	1.54E+00	1.69E+00	7.40E+00	8.45E+00	6.84E+00
PM10	NV	7.81E+01	2.17E+01	2.12E+01	2.14E+01	2.27E+01	2.64E+01	3.80E+01	8.92E+00	1.08E+01	5.98E+00	8.93E+00	1.01E+01	5.16E+01	4.73E+01	3.91E+01
PM2.5	NV	3.32E+01	8.91E+00	1.00E+01	9.53E+00	1.08E+01	1.39E+01	1.41E+01	3.01E+00	4.17E+00	2.36E+00	3.02E+00	4.06E+00	1.38E+01	1.64E+01	1.30E+01
CO	15000	2.67E+02	9.75E+01	8.37E+01	8.31E+01	9.89E+01	1.26E+02	1.34E+02	2.94E+01	3.01E+01	2.29E+01	2.94E+01	3.02E+01	1.47E+02	1.65E+02	1.30E+02
<b>Metals</b>																
Aluminum	30	9.80E+00	2.95E+00	2.83E+00	2.86E+00	3.03E+00	3.49E+00	5.04E+00	1.15E+00	1.36E+00	7.85E-01	1.15E+00	1.27E+00	6.94E+00	6.48E+00	5.27E+00
Antimony	63	5.54E-04	1.67E-04	1.60E-04	1.62E-04	1.71E-04	1.97E-04	2.85E-04	6.49E-05	7.67E-05	4.43E-05	6.50E-05	7.17E-05	3.92E-04	3.66E-04	2.98E-04
Arsenic	0.2	1.57E-02	4.73E-03	4.53E-03	4.59E-03	4.86E-03	5.59E-03	8.08E-03	1.84E-03	2.18E-03	1.26E-03	1.84E-03	2.03E-03	1.11E-02	1.04E-02	8.44E-03
Barium	25	5.53E-02	1.67E-02	1.60E-02	1.62E-02	1.71E-02	1.97E-02	2.85E-02	6.48E-03	7.66E-03	4.43E-03	6.49E-03	7.16E-03	3.91E-02	3.65E-02	2.97E-02
Beryllium	0.025	1.03E-04	3.10E-05	2.97E-05	3.01E-05	3.18E-05	3.66E-05	5.30E-05	1.21E-05	1.43E-05	8.24E-06	1.21E-05	1.33E-05	7.29E-05	6.80E-05	5.54E-05
Bismuth	6.3	2.83E-05	8.52E-06	8.17E-06	8.26E-06	8.75E-06	1.01E-05	1.46E-05	3.31E-06	3.92E-06	2.26E-06	3.32E-06	3.66E-06	2.00E-05	1.87E-05	1.52E-05
Cadmium	0.03	9.14E-03	3.22E-03	2.88E-03	2.71E-03	3.41E-03	4.14E-03	4.38E-03	9.24E-04	1.03E-03	7.77E-04	9.26E-04	1.02E-03	4.47E-03	5.10E-03	4.12E-03
Calcium	NV	5.59E+00	1.68E+00	1.61E+00	1.63E+00	1.73E+00	1.99E+00	2.88E+00	6.55E-01	7.74E-01	4.47E-01	6.56E-01	7.23E-01	3.96E+00	3.69E+00	3.01E+00
Chromium	1.3	2.50E-02	7.62E-03	7.27E-03	7.32E-03	7.84E-03	9.05E-03	1.28E-02	2.91E-03	3.43E-03	2.01E-03	2.91E-03	3.21E-03	1.74E-02	1.64E-02	1.33E-02
Cobalt	0.25	3.79E-03	1.14E-03	1.09E-03	1.11E-03	1.17E-03	1.35E-03	1.95E-03	4.44E-04	5.25E-04	3.03E-04	4.45E-04	4.90E-04	2.68E-03	2.50E-03	2.04E-03
Copper	83	1.00E-02	3.02E-03	2.89E-03	2.93E-03	3.10E-03	3.57E-03	5.16E-03	1.17E-03	1.39E-03	8.02E-04	1.18E-03	1.30E-03	7.10E-03	6.62E-03	5.39E-03
Gold	3.1	1.09E-05	3.30E-06	3.16E-06	3.20E-06	3.39E-06	3.90E-06	5.64E-06	1.28E-06	1.52E-06	8.76E-07	1.28E-06	1.42E-06	7.75E-06	7.24E-06	5.89E-06
Iron	8.3	1.07E+01	3.24E+00	3.10E+00	3.14E+00	3.33E+00	3.82E+00	5.53E+00	1.26E+00	1.49E+00	8.60E-01	1.26E+00	1.39E+00	7.61E+00	7.10E+00	5.78E+00
Lead	1.2	3.21E-03	1.04E-03	9.66E-04	9.43E-04	1.09E-03	1.29E-03	1.60E-03	3.51E-04	4.05E-04	2.64E-04	3.52E-04	3.88E-04	1.94E-03	1.96E-03	1.59E-03
Lithium	50	4.57E-03	1.38E-03	1.32E-03	1.34E-03	1.41E-03	1.63E-03	2.35E-03	5.36E-04	6.33E-04	3.66E-04	5.36E-04	5.92E-04	3.24E-03	3.02E-03	2.46E-03
Magnesium	167	2.96E+00	8.93E-01	8.56E-01	8.66E-01	9.17E-01	1.05E+00	1.53E+00	3.47E-01	4.11E-01	2.37E-01	3.48E-01	3.84E-01	2.10E+00	1.96E+00	1.59E+00
Manganese	1	1.11E-01	3.36E-02	3.22E-02	3.26E-02	3.45E-02	3.96E-02	5.74E-02	1.31E-02	1.54E-02	8.92E-03	1.31E-02	1.44E-02	7.89E-02	7.36E-02	5.99E-02
Molybdenum	83	1.70E-04	5.11E-05	4.90E-05	4.96E-05	5.25E-05	6.04E-05	8.73E-05	1.99E-05	2.35E-05	1.36E-05	1.99E-05	2.20E-05	1.20E-04	1.12E-04	9.12E-05
Nickel	0.2	9.83E-03	2.96E-03	2.84E-03	2.87E-03	3.04E-03	3.50E-03	5.06E-03	1.15E-03	1.36E-03	7.87E-04	1.15E-03	1.27E-03	6.96E-03	6.50E-03	5.29E-03
Potassium	67	1.88E+00	5.65E-01	5.42E-01	5.48E-01	5.80E-01	6.67E-01	9.65E-01	2.20E-01	2.60E-01	1.50E-01	2.20E-01	2.43E-01	1.33E+00	1.24E+00	1.01E+00
Selenium	17	1.69E-04	5.10E-05	4.89E-05	4.95E-05	5.24E-05	6.02E-05	8.71E-05	1.98E-05	2.35E-05	1.35E-05	1.99E-05	2.19E-05	1.20E-04	1.12E-04	9.10E-05
Silver	2.5	4.16E-05	1.25E-05	1.20E-05	1.22E-05	1.29E-05	1.48E-05	2.14E-05	4.88E-06	5.77E-06	3.33E-06	4.89E-06	5.39E-06	2.95E-05	2.75E-05	2.24E-05
Sodium	NV	2.24E+00	6.75E-01	6.47E-01	6.55E-01	6.93E-01	7.97E-01	1.15E+00	2.63E-01	3.10E-01	1.79E-01	2.63E-01	2.90E-01	1.59E+00	1.48E+00	1.20E+00
Strontium	83	2.99E-02	9.02E-03	8.65E-03	8.75E-03	9.26E-03	1.07E-02	1.54E-02	3.51E-03	4.15E-03	2.40E-03	3.51E-03	3.87E-03	2.12E-02	1.98E-02	1.61E-02
Thallium	1.3	4.32E-05	1.30E-05	1.25E-05	1.26E-05	1.34E-05	1.54E-05	2.23E-05	5.07E-06	5.99E-06	3.46E-06	5.07E-06	5.60E-06	3.06E-05	2.86E-05	2.33E-05
Tin	25	1.52E-04	4.59E-05	4.40E-05	4.45E-05	4.72E-05	5.42E-05	7.85E-05	1.79E-05	2.11E-05	1.22E-05	1.79E-05	1.97E-05	1.08E-04	1.01E-04	8.20E-05
Titanium	83	4.93E-01	1.48E-01	1.42E-01	1.44E-01	1.53E-01	1.75E-01	2.54E-01	5.78E-02	6.83E-02	3.95E-02	5.78E-02	6.38E-02	3.49E-01	3.26E-01	2.65E-01
Uranium	0.38	1.38E-04	4.14E-05	3.97E-05	4.02E-05	4.26E-05	4.89E-05	7.08E-05	1.61E-05	1.91E-05	1.10E-05	1.61E-05	1.78E-05	9.74E-05	9.09E-05	7.40E-05
Vanadium	0.8	1.81E-02	5.46E-03	5.23E-03	5.30E-03	5.61E-03	6.45E-03	9.33E-03	2.12E-03	2.51E-03	1.45E-03	2.13E-03	2.35E-03	1.28E-02	1.20E-02	9.75E-03
Yttrium	33	1.34E-03	4.03E-04	3.86E-04	3.91E-04	4.14E-04	4.76E-04	6.89E-04	1.57E-04	1.85E-04	1.07E-04	1.57E-04	1.73E-04	9.47E-04	8.84E-04	7.20E-04
Zinc	83	2.48E-02	8.01E-03	7.44E-03	7.28E-03	8.34E-03	9.85E-03	1.24E-02	2.73E-03	3.16E-03	2.04E-03	2.74E-03	3.02E-03	1.52E-02	1.53E-02	1.24E-02
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.67E-05	5.88E-06	5.26E-06	4.95E-06	6.23E-06	7.56E-06	8.00E-06	1.69E-06	1.88E-06	1.42E-06	1.69E-06	1.86E-06	8.15E-06	9.30E-06	7.53E-06
naphthalene	50	6.61E-03	2.33E-03	2.08E-03	1.96E-03	2.47E-03	2.99E-03	3.17E-03	6.67E-04	7.43E-04	5.62E-04	6.69E-04	7.38E-04	3.22E-03	3.68E-03	2.98E-03
phenanthrene	2	5.46E-04	1.92E-04	1.72E-04	1.62E-04	2.04E-04	2.47E-04	2.62E-04	5.51E-05	6.14E-05	4.64E-05	5.53E-05	6.09E-05	2.66E-04	3.04E-04	2.46E-04
anthracene	3	6.09E-05	2.14E-05	1.92E-05	1.80E-05	2.27E-05	2.76E-05	2.92E-05	6.15E-06	6.85E-06	5.18E-06	6.17E-06	6.80E-06	2.97E-05	3.39E-05	2.74E-05
fluorene	33	2.66E-04	9.38E-05	8.39E-05	7.89E-05	9.94E-05	1.21E-04	1.28E-04	2.69E-05	2.99E-05	2.26E-05	2.70E-05	2.97E-05	1.30E-04	1.48E-04	1.20E-04
pyrene	2	1.99E-04	7.03E-05	6.29E-05	5.91E-05	7.45E-05	9.03E-05	9.56E-05	2.01E-05	2.24E-05	1.70E-05	2.02E-05	2.23E-05	9.73E-05	1.11E-04	8.99E-05
thiophenes	83	3.46E-06	1.22E-06	1.09E-06	1.03E-06	1.29E-06	1.57E-06	1.66E-06	3.49E-07	3.89E-07	2.94E-07	3.50E-07	3.86E-07	1.69E-06	1.93E-06	1.56E-06
benz(a)anthracene	2	7.92E-06	2.79E-06	2.50E-06	2.35E-06	2.96E-06	3.59E-06	3.80E-06	8.00E-07	8.91E-07	6.74E-07	8.02E-07	8.84E-07	3.86E-06	4.41E-06	3.57E-06
acenaphthene	333	5.13E-05	1.81E-05	1.62E-05	1.52E-05	1.92E-05	2.32E-05	2.46E-05	5.18E-06	5.77E-06	4.36E-06	5.20E-06	5.73E-06	2.50E-05	2.86E-05	2.31E-05
acenaphthylene	333	1.86E-04	6.57E-05	5.88E-05	5.52E-05	6.96E-05	8.44E-05	8.93E-05	1.88E-05	2.10E-05	1.58E-05	1.89E-05	2.08E-05	9.09E-05	1.04E-04	8.40E-05
fluoranthene	2	1.98E-04	6.99E-05	6.25E-05	5.88E-05	7.40E-05	8.98E-05	9.51E-05	2.00E-05	2.23E-05	1.69E-05	2.01E-05	2.21E-05	9.67E-05	1.10E-04	8.94E-05
benzo(b)fluoranthene	2	3.68E-05	1.30E-05	1.16E-05	1.09E-05	1.37E-05	1.67E-05	1.76E-05	3.72E-06	4.14E-06	3.13E-06	3.73E-06	4.11E-06	1.80E-05	2.05E-05	1.66E-05
benzo(g,h,i)perylene	NV	6.99E-07	2.46E-07	2.21E-07	2.07E-07	2.61E-07	3.17E-07	3.35E-07	7.07E-08	7.87E-08	5.95E-08	7.08E-08	7.81E-08	3.41E-07	3.90E-07	3.15E-07
benzo(k)fluoranthene	2	4.19E-06	1.48E-06	1.32E-06	1.24E-06	1.56E-06	1.90E-06	2.01E-06	4.23E-07	4.71E-07	3.56E-07	4.24E-07	4.67E-07	2.04E-06	2.33E-06	1.89E-06
chrysene	2	8.91E-06	3.14E-06	2.81E-06	2.64E-06	3.33E-06	4.03E-06	4.27E-06	9.00E-07	1.00E-06	7.57E-07	9.02E-07	9.94E-07	4.34E-06</		

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	8.62E-02	3.08E-02	2.71E-02	2.62E-02	3.17E-02	4.14E-02	4.30E-02	9.25E-03	9.31E-03	7.37E-03	9.25E-03	9.35E-03	4.26E-02	4.79E-02	3.87E-02
acetaldehyde	470	1.16E+01	4.15E+00	3.65E+00	3.53E+00	4.28E+00	5.58E+00	5.80E+00	1.25E+00	1.26E+00	9.93E-01	1.25E+00	1.26E+00	5.74E+00	6.46E+00	5.21E+00
acetone	19665	6.12E+00	2.19E+00	1.92E+00	1.86E+00	2.25E+00	2.94E+00	3.05E+00	6.56E-01	6.61E-01	5.23E-01	6.57E-01	6.64E-01	3.02E+00	3.40E+00	2.74E+00
acrolein	2.5	2.06E+00	7.35E-01	6.47E-01	6.25E-01	7.57E-01	9.88E-01	1.03E+00	2.21E-01	2.22E-01	1.76E-01	2.21E-01	2.23E-01	1.02E+00	1.14E+00	9.23E-01
aldehyde	10	<b>1.55E+01</b>	5.55E+00	4.88E+00	4.72E+00	5.72E+00	7.46E+00	7.75E+00	1.67E+00	1.68E+00	1.33E+00	1.67E+00	1.69E+00	7.68E+00	8.63E+00	6.97E+00
benzene	27	7.62E-01	2.72E-01	2.39E-01	2.31E-01	2.80E-01	3.66E-01	3.80E-01	8.17E-02	8.23E-02	6.51E-02	8.18E-02	8.27E-02	3.76E-01	4.23E-01	3.42E-01
C10-C12 aliphatic	11666	1.67E-01	5.98E-02	5.26E-02	5.08E-02	6.16E-02	8.03E-02	8.35E-02	1.79E-02	1.81E-02	1.43E-02	1.80E-02	1.82E-02	8.26E-02	9.29E-02	7.51E-02
C12-C16 aliphatic	11666	9.69E-01	3.46E-01	3.05E-01	2.94E-01	3.56E-01	4.65E-01	4.83E-01	1.04E-01	1.05E-01	8.28E-02	1.04E-01	1.05E-01	4.79E-01	5.38E-01	4.35E-01
C12-C16 aromatic	4166	1.31E-02	4.67E-03	4.11E-03	3.97E-03	4.81E-03	6.27E-03	6.52E-03	1.40E-03	1.41E-03	1.12E-03	1.40E-03	1.42E-03	6.45E-03	7.26E-03	5.86E-03
C16-C21 aliphatic	333	9.71E-01	3.47E-01	3.05E-01	2.95E-01	3.57E-01	4.66E-01	4.84E-01	1.04E-01	1.05E-01	8.29E-02	1.04E-01	1.05E-01	4.79E-01	5.39E-01	4.35E-01
C2-C6 aliphatic	2100	4.62E+00	1.65E+00	1.45E+00	1.40E+00	1.70E+00	2.22E+00	2.30E+00	4.95E-01	4.99E-01	3.95E-01	4.96E-01	5.01E-01	2.28E+00	2.57E+00	2.07E+00
C6-C8 aliphatic	61800	3.16E+00	1.13E+00	9.93E-01	9.59E-01	1.16E+00	1.52E+00	1.58E+00	3.39E-01	3.41E-01	2.70E-01	3.39E-01	3.43E-01	1.56E+00	1.75E+00	1.42E+00
C8-C10 aliphatic	60000	4.45E-02	1.59E-02	1.40E-02	1.35E-02	1.64E-02	2.14E-02	2.22E-02	4.77E-03	4.80E-03	3.80E-03	4.78E-03	4.83E-03	2.20E-02	2.47E-02	2.00E-02
C8-C10 aromatic	4166	2.50E-01	8.94E-02	7.86E-02	7.59E-02	9.20E-02	1.20E-01	1.25E-01	2.68E-02	2.70E-02	2.14E-02	2.68E-02	2.71E-02	1.24E-01	1.39E-01	1.12E-01
ethylbenzene	21710	1.31E-01	4.67E-02	4.11E-02	3.97E-02	4.81E-02	6.27E-02	6.52E-02	1.40E-02	1.41E-02	1.12E-02	1.40E-02	1.42E-02	6.45E-02	7.26E-02	5.86E-02
ethylene	566610	2.38E+00	8.50E-01	7.48E-01	7.23E-01	8.75E-01	1.14E+00	1.19E+00	2.55E-01	2.57E-01	2.03E-01	2.55E-01	2.58E-01	1.18E+00	1.32E+00	1.07E+00
formaldehyde	49	6.20E+00	2.22E+00	1.95E+00	1.88E+00	2.28E+00	2.98E+00	3.09E+00	6.65E-01	6.70E-01	5.30E-01	6.66E-01	6.73E-01	3.06E+00	3.44E+00	2.78E+00
ketone	1167	3.50E+00	1.25E+00	1.10E+00	1.06E+00	1.29E+00	1.68E+00	1.75E+00	3.76E-01	3.78E-01	2.99E-01	3.76E-01	3.80E-01	1.73E+00	1.95E+00	1.57E+00
toluene	1000	1.11E+00	3.95E-01	3.48E-01	3.36E-01	4.07E-01	5.31E-01	5.52E-01	1.19E-01	1.20E-01	9.46E-02	1.19E-01	1.20E-01	5.46E-01	6.15E-01	4.96E-01
trimethylbenzene	4166	3.17E-01	1.13E-01	9.96E-02	9.62E-02	1.17E-01	1.52E-01	1.58E-01	3.40E-02	3.42E-02	2.71E-02	3.40E-02	3.44E-02	1.57E-01	1.76E-01	1.42E-01
xylene	8680	8.79E-01	3.14E-01	2.76E-01	2.67E-01	3.23E-01	4.22E-01	4.38E-01	9.42E-02	9.49E-02	7.51E-02	9.43E-02	9.54E-02	4.34E-01	4.88E-01	3.94E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	NV	1.64E+01	1.11E+01	9.70E+00	9.51E+00	1.26E+01	1.69E+01	2.64E+02	3.46E+01	1.75E+01	1.86E+01	2.13E+01	2.64E+02	No	No	
DPM	10	2.19E+00	1.47E+00	1.32E+00	1.09E+00	1.55E+00	1.72E+00	<b>2.02E+01</b>	3.28E+00	1.47E+00	1.60E+00	1.60E+00	<b>2.02E+01</b>	Yes	Yes	
PM10	NV	8.92E+00	6.01E+00	5.29E+00	5.17E+00	6.82E+00	9.13E+00	1.36E+02	1.82E+01	9.14E+00	9.70E+00	1.11E+01	1.36E+02	No	No	
PM2.5	NV	3.52E+00	2.66E+00	2.40E+00	1.97E+00	2.83E+00	3.04E+00	3.86E+01	5.78E+00	2.88E+00	3.25E+00	3.54E+00	3.86E+01	No	No	
CO	15000	4.02E+01	2.71E+01	2.44E+01	2.01E+01	2.86E+01	3.19E+01	4.09E+02	5.71E+01	4.22E+01	4.21E+01	4.40E+01	4.09E+02	No	No	
<b>Metals</b>																
Aluminum	30	1.14E+00	7.68E-01	6.73E-01	6.59E-01	8.71E-01	1.17E+00	1.83E+01	2.40E+00	1.21E+00	1.29E+00	1.47E+00	1.83E+01	No	No	
Antimony	63	6.43E-05	4.34E-05	3.80E-05	3.72E-05	4.92E-05	6.60E-05	1.03E-03	1.35E-04	6.85E-05	7.29E-05	8.32E-05	1.03E-03	No	No	
Arsenic	0.2	1.82E-03	1.23E-03	1.08E-03	1.06E-03	1.39E-03	1.87E-03	2.93E-02	3.84E-03	1.94E-03	2.07E-03	2.36E-03	2.93E-02	No	No	
Barium	25	6.42E-03	4.33E-03	3.79E-03	3.72E-03	4.91E-03	6.59E-03	1.03E-01	1.35E-02	6.84E-03	7.28E-03	8.31E-03	1.03E-01	No	No	
Beryllium	0.025	1.20E-05	8.06E-06	7.06E-06	6.92E-06	9.14E-06	1.23E-05	1.92E-04	2.52E-05	1.27E-05	1.35E-05	1.55E-05	1.92E-04	No	No	
Bismuth	6.3	3.29E-06	2.22E-06	1.94E-06	1.90E-06	2.51E-06	3.37E-06	5.29E-05	6.92E-06	3.50E-06	3.72E-06	4.25E-06	5.29E-05	No	No	
Cadmium	0.03	1.32E-03	8.82E-04	7.96E-04	6.59E-04	9.32E-04	1.04E-03	1.22E-02	1.98E-03	8.86E-04	9.68E-04	9.67E-04	1.22E-02	No	No	
Calcium	NV	6.49E-01	4.38E-01	3.83E-01	3.76E-01	4.96E-01	6.67E-01	1.04E+01	1.37E+00	6.91E-01	7.35E-01	8.40E-01	1.04E+01	No	No	
Chromium	1.3	2.95E-03	1.99E-03	1.75E-03	1.69E-03	2.24E-03	2.98E-03	4.60E-02	6.08E-03	3.06E-03	3.25E-03	3.70E-03	4.60E-02	No	No	
Cobalt	0.25	4.40E-04	2.97E-04	2.60E-04	2.55E-04	3.36E-04	4.52E-04	7.08E-03	9.27E-04	4.69E-04	4.99E-04	5.70E-04	7.08E-03	No	No	
Copper	83	1.16E-03	7.85E-04	6.87E-04	6.74E-04	8.90E-04	1.20E-03	1.87E-02	2.45E-03	1.24E-03	1.32E-03	1.51E-03	1.87E-02	No	No	
Gold	3.1	1.27E-06	8.58E-07	7.51E-07	7.36E-07	9.72E-07	1.31E-06	2.05E-05	2.68E-06	1.35E-06	1.44E-06	1.65E-06	2.05E-05	No	No	
Iron	8.3	1.25E+00	8.42E-01	7.37E-01	7.23E-01	9.55E-01	1.28E+00	<b>2.01E+01</b>	2.63E+00	1.33E+00	1.41E+00	1.62E+00	<b>2.01E+01</b>	Yes	No*	
Lead	1.2	4.15E-04	2.79E-04	2.48E-04	2.23E-04	3.05E-04	3.74E-04	5.18E-03	7.41E-04	3.56E-04	3.83E-04	4.14E-04	5.18E-03	No	No	
Lithium	50	5.31E-04	3.58E-04	3.14E-04	3.07E-04	4.06E-04	5.45E-04	8.54E-03	1.12E-03	5.65E-04	6.02E-04	6.87E-04	8.54E-03	No	No	
Magnesium	167	3.44E-01	2.32E-01	2.03E-01	1.99E-01	2.63E-01	3.54E-01	5.54E+00	7.25E-01	3.67E-01	3.90E-01	4.46E-01	5.54E+00	No	No	
Manganese	1	1.29E-02	8.73E-03	7.64E-03	7.49E-03	9.90E-03	1.33E-02	2.08E-01	2.73E-02	1.38E-02	1.47E-02	1.68E-02	2.08E-01	No	No	
Molybdenum	83	1.97E-05	1.33E-05	1.16E-05	1.14E-05	1.51E-05	2.02E-05	3.17E-04	4.15E-05	2.10E-05	2.23E-05	2.55E-05	3.17E-04	No	No	
Nickel	0.2	1.14E-03	7.70E-04	6.74E-04	6.61E-04	8.73E-04	1.17E-03	1.84E-02	2.40E-03	1.22E-03	1.29E-03	1.48E-03	1.84E-02	No	No	
Potassium	67	2.18E-01	1.47E-01	1.29E-01	1.26E-01	1.67E-01	2.24E-01	3.51E+00	4.59E-01	2.32E-01	2.47E-01	2.82E-01	3.51E+00	No	No	
Selenium	17	1.97E-05	1.33E-05	1.16E-05	1.14E-05	1.50E-05	2.02E-05	3.16E-04	4.14E-05	2.09E-05	2.23E-05	2.54E-05	3.16E-04	No	No	
Silver	2.5	4.84E-06	3.26E-06	2.86E-06	2.80E-06	3.70E-06	4.97E-06	7.78E-05	1.02E-05	5.15E-06	5.48E-06	6.26E-06	7.78E-05	No	No	
Sodium	NV	2.60E-01	1.76E-01	1.54E-01	1.51E-01	1.99E-01	2.67E-01	4.19E+00	5.48E-01	2.77E-01	2.95E-01	3.37E-01	4.19E+00	No	No	
Strontium	83	3.48E-03	2.35E-03	2.05E-03	2.01E-03	2.66E-03	3.57E-03	5.60E-02	7.33E-03	3.70E-03	3.94E-03	4.50E-03	5.60E-02	No	No	
Thallium	1.3	5.02E-06	3.39E-06	2.97E-06	2.91E-06	3.84E-06	5.16E-06	8.08E-05	1.06E-05	5.35E-06	5.69E-06	6.50E-06	8.08E-05	No	No	
Tin	25	1.77E-05	1.19E-05	1.05E-05	1.02E-05	1.35E-05	1.82E-05	2.85E-04	3.73E-05	1.89E-05	2.01E-05	2.29E-05	2.85E-04	No	No	
Titanium	83	5.73E-02	3.86E-02	3.38E-02	3.31E-02	4.38E-02	5.88E-02	9.21E-01	1.21E-01	6.10E-02	6.49E-02	7.41E-02	9.21E-01	No	No	
Uranium	0.38	1.60E-05	1.08E-05	9.44E-06	9.25E-06	1.22E-05	1.64E-05	2.57E-04	3.37E-05	1.70E-05	1.81E-05	2.07E-05	2.57E-04	No	No	
Vanadium	0.8	2.11E-03	1.42E-03	1.24E-03	1.22E-03	1.61E-03	2.16E-03	3.39E-02	4.44E-03	2.24E-03	2.39E-03	2.73E-03	3.39E-02	No	No	
Yttrium	33	1.55E-04	1.05E-04	9.18E-05	8.99E-05	1.19E-04	1.60E-04	2.50E-03	3.27E-04	1.65E-04	1.76E-04	2.01E-04	2.50E-03	No	No	
Zinc	83	3.18E-03	2.13E-03	1.90E-03	1.72E-03	2.34E-03	2.89E-03	4.06E-02	5.76E-03	2.78E-03	2.99E-03	3.25E-03	4.06E-02	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	2.41E-06	1.61E-06	1.45E-06	1.20E-06	1.70E-06	1.90E-06	2.23E-05	3.61E-06	1.62E-06	1.77E-06	1.76E-06	2.23E-05	No	No	
naphthalene	50	9.55E-04	6.38E-04	5.76E-04	4.76E-04	6.74E-04	7.50E-04	8.81E-03	1.43E-03	6.39E-04	6.99E-04	6.98E-04	8.81E-03	No	No	
phenanthrene	2	7.89E-05	5.27E-05	4.75E-05	3.94E-05	5.57E-05	6.20E-05	7.28E-04	1.18E-04	5.28E-05	5.77E-05	5.77E-05	7.28E-04	No	No	
anthracene	3	8.80E-06	5.88E-06	5.30E-06	4.39E-06	6.21E-06	6.91E-06	8.12E-05	1.32E-05	5.89E-06	6.44E-06	6.43E-06	8.12E-05	No	No	
fluorene	33	3.85E-05	2.57E-05	2.32E-05	1.92E-05	2.72E-05	3.02E-05	3.55E-04	5.76E-05	2.58E-05	2.82E-05	2.81E-05	3.55E-04	No	No	
pyrene	2	2.88E-05	1.93E-05	1.74E-05	1.44E-05	2.03E-05	2.26E-05	2.66E-04	4.31E-05	1.93E-05	2.11E-05	2.11E-05	2.66E-04	No	No	
thiophenes	83	5.00E-07	3.34E-07	3.01E-07	2.49E-07	3.53E-07	3.93E-07	4.61E-06	7.48E-07	3.35E-07	3.66E-07	3.65E-07	4.61E-06	No	No	
benz(a)anthracene	2	1.14E-06	7.65E-07	6.90E-07	5.71E-07	8.08E-07	9.00E-07	1.06E-05	1.71E-06	7.67E-07	8.38E-07	8.37E-07	1.06E-05	No	No	
acenaphthene	333	7.41E-06	4.96E-06	4.47E-06	3.70E-06	5.24E-06	5.83E-06	6.84E-05	1.11E-05	4.96E-06	5.43E-06	5.42E-06	6.84E-05	No	No	
acenaphthylene	333	2.69E-05	1.80E-05	1.62E-05	1.34E-05	1.90E-05	2.12E-05	2.48E-04	4.03E-05	1.80E-05	1.97E-05	1.97E-05	2.48E-04	No	No	
fluoranthene	2	2.87E-05	1.92E-05	1.73E-05	1.43E-05	2.02E-05	2.25E-05	2.64E-04	4.29E-05	1.92E-05	2.10E-05	2.09E-05	2.64E-04	No	No	
benzo(b)fluoranthene	2	5.32E-06	3.56E-06	3.21E-06	2.65E-06	3.76E-06	4.18E-06	4.91E-05	7.96E-06	3.56E-06	3.89E-06	3.89E-06	4.91E-05	No	No	
benzo(g,h,i)perylene	NV	1.01E-07	6.76E-08	6.09E-08	5.04E-08	7.14E-08	7.94E-08	9.33E-07	1.51E-07	6.77E-08	7.40E-08	7.39E-08	9.33E-07	No	No	
benzo(k)fluoranthene	2	6.05E-07	4.04E-07	3.65E-07	3.02E-07	4.27E-07	4.76E-07	5.58E-06	9.05E-07	4.05E-07	4.43E-07	4.42E-07	5.58E-06	No	No	
chrysene	2	1.29E-06	8.60E-07	7.76E-07	6.42E-07	9.09E-07	1.01E-06	1.19E-05	1.93E-06	8.62E-07	9.42E-07	9.41E-07	1.19E-05	No	No	
dibenzo(a,h)anthracene	2	1.67E-06	1.12E-06	1.01E-06	8.36E-07	1.18E-06	1.32E-06	1.55E-05	2.51E-06	1.12E-06	1.23E-06	1.22E-06	1.55E-05	No	No	
indeno(1,2,3-cd)pyrene	2	1.06E-06	7.12E-07	6.42E-07	5.31E-07	7.52E-07	8.37E-07	9.82E-06	1.59E-06	7.13E-07	7.79E-07	7.78E-07	9.82E-06	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	1.20E-02	7.98E-03	7.18E-03	5.91E-03	8.40E-03	9.84E-03	1.14E-01	1.83E-02	1.29E-02	1.28E-02	1.35E-02	1.14E-01	No	No	
acetaldehyde	470	1.62E+00	1.08E+00	9.69E-01	7.96E-01	1.13E+00	1.33E+00	1.54E+01	2.46E+00	1.73E+00	1.73E+00	1.82E+00	1.54E+01	No	No	
acetone	19665	8.54E-01	5.66E-01	5.10E-01	4.19E-01	5.96E-01	6.98E-01	8.12E+00	1.30E+00	9.12E-01	9.10E-01	9.57E-01	8.12E+00	No	No	
acrolein	2.5	2.87E-01	1.90E-01	1.71E-01	1.41E-01	2.00E-01	2.35E-01	<b>2.73E+00</b>	4.36E-01	3.07E-01	3.06E-01	3.22E-01	<b>2.73E+00</b>	Yes	Yes	
aldehyde	10	2.17E+00	1.44E+00	1.30E+00	1.07E+00	1.51E+00	1.77E+00	<b>2.06E+01</b>	3.29E+00	2.32E+00	2.31E+00	2.43E+00	<b>2.06E+01</b>	Yes	Yes	
benzene	27	1.06E-01	7.05E-02	6.35E-02	5.22E-02	7.42E-02	8.70E-02	1.01E+00	1.61E-01	1.14E-01	1.13E-01	1.19E-01	1.01E+00	No	No	
C10-C12 aliphatic	11666	2.33E-02	1.55E-02	1.39E-02	1.15E-02	1.63E-02	1.91E-02	2.22E-01	3.55E-02	2.50E-02	2.49E-02	2.62E-02	2.22E-01	No	No	
C12-C16 aliphatic	11666	1.35E-01	8.97E-02	8.08E-02	6.64E-02	9.44E-02	1.11E-01	1.29E+00	2.05E-01	1.45E-01	1.44E-01	1.52E-01	1.29E+00	No	No	
C12-C16 aromatic	4166	1.82E-03	1.21E-03	1.09E-03	8.96E-04	1.27E-03	1.49E-03	1.73E-02	2.77E-03	1.95E-03	1.94E-03	2.04E-03	1.73E-02	No	No	
C16-C21 aliphatic	333	1.35E-01	8.98E-02	8.09E-02	6.65E-02	9.45E-02	1.11E-01	1.29E+00	2.06E-01	1.45E-01	1.44E-01	1.52E-01	1.29E+00	No	No	
C2-C6 aliphatic	2100	6.44E-01	4.28E-01	3.85E-01	3.16E-01	4.50E-01	5.27E-01	6.13E+00	9.79E-01	6.89E-01	6.87E-01	7.23E-01	6.13E+00	No	No	
C6-C8 aliphatic	61800	4.41E-01	2.92E-01	2.63E-01	2.16E-01	3.08E-01	3.61E-01	4.19E+00	6.70E-01	4.71E-01	4.70E-01	4.94E-01	4.19E+00	No	No	
C8-C10 aliphatic	60000	6.21E-03	4.12E-03	3.71E-03	3.05E-03	4.33E-03	5.08E-03	5.90E-02	9.43E-03	6.64E-03	6.62E-03	6.96E-03	5.90E-02	No	No	
C8-C10 aromatic	4166	3.49E-02	2.32E-02	2.08E-02	1.71E-02	2.44E-02	2.86E-02	3.32E-01	5.30E-02	3.73E-02	3.72E-02	3.91E-02	3.32E-01	No	No	
ethylbenzene	21710	1.82E-02	1.21E-02	1.09E-02	8.96E-03	1.27E-02	1.49E-02	1.73E-01	2.77E-02	1.95E-02	1.94E-02	2.04E-02	1.73E-01	No	No	
ethylene	566610	3.32E-01	2.20E-01	1.98E-01	1.63E-01	2.32E-01	2.72E-01	3.16E+00	5.05E-01	3.55E-01	3.54E-01	3.72E-01	3.16E+00	No	No	
formaldehyde	49	8.65E-01	5.74E-01	5.17E-01	4.25E-01	6.04E-01	7.08E-01	8.23E+00	1.31E+00	9.25E-01	9.22E-01	9.70E-01	8.23E+00	No	No	
ketone	1167	4.89E-01	3.24E-01	2.92E-01	2.40E-01	3.41E-01	4.00E-01	4.65E+00	7.43E-01	5.23E-01	5.21E-01	5.48E-01	4.65E+00	No	No	
toluene	1000	1.54E-01	1.02E-01	9.22E-02	7.58E-02	1.08E-01	1.26E-01	1.47E+00	2.35E-01	1.65E-01	1.65E-01	1.73E-01	1.47E+00	No	No	
trimethylbenzene	4166	4.42E-02	2.93E-02	2.64E-02	2.17E-02	3.09E-02	3.62E-02	4.21E-01	6.72E-02	4.73E-02	4.71E-02	4.96E-02	4.21E-01	No	No	
xylene	8680	1.23E-01	8.13E-02	7.32E-02	6.02E-02	8.56E-02	1.00E-01	1.17E+00	1.86E-01	1.31E-01	1.31E-01	1.37E-01	1.17E+00	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	NV	1.39E+02	4.54E+01	6.38E+01	6.76E+01	7.68E+01	1.05E+02	1.91E+02	1.59E+01	1.50E+01	1.25E+01	1.59E+01	1.52E+01	6.13E+01	5.01E+01	4.16E+01
DPM	10	<b>1.37E+01</b>	5.51E+00	5.33E+00	5.39E+00	5.56E+00	6.84E+00	<b>1.07E+01</b>	1.39E+00	1.57E+00	1.21E+00	1.40E+00	1.52E+00	7.36E+00	6.55E+00	5.16E+00
PM10	NV	7.28E+01	2.40E+01	3.40E+01	3.59E+01	4.06E+01	5.54E+01	1.01E+02	8.82E+00	8.74E+00	6.98E+00	8.83E+00	8.34E+00	3.07E+01	2.78E+01	2.26E+01
PM2.5	NV	2.55E+01	8.17E+00	9.90E+00	9.34E+00	1.06E+01	1.39E+01	2.34E+01	3.00E+00	3.72E+00	2.21E+00	3.00E+00	3.42E+00	1.49E+01	1.21E+01	9.31E+00
CO	15000	2.38E+02	1.01E+02	1.01E+02	1.03E+02	1.04E+02	1.32E+02	2.31E+02	2.98E+01	2.74E+01	2.25E+01	2.98E+01	2.72E+01	1.30E+02	1.24E+02	9.31E+01
<b>Metals</b>																
Aluminum	30	9.66E+00	3.15E+00	4.42E+00	4.68E+00	5.32E+00	7.28E+00	1.32E+01	1.10E+00	1.04E+00	8.66E-01	1.10E+00	1.06E+00	4.25E+00	3.48E+00	2.88E+00
Antimony	63	5.46E-04	1.78E-04	2.50E-04	2.65E-04	3.01E-04	4.11E-04	7.47E-04	6.22E-05	5.87E-05	4.89E-05	6.22E-05	5.96E-05	2.40E-04	1.96E-04	1.63E-04
Arsenic	0.2	1.55E-02	5.04E-03	7.09E-03	7.50E-03	8.53E-03	1.17E-02	2.12E-02	1.76E-03	1.66E-03	1.39E-03	1.77E-03	1.69E-03	6.80E-03	5.57E-03	4.62E-03
Barium	25	5.45E-02	1.77E-02	2.49E-02	2.64E-02	3.00E-02	4.11E-02	7.46E-02	6.21E-03	5.86E-03	4.89E-03	6.22E-03	5.95E-03	2.40E-02	1.96E-02	1.63E-02
Beryllium	0.025	1.01E-04	3.30E-05	4.64E-05	4.92E-05	5.59E-05	7.65E-05	1.39E-04	1.16E-05	1.09E-05	9.09E-06	1.16E-05	1.11E-05	4.46E-05	3.65E-05	3.03E-05
Bismuth	6.3	2.79E-05	9.08E-06	1.28E-05	1.35E-05	1.54E-05	2.10E-05	3.81E-05	3.18E-06	3.00E-06	2.50E-06	3.18E-06	3.05E-06	1.23E-05	1.00E-05	8.32E-06
Cadmium	0.03	8.23E-03	3.32E-03	3.22E-03	3.25E-03	3.35E-03	4.13E-03	6.46E-03	8.39E-04	9.48E-04	7.31E-04	8.42E-04	9.16E-04	4.43E-03	3.94E-03	3.11E-03
Calcium	NV	5.51E+00	1.79E+00	2.52E+00	2.67E+00	3.04E+00	4.15E+00	7.54E+00	6.28E-01	5.92E-01	4.94E-01	6.28E-01	6.02E-01	2.42E+00	1.98E+00	1.64E+00
Chromium	1.3	2.46E-02	8.10E-03	1.11E-02	1.18E-02	1.33E-02	1.82E-02	3.28E-02	2.78E-03	2.65E-03	2.20E-03	2.78E-03	2.68E-03	1.09E-02	8.99E-03	7.43E-03
Cobalt	0.25	3.74E-03	1.22E-03	1.71E-03	1.81E-03	2.06E-03	2.82E-03	5.11E-03	4.26E-04	4.02E-04	3.35E-04	4.26E-04	4.08E-04	1.64E-03	1.34E-03	1.11E-03
Copper	83	9.88E-03	3.22E-03	4.52E-03	4.79E-03	5.44E-03	7.45E-03	1.35E-02	1.13E-03	1.06E-03	8.86E-04	1.13E-03	1.08E-03	4.34E-03	3.55E-03	2.95E-03
Gold	3.1	1.08E-05	3.51E-06	4.94E-06	5.23E-06	5.95E-06	8.14E-06	1.48E-05	1.23E-06	1.16E-06	9.67E-07	1.23E-06	1.18E-06	4.74E-06	3.88E-06	3.22E-06
Iron	8.3	<b>1.06E+01</b>	3.45E+00	4.85E+00	5.14E+00	5.84E+00	7.99E+00	<b>1.45E+01</b>	1.21E+00	1.14E+00	9.50E-01	1.21E+00	1.16E+00	4.66E+00	3.81E+00	3.16E+00
Lead	1.2	3.03E-03	1.09E-03	1.30E-03	1.35E-03	1.47E-03	1.94E-03	3.35E-03	3.29E-04	3.36E-04	2.71E-04	3.29E-04	3.34E-04	1.47E-03	1.25E-03	1.01E-03
Lithium	50	4.51E-03	1.47E-03	2.06E-03	2.18E-03	2.48E-03	3.40E-03	6.17E-03	5.14E-04	4.85E-04	4.04E-04	5.14E-04	4.92E-04	1.98E-03	1.62E-03	1.35E-03
Magnesium	167	2.92E+00	9.51E-01	1.34E+00	1.42E+00	1.61E+00	2.20E+00	4.00E+00	3.33E-01	3.14E-01	2.62E-01	3.33E-01	3.19E-01	1.28E+00	1.05E+00	8.72E-01
Manganese	1	1.10E-01	3.58E-02	5.03E-02	5.33E-02	6.05E-02	8.28E-02	1.50E-01	1.25E-02	1.18E-02	9.85E-03	1.25E-02	1.20E-02	4.83E-02	3.95E-02	3.28E-02
Molybdenum	83	1.67E-04	5.44E-05	7.66E-05	8.11E-05	9.22E-05	1.26E-04	2.29E-04	1.91E-05	1.80E-05	1.50E-05	1.91E-05	1.83E-05	7.35E-05	6.02E-05	4.99E-05
Nickel	0.2	9.69E-03	3.15E-03	4.44E-03	4.70E-03	5.34E-03	7.30E-03	1.33E-02	1.10E-03	1.04E-03	8.69E-04	1.11E-03	1.06E-03	4.26E-03	3.49E-03	2.89E-03
Potassium	67	1.85E+00	6.02E-01	8.46E-01	8.96E-01	1.02E+00	1.39E+00	2.53E+00	2.11E-01	1.99E-01	1.66E-01	2.11E-01	2.02E-01	8.13E-01	6.65E-01	5.52E-01
Selenium	17	1.67E-04	5.43E-05	7.64E-05	8.09E-05	9.19E-05	1.26E-04	2.28E-04	1.90E-05	1.79E-05	1.50E-05	1.90E-05	1.82E-05	7.33E-05	6.00E-05	4.98E-05
Silver	2.5	4.11E-05	1.34E-05	1.88E-05	1.99E-05	2.26E-05	3.09E-05	5.62E-05	4.68E-06	4.41E-06	3.68E-06	4.68E-06	4.48E-06	1.80E-05	1.48E-05	1.23E-05
Sodium	NV	2.21E+00	7.19E-01	1.01E+00	1.07E+00	1.22E+00	1.66E+00	3.02E+00	2.52E-01	2.37E-01	1.98E-01	2.52E-01	2.41E-01	9.71E-01	7.94E-01	6.59E-01
Strontium	83	2.95E-02	9.61E-03	1.35E-02	1.43E-02	1.63E-02	2.22E-02	4.04E-02	3.36E-03	3.17E-03	2.65E-03	3.37E-03	3.22E-03	1.30E-02	1.06E-02	8.81E-03
Thallium	1.3	4.26E-05	1.39E-05	1.95E-05	2.07E-05	2.35E-05	3.21E-05	5.83E-05	4.86E-06	4.58E-06	3.82E-06	4.86E-06	4.66E-06	1.87E-05	1.53E-05	1.27E-05
Tin	25	1.50E-04	4.89E-05	6.88E-05	7.28E-05	8.28E-05	1.13E-04	2.06E-04	1.71E-05	1.62E-05	1.35E-05	1.71E-05	1.64E-05	6.60E-05	5.40E-05	4.48E-05
Titanium	83	4.86E-01	1.58E-01	2.22E-01	2.36E-01	2.68E-01	3.66E-01	6.65E-01	5.54E-02	5.23E-02	4.36E-02	5.54E-02	5.31E-02	2.14E-01	1.75E-01	1.45E-01
Uranium	0.38	1.36E-04	4.41E-05	6.21E-05	6.57E-05	7.47E-05	1.02E-04	1.86E-04	1.55E-05	1.46E-05	1.22E-05	1.55E-05	1.48E-05	5.96E-05	4.88E-05	4.05E-05
Vanadium	0.8	1.79E-02	5.82E-03	8.18E-03	8.66E-03	9.85E-03	1.35E-02	2.44E-02	2.04E-03	1.92E-03	1.60E-03	2.04E-03	1.95E-03	7.85E-03	6.43E-03	5.33E-03
Yttrium	33	1.32E-03	4.29E-04	6.04E-04	6.39E-04	7.27E-04	9.94E-04	1.80E-03	1.50E-04	1.42E-04	1.18E-04	1.50E-04	1.44E-04	5.80E-04	4.74E-04	3.94E-04
Zinc	83	2.35E-02	8.40E-03	1.01E-02	1.05E-02	1.16E-02	1.53E-02	2.66E-02	2.56E-03	2.60E-03	2.10E-03	2.57E-03	2.59E-03	1.13E-02	9.60E-03	7.77E-03
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.50E-05	6.06E-06	5.87E-06	5.93E-06	6.11E-06	7.53E-06	1.18E-05	1.53E-06	1.73E-06	1.34E-06	1.54E-06	1.67E-06	8.10E-06	7.20E-06	5.68E-06
naphthalene	50	5.95E-03	2.40E-03	2.32E-03	2.35E-03	2.42E-03	2.98E-03	4.65E-03	6.06E-04	6.85E-04	5.28E-04	6.08E-04	6.62E-04	3.21E-03	2.85E-03	2.25E-03
phenanthrene	2	4.91E-04	1.98E-04	1.92E-04	1.94E-04	2.00E-04	2.46E-04	3.84E-04	5.01E-05	5.66E-05	4.36E-05	5.02E-05	5.47E-05	2.65E-04	2.35E-04	1.86E-04
anthracene	3	5.48E-05	2.21E-05	2.14E-05	2.16E-05	2.23E-05	2.74E-05	4.29E-05	5.58E-06	6.31E-06	4.87E-06	5.60E-06	6.10E-06	2.95E-05	2.63E-05	2.07E-05
fluorene	33	2.40E-04	9.67E-05	9.36E-05	9.46E-05	9.75E-05	1.20E-04	1.88E-04	2.44E-05	2.76E-05	2.13E-05	2.45E-05	2.67E-05	1.29E-04	1.15E-04	9.05E-05
pyrene	2	1.80E-04	7.24E-05	7.01E-05	7.09E-05	7.30E-05	8.99E-05	1.40E-04	1.83E-05	2.07E-05	1.59E-05	1.83E-05	2.00E-05	9.68E-05	8.60E-05	6.78E-05
thiophenes	83	3.11E-06	1.26E-06	1.22E-06	1.23E-06	1.27E-06	1.56E-06	2.44E-06	3.17E-07	3.59E-07	2.77E-07	3.18E-07	3.47E-07	1.68E-06	1.49E-06	1.18E-06
benz(a)anthracene	2	7.13E-06	2.88E-06	2.79E-06	2.81E-06	2.90E-06	3.57E-06	5.58E-06	7.27E-07	8.21E-07	6.34E-07	7.29E-07	7.94E-07	3.84E-06	3.42E-06	2.69E-06
acenaphthene	333	4.62E-05	1.86E-05	1.80E-05	1.82E-05	1.88E-05	2.31E-05	3.61E-05	4.71E-06	5.32E-06	4.10E-06	4.72E-06	5.14E-06	2.49E-05	2.21E-05	1.74E-05
acenaphthylene	333	1.68E-04	6.77E-05	6.55E-05	6.62E-05	6.82E-05	8.40E-05	1.31E-04	1.71E-05	1.93E-05	1.49E-05	1.71E-05	1.87E-05	9.04E-05	8.04E-05	6.34E-05
fluoranthene	2	1.79E-04	7.20E-05	6.97E-05	7.05E-05	7.26E-05	8.94E-05	1.40E-04	1.82E-05	2.06E-05	1.59E-05	1.82E-05	1.99E-05	9.62E-05	8.56E-05	6.74E-05
benzo(b)fluoranthene	2	3.32E-05	1.34E-05	1.29E-05	1.31E-05	1.35E-05	1.66E-05	2.59E-05	3.38E-06	3.82E-06	2.94E-06	3.39E-06	3.69E-06	1.79E-05	1.59E-05	1.25E-05
benzo(g,h,i)perylene	NV	6.30E-07	2.54E-07	2.46E-07	2.49E-07	2.56E-07	3.15E-07	4.93E-07	6.42E-08	7.25E-08	5.59E-08	6.43E-08	7.01E-08	3.39E-07	3.02E-07	2.38E-07
benzo(k)fluoranthene	2	3.77E-06	1.52E-06	1.47E-06	1.49E-06	1.53E-06	1.89E-06	2.95E-06	3.84E-07	4.34E-07	3.35E-07	3.85E-07	4.20E-07	2.03E-06	1.81E-06	1.42E-06
chrysene	2	8.02E-06	3.23E-06	3.13E-06	3.16E-06	3.26E-06	4.01E-06	6.27E-06	8.17E-07	9.23E-07	7.12E-07	8.19E-07	8.92E-0			

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	7.76E-02	3.17E-02	3.09E-02	3.12E-02	3.14E-02	4.13E-02	6.06E-02	9.33E-03	8.55E-03	6.92E-03	9.34E-03	8.45E-03	4.24E-02	3.71E-02	2.91E-02
acetaldehyde	470	1.05E+01	4.27E+00	4.17E+00	4.21E+00	4.23E+00	5.57E+00	8.18E+00	1.26E+00	1.15E+00	9.34E-01	1.26E+00	1.14E+00	5.71E+00	5.00E+00	3.93E+00
acetone	19665	5.51E+00	2.25E+00	2.19E+00	2.22E+00	2.22E+00	2.93E+00	4.30E+00	6.62E-01	6.07E-01	4.91E-01	6.63E-01	5.99E-01	3.01E+00	2.63E+00	2.07E+00
acrolein	2.5	1.85E+00	7.56E-01	7.38E-01	7.46E-01	7.48E-01	9.86E-01	1.45E+00	2.23E-01	2.04E-01	1.65E-01	2.23E-01	2.02E-01	1.01E+00	8.84E-01	6.95E-01
aldehyde	10	<b>1.40E+01</b>	5.71E+00	5.58E+00	5.63E+00	5.65E+00	7.45E+00	<b>1.09E+01</b>	1.68E+00	1.54E+00	1.25E+00	1.68E+00	1.52E+00	7.64E+00	6.68E+00	5.25E+00
benzene	27	6.86E-01	2.80E-01	2.73E-01	2.76E-01	2.77E-01	3.65E-01	5.36E-01	8.24E-02	7.55E-02	6.12E-02	8.25E-02	7.47E-02	3.74E-01	3.27E-01	2.57E-01
C10-C12 aliphatic	11666	1.51E-01	6.15E-02	6.00E-02	6.06E-02	6.09E-02	8.02E-02	1.18E-01	1.81E-02	1.66E-02	1.34E-02	1.81E-02	1.64E-02	8.22E-02	7.19E-02	5.65E-02
C12-C16 aliphatic	11666	8.73E-01	3.56E-01	3.48E-01	3.51E-01	3.52E-01	4.64E-01	6.82E-01	1.05E-01	9.61E-02	7.78E-02	1.05E-01	9.50E-02	4.76E-01	4.17E-01	3.27E-01
C12-C16 aromatic	4166	1.18E-02	4.80E-03	4.69E-03	4.74E-03	4.75E-03	6.26E-03	9.19E-03	1.41E-03	1.30E-03	1.05E-03	1.42E-03	1.28E-03	6.42E-03	5.62E-03	4.41E-03
C16-C21 aliphatic	333	8.74E-01	3.57E-01	3.48E-01	3.52E-01	3.53E-01	4.65E-01	6.83E-01	1.05E-01	9.62E-02	7.79E-02	1.05E-01	9.51E-02	4.77E-01	4.17E-01	3.28E-01
C2-C6 aliphatic	2100	4.16E+00	1.70E+00	1.66E+00	1.67E+00	1.68E+00	2.21E+00	3.25E+00	5.00E-01	4.58E-01	3.71E-01	5.00E-01	4.53E-01	2.27E+00	1.99E+00	1.56E+00
C6-C8 aliphatic	61800	2.84E+00	1.16E+00	1.13E+00	1.14E+00	1.15E+00	1.51E+00	2.22E+00	3.42E-01	3.13E-01	2.54E-01	3.42E-01	3.10E-01	1.55E+00	1.36E+00	1.07E+00
C8-C10 aliphatic	60000	4.01E-02	1.63E-02	1.60E-02	1.61E-02	1.62E-02	2.13E-02	3.13E-02	4.81E-03	4.41E-03	3.57E-03	4.82E-03	4.36E-03	2.19E-02	1.91E-02	1.50E-02
C8-C10 aromatic	4166	2.25E-01	9.19E-02	8.97E-02	9.06E-02	9.10E-02	1.20E-01	1.76E-01	2.71E-02	2.48E-02	2.01E-02	2.71E-02	2.45E-02	1.23E-01	1.08E-01	8.45E-02
ethylbenzene	21710	1.18E-01	4.80E-02	4.69E-02	4.74E-02	4.75E-02	6.26E-02	9.19E-02	1.41E-02	1.30E-02	1.05E-02	1.42E-02	1.28E-02	6.42E-02	5.62E-02	4.41E-02
ethylene	566610	2.14E+00	8.75E-01	8.54E-01	8.62E-01	8.66E-01	1.14E+00	1.67E+00	2.58E-01	2.36E-01	1.91E-01	2.58E-01	2.33E-01	1.17E+00	1.02E+00	8.04E-01
formaldehyde	49	5.58E+00	2.28E+00	2.22E+00	2.25E+00	2.26E+00	2.97E+00	4.36E+00	6.71E-01	6.15E-01	4.98E-01	6.72E-01	6.08E-01	3.05E+00	2.67E+00	2.09E+00
ketone	1167	3.16E+00	1.29E+00	1.26E+00	1.27E+00	1.27E+00	1.68E+00	2.46E+00	3.79E-01	3.47E-01	2.81E-01	3.79E-01	3.43E-01	1.72E+00	1.51E+00	1.18E+00
toluene	1000	9.97E-01	4.07E-01	3.97E-01	4.01E-01	4.03E-01	5.30E-01	7.79E-01	1.20E-01	1.10E-01	8.89E-02	1.20E-01	1.08E-01	5.44E-01	4.76E-01	3.74E-01
trimethylbenzene	4166	2.85E-01	1.16E-01	1.14E-01	1.15E-01	1.15E-01	1.52E-01	2.23E-01	3.43E-02	3.14E-02	2.55E-02	3.43E-02	3.11E-02	1.56E-01	1.36E-01	1.07E-01
xylene	8680	7.91E-01	3.23E-01	3.15E-01	3.18E-01	3.20E-01	4.21E-01	6.18E-01	9.51E-02	8.71E-02	7.06E-02	9.52E-02	8.61E-02	4.32E-01	3.78E-01	2.97E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	NV	1.15E+01	8.47E+00	7.59E+00	7.07E+00	9.39E+00	1.19E+01	9.92E+01	3.66E+01	1.29E+01	1.35E+01	1.42E+01	1.91E+02	No	No	
DPM	10	2.04E+00	1.47E+00	1.33E+00	1.13E+00	1.58E+00	1.66E+00	<b>1.15E+01</b>	4.59E+00	1.48E+00	1.54E+00	1.58E+00	<b>1.37E+01</b>	Yes	Yes	
PM10	NV	6.85E+00	5.31E+00	4.77E+00	3.99E+00	5.84E+00	6.80E+00	5.13E+01	2.04E+01	6.85E+00	7.25E+00	7.60E+00	1.01E+02	No	No	
PM2.5	NV	3.24E+00	2.65E+00	2.40E+00	2.02E+00	2.86E+00	3.05E+00	2.16E+01	7.75E+00	2.82E+00	2.85E+00	2.98E+00	2.55E+01	No	No	
CO	15000	3.69E+01	2.73E+01	2.47E+01	2.08E+01	2.94E+01	3.10E+01	2.21E+02	8.65E+01	4.56E+01	4.78E+01	4.69E+01	2.38E+02	No	No	
<b>Metals</b>																
Aluminum	30	7.97E-01	5.87E-01	5.26E-01	4.90E-01	6.51E-01	8.25E-01	6.87E+00	2.54E+00	8.93E-01	9.33E-01	9.87E-01	1.32E+01	No	No	
Antimony	63	4.50E-05	3.32E-05	2.97E-05	2.77E-05	3.68E-05	4.66E-05	3.88E-04	1.43E-04	5.04E-05	5.27E-05	5.57E-05	7.47E-04	No	No	
Arsenic	0.2	1.28E-03	9.40E-04	8.42E-04	7.85E-04	1.04E-03	1.32E-03	1.10E-02	4.07E-03	1.43E-03	1.49E-03	1.58E-03	2.12E-02	No	No	
Barium	25	4.49E-03	3.31E-03	2.97E-03	2.76E-03	3.67E-03	4.65E-03	3.88E-02	1.43E-02	5.04E-03	5.26E-03	5.57E-03	7.46E-02	No	No	
Beryllium	0.025	8.37E-06	6.16E-06	5.52E-06	5.14E-06	6.83E-06	8.66E-06	7.22E-05	2.66E-05	9.38E-06	9.79E-06	1.04E-05	1.39E-04	No	No	
Bismuth	6.3	2.30E-06	1.69E-06	1.52E-06	1.41E-06	1.88E-06	2.38E-06	1.98E-05	7.32E-06	2.58E-06	2.69E-06	2.85E-06	3.81E-05	No	No	
Cadmium	0.03	1.22E-03	8.86E-04	8.03E-04	6.78E-04	9.51E-04	9.97E-04	6.94E-03	2.76E-03	8.89E-04	9.26E-04	9.50E-04	8.23E-03	No	No	
Calcium	NV	4.54E-01	3.35E-01	3.00E-01	2.79E-01	3.71E-01	4.70E-01	3.92E+00	1.45E+00	5.09E-01	5.32E-01	5.63E-01	7.54E+00	No	No	
Chromium	1.3	2.11E-03	1.56E-03	1.40E-03	1.29E-03	1.72E-03	2.15E-03	1.76E-02	6.55E-03	2.29E-03	2.39E-03	2.53E-03	3.28E-02	No	No	
Cobalt	0.25	3.08E-04	2.27E-04	2.03E-04	1.89E-04	2.51E-04	3.19E-04	2.66E-03	9.81E-04	3.45E-04	3.60E-04	3.81E-04	5.11E-03	No	No	
Copper	83	8.15E-04	6.00E-04	5.38E-04	5.01E-04	6.65E-04	8.44E-04	7.03E-03	2.59E-03	9.13E-04	9.54E-04	1.01E-03	1.35E-02	No	No	
Gold	3.1	8.90E-07	6.56E-07	5.87E-07	5.47E-07	7.27E-07	9.22E-07	7.68E-06	2.83E-06	9.97E-07	1.04E-06	1.10E-06	1.48E-05	No	No	
Iron	8.3	8.74E-01	6.44E-01	5.77E-01	5.37E-01	7.13E-01	9.05E-01	7.54E+00	2.78E+00	9.79E-01	1.02E+00	1.08E+00	<b>1.45E+01</b>	Yes	No*	
Lead	1.2	3.41E-04	2.49E-04	2.24E-04	1.97E-04	2.70E-04	3.08E-04	2.34E-03	8.96E-04	3.01E-04	3.14E-04	3.28E-04	3.35E-03	No	No	
Lithium	50	3.72E-04	2.74E-04	2.45E-04	2.28E-04	3.03E-04	3.85E-04	3.21E-03	1.18E-03	4.16E-04	4.35E-04	4.60E-04	6.17E-03	No	No	
Magnesium	167	2.41E-01	1.78E-01	1.59E-01	1.48E-01	1.97E-01	2.50E-01	2.08E+00	7.68E-01	2.70E-01	2.82E-01	2.98E-01	4.00E+00	No	No	
Manganese	1	9.06E-03	6.67E-03	5.98E-03	5.57E-03	7.40E-03	9.38E-03	7.82E-02	2.89E-02	1.02E-02	1.06E-02	1.12E-02	1.50E-01	No	No	
Molybdenum	83	1.38E-05	1.02E-05	9.10E-06	8.48E-06	1.13E-05	1.43E-05	1.19E-04	4.39E-05	1.55E-05	1.61E-05	1.71E-05	2.29E-04	No	No	
Nickel	0.2	7.99E-04	5.89E-04	5.27E-04	4.91E-04	6.52E-04	8.27E-04	6.89E-03	2.54E-03	8.95E-04	9.35E-04	9.90E-04	1.33E-02	No	No	
Potassium	67	1.52E-01	1.12E-01	1.01E-01	9.37E-02	1.25E-01	1.58E-01	1.32E+00	4.86E-01	1.71E-01	1.78E-01	1.89E-01	2.53E+00	No	No	
Selenium	17	1.38E-05	1.01E-05	9.08E-06	8.46E-06	1.12E-05	1.42E-05	1.19E-04	4.38E-05	1.54E-05	1.61E-05	1.70E-05	2.28E-04	No	No	
Silver	2.5	3.38E-06	2.49E-06	2.23E-06	2.08E-06	2.76E-06	3.51E-06	2.92E-05	1.08E-05	3.79E-06	3.96E-06	4.19E-06	5.62E-05	No	No	
Sodium	NV	1.82E-01	1.34E-01	1.20E-01	1.12E-01	1.49E-01	1.89E-01	1.57E+00	5.80E-01	2.04E-01	2.13E-01	2.26E-01	3.02E+00	No	No	
Strontium	83	2.43E-03	1.79E-03	1.61E-03	1.50E-03	1.99E-03	2.52E-03	2.10E-02	7.75E-03	2.73E-03	2.85E-03	3.01E-03	4.04E-02	No	No	
Thallium	1.3	3.51E-06	2.59E-06	2.32E-06	2.16E-06	2.87E-06	3.64E-06	3.03E-05	1.12E-05	3.94E-06	4.11E-06	4.35E-06	5.83E-05	No	No	
Tin	25	1.24E-05	9.13E-06	8.18E-06	7.62E-06	1.01E-05	1.28E-05	1.07E-04	3.95E-05	1.39E-05	1.45E-05	1.53E-05	2.06E-04	No	No	
Titanium	83	4.01E-02	2.95E-02	2.64E-02	2.46E-02	3.27E-02	4.15E-02	3.46E-01	1.28E-01	4.49E-02	4.69E-02	4.96E-02	6.65E-01	No	No	
Uranium	0.38	1.12E-05	8.24E-06	7.38E-06	6.87E-06	9.13E-06	1.16E-05	9.65E-05	3.56E-05	1.25E-05	1.31E-05	1.38E-05	1.86E-04	No	No	
Vanadium	0.8	1.47E-03	1.09E-03	9.73E-04	9.06E-04	1.20E-03	1.53E-03	1.27E-02	4.69E-03	1.65E-03	1.72E-03	1.83E-03	2.44E-02	No	No	
Yttrium	33	1.09E-04	8.01E-05	7.18E-05	6.69E-05	8.88E-05	1.13E-04	9.38E-04	3.46E-04	1.22E-04	1.27E-04	1.35E-04	1.80E-03	No	No	
Zinc	83	2.57E-03	1.88E-03	1.69E-03	1.50E-03	2.05E-03	2.35E-03	1.80E-02	6.87E-03	2.32E-03	2.42E-03	2.53E-03	2.66E-02	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	2.24E-06	1.62E-06	1.47E-06	1.24E-06	1.74E-06	1.82E-06	1.27E-05	5.05E-06	1.62E-06	1.69E-06	1.74E-06	1.50E-05	No	No	
naphthalene	50	8.86E-04	6.42E-04	5.81E-04	4.90E-04	6.89E-04	7.22E-04	5.02E-03	2.00E-03	6.43E-04	6.69E-04	6.87E-04	5.95E-03	No	No	
phenanthrene	2	7.32E-05	5.30E-05	4.80E-05	4.05E-05	5.69E-05	5.96E-05	4.15E-04	1.65E-04	5.31E-05	5.53E-05	5.67E-05	4.91E-04	No	No	
anthracene	3	8.17E-06	5.91E-06	5.36E-06	4.52E-06	6.34E-06	6.65E-06	4.63E-05	1.84E-05	5.92E-06	6.17E-06	6.33E-06	5.48E-05	No	No	
fluorene	33	3.57E-05	2.59E-05	2.34E-05	1.98E-05	2.77E-05	2.91E-05	2.02E-04	8.05E-05	2.59E-05	2.70E-05	2.77E-05	2.40E-04	No	No	
pyrene	2	2.67E-05	1.94E-05	1.75E-05	1.48E-05	2.08E-05	2.18E-05	1.52E-04	6.03E-05	1.94E-05	2.02E-05	2.07E-05	1.80E-04	No	No	
thiophenes	83	4.64E-07	3.36E-07	3.04E-07	2.57E-07	3.61E-07	3.78E-07	2.63E-06	1.05E-06	3.37E-07	3.50E-07	3.59E-07	3.11E-06	No	No	
benz(a)anthracene	2	1.06E-06	7.69E-07	6.97E-07	5.88E-07	8.26E-07	8.65E-07	6.02E-06	2.39E-06	7.71E-07	8.02E-07	8.23E-07	7.13E-06	No	No	
acenaphthene	333	6.88E-06	4.98E-06	4.51E-06	3.81E-06	5.35E-06	5.60E-06	3.90E-05	1.55E-05	4.99E-06	5.20E-06	5.33E-06	4.62E-05	No	No	
acenaphthylene	333	2.50E-05	1.81E-05	1.64E-05	1.38E-05	1.94E-05	2.04E-05	1.42E-04	5.63E-05	1.81E-05	1.89E-05	1.94E-05	1.68E-04	No	No	
fluoranthene	2	2.66E-05	1.93E-05	1.74E-05	1.47E-05	2.07E-05	2.17E-05	1.51E-04	5.99E-05	1.93E-05	2.01E-05	2.06E-05	1.79E-04	No	No	
benzo(b)fluoranthene	2	4.94E-06	3.58E-06	3.24E-06	2.73E-06	3.84E-06	4.02E-06	2.80E-05	1.11E-05	3.58E-06	3.73E-06	3.83E-06	3.32E-05	No	No	
benzo(g,h,i)perylene	NV	9.38E-08	6.79E-08	6.15E-08	5.19E-08	7.29E-08	7.64E-08	5.31E-07	2.11E-07	6.81E-08	7.09E-08	7.27E-08	6.30E-07	No	No	
benzo(k)fluoranthene	2	5.62E-07	4.07E-07	3.68E-07	3.11E-07	4.36E-07	4.57E-07	3.18E-06	1.27E-06	4.07E-07	4.24E-07	4.35E-07	3.77E-06	No	No	
chrysene	2	1.19E-06	8.65E-07	7.83E-07	6.61E-07	9.28E-07	9.73E-07	6.77E-06	2.69E-06	8.67E-07	9.02E-07	9.25E-07	8.02E-06	No	No	
dibenzo(a,h)anthracene	2	1.55E-06	1.13E-06	1.02E-06	8.60E-07	1.21E-06	1.27E-06	8.80E-06	3.50E-06	1.13E-06	1.17E-06	1.20E-06	1.04E-05	No	No	
indeno(1,2,3-cd)pyrene	2	9.88E-07	7.16E-07	6.48E-07	5.47E-07	7.68E-07	8.05E-07	5.60E-06	2.23E-06	7.17E-07	7.46E-07	7.66E-07	6.63E-06	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	1.11E-02	8.03E-03	7.26E-03	6.09E-03	8.59E-03	8.95E-03	6.50E-02	2.54E-02	1.37E-02	1.43E-02	1.42E-02	7.76E-02	No	No	
acetaldehyde	470	1.50E+00	1.08E+00	9.79E-01	8.22E-01	1.16E+00	1.21E+00	8.77E+00	3.43E+00	1.85E+00	1.92E+00	1.92E+00	1.05E+01	No	No	
acetone	19665	7.89E-01	5.70E-01	5.15E-01	4.32E-01	6.09E-01	6.35E-01	4.61E+00	1.81E+00	9.75E-01	1.01E+00	1.01E+00	5.51E+00	No	No	
acrolein	2.5	2.65E-01	1.92E-01	1.73E-01	1.45E-01	2.05E-01	2.14E-01	1.55E+00	6.07E-01	3.28E-01	3.41E-01	3.39E-01	1.85E+00	No	No	
aldehyde	10	2.01E+00	1.45E+00	1.31E+00	1.10E+00	1.55E+00	1.61E+00	<b>1.17E+01</b>	4.59E+00	2.48E+00	2.57E+00	2.56E+00	<b>1.40E+01</b>	Yes	Yes	
benzene	27	9.83E-02	7.09E-02	6.42E-02	5.39E-02	7.59E-02	7.91E-02	5.75E-01	2.25E-01	1.21E-01	1.26E-01	1.26E-01	6.86E-01	No	No	
C10-C12 aliphatic	11666	2.16E-02	1.56E-02	1.41E-02	1.18E-02	1.67E-02	1.74E-02	1.26E-01	4.94E-02	2.67E-02	2.77E-02	2.76E-02	1.51E-01	No	No	
C12-C16 aliphatic	11666	1.25E-01	9.02E-02	8.16E-02	6.85E-02	9.65E-02	1.01E-01	7.31E-01	2.86E-01	1.54E-01	1.60E-01	1.60E-01	8.73E-01	No	No	
C12-C16 aromatic	4166	1.69E-03	1.22E-03	1.10E-03	9.24E-04	1.30E-03	1.36E-03	9.86E-03	3.86E-03	2.08E-03	2.16E-03	2.15E-03	1.18E-02	No	No	
C16-C21 aliphatic	333	1.25E-01	9.04E-02	8.17E-02	6.86E-02	9.66E-02	1.01E-01	7.32E-01	2.86E-01	1.55E-01	1.61E-01	1.60E-01	8.74E-01	No	No	
C2-C6 aliphatic	2100	5.96E-01	4.30E-01	3.89E-01	3.26E-01	4.60E-01	4.80E-01	3.48E+00	1.36E+00	7.36E-01	7.64E-01	7.61E-01	4.16E+00	No	No	
C6-C8 aliphatic	61800	4.08E-01	2.94E-01	2.66E-01	2.23E-01	3.15E-01	3.28E-01	2.38E+00	9.32E-01	5.03E-01	5.23E-01	5.21E-01	2.84E+00	No	No	
C8-C10 aliphatic	60000	5.74E-03	4.14E-03	3.75E-03	3.14E-03	4.43E-03	4.62E-03	3.36E-02	1.31E-02	7.09E-03	7.36E-03	7.33E-03	4.01E-02	No	No	
C8-C10 aromatic	4166	3.23E-02	2.33E-02	2.11E-02	1.77E-02	2.49E-02	2.60E-02	1.89E-01	7.38E-02	3.99E-02	4.14E-02	4.12E-02	2.25E-01	No	No	
ethylbenzene	21710	1.69E-02	1.22E-02	1.10E-02	9.24E-03	1.30E-02	1.36E-02	9.86E-02	3.86E-02	2.08E-02	2.16E-02	2.15E-02	1.18E-01	No	No	
ethylene	566610	3.07E-01	2.22E-01	2.00E-01	1.68E-01	2.37E-01	2.47E-01	1.80E+00	7.03E-01	3.79E-01	3.94E-01	3.92E-01	2.14E+00	No	No	
formaldehyde	49	8.00E-01	5.77E-01	5.22E-01	4.38E-01	6.18E-01	6.44E-01	4.68E+00	1.83E+00	9.88E-01	1.03E+00	1.02E+00	5.58E+00	No	No	
ketone	1167	4.52E-01	3.26E-01	2.95E-01	2.48E-01	3.49E-01	3.64E-01	2.64E+00	1.03E+00	5.58E-01	5.80E-01	5.77E-01	3.16E+00	No	No	
toluene	1000	1.43E-01	1.03E-01	9.32E-02	7.82E-02	1.10E-01	1.15E-01	8.35E-01	3.27E-01	1.76E-01	1.83E-01	1.82E-01	9.97E-01	No	No	
trimethylbenzene	4166	4.09E-02	2.95E-02	2.67E-02	2.24E-02	3.16E-02	3.29E-02	2.39E-01	9.36E-02	5.05E-02	5.25E-02	5.22E-02	2.85E-01	No	No	
xylene	8680	1.13E-01	8.18E-02	7.40E-02	6.21E-02	8.75E-02	9.12E-02	6.63E-01	2.59E-01	1.40E-01	1.45E-01	1.45E-01	7.91E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	NV	7.78E+01	2.49E+01	2.22E+01	2.21E+01	2.34E+01	2.72E+01	3.66E+01	1.26E+01	1.48E+01	9.62E+00	1.26E+01	1.43E+01	2.83E+01	4.48E+01	7.19E+01
DPM	10	<b>1.40E+01</b>	4.61E+00	4.72E+00	4.38E+00	5.55E+00	6.85E+00	7.27E+00	1.42E+00	1.65E+00	1.23E+00	1.42E+00	1.58E+00	7.37E+00	5.11E+00	4.34E+00
PM10	NV	4.27E+01	1.24E+01	1.09E+01	1.05E+01	1.17E+01	1.43E+01	1.50E+01	5.65E+00	7.28E+00	3.91E+00	5.66E+00	7.20E+00	1.56E+01	2.21E+01	3.21E+01
PM2.5	NV	2.52E+01	8.85E+00	9.93E+00	9.37E+00	1.06E+01	1.39E+01	1.41E+01	2.80E+00	3.19E+00	2.26E+00	2.80E+00	3.22E+00	1.34E+01	9.34E+00	8.21E+00
CO	15000	2.44E+02	8.10E+01	8.23E+01	7.63E+01	9.68E+01	1.25E+02	1.27E+02	2.54E+01	2.92E+01	2.18E+01	2.55E+01	2.78E+01	1.28E+02	8.91E+01	9.72E+01
<b>Metals</b>																
Aluminum	30	5.40E+00	1.73E+00	1.54E+00	1.54E+00	1.63E+00	1.89E+00	2.54E+00	8.75E-01	1.03E+00	6.67E-01	8.76E-01	9.90E-01	1.97E+00	3.11E+00	4.98E+00
Antimony	63	3.05E-04	9.77E-05	8.70E-05	8.67E-05	9.17E-05	1.07E-04	1.44E-04	4.94E-05	5.80E-05	3.77E-05	4.95E-05	5.59E-05	1.11E-04	1.75E-04	2.81E-04
Arsenic	0.2	8.64E-03	2.77E-03	2.47E-03	2.46E-03	2.60E-03	3.02E-03	4.07E-03	1.40E-03	1.64E-03	1.07E-03	1.40E-03	1.59E-03	3.14E-03	4.97E-03	7.98E-03
Barium	25	3.04E-02	9.76E-03	8.68E-03	8.66E-03	9.16E-03	1.07E-02	1.43E-02	4.94E-03	5.79E-03	3.76E-03	4.94E-03	5.58E-03	1.11E-02	1.75E-02	2.81E-02
Beryllium	0.025	5.66E-05	1.82E-05	1.62E-05	1.61E-05	1.70E-05	1.98E-05	2.67E-05	9.19E-06	1.08E-05	7.00E-06	9.20E-06	1.04E-05	2.06E-05	3.26E-05	5.23E-05
Bismuth	6.3	1.56E-05	4.99E-06	4.44E-06	4.43E-06	4.68E-06	5.45E-06	7.33E-06	2.53E-06	2.96E-06	1.92E-06	2.53E-06	2.86E-06	5.66E-06	8.96E-06	1.44E-05
Cadmium	0.03	8.40E-03	2.77E-03	2.83E-03	2.64E-03	3.34E-03	4.11E-03	4.37E-03	8.54E-04	9.94E-04	7.41E-04	8.57E-04	9.52E-04	4.43E-03	3.08E-03	2.62E-03
Calcium	NV	3.07E+00	9.86E-01	8.78E-01	8.75E-01	9.26E-01	1.08E+00	1.45E+00	4.99E-01	5.85E-01	3.80E-01	5.00E-01	5.64E-01	1.12E+00	1.77E+00	2.84E+00
Chromium	1.3	1.43E-02	4.61E-03	4.16E-03	4.12E-03	4.45E-03	5.21E-03	6.82E-03	2.24E-03	2.63E-03	1.72E-03	2.24E-03	2.53E-03	5.44E-03	7.96E-03	1.24E-02
Cobalt	0.25	2.08E-03	6.68E-04	5.95E-04	5.93E-04	6.28E-04	7.30E-04	9.82E-04	3.38E-04	3.97E-04	2.58E-04	3.39E-04	3.83E-04	7.58E-04	1.20E-03	1.93E-03
Copper	83	5.51E-03	1.77E-03	1.57E-03	1.57E-03	1.66E-03	1.93E-03	2.60E-03	8.95E-04	1.05E-03	6.82E-04	8.96E-04	1.01E-03	2.01E-03	3.18E-03	5.09E-03
Gold	3.1	6.02E-06	1.93E-06	1.72E-06	1.71E-06	1.81E-06	2.11E-06	2.84E-06	9.78E-07	1.15E-06	7.45E-07	9.79E-07	1.11E-06	2.19E-06	3.47E-06	5.56E-06
Iron	8.3	5.91E+00	1.90E+00	1.69E+00	1.68E+00	1.78E+00	2.07E+00	2.79E+00	9.60E-01	1.12E+00	7.31E-01	9.61E-01	1.09E+00	2.15E+00	3.41E+00	5.46E+00
Lead	1.2	2.33E-03	7.59E-04	7.37E-04	7.03E-04	8.35E-04	1.01E-03	1.16E-03	2.93E-04	3.42E-04	2.38E-04	2.93E-04	3.29E-04	1.08E-03	1.05E-03	1.29E-03
Lithium	50	2.52E-03	8.07E-04	7.18E-04	7.16E-04	7.57E-04	8.81E-04	1.18E-03	4.08E-04	4.78E-04	3.11E-04	4.09E-04	4.62E-04	9.15E-04	1.45E-03	2.32E-03
Magnesium	167	1.63E+00	5.23E-01	4.66E-01	4.64E-01	4.91E-01	5.71E-01	7.68E-01	2.65E-01	3.10E-01	2.02E-01	2.65E-01	2.99E-01	5.93E-01	9.39E-01	1.51E+00
Manganese	1	6.13E-02	1.97E-02	1.75E-02	1.75E-02	1.85E-02	2.15E-02	2.89E-02	9.95E-03	1.17E-02	7.58E-03	9.96E-03	1.13E-02	2.23E-02	3.53E-02	5.66E-02
Molybdenum	83	9.33E-05	2.99E-05	2.66E-05	2.66E-05	2.81E-05	3.27E-05	4.40E-05	1.51E-05	1.78E-05	1.15E-05	1.52E-05	1.71E-05	3.40E-05	5.38E-05	8.62E-05
Nickel	0.2	5.41E-03	1.73E-03	1.54E-03	1.54E-03	1.63E-03	1.89E-03	2.55E-03	8.78E-04	1.03E-03	6.69E-04	8.79E-04	9.92E-04	1.97E-03	3.11E-03	4.99E-03
Potassium	67	1.03E+00	3.31E-01	2.95E-01	2.94E-01	3.11E-01	3.61E-01	4.86E-01	1.67E-01	1.96E-01	1.28E-01	1.68E-01	1.89E-01	3.76E-01	5.94E-01	9.53E-01
Selenium	17	9.31E-05	2.99E-05	2.66E-05	2.65E-05	2.80E-05	3.26E-05	4.39E-05	1.51E-05	1.77E-05	1.15E-05	1.51E-05	1.71E-05	3.39E-05	5.36E-05	8.60E-05
Silver	2.5	2.29E-05	7.35E-06	6.54E-06	6.52E-06	6.90E-06	8.02E-06	1.08E-05	3.72E-06	4.36E-06	2.83E-06	3.72E-06	4.20E-06	8.34E-06	1.32E-05	2.12E-05
Sodium	NV	1.23E+00	3.95E-01	3.52E-01	3.51E-01	3.71E-01	4.32E-01	5.81E-01	2.00E-01	2.34E-01	1.52E-01	2.00E-01	2.26E-01	4.49E-01	7.10E-01	1.14E+00
Strontium	83	1.65E-02	5.28E-03	4.70E-03	4.69E-03	4.96E-03	5.77E-03	7.76E-03	2.67E-03	3.13E-03	2.04E-03	2.68E-03	3.02E-03	5.99E-03	9.49E-03	1.52E-02
Thallium	1.3	2.38E-05	7.63E-06	6.79E-06	6.77E-06	7.16E-06	8.33E-06	1.12E-05	3.86E-06	4.53E-06	2.94E-06	3.86E-06	4.37E-06	8.66E-06	1.37E-05	2.20E-05
Tin	25	8.39E-05	2.69E-05	2.39E-05	2.39E-05	2.52E-05	2.94E-05	3.95E-05	1.36E-05	1.60E-05	1.04E-05	1.36E-05	1.54E-05	3.05E-05	4.83E-05	7.75E-05
Titanium	83	2.71E-01	8.70E-02	7.74E-02	7.72E-02	8.16E-02	9.50E-02	1.28E-01	4.40E-02	5.16E-02	3.35E-02	4.41E-02	4.98E-02	9.87E-02	1.56E-01	2.50E-01
Uranium	0.38	7.57E-05	2.43E-05	2.16E-05	2.15E-05	2.28E-05	2.65E-05	3.56E-05	1.23E-05	1.44E-05	9.36E-06	1.23E-05	1.39E-05	2.75E-05	4.36E-05	6.99E-05
Vanadium	0.8	9.97E-03	3.20E-03	2.85E-03	2.84E-03	3.00E-03	3.49E-03	4.70E-03	1.62E-03	1.90E-03	1.23E-03	1.62E-03	1.83E-03	3.63E-03	5.74E-03	9.21E-03
Yttrium	33	7.36E-04	2.36E-04	2.10E-04	2.10E-04	2.22E-04	2.58E-04	3.47E-04	1.19E-04	1.40E-04	9.10E-05	1.20E-04	1.35E-04	2.68E-04	4.24E-04	6.80E-04
Zinc	83	1.76E-02	5.72E-03	5.52E-03	5.29E-03	6.23E-03	7.52E-03	8.76E-03	2.26E-03	2.64E-03	1.82E-03	2.26E-03	2.54E-03	7.99E-03	8.06E-03	1.02E-02
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.54E-05	5.07E-06	5.19E-06	4.83E-06	6.11E-06	7.53E-06	8.00E-06	1.56E-06	1.82E-06	1.35E-06	1.57E-06	1.74E-06	8.11E-06	5.63E-06	4.77E-06
naphthalene	50	6.08E-03	2.01E-03	2.05E-03	1.91E-03	2.42E-03	2.98E-03	3.17E-03	6.18E-04	7.18E-04	5.36E-04	6.19E-04	6.88E-04	3.21E-03	2.23E-03	1.89E-03
phenanthrene	2	5.02E-04	1.66E-04	1.70E-04	1.58E-04	2.00E-04	2.46E-04	2.62E-04	5.10E-05	5.93E-05	4.43E-05	5.12E-05	5.69E-05	2.65E-04	1.84E-04	1.56E-04
anthracene	3	5.60E-05	1.85E-05	1.89E-05	1.76E-05	2.23E-05	2.75E-05	2.92E-05	5.69E-06	6.62E-06	4.94E-06	5.71E-06	6.34E-06	2.96E-05	2.05E-05	1.74E-05
fluorene	33	2.45E-04	8.08E-05	8.27E-05	7.69E-05	9.74E-05	1.20E-04	1.28E-04	2.49E-05	2.89E-05	2.16E-05	2.50E-05	2.77E-05	1.29E-04	8.97E-05	7.61E-05
pyrene	2	1.84E-04	6.06E-05	6.20E-05	5.76E-05	7.29E-05	9.00E-05	9.56E-05	1.86E-05	2.17E-05	1.62E-05	1.87E-05	2.08E-05	9.69E-05	6.72E-05	5.70E-05
thiophenes	83	3.18E-06	1.05E-06	1.07E-06	1.00E-06	1.27E-06	1.56E-06	1.66E-06	3.23E-07	3.76E-07	2.80E-07	3.24E-07	3.60E-07	1.68E-06	1.17E-06	9.89E-07
benz(a)anthracene	2	7.29E-06	2.41E-06	2.46E-06	2.29E-06	2.90E-06	3.57E-06	3.80E-06	7.41E-07	8.61E-07	6.42E-07	7.43E-07	8.25E-07	3.85E-06	2.67E-06	2.26E-06
acenaphthene	333	4.72E-05	1.56E-05	1.59E-05	1.48E-05	1.88E-05	2.31E-05	2.46E-05	4.80E-06	5.58E-06	4.16E-06	4.81E-06	5.35E-06	2.49E-05	1.73E-05	1.47E-05
acenaphthylene	333	1.71E-04	5.66E-05	5.79E-05	5.39E-05	6.82E-05	8.41E-05	8.93E-05	1.74E-05	2.03E-05	1.51E-05	1.75E-05	1.94E-05	9.05E-05	6.28E-05	5.33E-05
fluoranthene	2	1.82E-04	6.02E-05	6.16E-05	5.73E-05	7.25E-05	8.95E-05	9.50E-05	1.85E-05	2.16E-05	1.61E-05	1.86E-05	2.07E-05	9.63E-05	6.68E-05	5.67E-05
benzo(b)fluoranthene	2	3.39E-05	1.12E-05	1.14E-05	1.06E-05	1.35E-05	1.66E-05	1.76E-05	3.44E-06	4.00E-06	2.99E-06	3.45E-06	3.84E-06	1.79E-05	1.24E-05	1.05E-05
benzo(g,h,i)perylene	NV	6.44E-07	2.12E-07	2.17E-07	2.02E-07	2.56E-07	3.16E-07	3.35E-07	6.54E-08	7.61E-08	5.67E-08	6.56E-08	7.29E-08	3.40E-07	2.36E-07	2.00E-07
benzo(k)fluoranthene	2	3.85E-06	1.27E-06	1.30E-06	1.21E-06	1.53E-06	1.89E-06	2.01E-06	3.91E-07	4.55E-07	3.40E-07	3.93E-07	4.36E-07	2.03E-06	1.41E-06	1.20E-06
chrysene	2	8.20E-06	2.70E-06	2.77E-06	2.57E-06	3.26E-06	4.02E-06	4.27E-06	8.32E-07	9.68E-07	7.22E-07	8.35E-07	9.28E-07	4.33E		

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	7.93E-02	2.61E-02	2.67E-02	2.48E-02	3.10E-02	4.13E-02	4.16E-02	7.89E-03	9.12E-03	7.01E-03	7.90E-03	8.70E-03	4.24E-02	2.94E-02	2.42E-02
acetaldehyde	470	1.07E+01	3.52E+00	3.60E+00	3.34E+00	4.19E+00	5.57E+00	5.61E+00	1.06E+00	1.23E+00	9.46E-01	1.07E+00	1.17E+00	5.72E+00	3.96E+00	3.26E+00
acetone	19665	5.63E+00	1.85E+00	1.89E+00	1.76E+00	2.20E+00	2.93E+00	2.95E+00	5.60E-01	6.48E-01	4.98E-01	5.61E-01	6.17E-01	3.01E+00	2.08E+00	1.72E+00
acrolein	2.5	1.89E+00	6.23E-01	6.37E-01	5.92E-01	7.41E-01	9.86E-01	9.93E-01	1.88E-01	2.18E-01	1.67E-01	1.89E-01	2.08E-01	1.01E+00	7.01E-01	5.78E-01
aldehyde	10	<b>1.43E+01</b>	4.71E+00	4.81E+00	4.47E+00	5.60E+00	7.45E+00	7.50E+00	1.42E+00	1.65E+00	1.26E+00	1.42E+00	1.57E+00	7.65E+00	5.30E+00	4.36E+00
benzene	27	7.01E-01	2.31E-01	2.36E-01	2.19E-01	2.74E-01	3.65E-01	3.68E-01	6.97E-02	8.06E-02	6.20E-02	6.98E-02	7.69E-02	3.75E-01	2.60E-01	2.14E-01
C10-C12 aliphatic	11666	1.54E-01	5.07E-02	5.18E-02	4.81E-02	6.03E-02	8.02E-02	8.08E-02	1.53E-02	1.77E-02	1.36E-02	1.53E-02	1.69E-02	8.23E-02	5.70E-02	4.70E-02
C12-C16 aliphatic	11666	8.92E-01	2.93E-01	3.00E-01	2.79E-01	3.49E-01	4.65E-01	4.68E-01	8.87E-02	1.03E-01	7.88E-02	8.88E-02	9.78E-02	4.77E-01	3.30E-01	2.72E-01
C12-C16 aromatic	4166	1.20E-02	3.96E-03	4.05E-03	3.76E-03	4.71E-03	6.27E-03	6.31E-03	1.20E-03	1.38E-03	1.06E-03	1.20E-03	1.32E-03	6.43E-03	4.45E-03	3.67E-03
C16-C21 aliphatic	333	8.93E-01	2.94E-01	3.00E-01	2.79E-01	3.49E-01	4.65E-01	4.68E-01	8.88E-02	1.03E-01	7.89E-02	8.89E-02	9.79E-02	4.77E-01	3.31E-01	2.72E-01
C2-C6 aliphatic	2100	4.25E+00	1.40E+00	1.43E+00	1.33E+00	1.66E+00	2.21E+00	2.23E+00	4.23E-01	4.89E-01	3.76E-01	4.23E-01	4.66E-01	2.27E+00	1.57E+00	1.30E+00
C6-C8 aliphatic	61800	2.91E+00	9.57E-01	9.78E-01	9.09E-01	1.14E+00	1.51E+00	1.52E+00	2.89E-01	3.34E-01	2.57E-01	2.89E-01	3.19E-01	1.55E+00	1.08E+00	8.87E-01
C8-C10 aliphatic	60000	4.09E-02	1.35E-02	1.38E-02	1.28E-02	1.60E-02	2.13E-02	2.15E-02	4.07E-03	4.71E-03	3.62E-03	4.08E-03	4.49E-03	2.19E-02	1.52E-02	1.25E-02
C8-C10 aromatic	4166	2.30E-01	7.58E-02	7.75E-02	7.19E-02	9.01E-02	1.20E-01	1.21E-01	2.29E-02	2.65E-02	2.03E-02	2.29E-02	2.52E-02	1.23E-01	8.52E-02	7.02E-02
ethylbenzene	21710	1.20E-01	3.96E-02	4.05E-02	3.76E-02	4.71E-02	6.27E-02	6.31E-02	1.20E-02	1.38E-02	1.06E-02	1.20E-02	1.32E-02	6.43E-02	4.45E-02	3.67E-02
ethylene	566610	2.19E+00	7.21E-01	7.37E-01	6.85E-01	8.57E-01	1.14E+00	1.15E+00	2.18E-01	2.52E-01	1.94E-01	2.18E-01	2.40E-01	1.17E+00	8.11E-01	6.68E-01
formaldehyde	49	5.71E+00	1.88E+00	1.92E+00	1.78E+00	2.23E+00	2.97E+00	2.99E+00	5.68E-01	6.56E-01	5.04E-01	5.68E-01	6.26E-01	3.05E+00	2.11E+00	1.74E+00
ketone	1167	3.22E+00	1.06E+00	1.08E+00	1.01E+00	1.26E+00	1.68E+00	1.69E+00	3.21E-01	3.71E-01	2.85E-01	3.21E-01	3.54E-01	1.72E+00	1.19E+00	9.84E-01
toluene	1000	1.02E+00	3.35E-01	3.43E-01	3.18E-01	3.99E-01	5.31E-01	5.34E-01	1.01E-01	1.17E-01	9.00E-02	1.01E-01	1.12E-01	5.44E-01	3.77E-01	3.11E-01
trimethylbenzene	4166	2.92E-01	9.60E-02	9.82E-02	9.12E-02	1.14E-01	1.52E-01	1.53E-01	2.90E-02	3.36E-02	2.58E-02	2.90E-02	3.20E-02	1.56E-01	1.08E-01	8.90E-02
xylenes	8680	8.09E-01	2.66E-01	2.72E-01	2.53E-01	3.16E-01	4.21E-01	4.24E-01	8.04E-02	9.30E-02	7.15E-02	8.05E-02	8.87E-02	4.32E-01	2.99E-01	2.47E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	NV	4.64E+01	2.63E+01	2.16E+01	1.77E+01	2.52E+01	3.73E+01	4.00E+01	1.68E+01	1.34E+01	1.38E+01	1.46E+01	7.78E+01	No	No	
DPM	10	3.47E+00	1.66E+00	1.36E+00	1.30E+00	1.88E+00	2.85E+00	8.44E+00	3.28E+00	1.08E+00	1.13E+00	1.18E+00	1.40E+01	Yes	Yes	
PM10	NV	2.41E+01	1.31E+01	1.05E+01	8.60E+00	1.26E+01	2.02E+01	1.98E+01	7.18E+00	5.70E+00	5.73E+00	5.69E+00	4.27E+01	No	No	
PM2.5	NV	6.30E+00	3.18E+00	2.56E+00	2.29E+00	3.29E+00	5.15E+00	1.46E+01	5.77E+00	2.17E+00	2.26E+00	2.48E+00	2.52E+01	No	No	
CO	15000	7.74E+01	3.66E+01	2.95E+01	2.75E+01	4.03E+01	6.25E+01	1.47E+02	5.70E+01	4.07E+01	3.93E+01	4.30E+01	2.44E+02	No	No	
<b>Metals</b>																
Aluminum	30	3.21E+00	1.82E+00	1.50E+00	1.23E+00	1.74E+00	2.59E+00	2.77E+00	1.17E+00	9.28E-01	9.57E-01	1.01E+00	5.40E+00	No	No	
Antimony	63	1.82E-04	1.03E-04	8.46E-05	6.93E-05	9.86E-05	1.46E-04	1.56E-04	6.58E-05	5.24E-05	5.41E-05	5.72E-05	3.05E-04	No	No	
Arsenic	0.2	5.15E-03	2.92E-03	2.40E-03	1.97E-03	2.80E-03	4.15E-03	4.44E-03	1.87E-03	1.49E-03	1.53E-03	1.62E-03	8.64E-03	No	No	
Barium	25	1.81E-02	1.03E-02	8.45E-03	6.92E-03	9.85E-03	1.46E-02	1.56E-02	6.57E-03	5.24E-03	5.40E-03	5.72E-03	3.04E-02	No	No	
Beryllium	0.025	3.38E-05	1.91E-05	1.57E-05	1.29E-05	1.83E-05	2.72E-05	2.91E-05	1.22E-05	9.75E-06	1.00E-05	1.06E-05	5.66E-05	No	No	
Bismuth	6.3	9.28E-06	5.26E-06	4.32E-06	3.54E-06	5.04E-06	7.47E-06	7.99E-06	3.36E-06	2.68E-06	2.76E-06	2.92E-06	1.56E-05	No	No	
Cadmium	0.03	2.10E-03	1.00E-03	8.21E-04	7.87E-04	1.14E-03	1.72E-03	5.07E-03	1.97E-03	6.50E-04	6.80E-04	7.11E-04	8.40E-03	No	No	
Calcium	NV	1.83E+00	1.04E+00	8.54E-01	7.00E-01	9.95E-01	1.48E+00	1.58E+00	6.64E-01	5.29E-01	5.46E-01	5.78E-01	3.07E+00	No	No	
Chromium	1.3	8.06E-03	4.54E-03	3.73E-03	3.07E-03	4.38E-03	6.50E-03	7.49E-03	3.12E-03	2.33E-03	2.41E-03	2.55E-03	1.43E-02	No	No	
Cobalt	0.25	1.24E-03	7.05E-04	5.79E-04	4.74E-04	6.75E-04	1.00E-03	1.07E-03	4.50E-04	3.59E-04	3.70E-04	3.92E-04	2.08E-03	No	No	
Copper	83	3.29E-03	1.86E-03	1.53E-03	1.25E-03	1.78E-03	2.65E-03	2.83E-03	1.19E-03	9.49E-04	9.78E-04	1.04E-03	5.51E-03	No	No	
Gold	3.1	3.59E-06	2.04E-06	1.67E-06	1.37E-06	1.95E-06	2.89E-06	3.09E-06	1.30E-06	1.04E-06	1.07E-06	1.13E-06	6.02E-06	No	No	
Iron	8.3	3.53E+00	2.00E+00	1.64E+00	1.35E+00	1.91E+00	2.84E+00	3.04E+00	1.28E+00	1.02E+00	1.05E+00	1.11E+00	5.91E+00	No	No	
Lead	1.2	9.02E-04	4.80E-04	3.94E-04	3.42E-04	4.89E-04	7.31E-04	1.32E-03	5.28E-04	2.68E-04	2.78E-04	2.92E-04	2.33E-03	No	No	
Lithium	50	1.50E-03	8.50E-04	6.98E-04	5.72E-04	8.14E-04	1.21E-03	1.29E-03	5.43E-04	4.33E-04	4.46E-04	4.73E-04	2.52E-03	No	No	
Magnesium	167	9.73E-01	5.52E-01	4.53E-01	3.71E-01	5.28E-01	7.83E-01	8.38E-01	3.52E-01	2.81E-01	2.89E-01	3.07E-01	1.63E+00	No	No	
Manganese	1	3.66E-02	2.07E-02	1.70E-02	1.39E-02	1.98E-02	2.94E-02	3.15E-02	1.32E-02	1.06E-02	1.09E-02	1.15E-02	6.13E-02	No	No	
Molybdenum	83	5.57E-05	3.16E-05	2.59E-05	2.12E-05	3.02E-05	4.48E-05	4.80E-05	2.02E-05	1.61E-05	1.66E-05	1.75E-05	9.33E-05	No	No	
Nickel	0.2	3.22E-03	1.83E-03	1.50E-03	1.23E-03	1.75E-03	2.60E-03	2.78E-03	1.17E-03	9.31E-04	9.60E-04	1.02E-03	5.41E-03	No	No	
Potassium	67	6.15E-01	3.49E-01	2.87E-01	2.35E-01	3.34E-01	4.95E-01	5.30E-01	2.23E-01	1.78E-01	1.83E-01	1.94E-01	1.03E+00	No	No	
Selenium	17	5.55E-05	3.15E-05	2.59E-05	2.12E-05	3.01E-05	4.47E-05	4.78E-05	2.01E-05	1.60E-05	1.65E-05	1.75E-05	9.31E-05	No	No	
Silver	2.5	1.37E-05	7.75E-06	6.36E-06	5.21E-06	7.42E-06	1.10E-05	1.18E-05	4.95E-06	3.94E-06	4.07E-06	4.31E-06	2.29E-05	No	No	
Sodium	NV	7.35E-01	4.17E-01	3.42E-01	2.80E-01	3.99E-01	5.92E-01	6.33E-01	2.66E-01	2.12E-01	2.19E-01	2.32E-01	1.23E+00	No	No	
Strontium	83	9.82E-03	5.57E-03	4.57E-03	3.75E-03	5.33E-03	7.91E-03	8.46E-03	3.56E-03	2.84E-03	2.92E-03	3.10E-03	1.65E-02	No	No	
Thallium	1.3	1.42E-05	8.04E-06	6.60E-06	5.41E-06	7.70E-06	1.14E-05	1.22E-05	5.14E-06	4.09E-06	4.22E-06	4.47E-06	2.38E-05	No	No	
Tin	25	5.00E-05	2.84E-05	2.33E-05	1.91E-05	2.71E-05	4.03E-05	4.31E-05	1.81E-05	1.44E-05	1.49E-05	1.58E-05	8.39E-05	No	No	
Titanium	83	1.62E-01	9.17E-02	7.53E-02	6.17E-02	8.78E-02	1.30E-01	1.39E-01	5.86E-02	4.67E-02	4.81E-02	5.10E-02	2.71E-01	No	No	
Uranium	0.38	4.51E-05	2.56E-05	2.10E-05	1.72E-05	2.45E-05	3.63E-05	3.89E-05	1.63E-05	1.30E-05	1.34E-05	1.42E-05	7.57E-05	No	No	
Vanadium	0.8	5.95E-03	3.37E-03	2.77E-03	2.27E-03	3.23E-03	4.79E-03	5.12E-03	2.15E-03	1.72E-03	1.77E-03	1.87E-03	9.97E-03	No	No	
Yttrium	33	4.39E-04	2.49E-04	2.04E-04	1.67E-04	2.38E-04	3.53E-04	3.78E-04	1.59E-04	1.27E-04	1.31E-04	1.38E-04	7.36E-04	No	No	
Zinc	83	7.07E-03	3.79E-03	3.11E-03	2.68E-03	3.84E-03	5.73E-03	9.91E-03	3.97E-03	2.09E-03	2.17E-03	2.29E-03	1.76E-02	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	3.82E-06	1.82E-06	1.49E-06	1.44E-06	2.07E-06	3.13E-06	9.29E-06	3.60E-06	1.19E-06	1.24E-06	1.30E-06	1.54E-05	No	No	
naphthalene	50	1.51E-03	7.21E-04	5.91E-04	5.68E-04	8.19E-04	1.24E-03	3.67E-03	1.43E-03	4.69E-04	4.91E-04	5.13E-04	6.08E-03	No	No	
phenanthrene	2	1.25E-04	5.95E-05	4.89E-05	4.69E-05	6.77E-05	1.02E-04	3.04E-04	1.18E-04	3.87E-05	4.05E-05	4.24E-05	5.02E-04	No	No	
anthracene	3	1.39E-05	6.64E-06	5.45E-06	5.23E-06	7.55E-06	1.14E-05	3.39E-05	1.31E-05	4.32E-06	4.52E-06	4.73E-06	5.60E-05	No	No	
fluorene	33	6.10E-05	2.90E-05	2.38E-05	2.29E-05	3.30E-05	5.00E-05	1.48E-04	5.75E-05	1.89E-05	1.98E-05	2.07E-05	2.45E-04	No	No	
pyrene	2	4.57E-05	2.18E-05	1.78E-05	1.71E-05	2.47E-05	3.74E-05	1.11E-04	4.31E-05	1.42E-05	1.48E-05	1.55E-05	1.84E-04	No	No	
thiophenes	83	7.92E-07	3.77E-07	3.10E-07	2.97E-07	4.29E-07	6.49E-07	1.92E-06	7.47E-07	2.46E-07	2.57E-07	2.69E-07	3.18E-06	No	No	
benz(a)anthracene	2	1.81E-06	8.64E-07	7.09E-07	6.81E-07	9.82E-07	1.49E-06	4.41E-06	1.71E-06	5.62E-07	5.88E-07	6.15E-07	7.29E-06	No	No	
acenaphthene	333	1.17E-05	5.60E-06	4.59E-06	4.41E-06	6.36E-06	9.63E-06	2.85E-05	1.11E-05	3.64E-06	3.81E-06	3.98E-06	4.72E-05	No	No	
acenaphthylene	333	4.27E-05	2.03E-05	1.67E-05	1.60E-05	2.31E-05	3.50E-05	1.04E-04	4.02E-05	1.32E-05	1.38E-05	1.45E-05	1.71E-04	No	No	
fluoranthene	2	4.54E-05	2.16E-05	1.78E-05	1.70E-05	2.46E-05	3.72E-05	1.10E-04	4.28E-05	1.41E-05	1.47E-05	1.54E-05	1.82E-04	No	No	
benzo(b)fluoranthene	2	8.43E-06	4.02E-06	3.30E-06	3.17E-06	4.57E-06	6.91E-06	2.05E-05	7.95E-06	2.61E-06	2.73E-06	2.86E-06	3.39E-05	No	No	
benzo(g,h,i)perylene	NV	1.60E-07	7.63E-08	6.26E-08	6.01E-08	8.67E-08	1.31E-07	3.89E-07	1.51E-07	4.97E-08	5.19E-08	5.43E-08	6.44E-07	No	No	
benzo(k)fluoranthene	2	9.59E-07	4.57E-07	3.75E-07	3.60E-07	5.19E-07	7.86E-07	2.33E-06	9.04E-07	2.97E-07	3.11E-07	3.25E-07	3.85E-06	No	No	
chrysene	2	2.04E-06	9.72E-07	7.97E-07	7.66E-07	1.10E-06	1.67E-06	4.95E-06	1.92E-06	6.32E-07	6.61E-07	6.92E-07	8.20E-06	No	No	
dibenzo(a,h)anthracene	2	2.65E-06	1.26E-06	1.04E-06	9.96E-07	1.44E-06	2.18E-06	6.45E-06	2.50E-06	8.23E-07	8.60E-07	9.00E-07	1.07E-05	No	No	
indeno(1,2,3-cd)pyrene	2	1.69E-06	8.04E-07	6.59E-07	6.33E-07	9.14E-07	1.38E-06	4.10E-06	1.59E-06	5.23E-07	5.47E-07	5.72E-07	6.78E-06	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	1.93E-02	9.27E-03	7.56E-03	7.31E-03	1.06E-02	1.60E-02	4.79E-02	1.82E-02	1.20E-02	1.20E-02	1.27E-02	7.93E-02	No	No	
acetaldehyde	470	2.60E+00	1.25E+00	1.02E+00	9.85E-01	1.43E+00	2.15E+00	6.46E+00	2.46E+00	1.62E+00	1.62E+00	1.71E+00	1.07E+01	No	No	
acetone	19665	1.37E+00	6.58E-01	5.37E-01	5.19E-01	7.53E-01	1.13E+00	3.40E+00	1.29E+00	8.53E-01	8.52E-01	8.99E-01	5.63E+00	No	No	
acrolein	2.5	4.61E-01	2.21E-01	1.81E-01	1.74E-01	2.53E-01	3.81E-01	1.14E+00	4.35E-01	2.87E-01	2.87E-01	3.02E-01	1.89E+00	No	No	
aldehyde	10	3.48E+00	1.67E+00	1.36E+00	1.32E+00	1.91E+00	2.88E+00	8.63E+00	3.29E+00	2.17E+00	2.17E+00	2.29E+00	<b>1.43E+01</b>	Yes	Yes	
benzene	27	1.71E-01	8.19E-02	6.68E-02	6.46E-02	9.37E-02	1.41E-01	4.23E-01	1.61E-01	1.06E-01	1.06E-01	1.12E-01	7.01E-01	No	No	
C10-C12 aliphatic	11666	3.75E-02	1.80E-02	1.47E-02	1.42E-02	2.06E-02	3.10E-02	9.30E-02	3.54E-02	2.33E-02	2.33E-02	2.46E-02	1.54E-01	No	No	
C12-C16 aliphatic	11666	2.17E-01	1.04E-01	8.50E-02	8.22E-02	1.19E-01	1.80E-01	5.38E-01	2.05E-01	1.35E-01	1.35E-01	1.42E-01	8.92E-01	No	No	
C12-C16 aromatic	4166	2.93E-03	1.41E-03	1.15E-03	1.11E-03	1.61E-03	2.42E-03	7.26E-03	2.77E-03	1.82E-03	1.82E-03	1.92E-03	1.20E-02	No	No	
C16-C21 aliphatic	333	2.17E-01	1.04E-01	8.51E-02	8.23E-02	1.19E-01	1.80E-01	5.39E-01	2.05E-01	1.35E-01	1.35E-01	1.43E-01	8.93E-01	No	No	
C2-C6 aliphatic	2100	1.03E+00	4.97E-01	4.05E-01	3.92E-01	5.68E-01	8.56E-01	2.57E+00	9.78E-01	6.44E-01	6.44E-01	6.79E-01	4.25E+00	No	No	
C6-C8 aliphatic	61800	7.08E-01	3.40E-01	2.77E-01	2.68E-01	3.89E-01	5.85E-01	1.75E+00	6.69E-01	4.41E-01	4.40E-01	4.64E-01	2.91E+00	No	No	
C8-C10 aliphatic	60000	9.97E-03	4.78E-03	3.90E-03	3.77E-03	5.47E-03	8.24E-03	2.47E-02	9.42E-03	6.21E-03	6.20E-03	6.54E-03	4.09E-02	No	No	
C8-C10 aromatic	4166	5.60E-02	2.69E-02	2.19E-02	2.12E-02	3.08E-02	4.63E-02	1.39E-01	5.29E-02	3.49E-02	3.49E-02	3.68E-02	2.30E-01	No	No	
ethylbenzene	21710	2.93E-02	1.41E-02	1.15E-02	1.11E-02	1.61E-02	2.42E-02	7.26E-02	2.77E-02	1.82E-02	1.82E-02	1.92E-02	1.20E-01	No	No	
ethylene	566610	5.33E-01	2.56E-01	2.09E-01	2.02E-01	2.93E-01	4.41E-01	1.32E+00	5.04E-01	3.32E-01	3.32E-01	3.50E-01	2.19E+00	No	No	
formaldehyde	49	1.39E+00	6.67E-01	5.44E-01	5.26E-01	7.63E-01	1.15E+00	3.44E+00	1.31E+00	8.65E-01	8.64E-01	9.12E-01	5.71E+00	No	No	
ketone	1167	7.85E-01	3.77E-01	3.07E-01	2.97E-01	4.31E-01	6.49E-01	1.95E+00	7.42E-01	4.89E-01	4.88E-01	5.15E-01	3.22E+00	No	No	
toluene	1000	2.48E-01	1.19E-01	9.71E-02	9.38E-02	1.36E-01	2.05E-01	6.15E-01	2.34E-01	1.54E-01	1.54E-01	1.63E-01	1.02E+00	No	No	
trimethylbenzene	4166	7.10E-02	3.41E-02	2.78E-02	2.69E-02	3.90E-02	5.87E-02	1.76E-01	6.71E-02	4.42E-02	4.42E-02	4.66E-02	2.92E-01	No	No	
xylene	8680	1.97E-01	9.45E-02	7.71E-02	7.45E-02	1.08E-01	1.63E-01	4.88E-01	1.86E-01	1.23E-01	1.22E-01	1.29E-01	8.09E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	NV	1.21E+02	4.03E+01	4.93E+01	5.08E+01	5.51E+01	7.85E+01	1.51E+02	1.37E+01	1.44E+01	1.00E+01	1.38E+01	1.25E+01	6.15E+01	3.59E+01	3.71E+01
DPM	10	<b>1.39E+01</b>	5.62E+00	4.96E+00	4.95E+00	5.81E+00	6.95E+00	7.81E+00	1.48E+00	1.63E+00	1.28E+00	1.49E+00	1.59E+00	7.40E+00	5.67E+00	5.34E+00
PM10	NV	6.54E+01	2.27E+01	2.64E+01	2.69E+01	2.87E+01	3.94E+01	7.69E+01	7.92E+00	8.80E+00	5.67E+00	7.93E+00	7.74E+00	3.23E+01	2.19E+01	2.19E+01
PM2.5	NV	2.86E+01	8.38E+00	1.01E+01	9.70E+00	1.10E+01	1.40E+01	1.76E+01	2.87E+00	3.80E+00	2.33E+00	2.87E+00	3.59E+00	1.49E+01	1.05E+01	9.62E+00
CO	15000	2.43E+02	1.05E+02	9.36E+01	9.38E+01	1.03E+02	1.26E+02	1.70E+02	3.07E+01	2.88E+01	2.30E+01	3.07E+01	2.94E+01	1.34E+02	1.07E+02	9.86E+01
<b>Metals</b>																
Aluminum	30	8.39E+00	2.79E+00	3.42E+00	3.52E+00	3.82E+00	5.44E+00	1.04E+01	9.53E-01	9.98E-01	6.96E-01	9.53E-01	8.64E-01	4.26E+00	2.49E+00	2.57E+00
Antimony	63	4.74E-04	1.58E-04	1.93E-04	1.99E-04	2.16E-04	3.07E-04	5.90E-04	5.38E-05	5.64E-05	3.93E-05	5.39E-05	4.88E-05	2.41E-04	1.40E-04	1.45E-04
Arsenic	0.2	1.34E-02	4.47E-03	5.48E-03	5.64E-03	6.12E-03	8.71E-03	1.67E-02	1.53E-03	1.60E-03	1.11E-03	1.53E-03	1.38E-03	6.82E-03	3.98E-03	4.12E-03
Barium	25	4.73E-02	1.58E-02	1.93E-02	1.99E-02	2.16E-02	3.07E-02	5.89E-02	5.37E-03	5.63E-03	3.93E-03	5.38E-03	4.87E-03	2.40E-02	1.40E-02	1.45E-02
Beryllium	0.025	8.81E-05	2.93E-05	3.59E-05	3.70E-05	4.01E-05	5.71E-05	1.10E-04	1.00E-05	1.05E-05	7.31E-06	1.00E-05	9.07E-06	4.47E-05	2.61E-05	2.70E-05
Bismuth	6.3	2.42E-05	8.06E-06	9.86E-06	1.02E-05	1.10E-05	1.57E-05	3.01E-05	2.75E-06	2.88E-06	2.01E-06	2.75E-06	2.49E-06	1.23E-05	7.17E-06	7.42E-06
Cadmium	0.03	8.37E-03	3.38E-03	2.99E-03	2.99E-03	3.50E-03	4.19E-03	4.73E-03	8.94E-04	9.83E-04	7.73E-04	8.96E-04	9.57E-04	4.46E-03	3.41E-03	3.22E-03
Calcium	NV	4.79E+00	1.59E+00	1.95E+00	2.01E+00	2.18E+00	3.10E+00	5.96E+00	5.43E-01	5.69E-01	3.97E-01	5.44E-01	4.92E-01	2.43E+00	1.42E+00	1.47E+00
Chromium	1.3	2.15E-02	7.26E-03	8.70E-03	8.94E-03	9.75E-03	1.37E-02	2.58E-02	2.43E-03	2.56E-03	1.80E-03	2.44E-03	2.23E-03	1.10E-02	6.53E-03	6.70E-03
Cobalt	0.25	3.24E-03	1.08E-03	1.32E-03	1.36E-03	1.48E-03	2.10E-03	4.04E-03	3.68E-04	3.86E-04	2.69E-04	3.69E-04	3.34E-04	1.65E-03	9.61E-04	9.94E-04
Copper	83	8.58E-03	2.86E-03	3.50E-03	3.60E-03	3.91E-03	5.56E-03	1.07E-02	9.74E-04	1.02E-03	7.12E-04	9.75E-04	8.83E-04	4.36E-03	2.54E-03	2.63E-03
Gold	3.1	9.37E-06	3.12E-06	3.82E-06	3.93E-06	4.27E-06	6.08E-06	1.17E-05	1.06E-06	1.12E-06	7.77E-07	1.07E-06	9.65E-07	4.76E-06	2.78E-06	2.87E-06
Iron	8.3	<b>9.20E+00</b>	3.06E+00	3.75E+00	3.86E+00	4.19E+00	5.96E+00	<b>1.15E+01</b>	1.04E+00	1.09E+00	7.63E-01	1.05E+00	9.47E-01	4.67E+00	2.73E+00	2.82E+00
Lead	1.2	2.83E-03	1.04E-03	1.09E-03	1.10E-03	1.24E-03	1.63E-03	2.58E-03	3.13E-04	3.35E-04	2.48E-04	3.13E-04	3.08E-04	1.47E-03	9.96E-04	9.77E-04
Lithium	50	3.91E-03	1.30E-03	1.59E-03	1.64E-03	1.78E-03	2.54E-03	4.87E-03	4.44E-04	4.66E-04	3.25E-04	4.45E-04	4.03E-04	1.99E-03	1.16E-03	1.20E-03
Magnesium	167	2.54E+00	8.45E-01	1.03E+00	1.06E+00	1.16E+00	1.65E+00	3.16E+00	2.88E-01	3.02E-01	2.10E-01	2.88E-01	2.61E-01	1.29E+00	7.52E-01	7.78E-01
Manganese	1	9.54E-02	3.17E-02	3.89E-02	4.00E-02	4.35E-02	6.18E-02	1.19E-01	1.08E-02	1.13E-02	7.91E-03	1.08E-02	9.82E-03	4.84E-02	2.83E-02	2.92E-02
Molybdenum	83	1.45E-04	4.83E-05	5.92E-05	6.09E-05	6.62E-05	9.41E-05	1.81E-04	1.65E-05	1.73E-05	1.20E-05	1.65E-05	1.49E-05	7.37E-05	4.30E-05	4.45E-05
Nickel	0.2	8.42E-03	2.80E-03	3.43E-03	3.53E-03	3.83E-03	5.45E-03	1.05E-02	9.55E-04	1.00E-03	6.98E-04	9.56E-04	8.66E-04	4.27E-03	2.49E-03	2.58E-03
Potassium	67	1.61E+00	5.34E-01	6.54E-01	6.74E-01	7.31E-01	1.04E+00	2.00E+00	1.82E-01	1.91E-01	1.33E-01	1.82E-01	1.65E-01	8.15E-01	4.76E-01	4.92E-01
Selenium	17	1.45E-04	4.82E-05	5.90E-05	6.08E-05	6.60E-05	9.39E-05	1.80E-04	1.64E-05	1.72E-05	1.20E-05	1.65E-05	1.49E-05	7.36E-05	4.29E-05	4.44E-05
Silver	2.5	3.57E-05	1.19E-05	1.45E-05	1.50E-05	1.62E-05	2.31E-05	4.44E-05	4.05E-06	4.24E-06	2.96E-06	4.05E-06	3.67E-06	1.81E-05	1.06E-05	1.09E-05
Sodium	NV	1.92E+00	6.38E-01	7.82E-01	8.05E-01	8.74E-01	1.24E+00	2.39E+00	2.18E-01	2.28E-01	1.59E-01	2.18E-01	1.97E-01	9.74E-01	5.68E-01	5.88E-01
Strontium	83	2.56E-02	8.53E-03	1.04E-02	1.08E-02	1.17E-02	1.66E-02	3.19E-02	2.91E-03	3.05E-03	2.13E-03	2.91E-03	2.64E-03	1.30E-02	7.59E-03	7.85E-03
Thallium	1.3	3.70E-05	1.23E-05	1.51E-05	1.55E-05	1.69E-05	2.40E-05	4.61E-05	4.20E-06	4.40E-06	3.07E-06	4.21E-06	3.81E-06	1.88E-05	1.10E-05	1.13E-05
Tin	25	1.31E-04	4.34E-05	5.32E-05	5.47E-05	5.94E-05	8.46E-05	1.62E-04	1.48E-05	1.55E-05	1.08E-05	1.48E-05	1.34E-05	6.62E-05	3.87E-05	4.00E-05
Titanium	83	4.22E-01	1.40E-01	1.72E-01	1.77E-01	1.92E-01	2.74E-01	5.25E-01	4.79E-02	5.02E-02	3.50E-02	4.79E-02	4.34E-02	2.14E-01	1.25E-01	1.29E-01
Uranium	0.38	1.18E-04	3.92E-05	4.80E-05	4.94E-05	5.36E-05	7.63E-05	1.47E-04	1.34E-05	1.40E-05	9.77E-06	1.34E-05	1.21E-05	5.98E-05	3.49E-05	3.61E-05
Vanadium	0.8	1.55E-02	5.16E-03	6.32E-03	6.51E-03	7.07E-03	1.01E-02	1.93E-02	1.76E-03	1.85E-03	1.29E-03	1.76E-03	1.60E-03	7.88E-03	4.60E-03	4.75E-03
Yttrium	33	1.15E-03	3.81E-04	4.67E-04	4.80E-04	5.22E-04	7.42E-04	1.43E-03	1.30E-04	1.36E-04	9.50E-05	1.30E-04	1.18E-04	5.81E-04	3.39E-04	3.51E-04
Zinc	83	2.18E-02	7.97E-03	8.41E-03	8.55E-03	9.58E-03	1.27E-02	2.06E-02	2.41E-03	2.58E-03	1.90E-03	2.42E-03	2.36E-03	1.13E-02	7.56E-03	7.45E-03
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.53E-05	6.19E-06	5.46E-06	5.45E-06	6.39E-06	7.65E-06	8.59E-06	1.63E-06	1.80E-06	1.41E-06	1.64E-06	1.75E-06	8.14E-06	6.24E-06	5.88E-06
naphthalene	50	6.05E-03	2.45E-03	2.16E-03	2.16E-03	2.53E-03	3.03E-03	3.40E-03	6.46E-04	7.11E-04	5.59E-04	6.48E-04	6.93E-04	3.22E-03	2.47E-03	2.33E-03
phenanthrene	2	5.00E-04	2.02E-04	1.79E-04	1.78E-04	2.09E-04	2.50E-04	2.81E-04	5.34E-05	5.87E-05	4.62E-05	5.35E-05	5.72E-05	2.66E-04	2.04E-04	1.92E-04
anthracene	3	5.57E-05	2.26E-05	1.99E-05	1.99E-05	2.33E-05	2.79E-05	3.13E-05	5.95E-06	6.55E-06	5.15E-06	5.97E-06	6.38E-06	2.97E-05	2.28E-05	2.14E-05
fluorene	33	2.44E-04	9.86E-05	8.71E-05	8.69E-05	1.02E-04	1.22E-04	1.37E-04	2.60E-05	2.86E-05	2.25E-05	2.61E-05	2.79E-05	1.30E-04	9.96E-05	9.38E-05
pyrene	2	1.83E-04	7.39E-05	6.52E-05	6.51E-05	7.64E-05	9.14E-05	1.03E-04	1.95E-05	2.14E-05	1.69E-05	1.95E-05	2.09E-05	9.73E-05	7.46E-05	7.02E-05
thiophenes	83	3.17E-06	1.28E-06	1.13E-06	1.13E-06	1.32E-06	1.59E-06	1.78E-06	3.38E-07	3.72E-07	2.93E-07	3.39E-07	3.63E-07	1.69E-06	1.29E-06	1.22E-06
benz(a)anthracene	2	7.25E-06	2.93E-06	2.59E-06	2.59E-06	3.03E-06	3.63E-06	4.08E-06	7.75E-07	8.52E-07	6.70E-07	7.77E-07	8.30E-07	3.86E-06	2.96E-06	2.79E-06
acenaphthene	333	4.70E-05	1.90E-05	1.68E-05	1.68E-05	1.96E-05	2.35E-05	2.64E-05	5.02E-06	5.52E-06	4.34E-06	5.03E-06	5.38E-06	2.50E-05	1.92E-05	1.81E-05
acenaphthylene	333	1.71E-04	6.90E-05	6.10E-05	6.08E-05	7.14E-05	8.54E-05	9.59E-05	1.82E-05	2.00E-05	1.58E-05	1.83E-05	1.95E-05	9.09E-05	6.97E-05	6.56E-05
fluoranthene	2	1.82E-04	7.35E-05	6.49E-05	6.47E-05	7.59E-05	9.09E-05	1.02E-04	1.94E-05	2.13E-05	1.68E-05	1.94E-05	2.08E-05	9.67E-05	7.42E-05	6.98E-05
benzo(b)fluoranthene	2	3.37E-05	1.36E-05	1.20E-05	1.20E-05	1.41E-05	1.69E-05	1.89E-05	3.60E-06	3.96E-06	3.12E-06	3.61E-06	3.86E-06	1.80E-05	1.38E-05	1.30E-05
benzo(g,h,i)perylene	NV	6.40E-07	2.59E-07	2.29E-07	2.28E-07	2.68E-07	3.21E-07	3.60E-07	6.84E-08	7.52E-08	5.92E-08	6.86E-08	7.33E-08	3.41E-07	2.62E-07	2.46E-07
benzo(k)fluoranthene	2	3.83E-06	1.55E-06	1.37E-06	1.37E-06	1.60E-06	1.92E-06	2.16E-06	4.09E-07	4.50E-07	3.54E-07	4.10E-07	4.39E-07	2.04E-06	1.57E-06	1.47E-06
chrysene	2	8.15E-06	3.30E-06	2.91E-06	2.91E-06	3.41E-06	4.08E-06	4.58E-06	8.71E-07	9.58E-07	7.54E-07	8.73E-07	9.33E-07			

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	7.89E-02	3.23E-02	2.87E-02	2.87E-02	3.25E-02	4.15E-02	4.64E-02	9.47E-03	8.88E-03	7.32E-03	9.47E-03	8.99E-03	4.26E-02	3.20E-02	3.01E-02
acetaldehyde	470	1.06E+01	4.35E+00	3.87E+00	3.86E+00	4.38E+00	5.59E+00	6.26E+00	1.28E+00	1.20E+00	9.87E-01	1.28E+00	1.21E+00	5.74E+00	4.32E+00	4.07E+00
acetone	19665	5.60E+00	2.29E+00	2.04E+00	2.03E+00	2.31E+00	2.94E+00	3.29E+00	6.72E-01	6.30E-01	5.20E-01	6.72E-01	6.38E-01	3.02E+00	2.27E+00	2.14E+00
acrolein	2.5	1.88E+00	7.71E-01	6.86E-01	6.84E-01	7.76E-01	9.90E-01	1.11E+00	2.26E-01	2.12E-01	1.75E-01	2.26E-01	2.15E-01	1.02E+00	7.65E-01	7.20E-01
aldehyde	10	<b>1.42E+01</b>	5.82E+00	5.18E+00	5.17E+00	5.86E+00	7.48E+00	8.37E+00	1.71E+00	1.60E+00	1.32E+00	1.71E+00	1.62E+00	7.67E+00	5.78E+00	5.44E+00
benzene	27	6.97E-01	2.85E-01	2.54E-01	2.53E-01	2.87E-01	3.67E-01	4.10E-01	8.37E-02	7.85E-02	6.47E-02	8.37E-02	7.95E-02	3.76E-01	2.83E-01	2.66E-01
C10-C12 aliphatic	11666	1.53E-01	6.27E-02	5.58E-02	5.56E-02	6.31E-02	8.05E-02	9.01E-02	1.84E-02	1.72E-02	1.42E-02	1.84E-02	1.75E-02	8.26E-02	6.22E-02	5.85E-02
C12-C16 aliphatic	11666	8.87E-01	3.63E-01	3.23E-01	3.22E-01	3.66E-01	4.66E-01	5.22E-01	1.06E-01	9.98E-02	8.23E-02	1.06E-01	1.01E-01	4.78E-01	3.60E-01	3.39E-01
C12-C16 aromatic	4166	1.20E-02	4.89E-03	4.35E-03	4.34E-03	4.93E-03	6.29E-03	7.03E-03	1.44E-03	1.35E-03	1.11E-03	1.44E-03	1.36E-03	6.45E-03	4.86E-03	4.57E-03
C16-C21 aliphatic	333	8.88E-01	3.63E-01	3.23E-01	3.23E-01	3.66E-01	4.67E-01	5.22E-01	1.07E-01	9.99E-02	8.24E-02	1.07E-01	1.01E-01	4.79E-01	3.61E-01	3.39E-01
C2-C6 aliphatic	2100	4.23E+00	1.73E+00	1.54E+00	1.54E+00	1.74E+00	2.22E+00	2.49E+00	5.07E-01	4.76E-01	3.92E-01	5.08E-01	4.82E-01	2.28E+00	1.72E+00	1.62E+00
C6-C8 aliphatic	61800	2.89E+00	1.18E+00	1.05E+00	1.05E+00	1.19E+00	1.52E+00	1.70E+00	3.47E-01	3.25E-01	2.68E-01	3.47E-01	3.30E-01	1.56E+00	1.17E+00	1.10E+00
C8-C10 aliphatic	60000	4.07E-02	1.67E-02	1.48E-02	1.48E-02	1.68E-02	2.14E-02	2.39E-02	4.89E-03	4.58E-03	3.78E-03	4.89E-03	4.64E-03	2.20E-02	1.65E-02	1.56E-02
C8-C10 aromatic	4166	2.29E-01	9.37E-02	8.33E-02	8.31E-02	9.43E-02	1.20E-01	1.35E-01	2.75E-02	2.58E-02	2.12E-02	2.75E-02	2.61E-02	1.23E-01	9.30E-02	8.75E-02
ethylbenzene	21710	1.20E-01	4.89E-02	4.35E-02	4.34E-02	4.93E-02	6.29E-02	7.03E-02	1.44E-02	1.35E-02	1.11E-02	1.44E-02	1.36E-02	6.45E-02	4.86E-02	4.57E-02
ethylene	566610	2.18E+00	8.91E-01	7.93E-01	7.91E-01	8.98E-01	1.15E+00	1.28E+00	2.61E-01	2.45E-01	2.02E-01	2.62E-01	2.48E-01	1.18E+00	8.85E-01	8.32E-01
formaldehyde	49	5.68E+00	2.32E+00	2.07E+00	2.06E+00	2.34E+00	2.98E+00	3.34E+00	6.81E-01	6.39E-01	5.27E-01	6.81E-01	6.47E-01	3.06E+00	2.30E+00	2.17E+00
ketone	1167	3.21E+00	1.31E+00	1.17E+00	1.16E+00	1.32E+00	1.69E+00	1.89E+00	3.85E-01	3.61E-01	2.98E-01	3.85E-01	3.66E-01	1.73E+00	1.30E+00	1.23E+00
toluene	1000	1.01E+00	4.14E-01	3.69E-01	3.68E-01	4.17E-01	5.32E-01	5.96E-01	1.22E-01	1.14E-01	9.40E-02	1.22E-01	1.15E-01	5.46E-01	4.11E-01	3.87E-01
trimethylbenzene	4166	2.90E-01	1.19E-01	1.06E-01	1.05E-01	1.20E-01	1.53E-01	1.71E-01	3.48E-02	3.26E-02	2.69E-02	3.48E-02	3.31E-02	1.57E-01	1.18E-01	1.11E-01
xylene	8680	8.04E-01	3.29E-01	2.93E-01	2.92E-01	3.31E-01	4.23E-01	4.73E-01	9.65E-02	9.05E-02	7.46E-02	9.66E-02	9.17E-02	4.34E-01	3.27E-01	3.07E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	NV	9.29E+00	6.96E+00	6.20E+00	5.81E+00	7.58E+00	9.49E+00	6.75E+01	2.86E+01	1.01E+01	1.05E+01	1.12E+01	1.51E+02	No	No	
DPM	10	1.96E+00	1.38E+00	1.24E+00	1.04E+00	1.46E+00	1.55E+00	<b>1.08E+01</b>	4.26E+00	1.34E+00	1.43E+00	1.49E+00	<b>1.39E+01</b>	Yes	Yes	
PM10	NV	5.90E+00	4.55E+00	4.07E+00	3.37E+00	4.92E+00	5.54E+00	3.79E+01	1.61E+01	5.51E+00	5.78E+00	6.10E+00	7.69E+01	No	No	
PM2.5	NV	3.01E+00	2.47E+00	2.23E+00	1.86E+00	2.63E+00	2.76E+00	1.85E+01	6.95E+00	2.57E+00	2.67E+00	2.82E+00	2.86E+01	No	No	
CO	15000	3.56E+01	2.54E+01	2.29E+01	1.92E+01	2.70E+01	2.81E+01	2.01E+02	7.91E+01	4.44E+01	4.57E+01	4.59E+01	2.43E+02	No	No	
<b>Metals</b>																
Aluminum	30	6.44E-01	4.83E-01	4.30E-01	4.03E-01	5.26E-01	6.58E-01	4.68E+00	1.98E+00	7.03E-01	7.30E-01	7.77E-01	1.04E+01	No	No	
Antimony	63	3.64E-05	2.72E-05	2.43E-05	2.28E-05	2.97E-05	3.71E-05	2.64E-04	1.12E-04	3.97E-05	4.12E-05	4.39E-05	5.90E-04	No	No	
Arsenic	0.2	1.03E-03	7.73E-04	6.89E-04	6.46E-04	8.42E-04	1.05E-03	7.49E-03	3.18E-03	1.13E-03	1.17E-03	1.24E-03	1.67E-02	No	No	
Barium	25	3.63E-03	2.72E-03	2.42E-03	2.27E-03	2.97E-03	3.71E-03	2.64E-02	1.12E-02	3.97E-03	4.12E-03	4.38E-03	5.89E-02	No	No	
Beryllium	0.025	6.76E-06	5.06E-06	4.51E-06	4.23E-06	5.52E-06	6.91E-06	4.91E-05	2.08E-05	7.38E-06	7.66E-06	8.16E-06	1.10E-04	No	No	
Bismuth	6.3	1.86E-06	1.39E-06	1.24E-06	1.16E-06	1.52E-06	1.90E-06	1.35E-05	5.72E-06	2.03E-06	2.11E-06	2.24E-06	3.01E-05	No	No	
Cadmium	0.03	1.18E-03	8.28E-04	7.48E-04	6.28E-04	8.79E-04	9.33E-04	6.49E-03	2.56E-03	8.08E-04	8.59E-04	8.99E-04	8.37E-03	No	No	
Calcium	NV	3.67E-01	2.75E-01	2.45E-01	2.30E-01	3.00E-01	3.75E-01	2.67E+00	1.13E+00	4.01E-01	4.16E-01	4.43E-01	5.96E+00	No	No	
Chromium	1.3	1.74E-03	1.29E-03	1.16E-03	1.07E-03	1.41E-03	1.73E-03	1.23E-02	5.18E-03	1.82E-03	1.89E-03	2.01E-03	2.58E-02	No	No	
Cobalt	0.25	2.49E-04	1.86E-04	1.66E-04	1.56E-04	2.03E-04	2.54E-04	1.81E-03	7.66E-04	2.72E-04	2.82E-04	3.00E-04	4.04E-03	No	No	
Copper	83	6.58E-04	4.93E-04	4.39E-04	4.12E-04	5.37E-04	6.72E-04	4.78E-03	2.03E-03	7.19E-04	7.46E-04	7.94E-04	1.07E-02	No	No	
Gold	3.1	7.19E-07	5.39E-07	4.80E-07	4.50E-07	5.87E-07	7.35E-07	5.23E-06	2.21E-06	7.85E-07	8.15E-07	8.68E-07	1.17E-05	No	No	
Iron	8.3	7.06E-01	5.29E-01	4.71E-01	4.42E-01	5.76E-01	7.21E-01	5.13E+00	2.17E+00	7.71E-01	8.00E-01	8.52E-01	<b>1.15E+01</b>	Yes	No*	
Lead	1.2	3.07E-04	2.21E-04	1.98E-04	1.74E-04	2.37E-04	2.68E-04	1.88E-03	7.68E-04	2.55E-04	2.68E-04	2.83E-04	2.83E-03	No	No	
Lithium	50	3.00E-04	2.25E-04	2.00E-04	1.88E-04	2.45E-04	3.07E-04	2.18E-03	9.25E-04	3.28E-04	3.40E-04	3.62E-04	4.87E-03	No	No	
Magnesium	167	1.95E-01	1.46E-01	1.30E-01	1.22E-01	1.59E-01	1.99E-01	1.41E+00	6.00E-01	2.13E-01	2.21E-01	2.35E-01	3.16E+00	No	No	
Manganese	1	7.32E-03	5.48E-03	4.89E-03	4.58E-03	5.98E-03	7.48E-03	5.32E-02	2.25E-02	7.99E-03	8.30E-03	8.83E-03	1.19E-01	No	No	
Molybdenum	83	1.11E-05	8.35E-06	7.44E-06	6.98E-06	9.10E-06	1.14E-05	8.10E-05	3.43E-05	1.22E-05	1.26E-05	1.34E-05	1.81E-04	No	No	
Nickel	0.2	6.46E-04	4.84E-04	4.31E-04	4.04E-04	5.27E-04	6.60E-04	4.69E-03	1.99E-03	7.05E-04	7.32E-04	7.79E-04	1.05E-02	No	No	
Potassium	67	1.23E-01	9.23E-02	8.23E-02	7.71E-02	1.01E-01	1.26E-01	8.95E-01	3.79E-01	1.35E-01	1.40E-01	1.49E-01	2.00E+00	No	No	
Selenium	17	1.11E-05	8.33E-06	7.42E-06	6.96E-06	9.08E-06	1.14E-05	8.08E-05	3.42E-05	1.21E-05	1.26E-05	1.34E-05	1.80E-04	No	No	
Silver	2.5	2.73E-06	2.05E-06	1.83E-06	1.71E-06	2.23E-06	2.79E-06	1.99E-05	8.42E-06	2.99E-06	3.10E-06	3.30E-06	4.44E-05	No	No	
Sodium	NV	1.47E-01	1.10E-01	9.83E-02	9.21E-02	1.20E-01	1.50E-01	1.07E+00	4.53E-01	1.61E-01	1.67E-01	1.78E-01	2.39E+00	No	No	
Strontium	83	1.97E-03	1.47E-03	1.31E-03	1.23E-03	1.61E-03	2.01E-03	1.43E-02	6.06E-03	2.15E-03	2.23E-03	2.37E-03	3.19E-02	No	No	
Thallium	1.3	2.84E-06	2.13E-06	1.90E-06	1.78E-06	2.32E-06	2.90E-06	2.06E-05	8.74E-06	3.10E-06	3.22E-06	3.43E-06	4.61E-05	No	No	
Tin	25	1.00E-05	7.50E-06	6.68E-06	6.27E-06	8.17E-06	1.02E-05	7.27E-05	3.08E-05	1.09E-05	1.13E-05	1.21E-05	1.62E-04	No	No	
Titanium	83	3.24E-02	2.43E-02	2.16E-02	2.03E-02	2.64E-02	3.31E-02	2.35E-01	9.97E-02	3.54E-02	3.67E-02	3.91E-02	5.25E-01	No	No	
Uranium	0.38	9.03E-06	6.77E-06	6.03E-06	5.66E-06	7.38E-06	9.23E-06	6.56E-05	2.78E-05	9.87E-06	1.02E-05	1.09E-05	1.47E-04	No	No	
Vanadium	0.8	1.19E-03	8.92E-04	7.95E-04	7.45E-04	9.72E-04	1.22E-03	8.65E-03	3.67E-03	1.30E-03	1.35E-03	1.44E-03	1.93E-02	No	No	
Yttrium	33	8.79E-05	6.58E-05	5.87E-05	5.50E-05	7.18E-05	8.98E-05	6.39E-04	2.71E-04	9.60E-05	9.96E-05	1.06E-04	1.43E-03	No	No	
Zinc	83	2.30E-03	1.66E-03	1.49E-03	1.31E-03	1.78E-03	2.04E-03	1.43E-02	5.85E-03	1.95E-03	2.05E-03	2.17E-03	2.18E-02	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	2.16E-06	1.52E-06	1.37E-06	1.15E-06	1.61E-06	1.71E-06	1.19E-05	4.69E-06	1.48E-06	1.57E-06	1.64E-06	1.53E-05	No	No	
naphthalene	50	8.55E-04	6.00E-04	5.42E-04	4.54E-04	6.36E-04	6.75E-04	4.70E-03	1.86E-03	5.85E-04	6.21E-04	6.50E-04	6.05E-03	No	No	
phenanthrene	2	7.06E-05	4.95E-05	4.48E-05	3.75E-05	5.26E-05	5.58E-05	3.88E-04	1.53E-04	4.83E-05	5.13E-05	5.37E-05	5.00E-04	No	No	
anthracene	3	7.88E-06	5.53E-06	4.99E-06	4.19E-06	5.86E-06	6.22E-06	4.33E-05	1.71E-05	5.39E-06	5.73E-06	5.99E-06	5.57E-05	No	No	
fluorene	33	3.45E-05	2.42E-05	2.18E-05	1.83E-05	2.56E-05	2.72E-05	1.89E-04	7.48E-05	2.36E-05	2.50E-05	2.62E-05	2.44E-04	No	No	
pyrene	2	2.58E-05	1.81E-05	1.64E-05	1.37E-05	1.92E-05	2.04E-05	1.42E-04	5.60E-05	1.76E-05	1.88E-05	1.96E-05	1.83E-04	No	No	
thiophenes	83	4.48E-07	3.14E-07	2.84E-07	2.38E-07	3.33E-07	3.54E-07	2.46E-06	9.72E-07	3.06E-07	3.25E-07	3.40E-07	3.17E-06	No	No	
benz(a)anthracene	2	1.03E-06	7.19E-07	6.50E-07	5.45E-07	7.63E-07	8.10E-07	5.63E-06	2.23E-06	7.01E-07	7.45E-07	7.80E-07	7.25E-06	No	No	
acenaphthene	333	6.64E-06	4.66E-06	4.21E-06	3.53E-06	4.94E-06	5.25E-06	3.65E-05	1.44E-05	4.54E-06	4.83E-06	5.05E-06	4.70E-05	No	No	
acenaphthylene	333	2.41E-05	1.69E-05	1.53E-05	1.28E-05	1.79E-05	1.91E-05	1.32E-04	5.23E-05	1.65E-05	1.75E-05	1.83E-05	1.71E-04	No	No	
fluoranthene	2	2.57E-05	1.80E-05	1.63E-05	1.36E-05	1.91E-05	2.03E-05	1.41E-04	5.57E-05	1.75E-05	1.86E-05	1.95E-05	1.82E-04	No	No	
benzo(b)fluoranthene	2	4.76E-06	3.34E-06	3.02E-06	2.53E-06	3.55E-06	3.76E-06	2.62E-05	1.03E-05	3.26E-06	3.46E-06	3.62E-06	3.37E-05	No	No	
benzo(g,h,i)perylene	NV	9.05E-08	6.35E-08	5.74E-08	4.81E-08	6.74E-08	7.15E-08	4.97E-07	1.96E-07	6.19E-08	6.58E-08	6.88E-08	6.40E-07	No	No	
benzo(k)fluoranthene	2	5.42E-07	3.80E-07	3.43E-07	2.88E-07	4.03E-07	4.28E-07	2.98E-06	1.18E-06	3.71E-07	3.94E-07	4.12E-07	3.83E-06	No	No	
chrysene	2	1.15E-06	8.08E-07	7.30E-07	6.12E-07	8.58E-07	9.11E-07	6.33E-06	2.50E-06	7.88E-07	8.38E-07	8.76E-07	8.15E-06	No	No	
dibenzo(a,h)anthracene	2	1.50E-06	1.05E-06	9.50E-07	7.97E-07	1.12E-06	1.18E-06	8.24E-06	3.26E-06	1.03E-06	1.09E-06	1.14E-06	1.06E-05	No	No	
indeno(1,2,3-cd)pyrene	2	9.53E-07	6.69E-07	6.04E-07	5.07E-07	7.09E-07	7.53E-07	5.24E-06	2.07E-06	6.52E-07	6.93E-07	7.25E-07	6.74E-06	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	1.07E-02	7.47E-03	6.74E-03	5.61E-03	7.89E-03	8.63E-03	6.12E-02	2.36E-02	1.33E-02	1.36E-02	1.38E-02	7.89E-02	No	No	
acetaldehyde	470	1.44E+00	1.01E+00	9.08E-01	7.57E-01	1.06E+00	1.16E+00	8.25E+00	3.18E+00	1.79E+00	1.83E+00	1.86E+00	1.06E+01	No	No	
acetone	19665	7.60E-01	5.30E-01	4.78E-01	3.98E-01	5.60E-01	6.12E-01	4.34E+00	1.68E+00	9.41E-01	9.63E-01	9.79E-01	5.60E+00	No	No	
acrolein	2.5	2.56E-01	1.78E-01	1.61E-01	1.34E-01	1.88E-01	2.06E-01	1.46E+00	5.64E-01	3.17E-01	3.24E-01	3.29E-01	1.88E+00	No	No	
aldehyde	10	1.93E+00	1.35E+00	1.21E+00	1.01E+00	1.42E+00	1.56E+00	<b>1.10E+01</b>	4.26E+00	2.39E+00	2.45E+00	2.49E+00	<b>1.42E+01</b>	Yes	Yes	
benzene	27	9.46E-02	6.60E-02	5.95E-02	4.96E-02	6.97E-02	7.63E-02	5.41E-01	2.09E-01	1.17E-01	1.20E-01	1.22E-01	6.97E-01	No	No	
C10-C12 aliphatic	11666	2.08E-02	1.45E-02	1.31E-02	1.09E-02	1.53E-02	1.68E-02	1.19E-01	4.58E-02	2.57E-02	2.63E-02	2.68E-02	1.53E-01	No	No	
C12-C16 aliphatic	11666	1.20E-01	8.39E-02	7.57E-02	6.31E-02	8.87E-02	9.70E-02	6.88E-01	2.65E-01	1.49E-01	1.53E-01	1.55E-01	8.87E-01	No	No	
C12-C16 aromatic	4166	1.62E-03	1.13E-03	1.02E-03	8.51E-04	1.20E-03	1.31E-03	9.27E-03	3.58E-03	2.01E-03	2.06E-03	2.09E-03	1.20E-02	No	No	
C16-C21 aliphatic	333	1.21E-01	8.40E-02	7.58E-02	6.32E-02	8.88E-02	9.71E-02	6.89E-01	2.66E-01	1.49E-01	1.53E-01	1.55E-01	8.88E-01	No	No	
C2-C6 aliphatic	2100	5.74E-01	4.00E-01	3.61E-01	3.01E-01	4.23E-01	4.62E-01	3.28E+00	1.27E+00	7.11E-01	7.27E-01	7.39E-01	4.23E+00	No	No	
C6-C8 aliphatic	61800	3.92E-01	2.74E-01	2.47E-01	2.06E-01	2.89E-01	3.16E-01	2.24E+00	8.65E-01	4.86E-01	4.97E-01	5.05E-01	2.89E+00	No	No	
C8-C10 aliphatic	60000	5.53E-03	3.85E-03	3.48E-03	2.90E-03	4.07E-03	4.45E-03	3.16E-02	1.22E-02	6.84E-03	7.00E-03	7.12E-03	4.07E-02	No	No	
C8-C10 aromatic	4166	3.11E-02	2.17E-02	1.95E-02	1.63E-02	2.29E-02	2.50E-02	1.78E-01	6.85E-02	3.85E-02	3.94E-02	4.00E-02	2.29E-01	No	No	
ethylbenzene	21710	1.62E-02	1.13E-02	1.02E-02	8.51E-03	1.20E-02	1.31E-02	9.27E-02	3.58E-02	2.01E-02	2.06E-02	2.09E-02	1.20E-01	No	No	
ethylene	566610	2.96E-01	2.06E-01	1.86E-01	1.55E-01	2.18E-01	2.38E-01	1.69E+00	6.52E-01	3.66E-01	3.75E-01	3.81E-01	2.18E+00	No	No	
formaldehyde	49	7.70E-01	5.37E-01	4.85E-01	4.04E-01	5.68E-01	6.21E-01	4.40E+00	1.70E+00	9.54E-01	9.76E-01	9.92E-01	5.68E+00	No	No	
ketone	1167	4.35E-01	3.03E-01	2.74E-01	2.28E-01	3.21E-01	3.51E-01	2.49E+00	9.60E-01	5.39E-01	5.52E-01	5.61E-01	3.21E+00	No	No	
toluene	1000	1.37E-01	9.59E-02	8.65E-02	7.21E-02	1.01E-01	1.11E-01	7.85E-01	3.03E-01	1.70E-01	1.74E-01	1.77E-01	1.01E+00	No	No	
trimethylbenzene	4166	3.94E-02	2.75E-02	2.48E-02	2.06E-02	2.90E-02	3.17E-02	2.25E-01	8.68E-02	4.88E-02	4.99E-02	5.07E-02	2.90E-01	No	No	
xylene	8680	1.09E-01	7.61E-02	6.87E-02	5.72E-02	8.04E-02	8.80E-02	6.24E-01	2.41E-01	1.35E-01	1.38E-01	1.41E-01	8.04E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	NV	2.54E+01	8.67E+00	1.04E+01	9.77E+00	1.11E+01	1.42E+01	1.50E+01	2.56E+00	2.91E+00	2.20E+00	2.56E+00	2.78E+00	1.40E+01	9.62E+00	7.76E+00
DPM	10	<b>1.36E+01</b>	4.44E+00	4.70E+00	4.38E+00	5.49E+00	6.83E+00	7.27E+00	1.25E+00	1.53E+00	1.15E+00	1.25E+00	1.47E+00	7.36E+00	5.01E+00	4.08E+00
PM10	NV	2.54E+01	8.66E+00	1.04E+01	9.76E+00	1.11E+01	1.42E+01	1.50E+01	2.56E+00	2.91E+00	2.21E+00	2.56E+00	2.78E+00	1.40E+01	9.63E+00	7.78E+00
PM2.5	NV	2.39E+01	8.05E+00	9.82E+00	9.23E+00	1.05E+01	1.39E+01	1.41E+01	2.42E+00	2.73E+00	2.10E+00	2.42E+00	2.61E+00	1.34E+01	9.14E+00	7.41E+00
CO	15000	2.37E+02	7.72E+01	8.18E+01	7.63E+01	9.56E+01	1.25E+02	1.27E+02	2.29E+01	2.66E+01	2.01E+01	2.29E+01	2.56E+01	1.28E+02	8.74E+01	7.11E+01
<b>Metals</b>																
Aluminum	30	1.77E+00	6.04E-01	7.23E-01	6.80E-01	7.71E-01	9.90E-01	1.04E+00	1.78E-01	2.03E-01	1.53E-01	1.78E-01	1.93E-01	9.77E-01	6.70E-01	5.41E-01
Antimony	63	9.96E-05	3.40E-05	4.07E-05	3.83E-05	4.34E-05	5.57E-05	5.86E-05	1.00E-05	1.14E-05	8.61E-06	1.00E-05	1.09E-05	5.49E-05	3.77E-05	3.04E-05
Arsenic	0.2	2.82E-03	9.63E-04	1.15E-03	1.09E-03	1.23E-03	1.58E-03	1.66E-03	2.84E-04	3.24E-04	2.44E-04	2.84E-04	3.08E-04	1.56E-03	1.07E-03	8.62E-04
Barium	25	9.95E-03	3.39E-03	4.06E-03	3.82E-03	4.33E-03	5.56E-03	5.85E-03	9.99E-04	1.14E-03	8.60E-04	1.00E-03	1.09E-03	5.48E-03	3.76E-03	3.04E-03
Beryllium	0.025	1.85E-05	6.31E-06	7.56E-06	7.11E-06	8.06E-06	1.04E-05	1.09E-05	1.86E-06	2.12E-06	1.60E-06	1.86E-06	2.02E-06	1.02E-05	7.00E-06	5.65E-06
Bismuth	6.3	5.09E-06	1.73E-06	2.08E-06	1.95E-06	2.21E-06	2.84E-06	2.99E-06	5.11E-07	5.83E-07	4.40E-07	5.12E-07	5.55E-07	2.81E-06	1.92E-06	1.55E-06
Cadmium	0.03	8.18E-03	2.67E-03	2.83E-03	2.63E-03	3.30E-03	4.10E-03	4.37E-03	7.50E-04	9.19E-04	6.91E-04	7.51E-04	8.85E-04	4.42E-03	3.01E-03	2.45E-03
Calcium	NV	1.01E+00	3.43E-01	4.11E-01	3.86E-01	4.38E-01	5.62E-01	5.91E-01	1.01E-01	1.15E-01	8.69E-02	1.01E-01	1.10E-01	5.54E-01	3.80E-01	3.07E-01
Chromium	1.3	5.59E-03	1.89E-03	2.20E-03	2.06E-03	2.39E-03	3.05E-03	3.22E-03	5.50E-04	6.38E-04	4.81E-04	5.51E-04	6.09E-04	3.07E-03	2.10E-03	1.70E-03
Cobalt	0.25	6.81E-04	2.32E-04	2.78E-04	2.62E-04	2.97E-04	3.81E-04	4.01E-04	6.85E-05	7.81E-05	5.89E-05	6.86E-05	7.44E-05	3.76E-04	2.58E-04	2.08E-04
Copper	83	1.80E-03	6.15E-04	7.36E-04	6.93E-04	7.85E-04	1.01E-03	1.06E-03	1.81E-04	2.07E-04	1.56E-04	1.81E-04	1.97E-04	9.94E-04	6.82E-04	5.50E-04
Gold	3.1	1.97E-06	6.72E-07	8.04E-07	7.57E-07	8.57E-07	1.10E-06	1.16E-06	1.98E-07	2.26E-07	1.70E-07	1.98E-07	2.15E-07	1.09E-06	7.45E-07	6.01E-07
Iron	8.3	1.93E+00	6.59E-01	7.90E-01	7.43E-01	8.41E-01	1.08E+00	1.14E+00	1.94E-01	2.21E-01	1.67E-01	1.95E-01	2.11E-01	1.07E+00	7.31E-01	5.90E-01
Lead	1.2	1.67E-03	5.48E-04	5.95E-04	5.55E-04	6.81E-04	8.53E-04	9.06E-04	1.55E-04	1.88E-04	1.41E-04	1.56E-04	1.80E-04	9.03E-04	6.16E-04	5.01E-04
Lithium	50	8.22E-04	2.80E-04	3.36E-04	3.16E-04	3.58E-04	4.60E-04	4.84E-04	8.26E-05	9.42E-05	7.11E-05	8.28E-05	8.97E-05	4.53E-04	3.11E-04	2.51E-04
Magnesium	167	5.33E-01	1.82E-01	2.18E-01	2.05E-01	2.32E-01	2.98E-01	3.14E-01	5.36E-02	6.11E-02	4.61E-02	5.37E-02	5.82E-02	2.94E-01	2.02E-01	1.63E-01
Manganese	1	2.00E-02	6.84E-03	8.19E-03	7.70E-03	8.72E-03	1.12E-02	1.18E-02	2.01E-03	2.30E-03	1.73E-03	2.02E-03	2.19E-03	1.11E-02	7.58E-03	6.12E-03
Molybdenum	83	3.05E-05	1.04E-05	1.25E-05	1.17E-05	1.33E-05	1.71E-05	1.80E-05	3.07E-06	3.50E-06	2.64E-06	3.07E-06	3.33E-06	1.68E-05	1.15E-05	9.32E-06
Nickel	0.2	1.77E-03	6.03E-04	7.22E-04	6.79E-04	7.70E-04	9.89E-04	1.04E-03	1.78E-04	2.03E-04	1.53E-04	1.78E-04	1.93E-04	9.75E-04	6.69E-04	5.40E-04
Potassium	67	3.37E-01	1.15E-01	1.38E-01	1.30E-01	1.47E-01	1.89E-01	1.99E-01	3.39E-02	3.87E-02	2.92E-02	3.40E-02	3.68E-02	1.86E-01	1.28E-01	1.03E-01
Selenium	17	3.04E-05	1.04E-05	1.24E-05	1.17E-05	1.33E-05	1.70E-05	1.79E-05	3.06E-06	3.49E-06	2.63E-06	3.06E-06	3.32E-06	1.68E-05	1.15E-05	9.29E-06
Silver	2.5	7.49E-06	2.55E-06	3.06E-06	2.88E-06	3.26E-06	4.19E-06	4.41E-06	7.53E-07	8.58E-07	6.47E-07	7.54E-07	8.17E-07	4.13E-06	2.83E-06	2.29E-06
Sodium	NV	4.03E-01	1.37E-01	1.65E-01	1.55E-01	1.75E-01	2.25E-01	2.37E-01	4.05E-02	4.62E-02	3.48E-02	4.06E-02	4.40E-02	2.22E-01	1.52E-01	1.23E-01
Strontium	83	5.39E-03	1.84E-03	2.20E-03	2.07E-03	2.34E-03	3.01E-03	3.17E-03	5.41E-04	6.17E-04	4.65E-04	5.42E-04	5.88E-04	2.97E-03	2.04E-03	1.64E-03
Thallium	1.3	7.78E-06	2.65E-06	3.18E-06	2.99E-06	3.39E-06	4.35E-06	4.58E-06	7.81E-07	8.91E-07	6.72E-07	7.83E-07	8.49E-07	4.29E-06	2.94E-06	2.37E-06
Tin	25	2.74E-05	9.35E-06	1.12E-05	1.05E-05	1.19E-05	1.53E-05	1.61E-05	2.75E-06	3.14E-06	2.37E-06	2.76E-06	2.99E-06	1.51E-05	1.04E-05	8.37E-06
Titanium	83	8.87E-02	3.02E-02	3.62E-02	3.41E-02	3.86E-02	4.96E-02	5.22E-02	8.91E-03	1.02E-02	7.66E-03	8.92E-03	9.68E-03	4.89E-02	3.35E-02	2.71E-02
Uranium	0.38	2.47E-05	8.44E-06	1.01E-05	9.51E-06	1.08E-05	1.38E-05	1.46E-05	2.49E-06	2.83E-06	2.14E-06	2.49E-06	2.70E-06	1.36E-05	9.35E-06	7.55E-06
Vanadium	0.8	3.26E-03	1.11E-03	1.33E-03	1.25E-03	1.42E-03	1.82E-03	1.92E-03	3.28E-04	3.74E-04	2.82E-04	3.28E-04	3.56E-04	1.80E-03	1.23E-03	9.95E-04
Yttrium	33	2.41E-04	8.21E-05	9.83E-05	9.25E-05	1.05E-04	1.35E-04	1.42E-04	2.42E-05	2.76E-05	2.08E-05	2.42E-05	2.63E-05	1.33E-04	9.10E-05	7.35E-05
Zinc	83	1.21E-02	3.98E-03	4.33E-03	4.05E-03	4.95E-03	6.21E-03	6.59E-03	1.13E-03	1.36E-03	1.03E-03	1.13E-03	1.31E-03	6.55E-03	4.47E-03	3.64E-03
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.50E-05	4.89E-06	5.18E-06	4.83E-06	6.04E-06	7.52E-06	8.00E-06	1.37E-06	1.68E-06	1.27E-06	1.38E-06	1.62E-06	8.10E-06	5.52E-06	4.49E-06
naphthalene	50	5.94E-03	1.93E-03	2.05E-03	1.91E-03	2.39E-03	2.98E-03	3.17E-03	5.44E-04	6.67E-04	5.01E-04	5.44E-04	6.42E-04	3.20E-03	2.18E-03	1.78E-03
phenanthrene	2	4.90E-04	1.60E-04	1.69E-04	1.58E-04	1.97E-04	2.46E-04	2.62E-04	4.49E-05	5.51E-05	4.14E-05	4.50E-05	5.30E-05	2.65E-04	1.80E-04	1.47E-04
anthracene	3	5.47E-05	1.78E-05	1.89E-05	1.76E-05	2.20E-05	2.74E-05	2.92E-05	5.01E-06	6.14E-06	4.62E-06	5.01E-06	5.91E-06	2.95E-05	2.01E-05	1.64E-05
fluorene	33	2.39E-04	7.79E-05	8.26E-05	7.69E-05	9.63E-05	1.20E-04	1.28E-04	2.19E-05	2.69E-05	2.02E-05	2.19E-05	2.59E-05	1.29E-04	8.80E-05	7.17E-05
pyrene	2	1.79E-04	5.84E-05	6.18E-05	5.76E-05	7.21E-05	8.98E-05	9.56E-05	1.64E-05	2.01E-05	1.51E-05	1.64E-05	1.94E-05	9.67E-05	6.59E-05	5.37E-05
thiophenes	83	3.11E-06	1.01E-06	1.07E-06	1.00E-06	1.25E-06	1.56E-06	1.66E-06	2.85E-07	3.49E-07	2.62E-07	2.85E-07	3.36E-07	1.68E-06	1.14E-06	9.31E-07
benz(a)anthracene	2	7.12E-06	2.32E-06	2.46E-06	2.29E-06	2.87E-06	3.57E-06	3.80E-06	6.52E-07	7.99E-07	6.01E-07	6.53E-07	7.69E-07	3.84E-06	2.62E-06	2.13E-06
acenaphthene	333	4.61E-05	1.50E-05	1.59E-05	1.48E-05	1.86E-05	2.31E-05	2.46E-05	4.22E-06	5.18E-06	3.89E-06	4.23E-06	4.98E-06	2.49E-05	1.70E-05	1.38E-05
acenaphthylene	333	1.67E-04	5.45E-05	5.78E-05	5.39E-05	6.74E-05	8.39E-05	8.93E-05	1.53E-05	1.88E-05	1.41E-05	1.53E-05	1.81E-05	9.04E-05	6.16E-05	5.02E-05
fluoranthene	2	1.78E-04	5.80E-05	6.15E-05	5.73E-05	7.17E-05	8.93E-05	9.50E-05	1.63E-05	2.00E-05	1.50E-05	1.63E-05	1.93E-05	9.62E-05	6.55E-05	5.34E-05
benzo(b)fluoranthene	2	3.31E-05	1.08E-05	1.14E-05	1.06E-05	1.33E-05	1.66E-05	1.76E-05	3.03E-06	3.71E-06	2.79E-06	3.03E-06	3.58E-06	1.79E-05	1.22E-05	9.91E-06
benzo(g,h,i)perylene	NV	6.28E-07	2.05E-07	2.17E-07	2.02E-07	2.53E-07	3.15E-07	3.35E-07	5.75E-08	7.06E-08	5.30E-08	5.76E-08	6.79E-08	3.39E-07	2.31E-07	1.88E-07
benzo(k)fluoranthene	2	3.76E-06	1.23E-06	1.30E-06	1.21E-06	1.51E-06	1.89E-06	2.01E-06	3.44E-07	4.22E-07	3.17E-07	3.45E-07	4.07E-07	2.03E-06	1.38E-06	1.13E-06
chrysene	2	8.00E-06	2.61E-06	2.76E-06	2.57E-06	3.22E-06	4.01E-06	4.27E-06	7.33E-07	8.99E-07	6.75E-07	7.34E-07	8.65E-07	4.32E		

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	7.75E-02	2.52E-02	2.64E-02	2.48E-02	3.07E-02	4.13E-02	4.16E-02	7.46E-03	8.31E-03	6.57E-03	7.47E-03	8.10E-03	4.23E-02	2.88E-02	2.31E-02
acetaldehyde	470	1.04E+01	3.40E+00	3.56E+00	3.34E+00	4.14E+00	5.57E+00	5.61E+00	1.01E+00	1.12E+00	8.85E-01	1.01E+00	1.09E+00	5.71E+00	3.89E+00	3.11E+00
acetone	19665	5.50E+00	1.79E+00	1.87E+00	1.76E+00	2.18E+00	2.93E+00	2.95E+00	5.30E-01	5.90E-01	4.66E-01	5.30E-01	5.75E-01	3.00E+00	2.05E+00	1.64E+00
acrolein	2.5	1.85E+00	6.01E-01	6.30E-01	5.92E-01	7.33E-01	9.86E-01	9.93E-01	1.78E-01	1.98E-01	1.57E-01	1.78E-01	1.93E-01	1.01E+00	6.88E-01	5.50E-01
aldehyde	10	<b>1.40E+01</b>	4.54E+00	4.76E+00	4.47E+00	5.54E+00	7.45E+00	7.50E+00	1.35E+00	1.50E+00	1.18E+00	1.35E+00	1.46E+00	7.63E+00	5.20E+00	4.16E+00
benzene	27	6.85E-01	2.23E-01	2.33E-01	2.19E-01	2.71E-01	3.65E-01	3.68E-01	6.60E-02	7.35E-02	5.80E-02	6.61E-02	7.16E-02	3.74E-01	2.55E-01	2.04E-01
C10-C12 aliphatic	11666	1.50E-01	4.89E-02	5.13E-02	4.81E-02	5.96E-02	8.02E-02	8.08E-02	1.45E-02	1.61E-02	1.27E-02	1.45E-02	1.57E-02	8.21E-02	5.60E-02	4.48E-02
C12-C16 aliphatic	11666	8.71E-01	2.83E-01	2.97E-01	2.79E-01	3.45E-01	4.64E-01	4.68E-01	8.39E-02	9.34E-02	7.38E-02	8.40E-02	9.11E-02	4.76E-01	3.24E-01	2.59E-01
C12-C16 aromatic	4166	1.17E-02	3.82E-03	4.00E-03	3.76E-03	4.66E-03	6.26E-03	6.31E-03	1.13E-03	1.26E-03	9.96E-04	1.13E-03	1.23E-03	6.42E-03	4.37E-03	3.50E-03
C16-C21 aliphatic	333	8.72E-01	2.83E-01	2.97E-01	2.79E-01	3.46E-01	4.65E-01	4.68E-01	8.40E-02	9.36E-02	7.39E-02	8.41E-02	9.12E-02	4.76E-01	3.24E-01	2.60E-01
C2-C6 aliphatic	2100	4.15E+00	1.35E+00	1.41E+00	1.33E+00	1.65E+00	2.21E+00	2.23E+00	4.00E-01	4.45E-01	3.52E-01	4.00E-01	4.34E-01	2.27E+00	1.54E+00	1.24E+00
C6-C8 aliphatic	61800	2.84E+00	9.23E-01	9.68E-01	9.09E-01	1.13E+00	1.51E+00	1.52E+00	2.74E-01	3.05E-01	2.41E-01	2.74E-01	2.97E-01	1.55E+00	1.06E+00	8.45E-01
C8-C10 aliphatic	60000	4.00E-02	1.30E-02	1.36E-02	1.28E-02	1.59E-02	2.13E-02	2.15E-02	3.85E-03	4.29E-03	3.39E-03	3.86E-03	4.18E-03	2.18E-02	1.49E-02	1.19E-02
C8-C10 aromatic	4166	2.25E-01	7.31E-02	7.66E-02	7.19E-02	8.91E-02	1.20E-01	1.21E-01	2.17E-02	2.41E-02	1.91E-02	2.17E-02	2.35E-02	1.23E-01	8.36E-02	6.69E-02
ethylbenzene	21710	1.17E-01	3.82E-02	4.00E-02	3.76E-02	4.66E-02	6.26E-02	6.31E-02	1.13E-02	1.26E-02	9.96E-03	1.13E-02	1.23E-02	6.42E-02	4.37E-02	3.50E-02
ethylene	566610	2.14E+00	6.95E-01	7.29E-01	6.85E-01	8.48E-01	1.14E+00	1.15E+00	2.06E-01	2.30E-01	1.81E-01	2.06E-01	2.24E-01	1.17E+00	7.96E-01	6.37E-01
formaldehyde	49	5.57E+00	1.81E+00	1.90E+00	1.78E+00	2.21E+00	2.97E+00	2.99E+00	5.37E-01	5.98E-01	4.72E-01	5.38E-01	5.83E-01	3.04E+00	2.07E+00	1.66E+00
ketone	1167	3.15E+00	1.02E+00	1.07E+00	1.01E+00	1.25E+00	1.68E+00	1.69E+00	3.03E-01	3.38E-01	2.67E-01	3.04E-01	3.29E-01	1.72E+00	1.17E+00	9.37E-01
toluene	1000	9.95E-01	3.23E-01	3.39E-01	3.18E-01	3.94E-01	5.30E-01	5.34E-01	9.58E-02	1.07E-01	8.43E-02	9.60E-02	1.04E-01	5.43E-01	3.70E-01	2.96E-01
trimethylbenzene	4166	2.85E-01	9.26E-02	9.71E-02	9.12E-02	1.13E-01	1.52E-01	1.53E-01	2.75E-02	3.06E-02	2.41E-02	2.75E-02	2.98E-02	1.56E-01	1.06E-01	8.48E-02
xylenes	8680	7.90E-01	2.57E-01	2.69E-01	2.53E-01	3.13E-01	4.21E-01	4.24E-01	7.61E-02	8.47E-02	6.69E-02	7.62E-02	8.26E-02	4.31E-01	2.94E-01	2.35E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

**3.20E-03** = greater than 1-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	NV	2.55E+00	1.93E+00	1.76E+00	1.48E+00	2.05E+00	2.08E+00	1.48E+01	6.02E+00	1.92E+00	2.05E+00	2.17E+00	2.54E+01	No	No	
DPM	10	1.67E+00	1.06E+00	9.66E-01	8.24E-01	1.12E+00	1.32E+00	7.96E+00	3.27E+00	9.68E-01	1.08E+00	1.11E+00	1.36E+01	Yes	Yes	
PM10	NV	2.56E+00	1.93E+00	1.76E+00	1.48E+00	2.05E+00	2.08E+00	1.47E+01	6.04E+00	1.93E+00	2.05E+00	2.18E+00	2.54E+01	No	No	
PM2.5	NV	2.41E+00	1.82E+00	1.66E+00	1.40E+00	1.93E+00	1.95E+00	1.36E+01	5.76E+00	1.82E+00	1.94E+00	2.05E+00	2.39E+01	No	No	
CO	15000	2.90E+01	1.84E+01	1.68E+01	1.43E+01	1.94E+01	2.30E+01	1.38E+02	5.70E+01	3.29E+01	3.38E+01	3.42E+01	2.37E+02	No	No	
<b>Metals</b>																
Aluminum	30	1.78E-01	1.34E-01	1.22E-01	1.03E-01	1.43E-01	1.45E-01	1.03E+00	4.20E-01	1.34E-01	1.43E-01	1.51E-01	1.77E+00	No	No	
Antimony	63	9.98E-06	7.56E-06	6.87E-06	5.80E-06	8.02E-06	8.16E-06	5.78E-05	2.36E-05	7.51E-06	8.02E-06	8.49E-06	9.96E-05	No	No	
Arsenic	0.2	2.83E-04	2.14E-04	1.95E-04	1.65E-04	2.27E-04	2.31E-04	1.64E-03	6.69E-04	2.13E-04	2.28E-04	2.41E-04	2.82E-03	No	No	
Barium	25	9.96E-04	7.55E-04	6.87E-04	5.79E-04	8.01E-04	8.15E-04	5.77E-03	2.35E-03	7.50E-04	8.01E-04	8.48E-04	9.95E-03	No	No	
Beryllium	0.025	1.85E-06	1.41E-06	1.28E-06	1.08E-06	1.49E-06	1.52E-06	1.07E-05	4.38E-06	1.40E-06	1.49E-06	1.58E-06	1.85E-05	No	No	
Bismuth	6.3	5.10E-07	3.86E-07	3.51E-07	2.96E-07	4.10E-07	4.17E-07	2.95E-06	1.20E-06	3.84E-07	4.10E-07	4.33E-07	5.09E-06	No	No	
Cadmium	0.03	1.00E-03	6.35E-04	5.80E-04	4.95E-04	6.71E-04	7.93E-04	4.78E-03	1.97E-03	5.81E-04	6.46E-04	6.69E-04	8.18E-03	No	No	
Calcium	NV	1.01E-01	7.63E-02	6.94E-02	5.86E-02	8.09E-02	8.24E-02	5.83E-01	2.38E-01	7.58E-02	8.10E-02	8.57E-02	1.01E+00	No	No	
Chromium	1.3	5.90E-04	4.27E-04	3.89E-04	3.29E-04	4.52E-04	4.79E-04	3.25E-03	1.33E-03	4.16E-04	4.48E-04	4.72E-04	5.59E-03	No	No	
Cobalt	0.25	6.83E-05	5.17E-05	4.70E-05	3.97E-05	5.49E-05	5.58E-05	3.95E-04	1.61E-04	5.14E-05	5.49E-05	5.81E-05	6.81E-04	No	No	
Copper	83	1.81E-04	1.37E-04	1.24E-04	1.05E-04	1.45E-04	1.48E-04	1.05E-03	4.27E-04	1.36E-04	1.45E-04	1.54E-04	1.80E-03	No	No	
Gold	3.1	1.97E-07	1.49E-07	1.36E-07	1.15E-07	1.59E-07	1.61E-07	1.14E-06	4.66E-07	1.49E-07	1.59E-07	1.68E-07	1.97E-06	No	No	
Iron	8.3	1.94E-01	1.47E-01	1.33E-01	1.13E-01	1.56E-01	1.58E-01	1.12E+00	4.58E-01	1.46E-01	1.56E-01	1.65E-01	1.93E+00	No	No	
Lead	1.2	1.97E-04	1.29E-04	1.18E-04	1.00E-04	1.36E-04	1.57E-04	9.72E-04	3.99E-04	1.20E-04	1.32E-04	1.37E-04	1.67E-03	No	No	
Lithium	50	8.24E-05	6.24E-05	5.68E-05	4.79E-05	6.62E-05	6.74E-05	4.77E-04	1.95E-04	6.20E-05	6.62E-05	7.01E-05	8.22E-04	No	No	
Magnesium	167	5.34E-02	4.05E-02	3.68E-02	3.11E-02	4.29E-02	4.37E-02	3.09E-01	1.26E-01	4.02E-02	4.30E-02	4.54E-02	5.33E-01	No	No	
Manganese	1	2.01E-03	1.52E-03	1.38E-03	1.17E-03	1.61E-03	1.64E-03	1.16E-02	4.75E-03	1.51E-03	1.61E-03	1.71E-03	2.00E-02	No	No	
Molybdenum	83	3.06E-06	2.32E-06	2.11E-06	1.78E-06	2.46E-06	2.50E-06	1.77E-05	7.23E-06	2.30E-06	2.46E-06	2.60E-06	3.05E-05	No	No	
Nickel	0.2	1.77E-04	1.34E-04	1.22E-04	1.03E-04	1.42E-04	1.45E-04	1.03E-03	4.19E-04	1.33E-04	1.42E-04	1.51E-04	1.77E-03	No	No	
Potassium	67	3.38E-02	2.56E-02	2.33E-02	1.97E-02	2.72E-02	2.76E-02	1.96E-01	7.99E-02	2.54E-02	2.72E-02	2.88E-02	3.37E-01	No	No	
Selenium	17	3.05E-06	2.31E-06	2.10E-06	1.77E-06	2.45E-06	2.49E-06	1.77E-05	7.21E-06	2.30E-06	2.45E-06	2.59E-06	3.04E-05	No	No	
Silver	2.5	7.50E-07	5.69E-07	5.17E-07	4.36E-07	6.03E-07	6.14E-07	4.35E-06	1.77E-06	5.65E-07	6.03E-07	6.38E-07	7.49E-06	No	No	
Sodium	NV	4.04E-02	3.06E-02	2.78E-02	2.35E-02	3.24E-02	3.30E-02	2.34E-01	9.54E-02	3.04E-02	3.25E-02	3.43E-02	4.03E-01	No	No	
Strontium	83	5.39E-04	4.09E-04	3.72E-04	3.14E-04	4.34E-04	4.41E-04	3.12E-03	1.28E-03	4.06E-04	4.34E-04	4.59E-04	5.39E-03	No	No	
Thallium	1.3	7.79E-07	5.90E-07	5.37E-07	4.53E-07	6.26E-07	6.37E-07	4.51E-06	1.84E-06	5.87E-07	6.26E-07	6.63E-07	7.78E-06	No	No	
Tin	25	2.75E-06	2.08E-06	1.89E-06	1.60E-06	2.21E-06	2.25E-06	1.59E-05	6.49E-06	2.07E-06	2.21E-06	2.34E-06	2.74E-05	No	No	
Titanium	83	8.88E-03	6.73E-03	6.12E-03	5.17E-03	7.14E-03	7.26E-03	5.14E-02	2.10E-02	6.69E-03	7.14E-03	7.56E-03	8.87E-02	No	No	
Uranium	0.38	2.48E-06	1.88E-06	1.71E-06	1.44E-06	1.99E-06	2.03E-06	1.44E-05	5.86E-06	1.87E-06	1.99E-06	2.11E-06	2.47E-05	No	No	
Vanadium	0.8	3.27E-04	2.47E-04	2.25E-04	1.90E-04	2.63E-04	2.67E-04	1.89E-03	7.72E-04	2.46E-04	2.63E-04	2.78E-04	3.26E-03	No	No	
Yttrium	33	2.41E-05	1.83E-05	1.66E-05	1.40E-05	1.94E-05	1.97E-05	1.40E-04	5.70E-05	1.82E-05	1.94E-05	2.05E-05	2.41E-04	No	No	
Zinc	83	1.42E-03	9.34E-04	8.52E-04	7.25E-04	9.87E-04	1.13E-03	7.05E-03	2.89E-03	8.70E-04	9.58E-04	9.97E-04	1.21E-02	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.0013	1.83E-06	1.16E-06	1.06E-06	9.06E-07	1.23E-06	1.45E-06	8.76E-06	3.60E-06	1.07E-06	1.18E-06	1.23E-06	1.50E-05	No	No	
naphthalene	50	7.25E-04	4.61E-04	4.20E-04	3.59E-04	4.86E-04	5.75E-04	3.47E-03	1.43E-03	4.22E-04	4.69E-04	4.85E-04	5.94E-03	No	No	
phenanthrene	2	5.99E-05	3.81E-05	3.47E-05	2.96E-05	4.02E-05	4.75E-05	2.86E-04	1.18E-04	3.48E-05	3.87E-05	4.01E-05	4.90E-04	No	No	
anthracene	3	6.68E-06	4.25E-06	3.87E-06	3.30E-06	4.48E-06	5.30E-06	3.19E-05	1.31E-05	3.89E-06	4.32E-06	4.47E-06	5.47E-05	No	No	
fluorene	33	2.92E-05	1.86E-05	1.69E-05	1.45E-05	1.96E-05	2.32E-05	1.40E-04	5.74E-05	1.70E-05	1.89E-05	1.95E-05	2.39E-04	No	No	
pyrene	2	2.19E-05	1.39E-05	1.27E-05	1.08E-05	1.47E-05	1.74E-05	1.05E-04	4.30E-05	1.27E-05	1.41E-05	1.46E-05	1.79E-04	No	No	
thiophenes	83	3.80E-07	2.41E-07	2.20E-07	1.88E-07	2.55E-07	3.01E-07	1.81E-06	7.46E-07	2.21E-07	2.45E-07	2.54E-07	3.11E-06	No	No	
benz(a)anthracene	2	8.70E-07	5.53E-07	5.04E-07	4.30E-07	5.83E-07	6.90E-07	4.16E-06	1.71E-06	5.06E-07	5.62E-07	5.82E-07	7.12E-06	No	No	
acenaphthene	333	5.63E-06	3.58E-06	3.27E-06	2.78E-06	3.78E-06	4.47E-06	2.69E-05	1.11E-05	3.27E-06	3.64E-06	3.77E-06	4.61E-05	No	No	
acenaphthylene	333	2.05E-05	1.30E-05	1.19E-05	1.01E-05	1.37E-05	1.62E-05	9.78E-05	4.02E-05	1.19E-05	1.32E-05	1.37E-05	1.67E-04	No	No	
fluoranthene	2	2.18E-05	1.38E-05	1.26E-05	1.08E-05	1.46E-05	1.73E-05	1.04E-04	4.28E-05	1.27E-05	1.41E-05	1.46E-05	1.78E-04	No	No	
benzo(b)fluoranthene	2	4.04E-06	2.57E-06	2.34E-06	2.00E-06	2.71E-06	3.20E-06	1.93E-05	7.94E-06	2.35E-06	2.61E-06	2.70E-06	3.31E-05	No	No	
benzo(g,h,i)perylene	NV	7.68E-08	4.88E-08	4.45E-08	3.80E-08	5.15E-08	6.09E-08	3.67E-07	1.51E-07	4.46E-08	4.96E-08	5.13E-08	6.28E-07	No	No	
benzo(k)fluoranthene	2	4.60E-07	2.92E-07	2.66E-07	2.27E-07	3.08E-07	3.64E-07	2.20E-06	9.03E-07	2.67E-07	2.97E-07	3.07E-07	3.76E-06	No	No	
chrysene	2	9.78E-07	6.21E-07	5.67E-07	4.83E-07	6.55E-07	7.75E-07	4.67E-06	1.92E-06	5.68E-07	6.32E-07	6.54E-07	8.00E-06	No	No	
dibenzo(a,h)anthracene	2	1.27E-06	8.08E-07	7.37E-07	6.29E-07	8.53E-07	1.01E-06	6.08E-06	2.50E-06	7.40E-07	8.22E-07	8.51E-07	1.04E-05	No	No	
indeno(1,2,3-cd)pyrene	2	8.09E-07	5.14E-07	4.69E-07	4.00E-07	5.42E-07	6.41E-07	3.86E-06	1.59E-06	4.70E-07	5.22E-07	5.41E-07	6.62E-06	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	220	9.01E-03	5.65E-03	5.15E-03	4.36E-03	5.93E-03	7.13E-03	4.52E-02	1.82E-02	1.03E-02	1.05E-02	1.08E-02	7.75E-02	No	No	
acetaldehyde	470	1.21E+00	7.62E-01	6.94E-01	5.88E-01	8.00E-01	9.62E-01	6.09E+00	2.46E+00	1.39E+00	1.41E+00	1.45E+00	1.04E+01	No	No	
acetone	19665	6.39E-01	4.01E-01	3.65E-01	3.09E-01	4.21E-01	5.06E-01	3.21E+00	1.29E+00	7.30E-01	7.44E-01	7.63E-01	5.50E+00	No	No	
acrolein	2.5	2.15E-01	1.35E-01	1.23E-01	1.04E-01	1.42E-01	1.70E-01	1.08E+00	4.35E-01	2.45E-01	2.50E-01	2.57E-01	1.85E+00	No	No	
aldehyde	10	1.62E+00	1.02E+00	9.28E-01	7.86E-01	1.07E+00	1.29E+00	8.15E+00	3.29E+00	1.85E+00	1.89E+00	1.94E+00	<b>1.40E+01</b>	Yes	Yes	
benzene	27	7.96E-02	4.99E-02	4.55E-02	3.85E-02	5.24E-02	6.31E-02	3.99E-01	1.61E-01	9.09E-02	9.27E-02	9.51E-02	6.85E-01	No	No	
C10-C12 aliphatic	11666	1.75E-02	1.10E-02	9.99E-03	8.46E-03	1.15E-02	1.39E-02	8.77E-02	3.54E-02	2.00E-02	2.04E-02	2.09E-02	1.50E-01	No	No	
C12-C16 aliphatic	11666	1.01E-01	6.35E-02	5.79E-02	4.90E-02	6.67E-02	8.02E-02	5.08E-01	2.05E-01	1.16E-01	1.18E-01	1.21E-01	8.71E-01	No	No	
C12-C16 aromatic	4166	1.37E-03	8.57E-04	7.80E-04	6.61E-04	8.99E-04	1.08E-03	6.85E-03	2.76E-03	1.56E-03	1.59E-03	1.63E-03	1.17E-02	No	No	
C16-C21 aliphatic	333	1.01E-01	6.36E-02	5.79E-02	4.91E-02	6.67E-02	8.03E-02	5.09E-01	2.05E-01	1.16E-01	1.18E-01	1.21E-01	8.72E-01	No	No	
C2-C6 aliphatic	2100	4.83E-01	3.03E-01	2.76E-01	2.34E-01	3.18E-01	3.82E-01	2.42E+00	9.77E-01	5.51E-01	5.62E-01	5.76E-01	4.15E+00	No	No	
C6-C8 aliphatic	61800	3.30E-01	2.07E-01	1.89E-01	1.60E-01	2.17E-01	2.61E-01	1.66E+00	6.68E-01	3.77E-01	3.84E-01	3.94E-01	2.84E+00	No	No	
C8-C10 aliphatic	60000	4.65E-03	2.92E-03	2.66E-03	2.25E-03	3.06E-03	3.68E-03	2.33E-02	9.41E-03	5.31E-03	5.41E-03	5.55E-03	4.00E-02	No	No	
C8-C10 aromatic	4166	2.61E-02	1.64E-02	1.49E-02	1.26E-02	1.72E-02	2.07E-02	1.31E-01	5.29E-02	2.98E-02	3.04E-02	3.12E-02	2.25E-01	No	No	
ethylbenzene	21710	1.37E-02	8.57E-03	7.80E-03	6.61E-03	8.99E-03	1.08E-02	6.85E-02	2.76E-02	1.56E-02	1.59E-02	1.63E-02	1.17E-01	No	No	
ethylene	566610	2.49E-01	1.56E-01	1.42E-01	1.20E-01	1.64E-01	1.97E-01	1.25E+00	5.03E-01	2.84E-01	2.90E-01	2.97E-01	2.14E+00	No	No	
formaldehyde	49	6.48E-01	4.06E-01	3.70E-01	3.14E-01	4.27E-01	5.13E-01	3.25E+00	1.31E+00	7.40E-01	7.54E-01	7.74E-01	5.57E+00	No	No	
ketone	1167	3.66E-01	2.30E-01	2.09E-01	1.77E-01	2.41E-01	2.90E-01	1.84E+00	7.41E-01	4.18E-01	4.26E-01	4.37E-01	3.15E+00	No	No	
toluene	1000	1.16E-01	7.25E-02	6.61E-02	5.60E-02	7.61E-02	9.16E-02	5.80E-01	2.34E-01	1.32E-01	1.35E-01	1.38E-01	9.95E-01	No	No	
trimethylbenzene	4166	3.31E-02	2.08E-02	1.89E-02	1.60E-02	2.18E-02	2.62E-02	1.66E-01	6.70E-02	3.78E-02	3.86E-02	3.96E-02	2.85E-01	No	No	
xylenes	8680	9.18E-02	5.76E-02	5.25E-02	4.44E-02	6.04E-02	7.27E-02	4.61E-01	1.86E-01	1.05E-01	1.07E-01	1.10E-01	7.90E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

NV = no value

**3.20E-03** = greater than 1-hour air threshold

Parameter	Acute Air Threshold (µg/m³)	Air Concentrations (µg/m³)														
		SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014	SR_015
<b>Scenario 1</b>																
NO2*	79	53.3	63.0	60.4	52.4	64.6	68.5	63.1	65	55.7	61.1	63.3	54.9	50.6	44	30.5
<b>Scenario 2</b>																
NO2*	79	41.4	56.7	49.3	34.3	58.6	65	46.6	55	32.5	45.8	47.6	38.1	32.5	32.9	25.4
<b>Scenario 3</b>																
NO2*	79	36.3	43.7	45	27	52.5	61.7	32.6	51.8	28.5	39.8	43.6	34.3	29.1	31.5	22.7

  

Parameter	Acute Air Threshold (µg/m³)	Hazard Quotients														
		SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014	SR_015
<b>Scenario 1</b>																
NO2*	79	0.7	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.7	0.8	0.8	0.7	0.6	0.6	0.4
<b>Scenario 2</b>																
NO2*	79	0.5	0.7	0.6	0.4	0.7	0.8	0.6	0.7	0.4	0.6	0.6	0.5	0.4	0.4	0.3
<b>Scenario 3</b>																
NO2*	79	0.5	0.6	0.6	0.3	0.7	0.8	0.4	0.7	0.4	0.5	0.6	0.4	0.4	0.4	0.3

**Notes:**

\* NO2 was retained as a COPC because it is considered a non-threshold chemical.

NO2 = Nitrogen dioxide; COPC = contaminant of potential concern

**Bold** = greater than HQ of 1

Prepared by: KCS

Checked by: SG

Table H-12-D-10: Exposure Point Concentrations and Hazard Quotients for the Acute Air Quality Risk Assessment for Nitrogen Dioxide

Parameter	Air Concentrations (µg/m <sup>3</sup> )									
	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025
<b>Scenario 1</b>										
NO2*	29.1	26.6	22.7	21.4	17.8	18	18.9	20.1	18.2	19.6
<b>Scenario 2</b>										
NO2*	24.7	22.7	18.6	17.1	13.7	14	15.2	16.6	14.6	15.7
<b>Scenario 3</b>										
NO2*	21.1	19.1	16.6	15.5	11.8	11.8	13.4	13.9	12.7	13.5

  

Parameter	Hazard Quotients									
	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025
<b>Scenario 1</b>										
NO2*	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2
<b>Scenario 2</b>										
NO2*	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Scenario 3</b>										
NO2*	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2

**Notes:** **Notes:**  
 \* NO2 was retained as a COPC because it is considered a non-threshold chemical.  
 NO2 = Nitrogen dioxide; COPC = contaminant of potential concern  
**Bold** = greater than HQ of 1

Prepared by: KCS      Prepared by: KCS  
 Checked by: SG      Checked by: SG

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	14	5.9	5.4	5.4	6.3	7.7	8.7	1.6	1.7	1.3	1.6	1.7	8.0	5.8	5.3
Acrolein	2.5	2.0	0.81	0.75	0.75	0.84	1.1	1.3	0.24	0.22	0.18	0.24	0.23	1.1	0.78	0.71
Aldehyde	10	15	6.1	5.7	5.7	6.4	8.1	9.5	1.8	1.6	1.4	1.8	1.7	8.3	5.9	5.4

  

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	1	0.6	0.5	0.5	0.6	0.8	0.9	0.2	0.2	0.1	0.2	0.2	0.8	0.6	0.5
Acrolein	2.5	0.8	0.3	0.3	0.3	0.3	0.4	0.5	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.3
Aldehyde	10	1	0.6	0.6	0.6	0.6	0.8	0.9	0.2	0.2	0.1	0.2	0.2	0.8	0.6	0.5

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	2.0	1.4	1.3	1.1	1.5	1.6	12	4.2	1.4	1.5	1.5
Acrolein	2.5	0.26	0.19	0.17	0.14	0.20	0.21	1.6	0.56	0.32	0.33	0.33
Aldehyde	10	2.0	1.4	1.3	1.1	1.5	1.6	12	4.2	2.4	2.5	2.5

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	0.2	0.1	0.1	0.1	0.2	0.2	1	0.4	0.1	0.1	0.2
Acrolein	2.5	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.2	0.1	0.1	0.1
Aldehyde	10	0.2	0.1	0.1	0.1	0.1	0.2	1	0.4	0.2	0.3	0.3

Notes: µg/m<sup>3</sup> = micrograms per cubic metres; DPM = diesel particulate matter

**Bold** = greater than HQ of 1

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Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	15	5.3	4.8	4.5	5.7	6.9	7.3	1.5	1.7	1.3	1.5	1.7	7.4	8.5	6.8
Acrolein	2.5	2.1	0.74	0.65	0.62	0.76	1.0	1.0	0.22	0.22	0.18	0.22	0.22	1.0	1.1	0.92
Aldehyde	10	16	5.6	4.9	4.7	5.7	7.5	7.8	1.7	1.7	1.3	1.7	1.7	7.7	8.6	7.0

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	2	0.5	0.5	0.4	0.6	0.7	0.7	0.2	0.2	0.1	0.2	0.2	0.7	0.8	0.7
Acrolein	2.5	0.8	0.3	0.3	0.2	0.3	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.4
Aldehyde	10	2	0.6	0.5	0.5	0.6	0.7	0.8	0.2	0.2	0.1	0.2	0.2	0.8	0.9	0.7

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	2.2	1.5	1.3	1.1	1.5	1.7	20	3.3	1.5	1.6	1.6
Acrolein	2.5	0.29	0.19	0.17	0.14	0.20	0.23	2.7	0.44	0.31	0.31	0.32
Aldehyde	10	2.2	1.4	1.3	1.1	1.5	1.8	21	3.3	2.3	2.3	2.4

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	0.2	0.1	0.1	0.1	0.2	0.2	<b>2</b>	0.3	0.1	0.2	0.2
Acrolein	2.5	0.1	0.1	0.1	0.1	0.1	0.1	1	0.2	0.1	0.1	0.1
Aldehyde	10	0.2	0.1	0.1	0.1	0.2	0.2	<b>2</b>	0.3	0.2	0.2	0.2

Notes: µg/m<sup>3</sup> = micrograms per cubic metres; DPM = diesel particulate matter

**Bold** = greater than HQ of 1

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Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	14	5.5	5.3	5.4	5.6	6.8	11	1.4	1.6	1.2	1.4	1.5	7.4	6.5	5.2
Acrolein	2.5	1.9	0.76	0.74	0.75	0.75	1.0	1.4	0.22	0.20	0.17	0.22	0.20	1.0	0.88	0.70
Aldehyde	10	14	5.7	5.6	5.6	5.7	7.4	11	1.7	1.5	1.2	1.7	1.5	7.6	6.7	5.3

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	1	0.6	0.5	0.5	0.6	0.7	1.1	0.1	0.2	0.1	0.1	0.2	0.7	0.7	0.5
Acrolein	2.5	0.7	0.3	0.3	0.3	0.3	0.4	0.6	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.3
Aldehyde	10	1	0.6	0.6	0.6	0.6	0.7	1	0.2	0.2	0.1	0.2	0.2	0.8	0.7	0.5

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	2.0	1.5	1.3	1.1	1.6	1.7	11.5	4.6	1.5	1.5	1.6
Acrolein	2.5	0.27	0.19	0.17	0.15	0.20	0.21	1.6	0.61	0.33	0.34	0.34
Aldehyde	10	2.0	1.4	1.3	1.1	1.5	1.6	12	4.6	2.5	2.6	2.6

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	0.2	0.1	0.1	0.1	0.2	0.2	1	0.5	0.1	0.2	0.2
Acrolein	2.5	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.2	0.1	0.1	0.1
Aldehyde	10	0.2	0.1	0.1	0.1	0.2	0.2	1	0.5	0.2	0.3	0.3

Notes: µg/m<sup>3</sup> = micrograms per cubic metres; DPM = diesel particulate matter

**Bold** = greater than HQ of 1

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Checked By: SG

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	14	4.6	4.7	4.4	5.5	6.8	7.3	1.4	1.6	1.2	1.4	1.6	7.4	5.1	4.3
Acrolein	2.5	1.9	0.62	0.64	0.59	0.74	1.0	1.0	0.19	0.22	0.17	0.19	0.21	1.0	0.70	0.58
Aldehyde	10	14	4.7	4.8	4.5	5.6	7.5	7.5	1.4	1.6	1.3	1.4	1.6	7.6	5.3	4.4

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	1	0.5	0.5	0.4	0.6	0.7	0.7	0.1	0.2	0.1	0.1	0.2	0.7	0.5	0.4
Acrolein	2.5	0.8	0.2	0.3	0.2	0.3	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.2
Aldehyde	10	1	0.5	0.5	0.4	0.6	0.7	0.8	0.1	0.2	0.1	0.1	0.2	0.8	0.5	0.4

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	3.5	1.7	1.4	1.3	1.9	2.8	8.4	3.3	1.1	1.1	1.2
Acrolein	2.5	0.46	0.22	0.18	0.17	0.25	0.38	1.1	0.44	0.29	0.29	0.30
Aldehyde	10	3.5	1.7	1.4	1.3	1.9	2.9	8.6	3.3	2.2	2.2	2.3

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	0.3	0.2	0.1	0.1	0.2	0.3	1	0.3	0.1	0.1	0.1
Acrolein	2.5	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.2	0.1	0.1	0.1
Aldehyde	10	0.3	0.2	0.1	0.1	0.2	0.3	1	0.3	0.2	0.2	0.2

Notes: µg/m<sup>3</sup> = micrograms per cubic metres; DPM = diesel particulate matter

**Bold** = greater than HQ of 1

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Checked By: SG

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	14	5.6	5.0	5.0	5.8	7.0	7.8	1.5	1.6	1.3	1.5	1.6	7.4	5.7	5.3
Acrolein	2.5	1.9	0.77	0.69	0.68	0.78	1.0	1.1	0.23	0.21	0.17	0.23	0.21	1.0	0.76	0.72
Aldehyde	10	14	5.8	5.2	5.2	5.9	7.5	8.4	1.7	1.6	1.3	1.7	1.6	7.7	5.8	5.4

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	1	0.6	0.5	0.5	0.6	0.7	0.8	0.1	0.2	0.1	0.1	0.2	0.7	0.6	0.5
Acrolein	2.5	0.8	0.3	0.3	0.3	0.3	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.3
Aldehyde	10	1	0.6	0.5	0.5	0.6	0.7	0.8	0.2	0.2	0.1	0.2	0.2	0.8	0.6	0.5

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	2.0	1.4	1.2	1.0	1.5	1.6	10.8	4.3	1.3	1.4	1.5
Acrolein	2.5	0.26	0.18	0.16	0.13	0.19	0.21	1.5	0.56	0.32	0.32	0.33
Aldehyde	10	1.9	1.3	1.2	1.0	1.4	1.6	11.0	4.3	2.4	2.4	2.5

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	0.2	0.1	0.1	0.1	0.1	0.2	1	0.4	0.1	0.1	0.1
Acrolein	2.5	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.2	0.1	0.1	0.1
Aldehyde	10	0.2	0.1	0.1	0.1	0.1	0.2	1	0.4	0.2	0.2	0.2

Notes: µg/m<sup>3</sup> = micrograms per cubic metres; DPM = diesel particulate matter

**Bold** = greater than HQ of 1

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	14	4.4	4.7	4.4	5.5	6.8	7.3	1.2	1.5	1.2	1.2	1.5	7.4	5.0	4.1
Acrolein	2.5	1.8	0.60	0.63	0.59	0.73	1.0	1.0	0.18	0.20	0.16	0.18	0.19	1.0	0.69	0.55
Aldehyde	10	14	4.5	4.8	4.5	5.5	7.4	7.5	1.3	1.5	1.2	1.3	1.5	7.6	5.2	4.2

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
DPM	10	1	0.4	0.5	0.4	0.5	0.7	0.7	0.1	0.2	0.1	0.1	0.1	0.7	0.5	0.4
Acrolein	2.5	0.7	0.2	0.3	0.2	0.3	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.2
Aldehyde	10	1	0.5	0.5	0.4	0.6	0.7	0.8	0.1	0.1	0.1	0.1	0.1	0.8	0.5	0.4

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Air Concentrations (µg/m <sup>3</sup> )										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	1.7	1.1	1.0	0.8	1.1	1.3	8.0	3.3	1.0	1.1	1.1
Acrolein	2.5	0.21	0.13	0.12	0.10	0.14	0.17	1.1	0.44	0.25	0.25	0.26
Aldehyde	10	1.6	1.0	0.93	0.79	1.1	1.3	8.1	3.3	1.9	1.9	1.9

Parameter	Acute Air Threshold (µg/m <sup>3</sup> )	Hazard Quotients										
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3
DPM	10	0.2	0.1	0.1	0.1	0.1	0.1	1	0.3	0.1	0.1	0.1
Acrolein	2.5	0.1	0.1	0.0	0.0	0.1	0.1	0.4	0.2	0.1	0.1	0.1
Aldehyde	10	0.2	0.1	0.1	0.1	0.1	0.1	1	0.3	0.2	0.2	0.2

Notes: µg/m<sup>3</sup> = micrograms per cubic metres; DPM = diesel particulate matter

**Bold** = greater than HQ of 1

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
<b>Metals</b>								
aluminum	NA	NA	12	NA	NA	NA	NA	MECP - health
antimony	NA	NA	25	NA	NA	1	NA	ATSDR - Screening value based on squamous metaplasia of the epiglottis respiratory endpoints. Mice were exposed to 0, 3.71, 7.43, 14.7, 30.2 and 59.4 mg/m <sup>3</sup> antimony trioxide gas for 17 days (ATSDR 2019). A BMCL10 of 940 µg/m <sup>3</sup> was identified as the point of departure. The BMCL10 was adjusted for a human equivalency concentration (HEC) (35 µg/m <sup>3</sup> ). Uncertainty factors for extrapolation from animals to humans using dosimetric adjustments (3), and human variability (10) were applied, for a total uncertainty factor of 30. The acute-duration inhalation MRL was adopted as the 24-hour air threshold.
arsenic	NA	NA	0.3	NA	0.015 <sup>(6)</sup>	NA	NA	MECP - health CalEPA - The CalEPA 8-hr threshold for As was taken to be equivalent to the chronic REL due to the possibility of repeated exposure and the relatively slow clearance of As compounds. The chronic REL was based on a LOAEL of 0.23 µg/m <sup>3</sup> for decrease in intellectual function and adverse effects on neurobehavioural development in children. An uncertainty factor of 30 was applied.
					0.2 <sup>(b)</sup>			
barium	NA	NA	10	NA	NA	NA	NA	MECP - health
beryllium	NA	NA	0.01	NA	NA	NA	NA	MECP - health
Bismuth	NA	NA	2.5	NA	NA	NA	NA	MECP - health
Cadmium	NA	NA	0.025	NA	NA	0.03	1.83	MECP - health
								ATSDR - Screening value based on a LOAEL of 88 µg/m <sup>3</sup> for respiratory effects in rats exposed to cadmium oxide for 6.2 hours/day, 5 days/week for 2 weeks (ATSDR 2012). The LOAEL was adjusted for continuous exposure and for a regional deposited dose ratio to determine human exposure. TCEQ - The LOAEL was 0.088 mg/m <sup>3</sup> (total of 62 hours of exposure) (TCEQ 2016). The LOAEL was not extrapolated to a 24-hour exposure. The LOAEL was adjusted for a regional deposited dose ratio (1.87), resulting in a human equivalent concentration point of departure (PODHEC) of 165 µg/m <sup>3</sup> . An uncertainty factor of 300 was applied (3 for interspecies variability, 10 for intraspecies variability and 10 for use of a LOAEL).
Calcium	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
chromium	NA	NA	0.5	NA	NA	5	NA	MECP - health
						0.1		ATSDR - The MRL for insoluble Cr(III) particulate compounds was based on a LOAEL of 3 mg/m <sup>3</sup> for trace-to-mild cell hyperplasia and chronic interstitial inflammation of the lung. The LOAEL was adjusted for intermittent exposure (6 hr/day, 5 days/week) and a human equivalent concentration (0.789). An uncertainty factor of 90 was applied. ATSDR - The MRL for soluble Cr(III) particulate compounds was based on a LOAEL of 3 mg/m <sup>3</sup> for nasal and larynx lesions. The LOAEL was adjusted for intermittent exposure (6 hr/day, 5 days/week) and a human equivalent concentration of 0.078. An uncertainty factor of 300 was applied.
chromium VI	NA	NA	0.00035	NA	NA	0.005	4.33	MECP - PM10, health MECP - TSP, health
			0.0007			0.3		ATSDR - The MRL for dissolved Cr(VI) aerosols and mists was based on a LOAEL of 0.002 mg/m <sup>3</sup> for nasal irritation, mucosal atrophy and decreased FVC, FEP, and FEV. The LOAEL was adjusted for exposure duration (8 hr/day, 5 days/week) and an uncertainty factor of 100 was applied. TCEQ - Based on a benchmark concentration lower confidence limit based on lung impacts on rats. The BMCL10 was not adjusted for human health. ATSDR - The MRL for Cr(VI) particulate compounds was based on a BMCL of 0.016 mg/m <sup>3</sup> for alterations in lactate dehydrogenase levels in bronchoalveolar lavage. The BMCL was converted to a human equivalent concentration of 0.01 mg/m <sup>3</sup> (regional deposited dose rate was 0.630). An uncertainty factor of 30 was applied.
cobalt	NA	NA	0.1	NA	NA	NA	0.32	MECP - health TCEQ - The LOEL of 38 ug/m <sup>3</sup> resulting from respiratory effects in people. Value was adjusted to 24 hr exposure.
copper	NA	NA	50	NA	NA	NA	NA	MECP - health
gold	NA	NA	1.25	NA	NA	NA	NA	MECP - health
iron	NA	NA	4	NA	NA	NA	NA	MECP - health
lead	NA	NA	0.5	NA	NA	NA	NA	MECP - health
Lithium	NA	NA	20	NA	NA	NA	NA	MECP - health
magnesium	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
manganese	NA	NA	0.1	NA	0.17 <sup>(6)</sup>	NA	17	MECP - PM2.5, health
			0.2					MECP - PM10, health
			0.4					MECP - TSP, health
								CalEPA - The REL is based on a benchmark concentration of 72 µg/m <sup>3</sup> for impaired neurobehaviour (visual reaction time, eye-hand coordination and hand steadiness). The benchmark concentration was adjusted for duration (5 days/week) and an uncertainty factor of 300 was applied.
								TCEQ - Screening value based on an inhalation study where rhesus monkeys were exposed to manganese sulphate for 6 hours per day, 5 days per week for 3 weeks (total of 90 hours of exposure) (TCEQ 2017). The critical effect was mild inflammatory changes to the airway with a point of departure LOAEL (6 hours of exposure) of 1.5 mg Mn/m <sup>3</sup> . The LOAEL did not require adjustment to a human equivalent concentration (HEC) because the particulate deposition efficiency is the same in rhesus monkeys and humans. Uncertainty factors for extrapolation from a LOAEL to a NOAEL (2), intrahuman variability (10), 3 to account for potential toxicodynamic differences between rhesus monkeys and humans and 6 for a limited database were applied; however, a maximum uncertainty factor of 300 is used to derive an acute reference value of 5 µg/m <sup>3</sup> .
molybdenum	NA	NA	120	NA	NA	NA	NA	MECP - particulate
nickel	NA	NA	0.1	NA	0.06 <sup>(6)</sup>	0.2	NA	MECP - PM10, health
			0.2					MECP - TSP, health
								CalEPA - The threshold was based on a NOAEL of 0.03 µg/m <sup>3</sup> for alveolar macrophage hyperplasia, alveolar proteinosis and chronic active inflammation. The NOAEL was corrected for a duration time of 5 days/week, a dosimetric adjustment factor of 0.264 and an uncertainty factor of 100.
								ATSDR - The intermediate MRL was based on a NOAEL of 0.06 mg/m <sup>3</sup> for chronic active inflammation in rats. The NOAEL was adjusted for exposure duration (6 hr/day, 5 days/week) and a human equivalent concentration of 0.474. An uncertainty factor of 30 was applied.
Potassium	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
selenium	NA	NA	10	NA	NA	NA	NA	MECP - health
silver	NA	NA	1	NA	NA	NA	NA	MECP - health
Sodium	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
strontium	NA	NA	120	NA	NA	NA	NA	MECP - particulate
thallium	NA	NA	0.5	NA	NA	NA	NA	MECP - health
tin	NA	NA	10	NA	NA	NA	NA	MECP - health
titanium	NA	NA	120	NA	NA	NA	NA	MECP - particulate
uranium	NA	NA	0.15	NA	NA	2	NA	MECP - PM10, health
			0.3					MECP - TSP, health
								ATSDR - The intermediate MRL for insoluble U was based on a NOAEL of 1.1 mg/m <sup>3</sup> and a LOAEL of 8.2 mg/m <sup>3</sup> for minimal microscopic lesions in the renal tubules in dogs. The NOAEL was adjusted for duration (6 hr/day, 6 days/week) and an uncertainty factor of 100.
								ATSDR - The intermediate MRL for soluble U was based on a LOAEL of 0.15 mg/m <sup>3</sup> for minimal microscopic lesions in the renal tubules in dogs. The LOAEL was adjusted for duration (6 hr/day, 6 days/week) and an uncertainty factor of 300 was applied.
vanadium	NA	NA	2	1	NA	0.8	NA	MECP - health
								ATSDR - Screening value based on microscopic lesions in the renal tubules of rats (ATSDR 2012) exposed to 0, 1, 2, or 4 mg of vanadium pentoxide/m <sup>3</sup> for 6 hours per day, 5 days per week for 16 days. A LOAEL of 560 µg-V/m <sup>3</sup> was adjusted for exposure duration (6/24 hours, 5/7 days), yielding an adjusted LOAEL of 100 µg/m <sup>3</sup> . A human equivalent concentration LOAEL of 73 µg-V/m <sup>3</sup> was calculated using a regional deposited dose ratios of 0.732. Uncertainty factors for the use of a minimal LOAEL (3), extrapolation from animals to humans (3), and human
yttrium	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
zinc	NA	NA	120	NA	NA	NA	NA	MECP - particulate

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Methyl acenaphthene	NA	NA	NA	NA	NA	NA	NA	-
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
2-Methylanthracene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Anthracene	NA	NA	NA	NA	NA	NA	NA	-
C2 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	-
C3 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	-
C4 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	-
Methyl phenanthrene/anthracene	NA	NA	NA	NA	NA	NA	NA	-
1,6-dinitropyrene	NA	NA	NA	NA	NA	NA	NA	-
1,8-dinitropyrene	NA	NA	NA	NA	NA	NA	NA	-
1-Nitropyrene	NA	NA	NA	NA	NA	NA	NA	-
3-Methylcholanthrene	NA	NA	NA	NA	NA	NA	NA	-
7H-Dibenzo(c,g)carbazole	NA	NA	NA	NA	NA	NA	NA	-
Benzo(a)pyrene	NA	NA	0.00005	NA	NA	NA	NA	MECP - health, as a surrogate of total PAHs
Benzo(b)fluorene	NA	NA	NA	NA	NA	NA	NA	-
Benzo(e)pyrene	NA	NA	NA	NA	NA	NA	NA	-
Cyclopenta(c,d)pyrene	NA	NA	NA	NA	NA	NA	NA	-
nitrobenzanthrone	NA	NA	NA	NA	NA	NA	NA	-
Nitro-pyrene	NA	NA	NA	NA	NA	NA	NA	-
7,12-dimethylbenz(a)anthracene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	-
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Benzo(j)fluoranthene	NA	NA	NA	NA	NA	NA	NA	-
C2 sub'd B(b&k)F/B(a)P	NA	NA	NA	NA	NA	NA	NA	-
Methyl B(b&k)F/B(a)P	NA	NA	NA	NA	NA	NA	NA	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Coronene	NA	NA	NA	NA	NA	NA	NA	-
Perylene	NA	NA	NA	NA	NA	NA	NA	-
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
C2 sub'd B(a)A/chrysene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Chrysene	NA	NA	NA	NA	NA	NA	NA	-
Methyl B(a)A/chrysene	NA	NA	NA	NA	NA	NA	NA	-
dibenz(a,h)acridine	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
dibenz(a,i)acridine	NA	NA	NA	NA	NA	NA	NA	-
picene	NA	NA	NA	NA	NA	NA	NA	-
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	-
Acephenanthrylene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Benzo(a)fluorene	NA	NA	NA	NA	NA	NA	NA	-
Benzo(g,h,i)fluoranthene	NA	NA	NA	NA	NA	NA	NA	-
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	-
2-Methylfluorene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
C2 sub'd fluorene	NA	NA	NA	NA	NA	NA	NA	-
carbazole	NA	NA	NA	NA	NA	NA	NA	-
Fluorene	NA	NA	NA	NA	NA	NA	NA	-
Methyl fluorene	NA	NA	NA	NA	NA	NA	NA	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Indeno(1,2,3-cd)fluoranthene	NA	NA	NA	NA	NA	NA	NA	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	-
Indeno(1,2,3-W)pyrene	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
1-methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	-
2-methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	-
C2 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	-
C3 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	-
C4 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	-
Indole	NA	NA	NA	NA	NA	NA	NA	-
Methyl naphthalene	NA	NA	NA	NA	NA	NA	NA	-
Naphthalene	NA	NA	22.5	NA	NA	NA	NA	MECP - health
1-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
2-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	-
3-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	-
4-+9-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	-
phenanthrene	NA	NA	NA	NA	NA	NA	NA	-
Retene	NA	NA	NA	NA	NA	NA	NA	-
2-Methylpyrene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Methyl fluoranthene/pyrene	NA	NA	NA	NA	NA	NA	NA	-
Pyrene	NA	NA	NA	NA	NA	NA	NA	-
2,5-dimethylthiophene	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
3-Methylidibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
4-Methylidibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
C2 sub'd dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
C3 sub'd dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
C4 sub'd dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
Dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
Methyl dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	-
<b>Volatile Organic Compounds</b>								
1,3-Butadiene	NA	NA	10	NA	NA	NA	3166	MECP - health TCEQ - Screening value based on a study where reduction in extragastrational weight gain and fetal body weight, and developmental toxicity (abnormal sternbrae, reduced ossification for all sites and increased incidence of supernumerary (additional ribs) were observed in mice exposed to 1,3-butadiene for 6 hours/day on gestational days 6 to 15 (TCEQ 2015). A benchmark concentration level corresponding to the lower confidence limit (one standard deviation) (BMCL1SD) of 51.3 ppm was calculated based on this study. The BMCL1SD was extrapolated to 24 hours (12.8 ppm) and adjusted to a human equivalent concentration (HEC) (12.8 ppm). Uncertainty factors for interspecies variation (3) and intraspecies variation (10) were applied, resulting in a value of 0.43 ppm (0.95 mg/m <sup>3</sup> ). The TCEQ value was selected over the lower MECP value because the MECP value is based on a cancer endpoint, which is not typical for the 24-hour averaging period. Cancer effects will be utilizing the chronic exposure scenario.
2,5,5-TRIMETHYL-1,6-HEPTADIENE	NA	NA	NA	NA	NA	NA	NA	-
2,5,5-TRIMETHYL-1,6-HEPTADIENE (B)	NA	NA	NA	NA	NA	NA	NA	-
2,5-dimethyl-1,3-hexadiene	NA	NA	NA	NA	NA	NA	NA	-
2-METHYL-4,5-NONADIENE	NA	NA	NA	NA	NA	NA	NA	-
3-ETHYL-2-METHYL-1,3HEXADIENE	NA	NA	NA	NA	NA	NA	NA	-
4,8-DIMETHYL-1,7-NONADIENE	NA	NA	NA	NA	NA	NA	NA	-
4-METHYL-2,7-OCTADIENE	NA	NA	NA	NA	NA	NA	NA	-
5-METHYL-1,4-HEXADIENE	NA	NA	NA	NA	NA	NA	NA	-
1,2-Butadiene	NA	NA	NA	NA	NA	NA	NA	-
1,2-Pentadiene	NA	NA	NA	NA	NA	NA	NA	-
1,4-Pentadiene	NA	NA	NA	NA	NA	NA	NA	-
2,3-Pentadiene	NA	NA	NA	NA	NA	NA	NA	-
2-Methyl-1,3-butadiene	NA	NA	NA	NA	NA	NA	NA	-
3-Methyl-1,2-butadiene	NA	NA	NA	NA	NA	NA	NA	-
cis-1,3-Pentadiene	NA	NA	NA	NA	NA	NA	NA	-
Cyclopentadiene	NA	NA	NA	NA	NA	NA	NA	-
trans-1,3-Pentadiene	NA	NA	NA	NA	NA	NA	NA	-
Acetaldehyde	NA	NA	500	NA	300 <sup>(6)</sup>	NA	NA	MECP - health CalEPA - The 8 hr threshold was based on a BMC <sub>05</sub> of 178 mg/m <sup>3</sup> for degeneration of olfactory nasal epithelium. The BMC <sub>05</sub> was adjusted for a human equivalent concentration (1.36 dosimetric adjustment factor) and duration (6 hr/day, 5 days/week and 10 m <sup>3</sup> of inhaled air). An uncertainty factor of 300 was applied.

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
Acetone	NA	NA	11880	NA	NA	30880 61760 <sup>(b)</sup>	NA	MECP - health ATSDR - The ATSDR threshold was based on a LOAEL of 1250 ppm for neurological effects in humans during a 6 week study. An uncertainty factor of 100 was applied. ATSDR - A LOAEL of 237 ppm based on neurobehavioural effects in humans was used to derive the 4-hr MRL. An uncertainty factor of 9 was applied.
Acrolein	NA	NA	0.4	NA	0.7 <sup>(e)</sup>	0.09	37	MECP - health CalEPA - The CalEPA threshold was based on a NOAEL of 0.2 ppm for lesions in the respiratory epithelium. The NOAEL was adjusted for duration and a human equivalent concentration. An uncertainty factor of 200 was applied. ATSDR - The ATSDR threshold is based on a LOAEL of 0.4 ppm for nasal metaplasia in rats. The LOAEL was adjusted for exposure duration (6 hr/day, 5 days/week). A human equivalent concentration of 0.17 and an uncertainty factor of 300 were applied. TCEQ - Screening value based on a LOAEL of 0.3 ppm (688 µg/m <sup>3</sup> ) for respiratory effects in college students exposed to various concentrations of acrolein for 1 hour (TCEQ 2015). The exposure was not extrapolated to a 24 hour exposure because adverse effects related to acrolein exposure are primarily concentration dependent. An uncertainty factor of 63 (10 for intraspecies variability and 6.3 for use of a LOAEL) was applied.
Methacrolein	NA	NA	NA	NA	NA	NA	NA	-
2,5-dimethylbenzaldehyde	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
3-Methylbutanal	NA	NA	NA	NA	NA	NA	NA	-
benzaldehyde	NA	NA	NA	NA	NA	NA	NA	-
butanal	NA	NA	NA	NA	NA	NA	NA	-
crotonaldehyde	NA	NA	NA	NA	NA	NA	NA	-
decanal	NA	NA	NA	NA	NA	NA	NA	-
dodecanal	NA	NA	NA	NA	NA	NA	NA	-
heptanal	NA	NA	NA	NA	NA	NA	NA	-
isobutyraldehyde	NA	NA	NA	NA	NA	NA	NA	-
nonanal	NA	NA	NA	NA	NA	NA	NA	-
octanal	NA	NA	NA	NA	NA	NA	NA	-
propanal	NA	NA	NA	NA	NA	NA	NA	-
tridecanal	NA	NA	NA	NA	NA	NA	NA	-
undecanal	NA	NA	NA	NA	NA	NA	NA	-
Benzene	NA	NA	23	NA	1300 <sup>(c)</sup>	29	1067	MECP - health CalEPA - The CalEPA OEHHA threshold is based on health effects (reproductive and developmental toxicity). ATSDR - The threshold was based on a LOAEL of 10 ppm for significantly delayed splenic lymphocyte reaction to foreign antigens in mice. The LOAEL was adjusted for intermittent exposure (6 hr/day, 5 days/week). A human equivalent concentration of 1 and an uncertainty factor of 300 was applied. cells to 0 to 301 ppm benzene for 6 hours/day for 6 days (from a study by Rozen et al. 1984, as cited in (TCEQ 2015). A NOAEL was not available because all exposure concentrations used in the study resulted in significant effects. The study TCEQ used to derive a reference value is the same as that used by ATSDR to derive a minimal risk level. The TCEQ did not adjust the LOAEL for duration, (i.e., it was not extrapolated to 24 hours as it was not considered applicable based on consideration of toxicokinetics). The TCEQ determined there to be inadequate clearance following each day of exposure, and considered the multiple day exposure as a continuous exposure in order to derive a 24-hour reference value. The LOAEL was adjusted to a human equivalent concentration (HEC) (10.2 ppm). Uncertainty factors for interspecies variation (3), intraspecies variation (10), and use of a LOAEL (3) were applied to derive an acute reference value of 320 µg/m <sup>3</sup> .
2,4-DIETHYL-1-METHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
2,2,7-TRIMETHYL-3-OCTYNE	NA	NA	NA	NA	NA	NA	NA	-
2,2-DIMETHYL-3-DECENE	NA	NA	NA	NA	NA	NA	NA	-
3-DODECENE	NA	NA	NA	NA	NA	NA	NA	-
7-METHYL-5-UNDECENE	NA	NA	NA	NA	NA	NA	NA	-
dodecane	NA	NA	NA	NA	NA	NA	NA	-
hexylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
pentylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
undecane	NA	NA	NA	NA	NA	NA	NA	-
3-Ethylnonane	NA	NA	NA	NA	NA	NA	NA	-
4-Methyldecane	NA	NA	NA	NA	NA	NA	NA	-
5-Methyldecane	NA	NA	NA	NA	NA	NA	NA	-
C11-Paraffin	NA	NA	NA	NA	NA	NA	NA	-
C12-Paraffin	NA	NA	NA	NA	NA	NA	NA	-
n-Dodecane	NA	NA	NA	NA	NA	NA	NA	-
n-Undecane	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Methyl-2(4-methylpentyl)-cyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-pentyl-2-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
2,6,10-trimethyltridecane	NA	NA	NA	NA	NA	NA	NA	-
3,3,8-trimethyldecane	NA	NA	NA	NA	NA	NA	NA	-
AMORPHANE B	NA	NA	NA	NA	NA	NA	NA	-
decylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
farnesane	NA	NA	NA	NA	NA	NA	NA	-
heptylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
Hexadecane	NA	NA	NA	NA	NA	NA	NA	-
nonylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
norfarnesane	NA	NA	NA	NA	NA	NA	NA	-
n-pentadecane	NA	NA	NA	NA	NA	NA	NA	-
octylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
Tetradecane	NA	NA	NA	NA	NA	NA	NA	-
Tridecane	NA	NA	NA	NA	NA	NA	NA	-
VALENCANE	NA	NA	NA	NA	NA	NA	NA	-
n-Tridecane	NA	NA	NA	NA	NA	NA	NA	-
1,2,4-TMB+n-Decane	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
1,2,3-TMB+P-C	NA	NA	NA	NA	NA	NA	NA	-
Decylbenzene	NA	NA	NA	NA	NA	NA	NA	-
fluorenone	NA	NA	NA	NA	NA	NA	NA	-
n-Octylbenzene	NA	NA	NA	NA	NA	NA	NA	-
xanthone	NA	NA	NA	NA	NA	NA	NA	-
3-EICOSYNE	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
5-EICOSYNE	NA	NA	NA	NA	NA	NA	NA	-
5-EICOSYNE (B)	NA	NA	NA	NA	NA	NA	NA	-
dodecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
n-eicosane	NA	NA	NA	NA	NA	NA	NA	-
n-heneicosane	NA	NA	NA	NA	NA	NA	NA	-
n-heptadecane	NA	NA	NA	NA	NA	NA	NA	-
n-nonadecane	NA	NA	NA	NA	NA	NA	NA	-
n-octadecane	NA	NA	NA	NA	NA	NA	NA	-
norpristane	NA	NA	NA	NA	NA	NA	NA	-
pentadecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
phytane	NA	NA	NA	NA	NA	NA	NA	-
pristane	NA	NA	NA	NA	NA	NA	NA	-
tetradecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
tridecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
undecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
8b,13a-dimethyl-14b-[3'-methylbutyl]-podocarpane	NA	NA	NA	NA	NA	NA	NA	-
8b,13a-dimethyl-14b-n-butylpodocarpane	NA	NA	NA	NA	NA	NA	NA	-
1,3,5-TRIMETHYL2-OCTADECYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
1-methyl-1-(2-methylene)cyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-4-(1-METHYLENE)CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-4-(METHYLENE)CYCLOHEXENE	NA	NA	NA	NA	NA	NA	NA	-
1-PROPYNE	NA	NA	NA	NA	NA	NA	NA	-
2,2-DIMETHYLPROPANE	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQS <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
2-ethyl-2-hexene	NA	NA	NA	NA	NA	NA	NA	-
2-Methyl pentane,2,3-Dimethylbutane	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-1-butene	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-1-pentene + 1-hexene	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-4-pentene	NA	NA	NA	NA	NA	NA	NA	-
2-METHYLBICYCLO[4.4.0]HEPTANE	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-1-butene	NA	NA	NA	NA	NA	NA	NA	-
4-METHYL-1-(1-METHYLENE)CYCLOHEXENE	NA	NA	NA	NA	NA	NA	NA	-
ACETYLENE + ETHANE	NA	NA	NA	NA	NA	NA	NA	-
Butane	NA	NA	NA	NA	NA	NA	NA	-
Butene	NA	NA	NA	NA	NA	NA	NA	-
cis-2-butene	NA	NA	NA	NA	NA	NA	NA	-
cyclopentane	NA	NA	NA	NA	NA	NA	NA	-
ethane	NA	NA	NA	NA	NA	NA	NA	-
ethyne	NA	NA	56000	NA	NA	NA	NA	MECP - odour, to be updated
i-butane	NA	NA	NA	NA	NA	NA	NA	-
isobutene	NA	NA	NA	NA	NA	NA	NA	-
isopentane	NA	NA	NA	NA	NA	NA	NA	-
pentane	NA	NA	NA	NA	NA	NA	NA	-
pentene	NA	NA	NA	NA	NA	NA	NA	-
Propane	NA	NA	NA	NA	NA	NA	NA	-
propene	NA	NA	4000	NA	NA	NA	NA	MECP - health
trans-2-butene	NA	NA	NA	NA	NA	NA	NA	-
trans-2-pentene	NA	NA	NA	NA	NA	NA	NA	-
1,2-Butane	NA	NA	NA	NA	NA	NA	NA	-
1-Butene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-1-cyclopentene	NA	NA	NA	NA	NA	NA	NA	-
1-Pentene	NA	NA	NA	NA	NA	NA	NA	-
1-Pentyne	NA	NA	NA	NA	NA	NA	NA	-
2-Butanol	NA	NA	NA	NA	NA	NA	NA	-
2-Butyne	NA	NA	NA	NA	NA	NA	NA	-
2-Methyl-2-butene	NA	NA	NA	NA	NA	NA	NA	-
3-Methyl-2-butene	NA	NA	NA	NA	NA	NA	NA	-
4-Methyl-1-cyclopentene	NA	NA	NA	NA	NA	NA	NA	-
C6-Olefin	NA	NA	NA	NA	NA	NA	NA	-
cis-2-Pentene	NA	NA	NA	NA	NA	NA	NA	-
Cyclopentene	NA	NA	NA	NA	NA	NA	NA	-
Ethene	NA	NA	NA	NA	NA	NA	NA	-
Isobutane	NA	NA	NA	NA	NA	NA	NA	-
Isobutanol	NA	NA	4600	NA	NA	NA	NA	MECP - health
Methyl-tert-butyl ether	NA	NA	7000	NA	NA	2520	NA	MECP - health ATSDR - The intermediate MRL was derived based on a NOAEL of 400 ppm for no CNS sedation in rats. The NOAEL was adjusted for duration (6 hr/day, 5 days/week) and a human equivalent concentration of 1. An uncertainty factor of 100 was applied.
Naphthene	NA	NA	NA	NA	NA	NA	NA	-
n-Butane	NA	NA	NA	NA	NA	NA	NA	-
n-Butanol	NA	NA	920	NA	NA	NA	NA	MECP - health
n-Pentane	NA	NA	NA	NA	NA	NA	NA	-
n-Propanol	NA	NA	16000	NA	NA	NA	NA	MECP - health
1,1-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1,2-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1,3-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1,5-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-ethyl-1-methylcyclopropane	NA	NA	NA	NA	NA	NA	NA	-
1-HEXENE	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-2-METHYLENE CYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
2,2,3-TRIMETHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	-
2,2-dimethylbutane	NA	NA	NA	NA	NA	NA	NA	-
2,3-dimethylbutane	NA	NA	NA	NA	NA	NA	NA	-
2,3-dimethylpentane	NA	NA	NA	NA	NA	NA	NA	-
2,4-dimethyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	-
2,4-dimethylpentane	NA	NA	NA	NA	NA	NA	NA	-
2-hexene	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-2-pentene	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-3-pentene	NA	NA	NA	NA	NA	NA	NA	-
2-methylhexane	NA	NA	NA	NA	NA	NA	NA	-
2-methylpentane	NA	NA	NA	NA	NA	NA	NA	-
3,3-DIMETHYL-1-BUTENE	NA	NA	NA	NA	NA	NA	NA	-
3,3-DIMETHYLPENTANE	NA	NA	NA	NA	NA	NA	NA	-
3,4-dimethyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-1,3-pentadiene	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-1-hexene	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-2-hexene	NA	NA	NA	NA	NA	NA	NA	-
3-METHYL-2-HEXENE (B)	NA	NA	NA	NA	NA	NA	NA	-
3-methyl-2-pentene	NA	NA	NA	NA	NA	NA	NA	-
3-methylcyclopentene	NA	NA	NA	NA	NA	NA	NA	-
3-methylhexane	NA	NA	NA	NA	NA	NA	NA	-
3-methylpentane	NA	NA	NA	NA	NA	NA	NA	-
4,4-dimethylcyclopentene	NA	NA	NA	NA	NA	NA	NA	-
4-methylcyclohexene	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQS <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
cis-2-hexene	NA	NA	NA	NA	NA	NA	NA	-
Cyclohexane	NA	NA	6100	NA	NA	NA	NA	MECP - health
Cyclohexene	NA	NA	NA	NA	NA	NA	NA	-
ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
heptane	NA	NA	NA	NA	NA	NA	NA	-
hexanal	NA	NA	NA	NA	NA	NA	NA	-
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
Methylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
t-1,3-DIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
trans-2-hexene	NA	NA	NA	NA	NA	NA	NA	-
1,1,3-TRIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
1,1-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1,2,3-trimethylcyclopentene	NA	NA	NA	NA	NA	NA	NA	-
1,2,4-trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1,2-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1,4-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
2,2,3-TRIMETHYLPENTANE	NA	NA	NA	NA	NA	NA	NA	-
2,2,4-trimethylpentane	NA	NA	1750	NA	NA	NA	NA	-
2,3,4-trimethylpentane	NA	NA	NA	NA	NA	NA	NA	-
2,3-dimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,4-dimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,5-dimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2-ethyl-3-methylcyclopentene	NA	NA	NA	NA	NA	NA	NA	-
2-methyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	-
2-methylheptane	NA	NA	NA	NA	NA	NA	NA	-
2-octene	NA	NA	NA	NA	NA	NA	NA	-
3-ethylhexane	NA	NA	NA	NA	NA	NA	NA	-
3-Methylheptane	NA	NA	NA	NA	NA	NA	NA	-
4-methyl-3-heptene	NA	NA	NA	NA	NA	NA	NA	-
4-METHYLHEPTANE	NA	NA	NA	NA	NA	NA	NA	-
cyclooctane	NA	NA	NA	NA	NA	NA	NA	-
methylethylcyclohexene	NA	NA	NA	NA	NA	NA	NA	-
OCTAHYDROPENTALENE	NA	NA	NA	NA	NA	NA	NA	-
octane	NA	NA	NA	NA	NA	NA	NA	-
OCTYNE	NA	NA	NA	NA	NA	NA	NA	-
Propane + Propylene	NA	NA	NA	NA	NA	NA	NA	-
Propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
t-1,3-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1-Heptene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-1-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-trans-3-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-Octene	NA	NA	50000	NA	NA	NA	NA	MECP - health
2,2-Dimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,2-Dimethylpentane	NA	NA	NA	NA	NA	NA	NA	-
2,3,3-Trimethylpentane	NA	NA	NA	NA	NA	NA	NA	-
2-Methyl-3-ethylpentane	NA	NA	NA	NA	NA	NA	NA	-
3,4-Dimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
3-Ethylpentane	NA	NA	NA	NA	NA	NA	NA	-
C7-Olefin	NA	NA	NA	NA	NA	NA	NA	-
C8-Olefin	NA	NA	NA	NA	NA	NA	NA	-
C8-Paraffin	NA	NA	NA	NA	NA	NA	NA	-
cis,cis-1,2,3-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
cis,trans-1,2,4-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
cis-1,2-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
cis-1,3-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
cis-2-Heptene	NA	NA	NA	NA	NA	NA	NA	-
cis-2-Octene	NA	NA	NA	NA	NA	NA	NA	-
cis-3-Heptene	NA	NA	NA	NA	NA	NA	NA	-
Ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
Isopropylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
n-Heptane	NA	NA	11000	NA	NA	NA	NA	MECP - health
n-Octane	NA	NA	NA	NA	NA	NA	NA	-
trans,cis-1,2,3-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
trans,cis-1,2,4-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
trans-1,2-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
trans-1,2-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
trans-1,3-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
trans-1,4-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
trans-2-Heptene	NA	NA	NA	NA	NA	NA	NA	-
trans-2-Octene	NA	NA	NA	NA	NA	NA	NA	-
trans-3-Heptene	NA	NA	NA	NA	NA	NA	NA	-
1,1,2,3-TETRAMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
1,1,3,4-TETRAMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
1,1,3,5-TETRAMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
1,1,3-TRIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
1,1,4-TRIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
1,3-DIMETHYL2-(1-METHYLENE)CYCLOPENETENE	NA	NA	NA	NA	NA	NA	NA	-
1-ETHYL-2,3-DIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
1-ethyl-2,4-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1-ETHYL-2-PROPYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
1-METHYL-4-(1-METHYLETHYL) CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
2,2,5-trimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,2-DIMETHYL-3-OCTYNE	NA	NA	NA	NA	NA	NA	NA	-
2,3,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,3-dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
2,5,5-TRIMETHYL-1-HEXENE	NA	NA	NA	NA	NA	NA	NA	-
2,6-dimethyl-2-octene	NA	NA	NA	NA	NA	NA	NA	-
2,6-dimethyl-4-octene	NA	NA	NA	NA	NA	NA	NA	-
2,6-dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
2+4-Methyloctane	NA	NA	NA	NA	NA	NA	NA	-
2-methyloctane	NA	NA	NA	NA	NA	NA	NA	-
2-METHYLPROPYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
3,3,4-trimethylhexane + benzene	NA	NA	NA	NA	NA	NA	NA	-
3,4,4-trimethylcyclohexene	NA	NA	NA	NA	NA	NA	NA	-
3,7,7-TRIMETHYL BICYCLO[4.1.0]HEPTANE	NA	NA	NA	NA	NA	NA	NA	-
3,7-dimethyl-1-octene	NA	NA	NA	NA	NA	NA	NA	-
3-ETHYL-2-METHYL-2-HEPTENE	NA	NA	NA	NA	NA	NA	NA	-
3-ethyl-3-octene	NA	NA	NA	NA	NA	NA	NA	-
3-methyloctane	NA	NA	NA	NA	NA	NA	NA	-
4-ethyloctane	NA	NA	NA	NA	NA	NA	NA	-
4-methyloctane	NA	NA	NA	NA	NA	NA	NA	-
BICYCLO[3.3.1]NONANE	NA	NA	NA	NA	NA	NA	NA	-
BICYCLO[3.3.1]NONANE	NA	NA	NA	NA	NA	NA	NA	-
BUTYLIDENECYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
c-1,3-DIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	-
c-1-BUTYL-2-METHYLCYCLOPROPANE	NA	NA	NA	NA	NA	NA	NA	-
decane	NA	NA	NA	NA	NA	NA	NA	-
ETHYLIDENECYCLOHEPTANE	NA	NA	NA	NA	NA	NA	NA	-
isocamphane	NA	NA	NA	NA	NA	NA	NA	-
nonane	NA	NA	NA	NA	NA	NA	NA	-
1-Decene	NA	NA	60000	NA	NA	NA	NA	MECP - health
1-Methyl-1-ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-1-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-4-isopropylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
1-Nonene	NA	NA	NA	NA	NA	NA	NA	-
2,2,3,4-Tetramethylpentane	NA	NA	NA	NA	NA	NA	NA	-
2,2,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,2-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
2,2-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
2,3,3-Trimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
2,3,5-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,4,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
2,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
2,4-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
2,5-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
2,5-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
2,6-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
2-Methylnonane	NA	NA	NA	NA	NA	NA	NA	-
2-Methyloctane	NA	NA	NA	NA	NA	NA	NA	-
3,3,4-Trimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
3,3,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	-
3,3,5-Trimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
3,3-Diethylpentane	NA	NA	NA	NA	NA	NA	NA	-
3,3-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
3,3-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
3,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
3,5-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
3,6-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	-
3-Ethyloctane	NA	NA	NA	NA	NA	NA	NA	-
3-Methyl-5-ethylheptane	NA	NA	NA	NA	NA	NA	NA	-
3-Methylethylhexane	NA	NA	NA	NA	NA	NA	NA	-
3-Methylnonane	NA	NA	NA	NA	NA	NA	NA	-
4-Ethylheptane	NA	NA	NA	NA	NA	NA	NA	-
5-Methylnonane	NA	NA	NA	NA	NA	NA	NA	-
Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
C10-Olefin	NA	NA	NA	NA	NA	NA	NA	-
C10-Paraffin	NA	NA	NA	NA	NA	NA	NA	-
C9-Olefin	NA	NA	NA	NA	NA	NA	NA	-
C9-Paraffin	NA	NA	NA	NA	NA	NA	NA	-
cis-1,2,4-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
cis-1,3,5-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
cis-1-Ethyl-2-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
cis-1-Ethyl-4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
cis-1-Ethyl-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
cis-2-nonene	NA	NA	NA	NA	NA	NA	NA	-
cis-3-Nonene	NA	NA	NA	NA	NA	NA	NA	-

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQS <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
Isobutylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
Isobutylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
Isopropylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
n-Decane	NA	NA	NA	NA	NA	NA	NA	-
n-Nonane	NA	NA	NA	NA	NA	NA	NA	-
Propylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
q,q,2-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
sec-Butylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
sec-Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
tert-Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
trans-1,2,4-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Ethyl-4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Methyl-2-methyl-4-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	-
trans-1-Methyl-2-propylcyclohexane	NA	NA	NA	NA	NA	NA	NA	-
trans-2-nonene	NA	NA	NA	NA	NA	NA	NA	-
trans-3-Nonene	NA	NA	NA	NA	NA	NA	NA	-
1,1,2,3-TETRAMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
1,2-DIETHYL-1-METHYL-CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	-
2-Ethyl-toluene	NA	NA	NA	NA	NA	NA	NA	-
3-Ethyl-toluene	NA	NA	NA	NA	NA	NA	NA	-
4-Ethyl-toluene	NA	NA	NA	NA	NA	NA	NA	-
Indanone	NA	NA	NA	NA	NA	NA	NA	-
methylpropylbenzene	NA	NA	NA	NA	NA	NA	NA	-
n-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	-
p-cymene	NA	NA	NA	NA	NA	NA	NA	-
Propylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,2,3,4-tetrahydronaphthalene	NA	NA	NA	NA	NA	NA	NA	-
1,2,3,4-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,2,3,5-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,2,4,5-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,3-Diethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,3-Dimethyl-2-ethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,3-Dimethyl-4-ethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,3-Dimethyl-5-ethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,4-Diethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1,4-Dimethyl-2-ethylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Ethyl-2-methylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Ethyl-3-methylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Ethyl-4-methylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-2-propylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-3-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-3-propylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-4-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	-
1-Methyl-4-propylbenzene	NA	NA	NA	NA	NA	NA	NA	-
2,3-Dihydroindene	NA	NA	NA	NA	NA	NA	NA	-
2,3-Dimethylheptane	NA	NA	NA	NA	NA	NA	NA	-
Butylbenzene	NA	NA	NA	NA	NA	NA	NA	-
C10-Aromatic	NA	NA	NA	NA	NA	NA	NA	-
Isobutylbenzene	NA	NA	NA	NA	NA	NA	NA	-
Isopropylbenzene	NA	NA	400	NA	NA	NA	NA	MECP - health
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	-
Ethylbenzene	NA	NA	1000	NA	NA	21700	NA	MECP - health ATSDR - The intermediate MRL was based on was based on a BMDL1sd of 19.94 µmol/L for auditory shifts in rats. A human equivalent concentration of 63.64 ppm was predicted from the human PBPK model. An uncertainty factor of 30 was applied.
ethylene	NA	NA	40	NA	NA	NA	NA	MECP - vegetation
Ethylene Dibromide	NA	NA	3	NA	NA	NA	NA	MECP - health
					9 <sup>(6)</sup>			MECP - health CalEPA - The 8-hr REL was based on a NOAEL of 0.09 mg/m <sup>3</sup> for nasal obstruction and discomfort, lower airway discomfort and eye irritation in occupationally-exposed workers. The NOAEL was adjusted for an uncertainty factor of 10. CalEPA - The CalEPA OEHHA 3-hr threshold was based on the benchmark concentration using the dose-response for eye irritation in humans; an intraspecies uncertainty factor of 10 was applied to account for potential asthma exacerbation. ATSDR - The intermediate MRL was based on a NOAEL of 0.98 ppm for nasopharyngeal irritation. An uncertainty factor of 30 was applied.

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
Formaldehyde	NA	NA	65	NA	55 <sup>(a)</sup>	36.85	167	TCEQ - Screening value based on eye and nose irritation, and symptoms of rhinitis in two studies where human volunteers were exposed to formaldehyde through inhalation (Pazdrak et al. 1993 and Krakowiak et al. 1998; as cited in (TCEQ 2015). The first study consisted of 20 human volunteers of whom 9 had skin hypersensitivity (the most sensitive effects from the study were eye and nose irritation and transitory rhinitis) to formaldehyde; Pazdrak et al. (1993; as cited in (TCEQ 2015). The second study consisted of 20 human volunteers of whom 10 had bronchial asthma and suspected respiratory formaldehyde sensitization; Krakowiak et al. (1998; as cited in (TCEQ 2015). In both studies, the subjects were exposed to a formaldehyde concentration of 0.5 mg/m <sup>3</sup> for two hours. A NOAEL was not available because there was only one exposure concentration. The LOAEL was 0.5 mg/m <sup>3</sup> (0.4 ppm) and considered minimal because the symptoms were mild and reversible. An uncertainty factor of 10 (3 for intraspecies variation and 3 for using a LOAEL) was applied, resulting in a screening value of 0.05 mg/m <sup>3</sup> (HQ = 1.0). The TCEQ screening value is based on the same study as that for which ATSDR derived a minimal risk level.
Hexane	NA	NA	NA	NA	NA	NA	NA	MECP - health, part of a mixture
n-Hexane	NA	NA	7500	NA	NA	NA	63327	MECP - health, n-hexane and hexane isomers only rats exposed to n-hexane by inhalation for 20 hours/day during gestation (Mast et al. 1987; as cited in TCEQ 2017). The LOAEL based on decreased fetal body weight was used as the point of departure. No adjustments were made for duration of exposure or to a human equivalent dose given that no adjustment is typically used by TCEQ for duration of exposure on developmental/reproductive studies, and a default animal-to-human partition coefficient of 1 was applied. An uncertainty factor of 180 was applied (10 for human variability, 3 for interspecies variability, 2 for extrapolation from a LOAEL to a NOAEL and 3 to account for database uncertainty. The TCEQ value was selected over the MECP value because supporting documentation is available.
Isopropanol	NA	NA	7300	NA	NA	NA	NA	MECP - health
3-Buten-2-one	NA	NA	NA	NA	NA	NA	NA	-
acetophenone	NA	NA	NA	NA	NA	NA	NA	-
CAMPHOR	NA	NA	NA	NA	NA	NA	NA	-
Methyl Ethyl Ketone	NA	NA	1000	NA	NA	NA	NA	MECP - health
Methane	NA	NA	37330	NA	NA	NA	NA	MECP - health
Methanol	NA	NA	4000	NA	NA	NA	NA	MECP - health
Methylene Chloride	NA	NA	220	3000	NA	1040	NA	MECP - health WHO - effects other than cancer or odour/annoyance: The biological endpoint from exposure to methylene chloride is formation of COHb. ATSDR - The MRL was based on a LOAEL of 25 ppm for hepatic effects in rats. A human equivalent concentration of 1 and an uncertainty factor of 90 were applied.
OCDD (Octachlorodibenzo-p-dioxin)	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
Phenol	NA	NA	30	NA	NA	NA	NA	MECP - health
Propylene Oxide	NA	NA	1.5	NA	NA	NA	NA	MECP - health
Styrene	NA	NA	400	NA	NA	NA	NA	MECP - health
1,1,1,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	
toluene	NA	NA	2000	NA	NA	NA	NA	MECP - odour, to be updated
1,2,3-trimethylbenzene	NA	NA	220	NA	NA	NA	NA	MECP - health
1,2,4-trimethylbenzene	NA	NA	220	NA	NA	NA	NA	MECP - health
1,3,5-trimethylbenzene	NA	NA	220	NA	NA	NA	NA	MECP - health

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
p-Xylene	NA	NA	NA	NA	NA	2610	NA	ATSDR - The ATSDR MRL was based on a LOAEL of 50 ppm for significant decreases in the mean latency of the paw-lick response in rats. The LOAEL was adjusted for a human equivalent concentration of 1 and an uncertainty factor of 90. Based on similar toxicokinetic properties and similar toxicological effects, a single intermediate duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene.
m-xylene	NA	NA	NA	NA	NA	2610	NA	ATSDR - The ATSDR MRL was based on a LOAEL of 50 ppm for significant decreases in the mean latency of the paw-lick response in rats. The LOAEL was adjusted for a human equivalent concentration of 1 and an uncertainty factor of 90. Based on similar toxicokinetic properties and similar toxicological effects, a single intermediate duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene.
o-xylene	NA	NA	NA	NA	NA	2610	NA	ATSDR - The ATSDR MRL was based on a LOAEL of 50 ppm for significant decreases in the mean latency of the paw-lick response in rats. The LOAEL was adjusted for a human equivalent concentration of 1 and an uncertainty factor of 90. Based on similar toxicokinetic properties and similar toxicological effects, a single intermediate duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene.
Xylene	NA	NA	730	NA	NA	2610	NA	MECP - health ATSDR - The ATSDR MRL was based on a LOAEL of 50 ppm for significant decreases in the mean latency of the paw-lick response in rats. The LOAEL was adjusted for a human equivalent concentration of 1 and an uncertainty factor of 90. Based on similar toxicokinetic properties and similar toxicological effects, a single intermediate duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene.
<b>Criteria Compounds</b>								
Carbon monoxide	NA	Desirable NAAQO = 6000 <sup>(e)</sup>	15700 <sup>(e)</sup>	10000 <sup>(e)</sup>	NA	NA	NA	NAAQO - health and environment
		Acceptable NAAQO = 15000						MECP - health
Nitrogen dioxide	200	Acceptable NAAQO = 200	200	120 <sup>(e)</sup>	NA	NA	NA	Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for NO <sub>2</sub> .
		Tolerable NAAQO = 300						NAAQO - health and environment
								MECP - health
Nitrogen oxides (NOx)	NA	NA	9000	NA	NA	NA	NA	WHO - effects other than cancer or odour/annoyance MECP - health

Parameter	Chronic Inhalation 24-Hour Health Based Thresholds (µg/m <sup>3</sup> )							Basis of Screening Threshold
	Government of Nunavut AAQS <sup>(1)</sup>	Canadian CAAQS and NAAQO <sup>(2)</sup>	ON MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	
Sulphur dioxide	150	Desirable NAAQO = 150 Acceptable NAAQO = 300  Tolerable NAAQO = 800	275	20	NA	NA	NA	Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for SO <sub>2</sub> . NAAQO - health and environment MECP - health & vegetation by the WHO and are summarized below. One study concluded that a reduction in SO <sub>2</sub> linked to reductions in sulphur content in fuels appears to be associated with substantial reductions in health effects including all-age mortality and childhood respiratory disease (Hedley et al. 2002; as cited in WHO 2006). A second study reported that there was no evidence of a screening value for health effects associated with 24-hour SO <sub>2</sub> concentrations ranging from 5 to 40 µg/m <sup>3</sup> (Wong et al. 2002; as cited in WHO 2006). A third study indicated that there may be increases to daily mortality rates from 24-hour average SO <sub>2</sub> concentrations of 5 µg/m <sup>3</sup> (Burnett et al., 2004; as cited in WHO 2006). A fourth study reported significant associations between SO <sub>2</sub> and mortality at mean SO <sub>2</sub> concentrations of 18 µg/m <sup>3</sup> and maximum SO <sub>2</sub> concentrations of 85 µg/m <sup>3</sup> (Pope et al. 2002; as cited in WHO 2006). The WHO concludes that there is uncertainty regarding whether SO <sub>2</sub> is the primary pollutant responsible for the health effects because exposure is often present in combination with other pollutants such as particulate matter. The WHO has applied a precautionary approach and set a 24-hour SO <sub>2</sub> guideline of 20 µg/m <sup>3</sup> .
PM <sub>2.5</sub>	30	CAAQS = 27	NA	25	NA	NA	NA	Gov Nunavut - The Government of Nunavut standard is based on the CCME Canada-Wide Standard for fine PM. CAAQS - Air screening levels based on Canada Wide Standards, intended for the protection of respiratory effects. CCME has proposed a Canadian ambient air quality standard (CAAQS) for PM <sub>2.5</sub> of 27 µg/m <sup>3</sup> for the year 2020, which is intended to be protective of human health and the environment. The metric is the 3-year average of the annual 98th percentile of the daily 24-hour average concentrations. WHO - The WHO AQG is based on a PM <sub>2.5</sub> :PM <sub>10</sub> ratio of 0.5.
PM <sub>10</sub>	NA	NAAQO = 25	50	50	NA	NA	NA	NAAQO - health and environment MECP - interim AAQC, provided for decision making. WHO - The WHO AQG is based on a 0.46 to 0.62% increase in mortality per 10 µg/m <sup>3</sup> increase in PM <sub>10</sub> . The AQG reflects the relationship between the distributions of 24-hour means (and its 99th percentile) and annual average concentrations.
Diesel Particulate Matter	NA	NA	NA	NA	NA	NA	NA	No 24 hour thresholds were available.
Total suspended particulate	120	120 400	120	NA	NA	NA	NA	Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for TSP. NAAQO - health and environment MECP - visibility

**Notes:**

- (1) Government of Nunavut. (2011). Environmental Guideline for Ambient Air Quality. Department of Environment.
  - (2) Canadian Council of Ministers of the Environment. (1999). Canadian Environmental Quality Guidelines. Canadian National Ambient Air Quality Objectives. CCME. 2017. Canadian Ambient Air Quality Standards (CAAQS). CCME. <<http://airquality-qualitedelair.ccmec.ca/en/>>.
  - (3) Ontario Ministry of the Environment, Conservation and Parks (2018). Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants. Technical Assessment and Standards Development Branch, Environmental Sciences Division. Version 2.0, April 2018.  
The ON MECP ACBs are based on health, odour, vegetation, soiling, visibility, corrosion or other effects. The ON MECP does not provide background information on how the ACBs were derived on a chemical to chemical basis.
  - (4) World Health Organization. (2000). Air Quality Guidelines for Europe, 2nd Ed. World Health Organization Regional Publications, European Series, No. 91. Copenhagen.
  - (5) World Health Organization. (2005). Air Quality Guidelines Global Update. Report on Working Group Meeting. Bonn, Germany.
  - (6) World Health Organization. (2005). WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen Dioxide and Sulphur Dioxide. Global Update, Summary of Risk Assessment.
  - (7) California Environmental Protection Agency. (2021). Acute, 8-Hour and Chronic Reference Exposure Levels. Office of Environmental Health Hazard Assessment, Air Toxicology and Epidemiology. Internet Site, last updated February 2012, accessed 10 November 2021.
  - (8) Agency for Toxic Substances and Disease Registry. (2021). Minimal Risk Levels. Internet Site, last updated July 2021, accessed 10 November 2021.  
The ATSDR defines intermediate exposure as 15 to 365 days.
  - (9) Texas Commission on Environmental Quality. (2021). exas Air Monitoring Information System (TAMIS) Web Interface. Database export: Tox ESL Detailed Report and Tox AMCV Report. Available at: <https://www17.tceq.texas.gov/tamis/index.cfm?fuseaction=home.welcome>. Accessed November 2021.
- The TCEQ ESLs are based on health, odour/nuisance potential, and vegetation effects. The TCEQ ESLs are based on an HQ = 0.3 for non-carcinogens and were therefore adjusted with the following equation: threshold (µg/m<sup>3</sup>) = TCEQ value x 3.333. The TCEQ does not provide background information on how the ESLs were derived on a chemical to chemical basis. All ESLs are interim, unless otherwise stated.

NA = not available  
(a) 3 hour  
(b) 4 hour  
(c) 6 hour  
(d) 7 hour  
(e) 8 hour  
Target HQ = 1.0

Air concentrations given in ppm were converted to µg/m<sup>3</sup> with the following equation: X (ppm) = Y (mg/m<sup>3</sup>)\*24.45/MW.  
Centre for Disease Control and Prevention. (2003). Conversion Calculator. The National Institute for Occupational Safety and Health Publication No. 2004-101.

**Selection criteria:**

The lowest health-based air threshold from the first six agencies listed was selected as the guideline for screening in the HHRA. The TCEQ threshold was selected if it was the only agency with a guideline.  
**200** = selected guideline for screening in the HHRA

Updated by: BP  
Checked by: SG

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )									Basis of Screening Threshold	Decision Criteria	
	Government of Nunavut AAGS <sup>(1)</sup>	Canadian NAAQS and CAAQS <sup>(2)</sup>	MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	Adjusted Non-carcinogenic Threshold <sup>(10)</sup>			
<b>Metals</b>												
aluminum	NA	NA	NA	NA	NA	NA	5	17	3	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
antimony	NA	NA	NA	NA	NA	0.3	0.5	1.7	0.3	ASTR - based on lung inflammation in rats exposed to antimony trioxide dust for 12 months. A minimum risk level was derived from a BMCL <sub>10</sub> of 0.01 mg/m <sup>3</sup> . The BMCL <sub>10</sub> was adjusted to a human-equivalent concentration and an uncertainty factor of 30 was applied. TCEQ - PM <sub>10</sub> , health	The ASTDR value was the only available value with supporting documentation.	
arsenic	NA	NA	NA	0.006667	0.015	NA	0.01	0.01	0.003	WHO - carcinogenic risk estimates based on human studies. Lung: A unit risk was derived from human exposure studies. CalEPA - The chronic REL was based on a LOAEL of 0.23 µg/m <sup>3</sup> for decrease in intellectual function and adverse effects on neurobehavioural development in children. An uncertainty factor of 30 was applied. The CalEPA unit risk was based on the 95% UCL predicted from fitting a linear model to human data, adjusted for interaction with smoking. TCEQ - PM <sub>10</sub> , health	The CalEPA REL was the only available non-carcinogenic threshold and supporting documentation was available. The CalEPA unit risk was the lowest threshold and supporting documentation was available.	
barium	NA	NA	NA	NA	NA	NA	0.5	2	0.3	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
beryllium	NA	NA	NA	NA	0.007	NA	0.002	0.002	0.0014	CalEPA - The REL is based on beryllium sensitization and chronic beryllium disease in occupationally-exposed humans. A LOAEL of 0.55 µg/m <sup>3</sup> for the above effects was selected. The LOAEL was adjusted for duration and a human equivalent concentration. The resulting LOAEL was 0.2 µg/m <sup>3</sup> . An uncertainty factor of 30 was applied. CalEPA - The CalEPA unit risk is the IRIS value for lung cancer in occupationally exposed males. TCEQ - particulate, health	The CalEPA REL was the only available non-carcinogenic threshold and supporting documentation was available. The CalEPA unit risk was the lowest threshold with supporting documentation available.	
Bismuth	NA	NA	NA	NA	NA	NA	5	17	3	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
Cadmium	NA	NA	0.005	0.005	0.02	0.01	0.01	0.01	0.001	MECP - health WHO - effects other than cancer or odour/annoyance: The WHO threshold is based on renal effects. CalEPA - The REL is based on a NOAEL of 1.4 µg/m <sup>3</sup> for kidney and respiratory effects. The NOAEL was adjusted for duration and a human equivalent concentration of 1. An uncertainty factor of 30 was applied. CalEPA - The unit risk was based on human occupational exposures and lung cancer. ATSDR - The ATSDR threshold was based on a UCD <sub>10</sub> . The 95% UCDL <sub>10</sub> of 0.5 µg/g creatinine was used as the point of departure. Chronic inhalation exposures to cadmium sulphide (0.1 µg/m <sup>3</sup> ) and a dietary intake of 0.3 µg/kg/day would result in 0.5 µg/g creatinine in urine. An uncertainty factor of 9 was applied. TCEQ - PM <sub>10</sub> , health	The ON MECP and WHO both have the lowest threshold. Supporting documentation was available for WHO, but not for the MECP, therefore the WHO threshold was selected. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available.	
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	No annual thresholds were available	-	
chromium	NA	NA	NA	NA	NA	NA	0.041	0.14	0.03	TCEQ - PM <sub>10</sub> , health, final	The TCEQ value was selected in the absence of other values.	
chromium VI	NA	NA	0.00007	0.00025	0.2	0.005	0.01	0.01	0.001	MECP - PM <sub>10</sub> , health MECP - TSP, health WHO - carcinogenic risk estimates based on human studies, lung: Several epidemiological studies indicate lifetime risks in the range of 1.3x10 <sup>-7</sup> to 1.1x10 <sup>-2</sup> . A geometric mean of 4x10 <sup>-2</sup> was selected as the incremental unit risk for Cr(VI) at 1 µg/m <sup>3</sup> . CalEPA - The REL was based on a LOAEL of 50 µg/m <sup>3</sup> for bronchoalveolar hyperplasia. The LOAEL was adjusted for BMCL <sub>10</sub> , exposure duration and a human equivalent concentration. An uncertainty factor of 100 was applied. CalEPA - The unit risk was based on cancer mortality data. ATSDR - The MRL for dissolved Cr(VI) aerosols and mists was based on a LOAEL of 0.002 mg/m <sup>3</sup> for nasal irritation, mucosal atrophy and decreased FVC, FEP, and FEV. The LOAEL was adjusted for exposure duration (8 hr/day, 5 days/week) and an uncertainty factor of 100 was applied. TCEQ - PM <sub>10</sub> , health, under review	The ATSDR MRL was the lowest non-carcinogenic threshold and supporting documentation was available. The CalEPA unit risk was the lowest threshold and supporting documentation was available.	
cobalt	NA	NA	NA	NA	NA	0.1	0.02	0.07	0.02	ATSDR - The MRL was based on a NOAEL of 0.0053 mg/m <sup>3</sup> for pulmonary function effects. The NOAEL was adjusted for duration (8 hr/day, 5 days/week) and an uncertainty factor of 10 was applied. TCEQ - PM <sub>10</sub> , health	The ATSDR MRL was the lowest threshold with supporting documentation available.	
copper	NA	NA	NA	NA	NA	NA	1	3	0.7	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
Gold	NA	NA	NA	NA	NA	NA	2.5	8.3	1.7	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
iron	NA	NA	NA	NA	NA	NA	1	3	0.7	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
lead	NA	NA	0.2 <sup>(9)</sup>	0.5	0.833333	NA	0.15 (quarterly average), 1.5 (three-month)	0.5 (quarterly average), 5 (three-month)	0.04	MECP - health WHO - effects other than cancer or odour/annoyance: the WHO guideline is based on the concentration of Pb in blood. Critical effects occur in adults at 150-300 µg/L, and include erythrocyte protoporphyrin elevation. Critical effects in children include cognitive deficit, hearing impairment and disturbed vitamin D metabolism and occurs at 100-150 µg/L. CalEPA - The CalEPA unit risk was based on kidney tumours in rats exposed to Pb via the oral route. TCEQ - health, criteria pollutant, must meet US NAAQS. Texas defers to the US National Ambient Air Quality Standards for lead (1.5 µg/m <sup>3</sup> as the quarterly average primary standard, and 0.15 µg/m <sup>3</sup> as the rolling three month average primary standard).	The ON MECP AAGC was the lowest threshold. The CalEPA unit risk was the only available carcinogenic threshold and supporting documentation was available.	
Lithium	NA	NA	NA	NA	NA	NA	NA	NA	NA	No annual thresholds were available	-	
magnesium	NA	NA	NA	NA	NA	NA	5	17	3	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
manganese	NA	NA	NA	0.15	0.09	0.3	0.2	0.7	0.02	WHO - effects other than cancer or odour/annoyance: A NOAEL of 30 µg/m <sup>3</sup> for neurotoxic effects was selected as the basis of the WHO threshold. The NOAEL was divided by 4.2 to adjust continuous exposure and an uncertainty factor of 50 was applied. CalEPA - The REL is based on a benchmark concentration of 72 µg/m <sup>3</sup> for impaired neurobehaviour (visual reaction time, eye-hand coordination and hand steadiness). The benchmark concentration was adjusted for duration (5 days/week at 10 m <sup>3</sup> of Mn-contaminated air out of 20 m <sup>3</sup> total air inhaled) and an uncertainty factor of 300 was applied. ATSDR - The ATSDR MRL was based on a BMCL <sub>10</sub> of 142 µg/m <sup>3</sup> for abnormal eye-hand coordination scores in workers. The BMCL was adjusted for duration (8 hr/day, 5 days/week). An uncertainty factor of 100 was applied. TCEQ - PM <sub>10</sub> , health	The CalEPA REL was the lowest threshold and supporting documentation was available.	
molybdenum	NA	NA	NA	NA	NA	NA	3	10	2	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
nickel	NA	NA	0.02	0.025	0.014	0.09	0.059	0.059	0.0028	MECP - PM <sub>10</sub> , health MECP - TSP, health WHO - carcinogenic risk estimates based on human studies, lung: An incremental risk of 3.8x10 <sup>-7</sup> was derived from epidemiological studies for an exposure concentration of 1 µg/m <sup>3</sup> . CalEPA - The threshold was based on a BMDL <sub>05</sub> of 30.5 µg/m <sup>3</sup> for pathological changes in lung, lymph nodes and nasal epithelium. The BMDL <sub>05</sub> was adjusted for duration (6 hr/day, 5 days/week), a human equivalent concentration and an uncertainty factor of 100 was applied. CalEPA - The CalEPA unit risk was based on a study that demonstrated an increased risk of lung cancer associated with occupationally-exposed humans. ATSDR - The chronic MRL was based on a NOAEL of 0.03	The CalEPA REL was the lowest threshold with supporting documentation available. The ON MECP AAGC was the lowest carcinogenic threshold.	
Potassium	NA	NA	NA	NA	NA	NA	2	7	1	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
selenium	NA	NA	NA	NA	20	NA	0.2	0.7	4	CalEPA - The Se threshold was based on a NOAEL of 0.015 mg/kg/day. The NOAEL was adjusted for an uncertainty factor of 3 and extrapolated to an inhalation REL (3500 µg/m <sup>3</sup> per mg/kg/day). TCEQ - PM <sub>10</sub> , health	The CalEPA REL was the lowest threshold with supporting documentation available.	
silver	NA	NA	NA	NA	NA	NA	0.01	0.03	0.007	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	No annual thresholds were available	-	
strontium	NA	NA	NA	NA	NA	NA	2	7	1	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
thallium	NA	NA	NA	NA	NA	NA	0.1	0.3	0.07	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
tin	NA	NA	NA	NA	NA	NA	2	7	1	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
titanium	NA	NA	NA	NA	NA	NA	5	17	3	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
uranium	NA	NA	0.03	NA	NA	0.8	0.2	0.7	0.006	MECP - PM <sub>10</sub> , health MECP - TSP, health ATSDR - The chronic MRL for insoluble U was based on a LOAEL of 5.1 mg/m <sup>3</sup> for fibrosis in the lungs and tracheobronchial lymph nodes in monkeys. The LOAEL was adjusted for duration (5.4 hr/day, 5 days/week). An uncertainty factor of 1000 was applied. ATSDR - The chronic MRL for soluble U was based on a BMCL <sub>10</sub> of 0.019 mg/m <sup>3</sup> for renal toxicity in dogs. The BMCL <sub>10</sub> was adjusted for duration (33 hr/7 days) and an uncertainty factor of 100. TCEQ - PM <sub>10</sub> , health TCEQ - PM <sub>10</sub> , health	The ON MECP AAGC was the lowest threshold.	
vanadium	NA	NA	NA	NA	NA	0.1	0.05	0.2	0.02	ATSDR - The chronic MRL was based on a BMCL <sub>10</sub> of 0.04 mg/m <sup>3</sup> for degeneration of respiratory epithelium of the epiglottis in rats. The BMCL <sub>10</sub> was adjusted for intermittent exposure (6 hr/day, 5 days/week) and a human equivalent concentration of 0.423. An uncertainty factor of 30 was applied. TCEQ - PM <sub>10</sub> , health	The ATSDR MRL was the lowest threshold with supporting documentation available.	
yttrium	NA	NA	NA	NA	NA	NA	1	3	0.7	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	
zinc	NA	NA	NA	NA	NA	NA	2	7	1	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.	

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )								Basis of Screening Threshold	Decision Criteria	
	Government of Nunavut AAGS <sup>(1)</sup>	Canadian NAAQS and CAAQS <sup>(2)</sup>	MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted			Adjusted Non-carcinogenic Threshold <sup>(10)</sup>
<b>Polycyclic Aromatic Hydrocarbons</b>											
Acenaphthene	NA	NA	NA	NA	NA	NA	10	33.3	6.67	TCEQ - health	The TCEQ value was selected in the absence of other values.
Methyl acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	6.67	TCEQ - health	The TCEQ value was selected in the absence of other values.
Acenaphthylene	NA	NA	NA	NA	NA	NA	10	33.3	6.67	TCEQ - health	The TCEQ value was selected in the absence of other values.
2-Methylanthracene	NA	NA	NA	NA	NA	NA	0.05	0.2	0.07	TCEQ - health	The TCEQ value was selected in the absence of other values.
Anthracene	NA	NA	NA	NA	NA	NA	0.1	0.3	0.07	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.
C2 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	NA	0.07	-	
C3 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	NA	0.07	-	
C4 sub'd phenanthrene/anth.	NA	NA	NA	NA	NA	NA	NA	NA	0.07	-	
Methyl phenanthrene/anthracene	NA	NA	NA	NA	NA	NA	0.05	0.2	0.07	TCEQ - health	
1,6-dinitropyrene	NA	NA	NA	NA	0.00909	NA	NA	NA	NA	CalEPA - The PEF was based on respiratory tract tumours. 1,6-Dinitropyrene was assigned a PEF of 10 (relative to the benzo(a)pyrene PEF, which equals 1). CalEPA - The PEF was assigned a PEF of 1.0 (relative to the benzo(a)pyrene PEF, which equals 1) until better data become available. This was based on a low dose used in a carcinogenic study and the high potency of 1,6-dinitropyrene.	The ON MECP AAGC was the lowest threshold.
1,8-dinitropyrene	NA	NA	NA	NA	0.009091	NA	NA	NA	NA	CalEPA - The PEF was based on lung tumours in newborn mice. 1-Nitropyrene was assigned a PEF of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	
1-Nitropyrene	NA	NA	NA	NA	0.090909	NA	0.05	0.05	0.05	CalEPA - The unit risk was based on increases in tumours of the mammary gland in female rats. The cancer potency factor of (22 mg/kg/day) <sup>-1</sup> was converted to a unit risk. TCEQ - health	
3-Methylcholanthrene	NA	NA	NA	NA	0.001587	NA	0.002	0.002	0.002	CalEPA - The PEF was based on the tumour initiating ability of 7H-Dibenzo(c,g)carbazole in mouse skin. The relative tumourigenic activity was 0.97, which was rounded to a PEF of 1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	
7H-Dibenzo(c,g)carbazole	NA	NA	NA	NA	0.009091	NA	NA	NA	NA	CalEPA - The PEF was based on the tumour initiating ability of 7H-Dibenzo(c,g)carbazole in mouse skin. The relative tumourigenic activity was 0.97, which was rounded to a PEF of 1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	
Benzo(a)pyrene	NA	NA	0.00001	0.000111	0.009091	NA	0.017	0.017	0.017	MECP - health, as a surrogate of total PAHs WHO - carcinogenic risk estimates based on human studies, lung. Epidemiological studies were used to derive a unit risk of 8.7x10 <sup>-5</sup> per ng/m <sup>3</sup> . CalEPA - The CalEPA unit risk was based on male hamster respiratory tract tumour incidence. The B(a)P PEF is 1.0. TCEQ - PM <sub>10</sub> , health, under review TCEQ - PM <sub>10</sub> , health	
Benzo(b)fluorene	NA	NA	NA	NA	NA	NA	0.05	0.17	0.17	TCEQ - PM <sub>10</sub> , health	
Benzo(e)pyrene	NA	NA	NA	NA	NA	NA	0.05	0.17	0.17	TCEQ - PM <sub>10</sub> , health	
Cyclopenta(c,d)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
nitrobenzanthrone	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Nitro-pyrene	NA	NA	NA	NA	NA	NA	0.05	0.17	0.17	TCEQ - health	
7,12-dimethylbenz(a)anthracene	NA	NA	NA	NA	0.00014	NA	0.05	0.05	0.05	CalEPA - The cancer potency of (250 mg/kg/day) <sup>-1</sup> was based on mesenteric intestine angiodenothelioma incidence. This was converted to a unit risk. TCEQ - health	The CalEPA unit risk was the lowest threshold and supporting documentation was available.
Benzo(a)anthracene	NA	NA	NA	NA	0.090909	NA	0.05	0.05	0.05	CalEPA - The PEF for benzo(a)anthracene was based on lung adenomas in newborn mice. Benzo(a)anthracene was assigned a PEF of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	
Benzo(b)fluoranthene	NA	NA	NA	NA	0.09091	NA	0.05	0.05	0.05	CalEPA - The PEF for benzo(b)fluoranthene was based on mouse skin carcinogenesis. Benzo(b)fluoranthene was assigned a PEF of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - PM <sub>10</sub> , health	The CalEPA unit risk was the lowest threshold with supporting documentation available.
Benzo(j)fluoranthene	NA	NA	NA	NA	0.090909	NA	NA	0.05	0.05	CalEPA - The PEF for benzo(j)fluoranthene was based on mouse skin carcinogenesis. The estimated cancer potency relative to B(a)P was 0.0648. Benzo(j)fluoranthene was assigned a PEF of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - PM <sub>10</sub> , health	
C2 sub'd B(b&k)F/B(a)P	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Methyl B(b&k)F/B(a)P	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	0.05	0.2	0.2	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.
Coronene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Perylene	NA	NA	NA	NA	NA	NA	0.05	0.2	0.2	TCEQ - PM <sub>10</sub> , health	
Benzo(k)fluoranthene	NA	NA	NA	NA	0.09091	NA	0.05	0.05	0.05	CalEPA - The PEF for benzo(k)fluoranthene was based on intrapulmonary administration to rats. The estimated PEF was 0.085. Benzo(k)fluoranthene was assigned a PEF of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - PM <sub>10</sub> , health	The CalEPA unit risk was the lowest threshold with supporting documentation available.
Biphenyl	NA	NA	NA	NA	NA	NA	1	3	3	TCEQ - health, under review	The TCEQ value was selected in the absence of other values.
C2 sub'd biphenyl	NA	NA	NA	NA	NA	NA	1	3	3	TCEQ - health	
Methyl biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
C2 sub'd B(a)A/chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Chrysene	NA	NA	NA	NA	0.90909	NA	0.05	0.05	0.05	CalEPA - The PEF was based on mouse skin carcinogenesis. The cancer potency relative to B(a)P was 0.0132. The assigned PEF was 0.01 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	The CalEPA unit risk was the lowest threshold with supporting documentation available.
Methyl B(a)A/chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
dibenz(a,h)acridine	NA	NA	NA	NA	0.090909	NA	NA	NA	NA	CalEPA - The PEF for dibenz(a,h)acridine was adopted from dibenz(a,j)acridine, which was assigned a value of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). CalEPA - The PEF for dibenz(a,j)acridine was based on the tumour-initiating ability in mouse skin. The PEF for dibenz(a,j)acridine was assigned a value of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	The CalEPA unit risk was the lowest threshold and supporting documentation was available.
dibenz(a,j)acridine	NA	NA	NA	NA	0.090909	NA	NA	NA	NA	CalEPA - The PEF for dibenz(a,j)acridine was based on the tumour-initiating ability in mouse skin. The PEF for dibenz(a,j)acridine was assigned a value of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	
picene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Dibenzo(a,h)anthracene	NA	NA	NA	NA	0.00833	NA	0.05	0.05	0.05	CalEPA - The unit risk was based on alveolar carcinomas of the lung in a drinking water study. The 4.1 (mg/kg/day) <sup>-1</sup> cancer potency factor was converted to a unit risk. TCEQ - PM <sub>10</sub> , health	
Acphenanthrylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Benzo(a)fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Benzo(g,h,i)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Fluoranthene	NA	NA	NA	NA	NA	NA	0.05	0.2	0.2	TCEQ - PM <sub>10</sub> , health	The TCEQ value was selected in the absence of other values.
2-Methylfluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
C2 sub'd fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
carbazole	NA	NA	NA	NA	NA	NA	10	33	33	TCEQ - health	
Fluorene	NA	NA	NA	NA	NA	NA	1	3	3	TCEQ - PM <sub>10</sub> , health	
Methyl fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Dibenzo(a,i)pyrene	NA	NA	NA	NA	0.00091	NA	NA	NA	NA	CalEPA - The PEF was based on skin tumours in mice. Dibenzo(a,i)pyrene was assigned a PEF of 10 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	The CalEPA unit risk was the lowest threshold and supporting documentation was available.
Indeno(1,2,3-cd)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	0.090909	NA	0.05	0.05	0.05	CalEPA - The PEF was based on skin carcinogenesis and lung tumours. Indeno(1,2,3-cd)pyrene was assigned a PEF of 0.1 (relative to the benzo(a)pyrene PEF, which equals 1). TCEQ - health	
Indeno(1,2,3-W)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )								Adjusted Non-carcinogenic Threshold (19)	Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS (1)	Canadian NAAQS and CAAQS (2)	MECP ACB (3)	WHO AQG (4,5)	CalEPA REL (7)	ATSDR MRL (8)	TCEQ ESL (9)	TCEQ ESL Adjusted			
1-methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA			
2-methylnaphthalene	NA	NA	NA	NA	NA	NA	3	10			
C2 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	NA			
C3 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	NA			
C4 sub'd naphthalene	NA	NA	NA	NA	NA	NA	NA	7			
Indole	NA	NA	NA	NA	NA	NA	2	10			
Methyl naphthalene	NA	NA	NA	NA	NA	NA	3	10			
Naphthalene	NA	NA	NA	NA	9	3.67	50	167	0.734	CalEPA - The CalEPA REL was based on a LOAEL of 10 ppm for nasal inflammation, olfactory epithelial metaplasia and respiratory epithelial hyperplasia in mice. The LOAEL was adjusted for exposure duration (6 hr/day, 5 days/week). An uncertainty factor of 1000 was applied. CalEPA - The unit risk was based on male rat respiratory epithelial adenoma and nasal olfactory epithelial neuroblastoma incidence. ATSDR - The chronic MRL was based on a LOAEL of 10 ppm for nonneoplastic lesions in nasal olfactory epithelium and respiratory epithelium in rats. The LOAEL was adjusted for duration (6 hr/day, 5 days/week) and a human equivalent concentration (0.132). An uncertainty factor of 300 was applied. TCEQ - health, under review	
1-Methylphenanthrene	NA	NA	NA	NA	NA	NA	3	10			
2-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA			
3-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA			
4+9-Methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA			
phenanthrene	NA	NA	NA	NA	NA	NA	0.05	0.2			
Retene	NA	NA	NA	NA	NA	NA	NA	NA			
2-Methylpyrene	NA	NA	NA	NA	NA	NA	NA	NA			
Methyl fluoranthene/pyrene	NA	NA	NA	NA	NA	NA	NA	NA			
Pyrene	NA	NA	NA	NA	NA	NA	0.05	0.2			
2,5-dimethylthiophene	NA	NA	NA	NA	NA	NA	10	33			
3-Methylbenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA			
4-Methylbenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA			
C2 sub'd dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA			
C3 sub'd dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA			
C4 sub'd dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA			
Dibenzothiophene	NA	NA	NA	NA	NA	NA	2.5	8.3			
Methyl dibenzothiophene	NA	NA	NA	NA	NA	NA	NA	NA			
<b>Volatile Organic Compounds</b>											
1,1,1-trichloroethane	NA	NA	NA	NA	1000	NA	1500	5000	200	CalEPA - The CalEPA chronic REL is based on a NOAEL of 70 ppm for astrogliosis in the sensorimotor cerebral cortex in Mongolian gerbils. The NOAEL was adjusted for an uncertainty factor of 300. TCEQ - health, final	The CalEPA REL was the lowest threshold and supporting documentation was available.
1,1,2-Trichloroethane	NA	NA	NA	NA	0.625	NA	55	55	NA	CalEPA - The CalEPA unit risk was based on male mouse hepatocellular carcinoma tumour. TCEQ - health, under review	The CalEPA unit risk was the lowest threshold and supporting documentation was available.
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	46	153	31	TCEQ - health	The TCEQ value was selected in the absence of other values.
1,3-Butadiene	NA	NA	2	NA	2	NA	33	33		CalEPA - The CalEPA threshold is based on a LOAEL of 6.25 ppm (BMC <sub>05</sub> of 1.40 ppm) for increased incidence of ovarian atrophy in mice. The BMC <sub>05</sub> was adjusted for duration (6 hr/day, 5 days/week) and a human equivalent concentration (0.25 ppm). An uncertainty factor of 30 was applied. CalEPA - The unit risk is based on lung alveolar and bronchiolar neoplasms in female mice. TCEQ - health, final	The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available.
2,5,5-TRIMETHYL-1,6-HEPTADIENE	NA	NA	NA	NA	NA	NA	NA	NA			
2,5,5-TRIMETHYL-1,6-HEPTADIENE (B)	NA	NA	NA	NA	NA	NA	NA	NA			
2,5-dimethyl-1,3-hexadiene	NA	NA	NA	NA	NA	NA	180	600			
2-METHYL-4,5-NONADIENE	NA	NA	NA	NA	NA	NA	NA	NA			
3-ETHYL-2-METHYL-1,3-HEXADIENE	NA	NA	NA	NA	NA	NA	NA	NA			
4,3-DIMETHYL-1,7-NONADIENE	NA	NA	NA	NA	NA	NA	NA	NA			
4-METHYL-2,7-OCTADIENE	NA	NA	NA	NA	NA	NA	NA	NA			
5-METHYL-1,4-HEXADIENE	NA	NA	NA	NA	NA	NA	NA	NA			
1,2-Butadiene	NA	NA	NA	NA	NA	NA	9.9	33			
1,2-Pentadiene	NA	NA	NA	NA	NA	NA	180	600			
1,4-Pentadiene	NA	NA	NA	NA	NA	NA	180	600			
2,3-Pentadiene	NA	NA	NA	NA	NA	NA	180	600			
2-Methyl-1,3-butadiene	NA	NA	NA	NA	NA	NA	6	20			
3-Methyl-1,2-butadiene	NA	NA	NA	NA	NA	NA	9.9	33			
cis-1,3-Pentadiene	NA	NA	NA	NA	NA	NA	180	600			
Cyclopentadiene	NA	NA	NA	NA	NA	NA	200	667			
trans-1,3-Pentadiene	NA	NA	NA	NA	NA	NA	180	600			
1,3-Dichloropropene	NA	NA	NA	NA	NA	31.77	4.5	15	6.4	ATSDR - The ATSDR MRL was based on a BMCL <sub>10</sub> of 0.2009 ppm for nasal effects in female mice. An uncertainty factor of 30 was applied. TCEQ - health	The ATSDR MRL was the lowest threshold with supporting documentation available.
2-ethyl-1-hexanol	NA	NA	NA	NA	NA	NA	160	533	107	TCEQ - health, under review	The TCEQ value was selected in the absence of other values.
Acetaldehyde	NA	NA	NA	NA	140	NA	45	45	28	CalEPA - The 8 hr threshold was based on a BMC <sub>05</sub> of 178 mg/m <sup>3</sup> for degenerative, inflammatory and hyperplastic changes of the nasal mucosa in animals. The BMC <sub>05</sub> was adjusted for a human equivalent concentration (1.36 dosimetric adjustment factor) and duration (6 hr/day, 5 days/week). An uncertainty factor of 300 was applied. CalEPA - The CalEPA unit risk was based on nasal tumours in rats and laryngeal tumours in hamsters. The entire human respiratory tract (including lungs) may be at risk for cancer induction by acetaldehyde. TCEQ - health, under review	The CalEPA REL was the only threshold available and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available.
Acetone	NA	NA	NA	NA	NA	30880	590	1966	6176	ATSDR - The ATSDR threshold was based on a LOAEL of 1250 ppm for neurological effects in humans during a 6 week study. An uncertainty factor of 100 was applied. TCEQ - health, under review	The ATSDR MRL was the lowest threshold with supporting documentation available.
Acrolein	NA	NA	NA	NA	0.35	NA	0.15	0.5	0.07	CalEPA - The CalEPA threshold was based on a NOAEL of 0.2 ppm for lesions in the respiratory epithelium. The NOAEL was adjusted for duration and a human equivalent concentration. An uncertainty factor of 200 was applied. TCEQ - health, final	The CalEPA REL was the lowest threshold with supporting documentation available.
Methacrolein	NA	NA	NA	NA	NA	NA	0.36	1.2		TCEQ - health, final	
2,5-dimethylbenzaldehyde	NA	NA	NA	NA	NA	NA	9	30		TCEQ - health	The TCEQ value was selected in the absence of other values.
3-Methylbutanal	NA	NA	NA	NA	NA	NA	180	600			
benzaldehyde	NA	NA	NA	NA	NA	NA	9	30			
butanal	NA	NA	NA	NA	NA	NA	NA	NA			
crotonaldehyde	NA	NA	NA	NA	NA	NA	0.9	3			
decanal	NA	NA	NA	NA	NA	NA	4	13			
dodecanal	NA	NA	NA	NA	NA	NA	4	13			
heptanal	NA	NA	NA	NA	NA	NA	40	133			
isobutyraldehyde	NA	NA	NA	NA	NA	NA	290	967			
nonanal	NA	NA	NA	NA	NA	NA	150	500			
octanal	NA	NA	NA	NA	NA	NA	150	500			
propanal	NA	NA	NA	NA	NA	NA	46	153			
tridecanal	NA	NA	NA	NA	NA	NA	NA	NA			
undecanal	NA	NA	NA	NA	NA	NA	10	33			
Benzene	NA	NA	0.45	1.666667	60	9.58	4.5	4.5	1.9	MECP - health WHO - carcinogenic risk estimates based on human studies, leukemia. The WHO threshold is based on a study by Crump and Allen (1984), which reported 5.1 leukemia cases per 1000 workers exposed to a benzene concentration of 3.2 mg/m <sup>3</sup> . CalEPA - The CalEPA threshold was based on a NOAEL of 0.53 ppm for hematological effects. The NOAEL was adjusted for duration (8 hr/day, 5 days/week and 10 m <sup>3</sup> inhaled per 20 m <sup>3</sup> day) and a human equivalent concentration of 0.19 ppm. An uncertainty factor of 10 was applied. CalEPA - The unit risk was based on leukemia incidence in occupationally-exposed workers. ATSDR - The threshold was based on a BMCL <sub>10</sub> of 0.1 ppm for significantly decreased counts of B-lymphocytes in workers. The BMCL was adjusted for exposure time (8 hr/day) and an uncertainty factor of 10 was applied. TCEQ - health, final	The ATSDR MRL was the lowest threshold and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available.
2,4-DIETHYL-1-METHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
2,2,7-TRIMETHYL-3-OCTYNE	NA	NA	NA	NA	NA	NA	NA	NA			
2,2-DIMETHYL-3-DECENE	NA	NA	NA	NA	NA	NA	NA	NA			
3-DODECENE	NA	NA	NA	NA	NA	NA	NA	NA			
7-METHYL-5-UNDECENE	NA	NA	NA	NA	NA	NA	NA	NA			
dodecane	NA	NA	NA	NA	NA	NA	350	1167			
hexylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
perthylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
undecane	NA	NA	NA	NA	NA	NA	350	1167			
3-Ethylundecane	NA	NA	NA	NA	NA	NA	350	1167			
4-Methyldecane	NA	NA	NA	NA	NA	NA	NA	NA			
5-Methyldecane	NA	NA	NA	NA	NA	NA	NA	NA			
C11-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA			
C12-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA			
n-Dodecane	NA	NA	NA	NA	NA	NA	NA	NA			
n-Undecane	NA	NA	NA	NA	NA	NA	NA	NA			
trans-1-Methyl-2(4-methylpentyl)-cyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )								Adjusted Non-carcinogenic Threshold (19)	Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS (1)	Canadian NAAQO and CAAQS (2)	MECP ACB (3)	WHO AQG (4,5,6)	CalEPA REL (7)	ATSDR MRL (8)	TCEQ ESL (9)	TCEQ ESL Adjusted			
n-Hexylbenzene	NA	NA	NA	NA	NA	NA	125	417	4	TCEQ - health	The TCEQ value was selected in the absence of other values.
1,2,4-Triethylbenzene	NA	NA	NA	NA	NA	NA	125	417			
1,2-Diethylbenzene	NA	NA	NA	NA	NA	NA	250	833			
1,2-Dimethyl-3-ethylbenzene	NA	NA	NA	NA	NA	NA	156	520			
1,2-Dimethyl-4-ethylbenzene	NA	NA	NA	NA	NA	NA	256	853			
1,3,5-Triethylbenzene	NA	NA	NA	NA	NA	NA	125	417			
1,3-Disopropylbenzene	NA	NA	NA	NA	NA	NA	330	1100			
1-Ethyl-2-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Ethyl-2-propylbenzene	NA	NA	NA	NA	NA	NA	125	417			
1-Ethyl-4-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-3-butylbenzene	NA	NA	NA	NA	NA	NA	125	417			
1-Methyl-4-pentylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-4-tert-butylbenzene	NA	NA	NA	NA	NA	NA	6	20			
C11-Aromatic	NA	NA	NA	NA	NA	NA	NA	NA			
Hexylbenzene	NA	NA	NA	NA	NA	NA	125	417			
Pentylbenzene	NA	NA	NA	NA	NA	NA	125	417			
tert-1-Butyl-2-methylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
tert-1-Butyl-3,5-dimethylbenzene	NA	NA	NA	NA	NA	NA	330	1100			
tert-1-Butyl-4-ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
1-pentyl-2-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
2,6,10-trimethyltridecane	NA	NA	NA	NA	NA	NA	NA	NA			
3,3,8-trimethyldecane	NA	NA	NA	NA	NA	NA	NA	NA			
AMORPHANE B	NA	NA	NA	NA	NA	NA	NA	NA			
decylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
farnesane	NA	NA	NA	NA	NA	NA	350	1167			
heptylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
Hexadecane	NA	NA	NA	NA	NA	NA	350	1167			
nonylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
norfarnesane	NA	NA	NA	NA	NA	NA	NA	NA			
n-pentadecane	NA	NA	NA	NA	NA	NA	NA	NA			
octylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
Tetradecane	NA	NA	NA	NA	NA	NA	350	1167			
Tridecane	NA	NA	NA	NA	NA	NA	350	1167			
VALENCANE	NA	NA	NA	NA	NA	NA	NA	NA			
n-Tridecane	NA	NA	NA	NA	NA	NA	NA	NA			
1,2,4-TMB+n-Decane	NA	NA	NA	NA	NA	NA	NA	NA			
1,2,3-TMB+p-C	NA	NA	NA	NA	NA	NA	NA	NA			
Dodecylbenzene	NA	NA	NA	NA	NA	NA	125	417			
fluorenone	NA	NA	NA	NA	NA	NA	NA	NA			
n-Octylbenzene	NA	NA	NA	NA	NA	NA	125	417			
xanthone	NA	NA	NA	NA	NA	NA	NA	NA			
3-EICOSYNE	NA	NA	NA	NA	NA	NA	NA	NA			
5-EICOSYNE	NA	NA	NA	NA	NA	NA	NA	NA			
5-EICOSYNE (B)	NA	NA	NA	NA	NA	NA	NA	NA			
dodecylcyclohexane	NA	NA	NA	NA	NA	NA	10	33			
n-icosane	NA	NA	NA	NA	NA	NA	10	33			
n-heneicosane	NA	NA	NA	NA	NA	NA	10	33			
n-heptadecane	NA	NA	NA	NA	NA	NA	10	33			
n-nonadecane	NA	NA	NA	NA	NA	NA	10	33			
n-octadecane	NA	NA	NA	NA	NA	NA	10	33			
norpristane	NA	NA	NA	NA	NA	NA	NA	NA			
pentadecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
phytane	NA	NA	NA	NA	NA	NA	NA	NA			
pristane	NA	NA	NA	NA	NA	NA	10	33			
tetradecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
tridecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
undecylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
8b, 13a-dimethyl-14b-[3'-methylbutyl]-podocarpene	NA	NA	NA	NA	NA	NA	NA	NA			
8b, 13a-dimethyl-14b-n-butylpodocarpene	NA	NA	NA	NA	NA	NA	NA	NA			
1,3,5-TRIMETHYL2-OCTADECYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
1-methyl-1-(2-methylene)cyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
1-METHYL-4-(1-METHYLENE)CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
1-METHYL-4-(METHYLENE)CYCLOHEXENE	NA	NA	NA	NA	NA	NA	NA	NA			
1-PROPYLENE	NA	NA	NA	NA	NA	NA	1640	5466			
2,2-DIMETHYLPROPANE	NA	NA	NA	NA	NA	NA	7200	23998			
2-ethyl-2-hexene	NA	NA	NA	NA	NA	NA	NA	NA			
2-Methyl pentane, 2,3-Dimethylbutane	NA	NA	NA	NA	NA	NA	NA	NA			
2-methyl-1-butene	NA	NA	NA	NA	NA	NA	NA	NA			
2-methyl-1-pentene + 1-hexene	NA	NA	NA	NA	NA	NA	NA	NA			
2-methyl-4-pentene	NA	NA	NA	NA	NA	NA	NA	NA			
2-METHYLBYCyclo[4.4.0]HEPTANE	NA	NA	NA	NA	NA	NA	NA	NA			
3-methyl-1-butene	NA	NA	NA	NA	NA	NA	2230	7433			
4-METHYL-1-(1-METHYLENE)CYCLOHEXENE	NA	NA	NA	NA	NA	NA	NA	NA			
ACETYLENE + ETHANE	NA	NA	NA	NA	NA	NA	NA	NA			
Butane	NA	NA	NA	NA	NA	NA	2375	7916			
Butene	NA	NA	NA	NA	NA	NA	NA	NA			
cis-2-Butene	NA	NA	NA	NA	NA	NA	NA	NA			
cyclopentane	NA	NA	NA	NA	NA	NA	340	1133			
ethane	NA	NA	NA	NA	NA	NA	NA	NA			
ethyne	NA	NA	NA	NA	NA	NA	2660	8666			
1-butene	NA	NA	NA	NA	NA	NA	1900	6333			
isobutene	NA	NA	NA	NA	NA	NA	3200	10666			
isopentane	NA	NA	NA	NA	NA	NA	7200	23998			
pentane	NA	NA	NA	NA	NA	NA	7200	23998			
pentene	NA	NA	NA	NA	NA	NA	NA	NA			
Propane	NA	NA	NA	NA	NA	NA	NA	NA			
propene	NA	NA	NA	NA	3000	NA	NA	NA			
trans-2-butene	NA	NA	NA	NA	NA	NA	NA	NA			
trans-2-pentene	NA	NA	NA	NA	NA	NA	NA	NA			
1,2-Butane	NA	NA	NA	NA	NA	NA	NA	NA			
1-Butene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-1-cyclopentene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Pentene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Pentyne	NA	NA	NA	NA	NA	NA	100	333			
2-Butanol	NA	NA	NA	NA	NA	NA	300	1000			
2-Butyne	NA	NA	NA	NA	NA	NA	1440	4800			
2-Methyl-2-butene	NA	NA	NA	NA	NA	NA	NA	NA			
3-Methyl-2-butene	NA	NA	NA	NA	NA	NA	NA	NA			
4-Methyl-1-cyclopentene	NA	NA	NA	NA	NA	NA	810	2700			
C6-Olefin	NA	NA	NA	NA	NA	NA	NA	NA			
cis-2-Pentene	NA	NA	NA	NA	NA	NA	NA	NA			
Cyclopentene	NA	NA	NA	NA	NA	NA	340	1133			
Ethene	NA	NA	NA	NA	NA	NA	34	113			
isobutane	NA	NA	NA	NA	NA	NA	1900	6333			
isobutanol	NA	NA	NA	NA	NA	NA	152	507			
Methyl-tert-butyl ether	NA	NA	NA	NA	8000	2520	180	180			
					38.46154						
Naphthene	NA	NA	NA	NA	NA	NA	NA	NA			
n-Butane	NA	NA	NA	NA	NA	NA	2375	7916			
n-Butanol	NA	NA	NA	NA	NA	NA	61	203			
n-Pentane	NA	NA	NA	NA	NA	NA	7200	23998			
n-Propanol	NA	NA	NA	NA	NA	NA	246	820			

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )								Adjusted Non-carcinogenic Threshold <sup>(19)</sup>	Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS <sup>(1)</sup>	Canadian NAAQS and CAAQS <sup>(2)</sup>	MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup>	TCEQ ESL Adjusted			
1,1-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health	The TCEQ value was selected in the absence of other values.	
1,2-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,3-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,5-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
1-methyl-1-methylcyclopropane	NA	NA	NA	NA	NA	NA	NA	NA	-		
1-HEXENE	NA	NA	NA	NA	NA	NA	170	567	TCEQ - health, under review		
1-METHYL-2-METHYLENE CYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-		
2,2,3-TRIMETHYLBUTANE	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,2-dimethylbutane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,3-dimethylbutane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,3-dimethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,4-dimethyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-		
2,4-dimethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2-hexene	NA	NA	NA	NA	NA	NA	170	567	TCEQ - health, under review		
2-methyl-2-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-		
2-methyl-3-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-		
2-methylhexane	NA	NA	NA	NA	NA	NA	307	1023	TCEQ - health		
2-methylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health, under review		
3,3-DIMETHYL-1-BUTENE	NA	NA	NA	NA	NA	NA	NA	NA	-		
3,3-DIMETHYLPENTANE	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
3,4-dimethyl-1-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methyl-1,3-pentadiene	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methyl-1-hexene	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methyl-2-hexene	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-METHYL-2-HEXENE (B)	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methyl-2-pentene	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methylcyclopentane	NA	NA	NA	NA	NA	NA	810	2700	TCEQ - health		
3-methylhexane	NA	NA	NA	NA	NA	NA	307	1023	TCEQ - health		
3-methylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
4,4-dimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	-		
cis-2-hexene	NA	NA	NA	NA	NA	NA	170	567	TCEQ - health, under review		
Cyclohexane	NA	NA	NA	NA	NA	NA	340	1133	TCEQ - health		
Cyclohexene	NA	NA	NA	NA	NA	NA	1000	3333	TCEQ - health, under review		
ethylcyclopentane	NA	NA	NA	NA	NA	NA	1630	5433	TCEQ - health		
heptane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
hexanal	NA	NA	NA	NA	NA	NA	810	2726	TCEQ - health		
Methylcyclohexane	NA	NA	NA	NA	NA	NA	1610	5366	TCEQ - health, under review		
Methylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,1,3-DIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans-2-hexene	NA	NA	NA	NA	NA	NA	170	567	TCEQ - health, under review		
1,1,3-TRIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,1-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,2,3-trimethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
1,2,4-trimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,2-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,4-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,2,3-TRIMETHYLPENTANE	NA	NA	NA	NA	NA	NA	NA	NA	-		
2,2,4-trimethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,3,4-trimethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,3-dimethylhexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,4-dimethylhexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,5-dimethylhexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2-ethyl-3-methylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
2-methyl-1-pentene	NA	NA	NA	NA	NA	NA	100	333	TCEQ - health		
2-methylheptane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2-octene	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methylhexane	NA	NA	NA	NA	NA	NA	NA	NA	-		
3-methylheptane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
4-methyl-3-heptene	NA	NA	NA	NA	NA	NA	NA	NA	-		
4-METHYLHEPTANE	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
cyclooctane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
methylcyclohexene	NA	NA	NA	NA	NA	NA	NA	NA	-		
OCTAHYDROPENTALENE	NA	NA	NA	NA	NA	NA	NA	NA	-		
octane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
OCTYNE	NA	NA	NA	NA	NA	NA	NA	NA	-		
Propene + Propylene	NA	NA	NA	NA	NA	NA	NA	NA	-		
Propylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1,1,3-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1-Heptene	NA	NA	NA	NA	NA	NA	1400	4666	TCEQ - health, under review		
1-Methyl-1-ethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
1-Methyl-2-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
1-Methyl-trans-3-ethylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
1-Octene	NA	NA	NA	NA	NA	NA	340	1133	TCEQ - health		
2,2-Dimethylhexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,2-Dimethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
2,3,3-Trimethylpentane	NA	NA	NA	NA	NA	NA	NA	NA	-		
2-Methyl-3-ethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
3,4-Dimethylhexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
3-Ethylpentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
C7-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-		
C8-Olefin	NA	NA	NA	NA	NA	NA	NA	NA	-		
C8-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA	-		
cis,cis-1,2,3-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
cis,trans-1,2,4-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
cis-1,2-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
cis-1,3-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
cis-2-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-		
cis-2-Octene	NA	NA	NA	NA	NA	NA	NA	NA	-		
cis-3-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-		
Ethylcyclohexane	NA	NA	NA	NA	NA	NA	1870	6233	TCEQ - health		
Isopropylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
n-Heptane	NA	NA	NA	NA	NA	NA	NA	NA	-		
n-Octane	NA	NA	NA	NA	NA	NA	NA	NA	-		
trans,cis-1,2,3-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans,cis-1,2,4-Trimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans-1,2-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans-1,2-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans-1,3-Dimethylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans-1,4-Dimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167	TCEQ - health		
trans-2-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-		
trans-2-Octene	NA	NA	NA	NA	NA	NA	NA	NA	-		
trans-3-Heptene	NA	NA	NA	NA	NA	NA	NA	NA	-		

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Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )								Adjusted Non-carcinogenic Threshold (19)	Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS (1)	Canadian NAAQO and CAAQS (2)	MECP ACB (3)	WHO AQG (4,5,6)	CalEPA REL (7)	ATSDR MRL (8)	TCEQ ESL (9)	TCEQ ESL (10)			
1,1,2,3-TETRAMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA			The TCEQ value was selected in the absence of other values.
1,1,3,4-TETRAMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA			
1,1,3,5-TETRAMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
1,1,3-TRIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
1,1,4-TRIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
1,3-DIMETHYL-2-(1-METHYLENE)CYCLOPENTENE	NA	NA	NA	NA	NA	NA	NA	NA			
1-ETHYL-2,3-DIMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
1-ethyl-2,4-dimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
1-ETHYL-2-PROPYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
1-METHYL-4-(1-METHYLETHYL) CYCLOHEXANE	NA	NA	NA	NA	NA	NA	110	367		TCEQ - health	
2,2,5-trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA			
2,2-DIMETHYL-3-OCTYNE	NA	NA	NA	NA	NA	NA	NA	NA			
2,3,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA			
2,3-dimethyloctane	NA	NA	NA	NA	NA	NA	350	1167			
2,5,5-TRIMETHYL-1-HEXENE	NA	NA	NA	NA	NA	NA	NA	NA			
2,6-dimethyl-2-octene	NA	NA	NA	NA	NA	NA	NA	NA			
2,6-dimethyl-4-octene	NA	NA	NA	NA	NA	NA	NA	NA			
2,6-dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2,4-Methyloctane	NA	NA	NA	NA	NA	NA	NA	NA			
2-methyloctyne	NA	NA	NA	NA	NA	NA	NA	NA			
2-METHYLPROPYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	NA	NA			
3,3,4-trimethylhexane + benzene	NA	NA	NA	NA	NA	NA	NA	NA			
3,4,4-trimethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
3,7,7-TRIMETHYL BICYCLO[4.1.0]HEPTANE	NA	NA	NA	NA	NA	NA	NA	NA			
3,7-dimethyl-1-octene	NA	NA	NA	NA	NA	NA	NA	NA			
3-ETHYL-2-METHYL-2-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA			
3-ethyl-3-octene	NA	NA	NA	NA	NA	NA	NA	NA			
3-methyloctane	NA	NA	NA	NA	NA	NA	NA	NA			
4-ethylcane	NA	NA	NA	NA	NA	NA	NA	NA			
4-methyloctane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
BICYCLO[3.3.1]NONANE	NA	NA	NA	NA	NA	NA	NA	NA			
BICYCLO[3.3.1]NONANE	NA	NA	NA	NA	NA	NA	NA	NA			
BUTYLIDENECYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
c-1,3-DIMETHYLCYCLOPENTANE	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
c-1-BUTYL-2-METHYLCYCLOPROPANE	NA	NA	NA	NA	NA	NA	NA	NA			
decane	NA	NA	NA	NA	NA	NA	1000	3333		TCEQ - health	
ETHYLIDENECYCLOHEPTANE	NA	NA	NA	NA	NA	NA	NA	NA			
Decamphane	NA	NA	NA	NA	NA	NA	NA	NA			
nonane	NA	NA	NA	NA	NA	NA	1050	3500		TCEQ - health	
1-Decene	NA	NA	NA	NA	NA	NA	100	333		TCEQ - health, under review	
1-Methyl-1-ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-1-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-2-ethylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-2-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-4-isopropylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
1-Nonene	NA	NA	NA	NA	NA	NA	520	1733		TCEQ - health	
2,2,3,4-Tetramethylpentane	NA	NA	NA	NA	NA	NA	NA	NA			
2,2,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA			
2,2-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2,2-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA			
2,3,3-Trimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2,3,5-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA			
2,4,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA			
2,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2,4-Dimethyloctane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2,5-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2,5-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA			
2,5-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA			
2-Methylnonane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
2-Methyloctane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,3,4-Trimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,3,4-Trimethylhexane	NA	NA	NA	NA	NA	NA	NA	NA			
3,3,5-Trimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,3-Dimethylpentane	NA	NA	NA	NA	NA	NA	NA	NA			
3,3-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,3-Dimethyloctane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,4-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,5-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3,5-Dimethyloctane	NA	NA	NA	NA	NA	NA	NA	NA			
3-Ethylcane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
3-Methyl-5-ethylheptane	NA	NA	NA	NA	NA	NA	NA	NA			
3-Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
3-Methylnonane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
4-Ethylheptane	NA	NA	NA	NA	NA	NA	NA	NA			
5-Methylnonane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
Butylcyclopentane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
C10-Olefin	NA	NA	NA	NA	NA	NA	NA	NA			
C10-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA			
C9-Olefin	NA	NA	NA	NA	NA	NA	NA	NA			
C9-Paraffin	NA	NA	NA	NA	NA	NA	NA	NA			
cis-1,2,4-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
cis-1,3,5-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
cis-1-Ethyl-2-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
cis-1-Ethyl-4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
cis-1-Ethyl-1-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
cis-2-nonene	NA	NA	NA	NA	NA	NA	NA	NA			
cis-3-Nonene	NA	NA	NA	NA	NA	NA	NA	NA			
Isobutylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
Isobutylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
Isopropylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
n-Decane	NA	NA	NA	NA	NA	NA	1000	3333		TCEQ - health	
n-Nonane	NA	NA	NA	NA	NA	NA	NA	NA			
Propylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
q,q,2-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
sec-Butylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
sec-Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
tert-Butylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
trans-1,2,4-Trimethylcyclohexane	NA	NA	NA	NA	NA	NA	350	1167		TCEQ - health	
trans-1-Ethyl-4-methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
trans-1-Methyl-2-methyl-4-propylcyclopentane	NA	NA	NA	NA	NA	NA	NA	NA			
trans-1-Methyl-2-propylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA			
trans-2-nonene	NA	NA	NA	NA	NA	NA	NA	NA			
trans-3-Nonene	NA	NA	NA	NA	NA	NA	NA	NA			

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Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )								Adjusted Non-carcinogenic Threshold (19)	Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS (1)	Canadian NAAQS and CAAQS (2)	MECP ACB (3)	WHO AQG (4,5,6)	CalEPA REL (7)	ATSDR MRL (8)	TCEQ ESL (9)	TCEQ ESL Adjusted			
1,1,2,3-TETRAMETHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			The TCEQ value was selected in the absence of other values.
1,2-DIETHYL-1-METHYLCYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA			
2-Ethyl-toluene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
3-Ethyl-toluene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
4-Ethyl-toluene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
Indanone	NA	NA	NA	NA	NA	NA	NA	NA			
methylpropylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
n-Butylbenzene	NA	NA	NA	NA	NA	NA	274	913			TCEQ - health
p-cymene	NA	NA	NA	NA	NA	NA	275	917			TCEQ - health
Propylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1,2,3,4-tetrahydronaphthalene	NA	NA	NA	NA	NA	NA	300	1000			TCEQ - health
1,2,3,4-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1,2,3,5-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1,2,4,5-Tetramethylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1,3-Diethylbenzene	NA	NA	NA	NA	NA	NA	250	833			TCEQ - health
1,3-Dimethyl-2-ethylbenzene	NA	NA	NA	NA	NA	NA	256	853			TCEQ - health
1,3-Dimethyl-4-ethylbenzene	NA	NA	NA	NA	NA	NA	256	853	83		TCEQ - health
1,3-Dimethyl-5-ethylbenzene	NA	NA	NA	NA	NA	NA	256	853			TCEQ - health
1,4-Diethylbenzene	NA	NA	NA	NA	NA	NA	250	833			TCEQ - health
1,4-Dimethyl-2-ethylbenzene	NA	NA	NA	NA	NA	NA	256	853			TCEQ - health
1-Ethyl-2-methylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1-Ethyl-3-methylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1-Ethyl-4-methylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1-Methyl-2-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-2-propylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1-Methyl-3-isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA			
1-Methyl-3-propylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
1-Methyl-4-isopropylbenzene	NA	NA	NA	NA	NA	NA	275	917			TCEQ - health
1-Methyl-4-propylbenzene	NA	NA	NA	NA	NA	NA	1250	4166			TCEQ - health
2,3-Dihydroindene	NA	NA	NA	NA	NA	NA	NA	NA			
2,3-Dimethylheptane	NA	NA	NA	NA	NA	NA	350	1167			TCEQ - health
Butylbenzene	NA	NA	NA	NA	NA	NA	274	913			TCEQ - health
C10-Aromatic	NA	NA	NA	NA	NA	NA	NA	NA			
Isobutylbenzene	NA	NA	NA	NA	NA	NA	125	417			TCEQ - health
Isopropylbenzene	NA	NA	NA	NA	NA	NA	250	833			TCEQ - health
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	274	913			TCEQ - health
Carbon Tetrachloride	NA	NA	NA	NA	40 0.238095	190	13	13	8		The CalEPA REL is based on a LOAEL of 5 ppm for increased liver weight and hepatic fatty infiltration in guinea pigs. The LOAEL was adjusted for duration and a human equivalent concentration. An uncertainty factor of 300 was applied. CalEPA - The unit risk is based on mouse liver tumour incidence. ATSDR - The ATSDR MRL is based on a NOAEL of 5 ppm for increased liver weight, serum enzymes and liver histopathology. The NOAEL was adjusted for exposure duration (6 hr/day, 5 days/week) and a human equivalent concentration of 1. An uncertainty factor of 30 was applied. TCEQ - health, under review
1-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA			
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	2	7			The CalEPA REL was the lowest threshold with supporting documentation available.
Chlorobenzene	NA	NA	NA	NA	1000	NA	46	153	200		The CalEPA REL was the lowest threshold with supporting documentation available.
Chloroethane	NA	NA	NA	NA	30000	NA	50	167	6000		The CalEPA REL was the lowest threshold with supporting documentation available.
Chloroform	NA	NA	0.2	NA	300 1.886792	97.65	10	10	19.53		The ATSDR MRL was the lowest threshold and supporting documentation was available. The ON MECP AAQC was the lowest carcinogenic threshold. CalEPA - The CalEPA unit risk was based on renal tumours in rats and mice. ATSDR - The MRL was based on a LOAEL of 2 ppm for hepatic effects. An uncertainty factor of 100 was applied. TCEQ - health, under review
Cumene	NA	NA	NA	NA	NA	NA	250	833	167		The TCEQ value was selected in the absence of other values.
Dichlorobenzene	NA	NA	NA	NA	800 0.909091	60.12	32	32	12.0		The ATSDR MRL was the lowest threshold and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available. CalEPA - The CalEPA unit risk was based on increases in several types of tumours in mice and rats. ATSDR - The MRL was based on a BMCL <sub>10</sub> of 9.51 ppm for increased incidences of nasal lesions in female rats. The BMCL was adjusted for duration (6 hr/day, 5 days/week) and a human equivalent concentration (0.16). An uncertainty factor of 30 was applied. TCEQ - health, final
1,1-Dichloroethane	NA	NA	NA	NA	6.25	NA	400	400			The CalEPA REL was the lowest threshold and supporting documentation was available. TCEQ - health
1,2-Dichloroethane	NA	NA	0.4	NA	400 0.476119	NA	2430	4	80		The ON MECP AAQC was the lowest carcinogenic threshold. CalEPA - The chronic REL was based on a NOAEL of 10 ppm for significant elevations in liver enzymes. The NOAEL was adjusted for exposure duration (7 hr/day, 5 days/week) and a human equivalent concentration of 1.5. An uncertainty factor of 30 was applied. CalEPA - The unit risk was based on the incidence of hemangiosarcoma in male rats. ATSDR - The ATSDR MRL was based on a NOAEL of 50 ppm for liver histopathology in rats. The NOAEL was adjusted for a human equivalent concentration of 1. An uncertainty factor of 90 was applied. This chronic MRL is also expected to be protective for intermediate inhalation exposure. TCEQ - health
Ethanol	NA	NA	NA	NA	NA	NA	1880	6266	1253		The TCEQ value was selected in the absence of other values.
Ethylbenzene	NA	NA	NA	NA	2000 4	260	570	570	52		The ATSDR MRL was the lowest threshold and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available. CalEPA - The CalEPA unit risk was based on male rat renal tumours. ATSDR - The ATSDR MRL was based on a LOAEL of 75 ppm for increased severity of chronic progressive nephropathy in female rats. A human equivalent concentration of 17.45 ppm was selected as the point of departure and an uncertainty factor of 300 was applied. TCEQ - health, final
ethylene	NA	NA	NA	NA	NA	NA	1800 (health), 34 (vegetation)	6000 (health), 113 (vegetation)	1200 (health), 23 (vegetation)		The TCEQ value was selected in the absence of other values.
Ethylene Dibromide	NA	NA	NA	NA	0.8 0.140845	NA	0.4	0.4	0.16		The CalEPA REL was the only available threshold and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available. CalEPA - The unit risk was based on male rat nasal tumour incidence. TCEQ - health
Formaldehyde	NA	NA	NA	NA	9 1.666667	9.83	3.3	3.3	1.8		The CalEPA REL was the lowest threshold and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available. CalEPA - The unit risk was based on rat nasal squamous carcinoma incidence. ATSDR - The chronic MRL was based on a LOAEL of 0.24 ppm for mild eye and upper respiratory tract irritation and mild damage to the nasal epithelium. An uncertainty factor of 30 was applied. TCEQ - health, final

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )									Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS <sup>(1)</sup>	Canadian NAAQS and CAAQS <sup>(2)</sup>	MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	Adjusted Non-carcinogenic Threshold <sup>(10)</sup>		
Hexane	NA	NA	NA	NA	NA	NA	200	667		TCEQ - health, final	The ATSDR MRL was the lowest threshold with supporting documentation available.
n-Hexane	NA	NA	NA	NA	7000	2,110	200	667	422	CalEPA - The chronic REL was based on a NOAEL of 100 ppm for peripheral neuropathy in male mice. The NOAEL was adjusted for exposure duration and a human equivalent concentration. An uncertainty factor of 30 was applied. ATSDR - The chronic MRL is based on a LOAEL of 58 ppm for reduced motor nerve conduction velocity in occupationally-exposed workers. An uncertainty factor of 100 was applied.	
Isopropanol	NA	NA	NA	NA	7000	NA	492	1640	1400	CalEPA - The chronic REL is based on a NOAEL of 504 ppm for kidney lesions in mice and rats. The NOAEL was adjusted for exposure duration (6 hr/day, 5 days/week) and a human equivalent concentration (1). An uncertainty factor of 30 was applied. TCEQ - health, final	The CalEPA REL was the lowest threshold with supporting documentation available.
3-Buten-2-one	NA	NA	NA	NA	NA	NA	0.6	2		TCEQ - health	The TCEQ value was selected in the absence of other values.
acetophenone	NA	NA	NA	NA	NA	NA	49	163		TCEQ - health	
CAMPHOR	NA	NA	NA	NA	NA	NA	2	7	0.4	TCEQ - health	
Methyl Ethyl Ketone	NA	NA	NA	NA	NA	NA	2600	8666		TCEQ - health, final	
Methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	No annual thresholds were available	
Methanol	NA	NA	NA	NA	4000	NA	262	873	800	CalEPA - The CalEPA threshold was based on a NOAEL of 1000 ppm (BMC <sub>01</sub> of 305 ppm) for abnormal cervical ribs, exencephaly and cleft palate in mice. The BMC <sub>01</sub> was adjusted for exposure duration (7 hr/day) and a human equivalent concentration (1). An uncertainty factor of 30 was applied. TCEQ - health, under review	The CalEPA REL was the lowest threshold with supporting documentation available.
Methylene Chloride	NA	NA	44	450 <sup>(a)</sup>	400	1040	350	350	80	MECP - health WHO - effects other than cancer or odour/annoyance: The biological endpoint from exposure to methylene chloride is formation of COHb. The weekly average is one-seventh of the 24 hr guideline CalEPA - The CalEPA chronic REL was based on a LOAEL of 40 ppm for elevated carboxyhemoglobin levels in occupationally-exposed humans. The LOAEL was adjusted for exposure duration. An uncertainty factor of 100 was applied. CalEPA - The unit risk was based on female mouse lung tumours ATSDR - The chronic MRL was based on a NOAEL of 50 ppm for liver histopathology in female rats. The NOAEL was adjusted for duration (6 hr/day, 5 days/week) and a human equivalency concentration (1). An uncertainty factor of 30 was applied. TCEQ - health, final	The CalEPA REL was the lowest threshold and supporting documentation was available. The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available.
OCDD (Octachlorodibenzo-p-dioxin)	NA	NA	NA	NA	0.00263	NA	NA	NA	NA	CalEPA - The OCDD unit risk is based on various cancers in humans and animals. The unit risk was determined using a TEF approach. OCDD was assigned a TEF of 0.0001, relative to 2,3,7,8-TCDD, which has a TEF of 1 and unit risk of 3.8x10 <sup>-1</sup> .	The CalEPA unit risk was the only available threshold and supporting documentation was available.
Phenol	NA	NA	NA	NA	200	NA	19	63	40	CalEPA - The chronic REL was based on a NOAEL of 5 ppm for systemic effects (liver and nervous system effects). The NOAEL was adjusted for a human equivalent concentration of 1 and an uncertainty factor of 100 was applied. TCEQ - health, under review	The CalEPA REL was the lowest threshold with supporting documentation available.
Propylene Oxide	NA	NA	0.3	NA	30	NA	7	7	0.06	MECP - health CalEPA - The CalEPA threshold is based on a LOAEL of 30 ppm for degenerative and hyperplastic changes in the respiratory epithelium in rats. The LOAEL was adjusted for exposure duration (6 hr/day, 5 days/week) and a human equivalent concentration of 0.23. An uncertainty factor of 100 was applied. CalEPA - The CalEPA unit risk was based on male rat nasal cavity hemangioma/hemangiosarcoma. TCEQ - health	The ON MECP AAGC was the lowest threshold. The CalEPA unit risk was the lowest carcinogenic threshold with supporting documentation available.
Styrene	NA	NA	NA	260 <sup>(a)</sup>	900	850	140	467	52	WHO - effects other than cancer or odour/annoyance: A LOAEL of 107 mg/m <sup>3</sup> for reduced visuomotor accuracy and verbal learning skills and subclinical effects on colour vision was used to derive the WHO threshold value. The LOAEL was adjusted for continuous exposure by a factor of 4.2. An uncertainty factor of 100 was applied. CalEPA - The CalEPA threshold was based on a LOAEL of 15 ppm for CNS effects in occupationally-exposed humans (BMC <sub>01</sub> of 1.7 ppm). The LOAEL was adjusted for exposure duration and inhalation of 10 m <sup>3</sup> of contaminated air per 20 m <sup>3</sup> of total air. An uncertainty factor of 3 was applied. ATSDR - The chronic MRL was based on a LOAEL of 20 ppm for reversible alterations in colour vision. The LOAEL was adjusted for exposure duration (8 hr/day, 5 days/week) and an uncertainty factor of 30 was applied. TCEQ - health, final	The WHO AQG was the lowest threshold and supporting documentation was available.
1,1,1,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	105	350	70	TCEQ - health	The TCEQ value was selected in the absence of other values.
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	0.17241	NA	7	7		CalEPA - The unit risk was based on female mouse hepatocellular carcinoma tumour. TCEQ - health	The CalEPA unit risk was the lowest.
toluene	NA	NA	NA	260 <sup>(a)</sup>	300	300	1200	4000	52	WHO - effects other than cancer or odour/annoyance: A LOAEL of 332 mg/m <sup>3</sup> for CNS effects was used to derive the WHO threshold. The LOAEL was adjusted for continuous exposure by a factor of 4.2 and an uncertainty factor of 300 was applied. CalEPA - The chronic REL was based on a NOAEL of 40 ppm for decreased brain weight and altered dopamine receptor binding in male rats. The NOAEL was adjusted for exposure duration (6 hr/day, 5 days/week) and a human equivalent concentration of 1. An uncertainty factor of 100 was applied. ATSDR - The chronic MRL was based on a LOAEL of 35 ppm for alcohol- and age-adjusted colour vision impairment. The LOAEL was adjusted for duration (8 hr/day, 5 days/week) and an uncertainty factor of 100 was applied. TCEQ - health, final	The WHO AQG was the lowest threshold and supporting documentation was available.
1,2,3-trimethylbenzene	NA	NA	NA	NA	NA	NA	125	417		TCEQ - health	The TCEQ value was selected in the absence of other values.
1,2,4-trimethylbenzene	NA	NA	NA	NA	NA	NA	125	417		TCEQ - health	
1,3,5-trimethylbenzene	NA	NA	NA	NA	NA	NA	125	417		TCEQ - health	
Vinyl Chloride	NA	NA	0.2	10	0.12821	NA	1.2	1.2	NA	MECP - health WHO - carcinogenic risk estimates based on human studies, liver and other sites CalEPA - The CalEPA unit risk was based on female mouse lung tumour incidence. TCEQ - health, final	The CalEPA unit risk was the lowest carcinogenic threshold and supporting documentation was available.
p-Xylene	NA	NA	NA	NA	NA	220	180	600		ATSDR - The chronic MRL was based on a LOAEL of 14 ppm for neurotoxicity, respiratory toxicity and eye irritation in humans. An uncertainty factor of 100 and a modifying factor of 3 were applied. Based on similar toxicokinetic properties and similar toxicological effects, a single chronic duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene. TCEQ - health, final	The ATSDR MRL was the lowest threshold and supporting documentation was available.
m-xylene	NA	NA	NA	NA	NA	220	180	600		ATSDR - The chronic MRL was based on a LOAEL of 14 ppm for neurotoxicity, respiratory toxicity and eye irritation in humans. An uncertainty factor of 100 and a modifying factor of 3 were applied. Based on similar toxicokinetic properties and similar toxicological effects, a single chronic duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene. TCEQ - health, final	
o-xylene	NA	NA	NA	NA	NA	220	180	600	44	ATSDR - The chronic MRL was based on a LOAEL of 14 ppm for neurotoxicity, respiratory toxicity and eye irritation in humans. An uncertainty factor of 100 and a modifying factor of 3 were applied. Based on similar toxicokinetic properties and similar toxicological effects, a single chronic duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene. TCEQ - health, final	
Xylene	NA	NA	NA	NA	700	220	180	600		CalEPA - The chronic REL was based on a LOAEL of 14.2 ppm for dose-related increases in the prevalence of eye irritation, sore throat, floating sensation and poor appetite in factory workers. The LOAEL was adjusted for exposure duration (5 days/week) and an inhalation rate of 10 m <sup>3</sup> /day. An uncertainty factor of 30 was applied. ATSDR - The chronic MRL was based on a LOAEL of 14 ppm for neurotoxicity, respiratory toxicity and eye irritation in humans. An uncertainty factor of 100 and a modifying factor of 3 were applied. Based on similar toxicokinetic properties and similar toxicological effects, a single chronic duration MRL that applies to mixed xylenes and all of the individual isomers was derived based on data for m-xylene. TCEQ - health, final	

Parameter	Chronic Inhalation Annual Health Based Thresholds (µg/m <sup>3</sup> )									Basis of Screening Threshold	Decision Criteria
	Government of Nunavut AAGS <sup>(1)</sup>	Canadian NAAQO and CAAQS <sup>(2)</sup>	MECP ACB (3)	WHO AQG <sup>(4,5,6)</sup>	CalEPA REL <sup>(7)</sup>	ATSDR MRL <sup>(8)</sup>	TCEQ ESL <sup>(9)</sup>	TCEQ ESL <sup>(9)</sup> Adjusted	Adjusted Non-carcinogenic Threshold <sup>(10)</sup>		
<b>Criteria Compounds</b>											
Carbon monoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	No annual thresholds were available	-
Nitrogen dioxide	60	CAAQS = 32	NA	40	NA	NA	99.73	332.4	5	Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for NO <sub>2</sub> .	The CAAQS was the lowest threshold and supporting documentation was available.
		CAAQS = 22.5 (Effective 2025)								CAAQS - Proposed screening value for the year 2025 was selected as it is more conservative than the 2020 CAAQS of 32 µg/m <sup>3</sup> (supporting documentation not available). The metric is the average over a single calendar year of all 1-hour average concentrations. The CAAQS of 17 and 12 ppb were converted to µg/m <sup>3</sup> using a molecular weight of 46.01.	
Nitrogen Oxides (NO <sub>x</sub> )	NA	NA	NA	NA	NA	NA	NA	NA	NA	No annual thresholds were available	-
Sulphur dioxide	30	CAAQS = 13	55	50	NA	NA	NA	NA	2.1	Gov Nunavut - The Government of Nunavut standard is based on the NAAQO value for SO <sub>2</sub> .	The CAAQS was the lowest threshold and supporting documentation was available.
		CAAQS = 10.5 (effective 2025)								CAAQS - The annual screening value of 4.0 ppb is intended to be applied to the average over a single calendar year of all the 1-hour average SO <sub>2</sub> concentrations. It was selected as the screening value as it is more conservative than the 2020 CAAQS of 13 µg/m <sup>3</sup> . Based upon protection of human health and the environment. The CAAQS of 5 and 4 ppb were converted to µg/m <sup>3</sup> using a molecular weight of 64.07.	
PM <sub>2.5</sub>	NA	CAAQS = 8.8	NA	10	NA	NA	NA	NA	1.76	CAAQS - Canadian ambient air quality standard protective of human health and the environment. The standard represents a balance between achieving the best health and environmental protection possible and the feasibility and costs of reducing pollutant emissions; a value of 8.8 µg/m <sup>3</sup> is proposed for the year 2020. The metric is the 3-year average of the annual average concentrations.	The CAAQS was the lowest threshold and supporting documentation was available.
PM <sub>10</sub>	NA	NA	NA	20	NA	NA	NA	NA	4	WHO - The WHO AQG is based on a PM <sub>2.5</sub> :PM <sub>10</sub> ratio of 0.5.	The WHO AQG was the only threshold and supporting documentation was available.
Diesel Particulate Matter	NA	5 (Health Canada 2016)	NA	NA	5	NA	0.15	0.15	1	Health Canada - Screening value based on a NOAEL of 0.46 mg/m <sup>3</sup> for effects on the respiratory tract (inflammation, histopathological and/or functional changes) in rats (Health Canada 2016). The NOAEL was adjusted to a human equivalent concentration of 0.12 mg/m <sup>3</sup> . An uncertainty factor of 25 was applied (100.4 for toxicodynamic differences in animal to human extrapolation and 10 for sensitive individuals in the human population).	The Health Canada value was the lowest non-carcinogenic threshold and supporting documentation was available.
					0.033333					TCEQ - PM <sub>10</sub> health CalEPA - The chronic REL was based on respiratory effects. CalEPA - The unit risk was based on lung cancer risk in occupationally exposed individuals.	
Total suspended particulate	60	Desirable NAAQO = 60	60	NA	NA	NA	NA	NA	12	Gov Nunavut - The Government of Nunavut standard is based on the desirable NAAQO value for TSP.	The Government of NWT threshold is adopted from the Canadian NAAQO. The Government of NWT threshold was selected preferentially over the Canadian NAAQO due to the location of the Site.
		Acceptable NAAQO = 70								NAAQO - health and environment MECP - visibility	

**Notes:**

(1) Government of Nunavut. (2011). Environmental Guideline for Ambient Air Quality. Department of Environment. October 2011.

(2) Canadian Council of Ministers of the Environment. (1999). Canadian Environmental Quality Guidelines. Canadian National Ambient Air Quality Objectives. CCME. 2017. Canadian Ambient Air Quality Standards (CAAQS). CCME. <<http://airquality-qualiteair.ccm.ca/en/>>.

(3) Ontario Ministry of the Environment, Conservation and Parks (2018). Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants. Technical Assessment and Standards Development Branch, Environmental Sciences Division. Version 2.0, April 2018.

(4) The ON MECP ACBs are based on health, odour, vegetation, soiling, visibility, corrosion or other effects. The ON MECP does not provide background information on how the ACBs were derived on a chemical to chemical basis, and therefore the following parameters were assumed to be based on a carcinogenic endpoint: Cr (VI), Ni, and B(a)P. The thresholds for these parameters were not further adjusted.

(5) World Health Organization. (2000). Air Quality Guidelines for Europe, 2nd Ed. World Health Organization Regional Publications, European Series, No. 91. Copenhagen.

(6) World Health Organization. (2005). Air Quality Guidelines Global Update. Report on Working Group Meeting, Bonn, Germany.

(7) World Health Organization. (2005). WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen Dioxide and Sulfur Dioxide. Global Update, Summary of Risk Assessment.

The WHO provides carcinogenic unit risks based on human studies. Unit risks (based on a risk level of 1x10<sup>-6</sup>) were adjusted to a risk based concentration and used as a screening value with the following formula: threshold (µg/m<sup>3</sup>) = 1x10<sup>-6</sup>/unit risk (µg/m<sup>3</sup>)<sup>-1</sup>. This value was multiplied by 10 to account for a target risk level of 1x10<sup>-5</sup>.

(8) California Environmental Protection Agency. (2021). Acute, 8-Hour and Chronic Reference Exposure Levels. Office of Environmental Health Hazard Assessment, Air Toxicology and Epidemiology. Internet Site, last updated February 2012, accessed 10 November 2021.

The CalEPA OEHHA provides carcinogenic unit risks. Unit risks (based on a risk level of 1x10<sup>-6</sup>) were adjusted to a risk based concentration and used as a screening value with the following formula: threshold (µg/m<sup>3</sup>) = 1x10<sup>-6</sup>/unit risk (µg/m<sup>3</sup>)<sup>-1</sup>. This value was then multiplied by 10 to account for a target risk level of 1x10<sup>-5</sup>.

(9) Agency for Toxic Substances and Disease Registry. (2021). Minimal Risk Levels. Internet Site, last updated July 2021, accessed 10 November 2021.

The ATSDR defines chronic exposure as 365 days or more.

(10) Texas Commission on Environmental Quality. (2021). Texas Air Monitoring Information System (TAMIS) Web Interface. Database export: Tox ESL Detailed Report and Tox AMCV Report. Available at: <https://www17.tceq.texas.gov/tamis/index.cfm?fuseaction=home.welcome>. Accessed November 2021.

The TCEQ ESLs are based on health, odour/nuisance potential, and vegetation effects. The TCEQ ESLs are based on an HQ = 0.3 for non-carcinogens and an ILCR = 1x10<sup>-6</sup> for carcinogens. HQs were adjusted with the following equation: threshold (µg/m<sup>3</sup>) = TCEQ value x 3.333. ILCRs were not adjusted. TCEQ values were assumed to be carcinogenic if other agencies have assessed the parameter as such (i.e. As, Be, Cd, Cr(VI), Ni, 1-nitropyrene, 3-methylcholanthrene, B(a)P, 7,12-dimethylbenz(a)anthracene, benz(a)anthracene, benzo(k)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene, 1,3-butadiene, acetaldehyde, benzene, MTBE, ethylbenzene, and formaldehyde were assumed carcinogens). The TCEQ does not provide background information on how the ESLs were derived on a chemical to chemical basis. All ESLs are interim, unless otherwise stated.

(11) The selected non-carcinogenic thresholds were divided by 5 to adjust for a final target HQ of 0.2.

NA = not available  
 (a) 7 days  
 (b) 30 days  
 200 = carcinogenic chemical  
 Target HQ = 1.0, see comment (9) above  
 Target cancer risk = 1x10<sup>-7</sup>

Air concentrations given in ppm were converted to µg/m<sup>3</sup> with the following equation: X (ppm) = Y (mg/m<sup>3</sup>)\*24.45/MW.  
 Centre for Disease Control and Prevention. (2003). Conversion Calculator. The National Institute for Occupational Safety and Health Publication No. 2004-101.

Selection criteria:  
 The lowest health-based air threshold from the first six agencies listed was selected as the guideline for screening in the HHRA. The TCEQ threshold was selected if it was the only agency with a guideline. Carcinogens have two standards selected, non-carcinogenic and carcinogenic.  
 200 = selected non-carcinogenic guideline for screening in the HHRA  
 200 = selected carcinogenic guideline for screening in the HHRA

Updated by: BP  
 Checked by: SG

Table H-12-D-8: Screening of Predicted Annual Air Concentrations for Nitrogen Dioxide and Sulphur Dioxide

Parameter	Air Threshold		Receptor Locations													
	CAAQS (2020)	CAAQS (2025)	SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014
<b>Criteria Pollutants</b>																
<b>Scenario 1</b>																
NO2	32	22.5	0.7	1.2	1.2	1	1.8	3.2	1.2	2.8	0.9	2.1	1	1.5	1.2	1.3
SO2	13	10.5	0.05	0.07	0.07	0.05	0.09	0.14	0.05	0.08	0.04	0.06	0.06	0.05	0.05	0.06
<b>Scenario 2</b>																
NO2	32	22.5	0.6	0.9	0.8	0.7	1.2	2.1	0.8	1.8	0.6	1.3	0.8	0.9	0.8	0.9
SO2	13	10.5	0.05	0.07	0.06	0.05	0.09	0.14	0.05	0.08	0.04	0.06	0.06	0.05	0.05	0.06
<b>Scenario 3</b>																
NO2	32	22.5	0.5	0.7	0.7	0.5	1	1.6	0.6	1.3	0.5	0.9	0.6	0.7	0.6	0.7
SO2	13	10.5	0.05	0.07	0.06	0.05	0.09	0.14	0.05	0.08	0.04	0.06	0.06	0.05	0.05	0.06

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

NV = no value; NO2 = Nitrogen dioxide; SO2 = Sulphur Dioxide; CAAQS = Canadian Ambient Air Quality Standard; COPC = contaminant of potential concern

**3.20E-03** = greater than 1-hour air threshold

\* NO2 was retained as a COPC because it is considered a non-threshold chemical.

Prepared by: BP  
 Checked by: SG  
 Revised by: KCS

Parameter	Air Thi	Receptor Locations											Maximum Concentration	Maximum Above Guideline?	Retained as a COPC?	
	CAAQS (2020)	SR_015	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025				
<b>Criteria Pollutants</b>																
<b>Scenario 1</b>																
NO2	32	1.4	1.2	1.1	1	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	3.20	No	Yes*
SO2	13	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.14	No	No
<b>Scenario 2</b>																
NO2	32	1.1	1	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.10	No	Yes*
SO2	13	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.14	No	No
<b>Scenario 3</b>																
NO2	32	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.60	No	Yes*
SO2	13	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.14	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

NV = no value; NO2 = Nitrogen dioxide; SO2 = Sulphur Dioxide; CAAQS = Canadian Ambient Air Quality Standard; COPC = contaminant of potential concern

**3.20E-03**

\* NO2 was retained as a COPC because it is considered a non-threshold chemical.

Prepared by: BP  
 Checked by: SG  
 Revised by: KCS

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	120	3.84E+01	1.17E+01	2.10E+01	2.12E+01	2.16E+01	2.49E+01	5.09E+01	3.54E+00	4.24E+00	3.75E+00	3.55E+00	3.90E+00	2.85E+01	1.60E+01	1.52E+01
DPM	NV	4.98E+00	1.74E+00	2.34E+00	1.76E+00	1.29E+00	3.78E+00	3.00E+00	6.87E-01	6.34E-01	5.84E-01	6.87E-01	6.59E-01	2.71E+00	3.36E+00	2.93E+00
PM10	25	2.02E+01	6.58E+00	1.03E+01	1.02E+01	1.03E+01	1.55E+01	2.33E+01	2.16E+00	2.52E+00	2.26E+00	2.16E+00	2.38E+00	1.50E+01	1.06E+01	9.66E+00
PM2.5	27	9.80E+00	3.62E+00	5.17E+00	4.13E+00	2.85E+00	7.58E+00	5.77E+00	1.29E+00	1.19E+00	1.14E+00	1.29E+00	1.19E+00	5.24E+00	6.87E+00	5.87E+00
SO2	20	4.85E-01	1.46E-01	2.20E-01	1.74E-01	1.20E-01	2.79E-01	1.68E-01	5.05E-02	4.85E-02	4.20E-02	5.06E-02	4.40E-02	1.67E-01	2.77E-01	2.31E-01
CO	6000	1.60E+02	6.17E+01	5.74E+01	5.75E+01	6.35E+01	7.74E+01	1.01E+02	1.82E+01	1.65E+01	1.35E+01	1.82E+01	1.73E+01	8.03E+01	6.03E+01	5.37E+01
NOX	9000	1.39E+02	4.89E+01	6.81E+01	5.08E+01	3.63E+01	1.10E+02	8.38E+01	1.97E+01	1.79E+01	1.64E+01	1.97E+01	1.86E+01	7.58E+01	9.43E+01	8.20E+01
NO2	120	9.29E+01	4.89E+01	6.81E+01	5.08E+01	3.63E+01	9.00E+01	8.38E+01	1.97E+01	1.79E+01	1.64E+01	1.97E+01	1.86E+01	7.58E+01	8.84E+01	8.20E+01
<b>Metals</b>																
Aluminum	12	2.66E+00	8.13E-01	1.45E+00	1.47E+00	1.49E+00	1.73E+00	3.53E+00	2.46E-01	2.94E-01	2.60E-01	2.46E-01	2.71E-01	1.98E+00	1.11E+00	1.06E+00
Antimony	1	1.50E-04	4.59E-05	8.21E-05	8.28E-05	8.45E-05	9.76E-05	1.99E-04	1.39E-05	1.66E-05	1.47E-05	1.39E-05	1.53E-05	1.12E-04	6.27E-05	5.96E-05
Arsenic	0.015	4.26E-03	1.30E-03	2.33E-03	2.35E-03	2.40E-03	2.77E-03	5.65E-03	3.94E-04	4.71E-04	4.16E-04	3.94E-04	4.33E-04	3.17E-03	1.78E-03	1.69E-03
Barium	10	1.50E-02	4.58E-03	8.19E-03	8.27E-03	8.43E-03	9.75E-03	1.99E-02	1.39E-03	1.66E-03	1.47E-03	1.39E-03	1.53E-03	1.12E-02	6.26E-03	5.96E-03
Beryllium	0.01	2.79E-05	8.53E-06	1.53E-05	1.54E-05	1.57E-05	1.81E-05	3.71E-05	2.58E-06	3.09E-06	2.73E-06	2.58E-06	2.84E-06	2.08E-05	1.17E-05	1.11E-05
Bismuth	2.5	7.67E-06	2.34E-06	4.19E-06	4.23E-06	4.31E-06	4.99E-06	1.02E-05	7.09E-07	8.49E-07	7.49E-07	7.10E-07	7.80E-07	5.71E-06	3.20E-06	3.05E-06
Cadmium	0.025	3.00E-03	1.05E-03	1.41E-03	1.06E-03	7.79E-04	2.27E-03	1.81E-03	4.13E-04	3.82E-04	3.52E-04	4.13E-04	3.97E-04	1.64E-03	2.02E-03	1.76E-03
Calcium	NV	1.52E+00	4.63E-01	8.28E-01	8.36E-01	8.53E-01	9.85E-01	2.01E+00	1.40E-01	1.68E-01	1.48E-01	1.40E-01	1.54E-01	1.13E+00	6.33E-01	6.02E-01
Chromium	0.1	6.88E-03	2.12E-03	3.72E-03	3.69E-03	3.72E-03	4.52E-03	8.77E-03	6.58E-04	7.69E-04	6.82E-04	6.59E-04	7.15E-04	5.02E-03	3.00E-03	2.83E-03
Cobalt	0.1	1.03E-03	3.14E-04	5.61E-04	5.67E-04	5.78E-04	6.68E-04	1.36E-03	9.50E-05	1.14E-04	1.00E-04	9.51E-05	1.04E-04	7.64E-04	4.29E-04	4.08E-04
Copper	50	2.72E-03	8.31E-04	1.49E-03	1.50E-03	1.53E-03	1.77E-03	3.61E-03	2.51E-04	3.01E-04	2.66E-04	2.52E-04	2.76E-04	2.02E-03	1.13E-03	1.08E-03
Gold	1.25	2.97E-06	9.07E-07	1.62E-06	1.64E-06	1.67E-06	1.93E-06	3.94E-06	2.74E-07	3.29E-07	2.90E-07	2.75E-07	3.02E-07	2.21E-06	1.24E-06	1.18E-06
Iron	4	2.92E+00	8.91E-01	1.59E+00	1.61E+00	1.64E+00	1.89E+00	3.87E+00	2.69E-01	3.23E-01	2.85E-01	2.70E-01	2.96E-01	2.17E+00	1.22E+00	1.16E+00
Lead	0.5	9.56E-04	3.14E-04	4.85E-04	4.28E-04	3.87E-04	6.75E-04	9.08E-04	1.11E-04	1.14E-04	1.03E-04	1.11E-04	1.13E-04	6.12E-04	5.27E-04	4.75E-04
Lithium	20	1.24E-03	3.79E-04	6.77E-04	6.84E-04	6.97E-04	8.06E-04	1.65E-03	1.15E-04	1.37E-04	1.21E-04	1.15E-04	1.26E-04	9.22E-04	5.18E-04	4.92E-04
Magnesium	NV	8.04E-01	2.46E-01	4.39E-01	4.43E-01	4.52E-01	5.23E-01	1.07E+00	7.43E-02	8.90E-02	7.86E-02	7.44E-02	8.18E-02	5.98E-01	3.36E-01	3.19E-01
Manganese	0.1	3.02E-02	9.24E-03	1.65E-02	1.67E-02	1.70E-02	1.96E-02	4.01E-02	2.79E-03	3.35E-03	2.95E-03	2.80E-03	3.07E-03	2.25E-02	1.26E-02	1.20E-02
Molybdenum	120	4.60E-05	1.41E-05	2.51E-05	2.54E-05	2.59E-05	2.99E-05	6.11E-05	4.25E-06	5.09E-06	4.50E-06	4.26E-06	4.68E-06	3.42E-05	1.92E-05	1.82E-05
Nickel	0.06	2.67E-03	8.15E-04	1.46E-03	1.47E-03	1.50E-03	1.73E-03	3.54E-03	2.46E-04	2.95E-04	2.60E-04	2.47E-04	2.71E-04	1.98E-03	1.11E-03	1.06E-03
Potassium	NV	5.09E-01	1.55E-01	2.78E-01	2.81E-01	2.86E-01	3.31E-01	6.76E-01	4.70E-02	5.63E-02	4.97E-02	4.71E-02	5.17E-02	3.78E-01	2.12E-01	2.02E-01
Selenium	10	4.59E-05	1.40E-05	2.51E-05	2.53E-05	2.58E-05	2.98E-05	6.09E-05	4.24E-06	5.08E-06	4.48E-06	4.25E-06	4.67E-06	3.41E-05	1.92E-05	1.82E-05
Silver	1	1.13E-05	3.45E-06	6.17E-06	6.23E-06	6.35E-06	7.34E-06	1.50E-05	1.04E-06	1.25E-06	1.10E-06	1.05E-06	1.15E-06	8.40E-06	4.72E-06	4.49E-06
Sodium	NV	6.08E-01	1.86E-01	3.32E-01	3.35E-01	3.42E-01	3.95E-01	8.07E-01	5.62E-02	6.73E-02	5.94E-02	5.62E-02	6.18E-02	4.52E-01	2.54E-01	2.41E-01
Strontium	120	8.12E-03	2.48E-03	4.44E-03	4.48E-03	4.57E-03	5.28E-03	1.08E-02	7.51E-04	8.99E-04	7.93E-04	7.51E-04	8.26E-04	6.04E-03	3.39E-03	3.22E-03
Thallium	0.5	1.17E-05	3.58E-06	6.41E-06	6.47E-06	6.60E-06	7.62E-06	1.56E-05	1.08E-06	1.30E-06	1.15E-06	1.09E-06	1.19E-06	8.72E-06	4.90E-06	4.66E-06
Tin	10	4.13E-05	1.26E-05	2.26E-05	2.28E-05	2.33E-05	2.69E-05	5.49E-05	3.82E-06	4.58E-06	4.04E-06	3.83E-06	4.20E-06	3.08E-05	1.73E-05	1.64E-05
Titanium	120	1.34E-01	4.09E-02	7.31E-02	7.37E-02	7.52E-02	8.69E-02	1.78E-01	1.24E-02	1.48E-02	1.31E-02	1.24E-02	1.36E-02	9.95E-02	5.58E-02	5.31E-02
Uranium	0.1	3.73E-05	1.14E-05	2.04E-05	2.06E-05	2.10E-05	2.42E-05	4.95E-05	3.45E-06	4.13E-06	3.65E-06	3.45E-06	3.79E-06	2.78E-05	1.56E-05	1.48E-05
Vanadium	0.8	4.92E-03	1.50E-03	2.69E-03	2.71E-03	2.77E-03	3.20E-03	6.53E-03	4.54E-04	5.44E-04	4.80E-04	4.55E-04	5.00E-04	3.66E-03	2.05E-03	1.95E-03
Yttrium	NV	3.63E-04	1.11E-04	1.98E-04	2.00E-04	2.04E-04	2.36E-04	4.82E-04	3.35E-05	4.02E-05	3.55E-05	3.36E-05	3.69E-05	2.70E-04	1.52E-04	1.44E-04
Zinc	120	7.33E-03	2.39E-03	3.74E-03	3.35E-03	3.06E-03	5.14E-03	7.20E-03	8.35E-04	8.69E-04	7.84E-04	8.36E-04	8.52E-04	4.76E-03	3.96E-03	3.57E-03
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	5.48E-06	1.92E-06	2.58E-06	1.93E-06	1.42E-06	4.16E-06	3.30E-06	7.56E-07	6.98E-07	6.43E-07	7.57E-07	7.25E-07	2.99E-06	3.70E-06	3.22E-06
naphthalene	22.5	2.17E-03	7.59E-04	1.02E-03	7.64E-04	5.61E-04	1.64E-03	1.31E-03	2.99E-04	2.76E-04	2.55E-04	2.99E-04	2.87E-04	1.18E-03	1.46E-03	1.27E-03
phenanthrene	NV	1.79E-04	6.27E-05	8.43E-05	6.31E-05	4.64E-05	1.36E-04	1.08E-04	2.47E-05	2.28E-05	2.10E-05	2.47E-05	2.37E-05	9.77E-05	1.21E-04	1.05E-04
anthracene	NV	2.00E-05	7.00E-06	9.41E-06	7.04E-06	5.17E-06	1.52E-05	1.20E-05	2.75E-06	2.55E-06	2.35E-06	2.76E-06	2.64E-06	1.09E-05	1.35E-05	1.17E-05
fluorene	NV	8.74E-05	3.06E-05	4.11E-05	3.08E-05	2.26E-05	6.63E-05	5.27E-05	1.20E-05	1.11E-05	1.03E-05	1.21E-05	1.16E-05	4.76E-05	5.90E-05	5.14E-05
pyrene	NV	6.55E-05	2.29E-05	3.08E-05	2.31E-05	1.69E-05	4.96E-05	3.95E-05	9.02E-06	8.34E-06	7.68E-06	9.04E-06	8.66E-06	3.57E-05	4.42E-05	3.85E-05
thiophenes	NV	1.14E-06	3.98E-07	5.35E-07	4.00E-07	2.94E-07	8.61E-07	6.84E-07	1.57E-07	1.45E-07	1.33E-07	1.57E-07	1.50E-07	6.19E-07	7.66E-07	6.67E-07
benz(a)anthracene	NV	2.60E-06	9.10E-07	1.22E-06	9.16E-07	6.73E-07	1.97E-06	1.57E-06	3.58E-07	3.31E-07	3.05E-07	3.59E-07	3.44E-07	1.42E-06	1.75E-06	1.53E-06
acenaphthene	NV	1.68E-05	5.90E-06	7.93E-06	5.94E-06	4.36E-06	1.28E-05	1.02E-05	2.32E-06	2.15E-06	1.98E-06	2.32E-06	2.23E-06	9.18E-06	1.14E-05	9.90E-06
acenaphthylene	NV	6.12E-05	2.14E-05	2.88E-05	2.16E-05	1.58E-05	4.64E-05	3.69E-05	8.43E-06	7.79E-06	7.18E-06	8.44E-06	8.10E-06	3.33E-05	4.13E-05	3.59E-05
fluoranthene	NV	6.51E-05	2.28E-05	3.06E-05	2.29E-05	1.69E-05	4.93E-05	3.92E-05	8.97E-06	8.29E-06	7.64E-06	8.99E-06	8.62E-06	3.55E-05	4.39E-05	3.82E-05
benzo(b)fluoranthene	NV	1.21E-05	4.23E-06	5.69E-06	4.26E-06	3.13E-06	9.16E-06	7.28E-06	1.67E-06	1.54E-06	1.42E-06	1.67E-06	1.60E-06	6.59E-06	8.1	

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	2.81E-02	9.92E-03	1.38E-02	1.03E-02	7.27E-03	2.24E-02	1.70E-02	3.89E-03	3.61E-03	3.31E-03	3.89E-03	3.77E-03	1.53E-02	1.92E-02	1.67E-02
acetaldehyde	300	3.79E+00	1.34E+00	1.86E+00	1.38E+00	9.80E-01	3.02E+00	2.29E+00	5.24E-01	4.86E-01	4.47E-01	5.25E-01	5.08E-01	2.06E+00	2.59E+00	2.25E+00
acetone	11880	2.00E+00	7.04E-01	9.79E-01	7.28E-01	5.16E-01	1.59E+00	1.20E+00	2.76E-01	2.56E-01	2.35E-01	2.76E-01	2.67E-01	1.09E+00	1.36E+00	1.18E+00
acrolein	0.09	<b>6.71E-01</b>	<b>2.37E-01</b>	<b>3.29E-01</b>	<b>2.45E-01</b>	<b>1.73E-01</b>	<b>5.35E-01</b>	<b>4.05E-01</b>	<b>9.28E-02</b>	8.61E-02	7.91E-02	<b>9.29E-02</b>	9.00E-02	<b>3.65E-01</b>	<b>4.59E-01</b>	<b>3.98E-01</b>
aldehyde	NV	5.07E+00	1.79E+00	2.49E+00	1.85E+00	1.31E+00	4.04E+00	3.06E+00	7.01E-01	6.50E-01	5.98E-01	7.02E-01	6.80E-01	2.76E+00	3.47E+00	3.01E+00
benzene	23	2.49E-01	8.77E-02	1.22E-01	9.06E-02	6.42E-02	1.98E-01	1.50E-01	3.44E-02	3.19E-02	2.93E-02	3.44E-02	3.33E-02	1.35E-01	1.70E-01	1.48E-01
C10-C12 aliphatic	NV	5.46E-02	1.93E-02	2.68E-02	1.99E-02	1.41E-02	4.35E-02	3.29E-02	7.55E-03	7.00E-03	6.43E-03	7.56E-03	7.32E-03	2.97E-02	3.73E-02	3.24E-02
C12-C16 aliphatic	NV	3.16E-01	1.12E-01	1.55E-01	1.15E-01	8.17E-02	2.52E-01	1.91E-01	4.37E-02	4.05E-02	3.73E-02	4.38E-02	4.24E-02	1.72E-01	2.16E-01	1.88E-01
C12-C16 aromatic	NV	4.26E-03	1.50E-03	2.09E-03	1.55E-03	1.10E-03	3.40E-03	2.57E-03	5.89E-04	5.47E-04	5.02E-04	5.90E-04	5.71E-04	2.32E-03	2.91E-03	2.53E-03
C16-C21 aliphatic	NV	3.17E-01	1.12E-01	1.55E-01	1.15E-01	8.18E-02	2.52E-01	1.91E-01	4.38E-02	4.06E-02	3.73E-02	4.38E-02	4.24E-02	1.72E-01	2.16E-01	1.88E-01
C2-C6 aliphatic	920	1.51E+00	5.32E-01	7.39E-01	5.49E-01	3.89E-01	1.20E+00	9.08E-01	2.08E-01	1.93E-01	1.78E-01	2.09E-01	2.02E-01	8.20E-01	1.03E+00	8.94E-01
C6-C8 aliphatic	6100	1.03E+00	3.64E-01	5.05E-01	3.76E-01	2.66E-01	8.21E-01	6.21E-01	1.42E-01	1.32E-01	1.21E-01	1.43E-01	1.38E-01	5.61E-01	7.04E-01	6.12E-01
C8-C10 aliphatic	60000	1.45E-02	5.12E-03	7.12E-03	5.29E-03	3.75E-03	1.16E-02	8.75E-03	2.01E-03	1.86E-03	1.71E-03	2.01E-03	1.95E-03	7.90E-03	9.92E-03	8.61E-03
C8-C10 aromatic	400	8.16E-02	2.88E-02	4.00E-02	2.97E-02	2.11E-02	6.50E-02	4.92E-02	1.13E-02	1.05E-02	9.62E-03	1.13E-02	1.09E-02	4.44E-02	5.58E-02	4.84E-02
ethylbenzene	1000	4.26E-02	1.50E-02	2.09E-02	1.55E-02	1.10E-02	3.40E-02	2.57E-02	5.89E-03	5.47E-03	5.02E-03	5.90E-03	5.71E-03	2.32E-02	2.91E-02	2.53E-02
ethylene	40	7.77E-01	2.74E-01	3.81E-01	2.83E-01	2.01E-01	6.19E-01	4.68E-01	1.07E-01	9.96E-02	9.15E-02	1.07E-01	1.04E-01	4.23E-01	5.31E-01	4.61E-01
formaldehyde	9	2.02E+00	7.14E-01	9.92E-01	7.37E-01	5.23E-01	1.61E+00	1.22E+00	2.80E-01	2.59E-01	2.38E-01	2.80E-01	2.71E-01	1.10E+00	1.38E+00	1.20E+00
ketone	1000	1.14E+00	4.03E-01	5.60E-01	4.17E-01	2.95E-01	9.11E-01	6.89E-01	1.58E-01	1.47E-01	1.35E-01	1.58E-01	1.53E-01	6.22E-01	7.81E-01	6.78E-01
toluene	2000	3.61E-01	1.27E-01	1.77E-01	1.32E-01	9.33E-02	2.88E-01	2.18E-01	4.99E-02	4.63E-02	4.25E-02	5.00E-02	4.84E-02	1.96E-01	2.47E-01	2.14E-01
trimethylbenzene	220	1.03E-01	3.65E-02	5.07E-02	3.77E-02	2.67E-02	8.24E-02	6.23E-02	1.43E-02	1.33E-02	1.22E-02	1.43E-02	1.39E-02	5.63E-02	7.07E-02	6.14E-02
xylenes	730	2.87E-01	1.01E-01	1.41E-01	1.04E-01	7.41E-02	2.28E-01	1.73E-01	3.96E-02	3.68E-02	3.38E-02	3.97E-02	3.84E-02	1.56E-01	1.96E-01	1.70E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>  
 Carbon monoxide results are based on 8-hour averaging times.  
 Cabins = Receptor Locations 1 to 22  
 Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations										Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2				Rankin 3
<b>Criteria Pollutants</b>															
SPM	120	4.70E+00	3.17E+00	2.95E+00	2.77E+00	4.07E+00	5.07E+00	2.41E+01	7.11E+00	3.70E+00	4.33E+00	4.07E+00	5.09E+01	No	No
DPM	NV	9.01E-01	6.89E-01	6.30E-01	5.51E-01	7.79E-01	8.61E-01	3.91E+00	1.39E+00	6.49E-01	7.55E-01	7.21E-01	4.98E+00	No	No
PM10	25	2.97E+00	2.07E+00	1.91E+00	1.74E+00	2.55E+00	3.06E+00	1.50E+01	4.08E+00	2.17E+00	2.60E+00	2.45E+00	2.33E+01	No	No
PM2.5	27	1.75E+00	1.28E+00	1.17E+00	1.02E+00	1.48E+00	1.68E+00	9.04E+00	2.45E+00	1.20E+00	1.43E+00	1.36E+00	9.80E+00	No	No
SO2	20	6.72E-02	4.90E-02	4.42E-02	3.80E-02	5.60E-02	6.28E-02	3.72E-01	9.12E-02	4.51E-02	5.36E-02	5.11E-02	4.85E-01	No	No
CO	6000	2.02E+01	1.47E+01	1.33E+01	1.11E+01	1.56E+01	1.63E+01	1.20E+02	4.27E+01	2.51E+01	2.60E+01	2.59E+01	1.60E+02	No	No
NOX	9000	2.53E+01	1.94E+01	1.77E+01	1.55E+01	2.19E+01	2.42E+01	1.10E+02	3.88E+01	1.82E+01	2.11E+01	2.02E+01	1.39E+02	No	No
NO2	120	2.53E+01	1.94E+01	1.77E+01	1.55E+01	2.19E+01	2.42E+01	8.99E+01	3.88E+01	1.82E+01	2.11E+01	2.02E+01	9.29E+01	No	No
<b>Metals</b>															
Aluminum	12	3.26E-01	2.20E-01	2.05E-01	1.92E-01	2.83E-01	3.52E-01	1.67E+00	4.93E-01	2.57E-01	3.00E-01	2.82E-01	3.53E+00	No	No
Antimony	1	1.84E-05	1.24E-05	1.15E-05	1.08E-05	1.59E-05	1.99E-05	9.43E-05	2.78E-05	1.45E-05	1.69E-05	1.59E-05	1.99E-04	No	No
Arsenic	0.015	5.22E-04	3.52E-04	3.27E-04	3.07E-04	4.52E-04	5.63E-04	2.67E-03	7.89E-04	4.11E-04	4.81E-04	4.52E-04	5.65E-03	No	No
Barium	10	1.84E-03	1.24E-03	1.15E-03	1.08E-03	1.59E-03	1.98E-03	9.41E-03	2.78E-03	1.45E-03	1.69E-03	1.59E-03	1.99E-02	No	No
Beryllium	0.01	3.42E-06	2.31E-06	2.14E-06	2.01E-06	2.96E-06	3.69E-06	1.75E-05	5.17E-06	2.69E-06	3.15E-06	2.96E-06	3.71E-05	No	No
Bismuth	2.5	9.40E-07	6.35E-07	5.89E-07	5.53E-07	8.14E-07	1.01E-06	4.82E-06	1.42E-06	7.40E-07	8.66E-07	8.14E-07	1.02E-05	No	No
Cadmium	0.025	5.42E-04	4.14E-04	3.79E-04	3.31E-04	4.69E-04	5.18E-04	2.35E-03	8.33E-04	3.90E-04	4.54E-04	4.34E-04	3.00E-03	No	No
Calcium	NV	1.86E-01	1.25E-01	1.16E-01	1.09E-01	1.61E-01	2.00E-01	9.52E-01	2.81E-01	1.46E-01	1.71E-01	1.61E-01	2.01E+00	No	No
Chromium	0.1	8.72E-04	5.97E-04	5.53E-04	5.15E-04	7.55E-04	9.29E-04	4.40E-03	1.32E-03	6.80E-04	7.95E-04	7.49E-04	8.77E-03	No	No
Cobalt	0.1	1.26E-04	8.50E-05	7.90E-05	7.41E-05	1.09E-04	1.36E-04	6.45E-04	1.90E-04	9.92E-05	1.16E-04	1.09E-04	1.36E-03	No	No
Copper	50	3.33E-04	2.25E-04	2.09E-04	1.96E-04	2.89E-04	3.59E-04	1.71E-03	5.04E-04	2.62E-04	3.07E-04	2.89E-04	3.61E-03	No	No
Gold	1.25	3.64E-07	2.46E-07	2.28E-07	2.14E-07	3.15E-07	3.93E-07	1.86E-06	5.50E-07	2.87E-07	3.35E-07	3.15E-07	3.94E-06	No	No
Iron	4	3.57E-01	2.41E-01	2.24E-01	2.10E-01	3.09E-01	3.85E-01	1.83E+00	5.40E-01	2.81E-01	3.29E-01	3.09E-01	3.87E+00	No	No
Lead	0.5	1.46E-04	1.07E-04	9.82E-05	8.81E-05	1.27E-04	1.47E-04	6.79E-04	2.23E-04	1.09E-04	1.27E-04	1.21E-04	9.56E-04	No	No
Lithium	20	1.52E-04	1.03E-04	9.53E-05	8.95E-05	1.32E-04	1.64E-04	7.78E-04	2.30E-04	1.20E-04	1.40E-04	1.32E-04	1.65E-03	No	No
Magnesium	NV	9.85E-02	6.65E-02	6.18E-02	5.80E-02	8.54E-02	1.06E-01	5.05E-01	1.49E-01	7.76E-02	9.07E-02	8.54E-02	1.07E+00	No	No
Manganese	0.1	3.70E-03	2.50E-03	2.32E-03	2.18E-03	3.21E-03	4.00E-03	1.90E-02	5.60E-03	2.92E-03	3.41E-03	3.21E-03	4.01E-02	No	No
Molybdenum	120	5.64E-06	3.81E-06	3.54E-06	3.32E-06	4.89E-06	6.08E-06	2.89E-05	8.53E-06	4.44E-06	5.19E-06	4.88E-06	6.11E-05	No	No
Nickel	0.06	3.27E-04	2.21E-04	2.05E-04	1.92E-04	2.83E-04	3.52E-04	1.67E-03	4.94E-04	2.57E-04	3.01E-04	2.83E-04	3.54E-03	No	No
Potassium	NV	6.23E-02	4.21E-02	3.91E-02	3.67E-02	5.40E-02	6.73E-02	3.19E-01	9.43E-02	4.91E-02	5.74E-02	5.40E-02	6.76E-01	No	No
Selenium	10	5.62E-06	3.80E-06	3.53E-06	3.31E-06	4.87E-06	6.07E-06	2.88E-05	8.51E-06	4.43E-06	5.18E-06	4.87E-06	6.09E-05	No	No
Silver	1	1.38E-06	9.35E-07	8.68E-07	8.15E-07	1.20E-06	1.49E-06	7.09E-06	2.09E-06	1.09E-06	1.27E-06	1.20E-06	1.50E-05	No	No
Sodium	NV	7.45E-02	5.03E-02	4.67E-02	4.38E-02	6.45E-02	8.03E-02	3.81E-01	1.13E-01	5.86E-02	6.86E-02	6.45E-02	8.07E-01	No	No
Strontium	120	9.95E-04	6.72E-04	6.24E-04	5.86E-04	8.62E-04	1.07E-03	5.10E-03	1.51E-03	7.84E-04	9.16E-04	8.62E-04	1.08E-02	No	No
Thallium	0.5	1.44E-06	9.70E-07	9.01E-07	8.46E-07	1.25E-06	1.55E-06	7.36E-06	2.17E-06	1.13E-06	1.32E-06	1.24E-06	1.56E-05	No	No
Tin	10	5.07E-06	3.42E-06	3.18E-06	2.98E-06	4.39E-06	5.47E-06	2.60E-05	7.66E-06	3.99E-06	4.67E-06	4.39E-06	5.49E-05	No	No
Titanium	120	1.64E-02	1.11E-02	1.03E-02	9.65E-03	1.42E-02	1.77E-02	8.39E-02	2.48E-02	1.29E-02	1.51E-02	1.42E-02	1.78E-01	No	No
Uranium	0.1	4.57E-06	3.09E-06	2.87E-06	2.69E-06	3.96E-06	4.93E-06	2.34E-05	6.91E-06	3.60E-06	4.21E-06	3.96E-06	4.95E-05	No	No
Vanadium	0.8	6.02E-04	4.07E-04	3.78E-04	3.55E-04	5.22E-04	6.50E-04	3.09E-03	9.11E-04	4.74E-04	5.55E-04	5.22E-04	6.53E-03	No	No
Yttrium	NV	4.45E-05	3.00E-05	2.79E-05	2.62E-05	3.85E-05	4.80E-05	2.28E-04	6.73E-05	3.50E-05	4.10E-05	3.85E-05	4.82E-04	No	No
Zinc	120	1.10E-03	8.00E-04	7.36E-04	6.62E-04	9.53E-04	1.11E-03	5.15E-03	1.68E-03	8.25E-04	9.62E-04	9.12E-04	7.33E-03	No	No
<b>Polycyclic Aromatic Hydrocarbons</b>															
benzo(a)pyrene	0.00005	9.91E-07	7.58E-07	6.94E-07	6.06E-07	8.57E-07	9.47E-07	4.31E-06	1.52E-06	7.14E-07	8.31E-07	7.93E-07	5.48E-06	No	No
naphthalene	22.5	3.92E-04	3.00E-04	2.75E-04	2.40E-04	3.39E-04	3.75E-04	1.70E-03	6.03E-04	2.83E-04	3.29E-04	3.14E-04	2.17E-03	No	No
phenanthrene	NV	3.24E-05	2.48E-05	2.27E-05	1.98E-05	2.80E-05	3.10E-05	1.41E-04	4.98E-05	2.33E-05	2.72E-05	2.59E-05	1.79E-04	No	No
anthracene	NV	3.61E-06	2.77E-06	2.53E-06	2.21E-06	3.13E-06	3.45E-06	1.57E-05	5.56E-06	2.60E-06	3.03E-06	2.89E-06	2.00E-05	No	No
fluorene	NV	1.58E-05	1.21E-05	1.11E-05	9.66E-06	1.37E-05	1.51E-05	6.87E-05	2.43E-05	1.14E-05	1.33E-05	1.27E-05	8.74E-05	No	No
pyrene	NV	1.18E-05	9.06E-06	8.29E-06	7.24E-06	1.02E-05	1.13E-05	5.14E-05	1.82E-05	8.53E-06	9.93E-06	9.48E-06	6.55E-05	No	No
thiophenes	NV	2.05E-07	1.57E-07	1.44E-07	1.26E-07	1.78E-07	1.96E-07	8.92E-07	3.16E-07	1.48E-07	1.72E-07	1.64E-07	1.14E-06	No	No
benz(a)anthracene	NV	4.70E-07	3.60E-07	3.29E-07	2.88E-07	4.07E-07	4.49E-07	2.04E-06	7.23E-07	3.39E-07	3.94E-07	3.76E-07	2.60E-06	No	No
acenaphthene	NV	3.05E-06	2.33E-06	2.13E-06	1.86E-06	2.63E-06	2.91E-06	1.32E-05	4.68E-06	2.19E-06	2.55E-06	2.44E-06	1.68E-05	No	No
acenaphthylene	NV	1.11E-05	8.47E-06	7.74E-06	6.76E-06	9.57E-06	1.06E-05	4.81E-05	1.70E-05	7.97E-06	9.28E-06	8.86E-06	6.12E-05	No	No
fluoranthene	NV	1.18E-05	9.01E-06	8.24E-06	7.20E-06	1.02E-05	1.12E-05	5.11E-05	1.81E-05	8.48E-06	9.87E-06	9.42E-06	6.51E-05	No	No
benzo(b)fluoranthene	NV	2.19E-06	1.67E-06	1.53E-06	1.34E-06	1.89E-06	2.09E-06	9.50E-06	3.36E-06	1.57E-06	1.83E-06	1.75E-06	1.21E-05	No	No
benzo(g,h,i)perylene	NV	4.15E-08	3.18E-08	2.91E-08	2.54E-08	3.59E-08	3.97E-08	1.80E-07	6.39E-08	2.99E-08	3.48E-08	3.32E-08	2.30E-07	No	No
benzo(k)fluoranthene	NV	2.49E-07	1.90E-07	1.74E-07	1.52E-07	2.15E-07	2.37E-07	1.08E-06	3.82E-07	1.79E-07	2.08E-07	1.99E-07	1.37E-06	No	No
chrysene	NV	5.29E-07	4.05E-07	3.70E-07	3.23E-07	4.57E-07	5.05E-07	2.30E-06	8.13E-07	3.81E-07	4.43E-07	4.23E-07	2.92E-06	No	No
dibenzo(a,h)anthracene	NV	6.88E-07	5.26E-07	4.81E-07	4.21E-07	5.95E-07	6.57E-07	2.99E-06	1.06E-06	4.96E-07	5.77E-07	5.51E-07	3.81E-06	No	No
indeno(1,2,3-cd)pyrene	NV	4.37E-07	3.35E-07	3.06E-07	2.67E-07	3.78E-07	4.18E-07	1.90E-06	6.73E-07	3.15E-07	3.67E-07	3.50E-07	2.42E-06	No	No

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	5.16E-03	3.94E-03	3.60E-03	3.12E-03	4.44E-03	4.90E-03	2.23E-02	7.78E-03	3.66E-03	4.23E-03	4.05E-03	2.81E-02	No	No	
acetaldehyde	300	6.96E-01	5.31E-01	4.85E-01	4.20E-01	5.99E-01	6.61E-01	3.00E+00	1.05E+00	4.93E-01	5.71E-01	5.46E-01	3.79E+00	No	No	
acetone	11880	3.66E-01	2.80E-01	2.55E-01	2.21E-01	3.15E-01	3.48E-01	1.58E+00	5.52E-01	2.59E-01	3.00E-01	2.87E-01	2.00E+00	No	No	
acrolein	0.09	<b>1.23E-01</b>	<b>9.41E-02</b>	8.59E-02	7.44E-02	<b>1.06E-01</b>	<b>1.17E-01</b>	<b>5.32E-01</b>	<b>1.86E-01</b>	8.73E-02	<b>1.01E-01</b>	<b>9.67E-02</b>	<b>6.71E-01</b>	Yes	Yes	
aldehyde	NV	9.31E-01	7.11E-01	6.49E-01	5.62E-01	8.01E-01	8.84E-01	4.02E+00	1.40E+00	6.59E-01	7.63E-01	7.31E-01	5.07E+00	No	No	
benzene	23	4.56E-02	3.48E-02	3.18E-02	2.76E-02	3.92E-02	4.33E-02	1.97E-01	6.87E-02	3.23E-02	3.74E-02	3.58E-02	2.49E-01	No	No	
C10-C12 aliphatic	NV	1.00E-02	7.65E-03	6.98E-03	6.05E-03	8.62E-03	9.52E-03	4.32E-02	1.51E-02	7.10E-03	8.22E-03	7.86E-03	5.46E-02	No	No	
C12-C16 aliphatic	NV	5.80E-02	4.43E-02	4.04E-02	3.51E-02	4.99E-02	5.51E-02	2.50E-01	8.74E-02	4.11E-02	4.76E-02	4.55E-02	3.16E-01	No	No	
C12-C16 aromatic	NV	7.83E-04	5.97E-04	5.45E-04	4.73E-04	6.73E-04	7.43E-04	3.38E-03	1.18E-03	5.54E-04	6.42E-04	6.14E-04	4.26E-03	No	No	
C16-C21 aliphatic	NV	5.81E-02	4.44E-02	4.05E-02	3.51E-02	5.00E-02	5.52E-02	2.51E-01	8.75E-02	4.11E-02	4.77E-02	4.56E-02	3.17E-01	No	No	
C2-C6 aliphatic	920	2.77E-01	2.11E-01	1.93E-01	1.67E-01	2.38E-01	2.63E-01	1.19E+00	4.17E-01	1.96E-01	2.27E-01	2.17E-01	1.51E+00	No	No	
C6-C8 aliphatic	6100	1.89E-01	1.44E-01	1.32E-01	1.14E-01	1.63E-01	1.80E-01	8.16E-01	2.85E-01	1.34E-01	1.55E-01	1.48E-01	1.03E+00	No	No	
C8-C10 aliphatic	60000	2.66E-03	2.03E-03	1.86E-03	1.61E-03	2.29E-03	2.53E-03	1.15E-02	4.01E-03	1.89E-03	2.18E-03	2.09E-03	1.45E-02	No	No	
C8-C10 aromatic	400	1.50E-02	1.14E-02	1.04E-02	9.05E-03	1.29E-02	1.42E-02	6.46E-02	2.26E-02	1.06E-02	1.23E-02	1.18E-02	8.16E-02	No	No	
ethylbenzene	1000	7.83E-03	5.97E-03	5.45E-03	4.73E-03	6.73E-03	7.43E-03	3.38E-02	1.18E-02	5.54E-03	6.42E-03	6.14E-03	4.26E-02	No	No	
ethylene	40	1.43E-01	1.09E-01	9.93E-02	8.61E-02	1.23E-01	1.35E-01	6.15E-01	2.15E-01	1.01E-01	1.17E-01	1.12E-01	7.77E-01	No	No	
formaldehyde	9	3.71E-01	2.83E-01	2.59E-01	2.24E-01	3.19E-01	3.53E-01	1.60E+00	5.59E-01	2.63E-01	3.05E-01	2.91E-01	2.02E+00	No	No	
ketone	1000	2.10E-01	1.60E-01	1.46E-01	1.27E-01	1.80E-01	1.99E-01	9.05E-01	3.16E-01	1.49E-01	1.72E-01	1.65E-01	1.14E+00	No	No	
toluene	2000	6.63E-02	5.06E-02	4.62E-02	4.00E-02	5.70E-02	6.29E-02	2.86E-01	9.98E-02	4.69E-02	5.43E-02	5.20E-02	3.61E-01	No	No	
trimethylbenzene	220	1.90E-02	1.45E-02	1.32E-02	1.15E-02	1.63E-02	1.80E-02	8.19E-02	2.86E-02	1.34E-02	1.56E-02	1.49E-02	1.03E-01	No	No	
xylenes	730	5.26E-02	4.02E-02	3.67E-02	3.18E-02	4.53E-02	5.00E-02	2.27E-01	7.93E-02	3.73E-02	4.32E-02	4.13E-02	2.87E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	120	3.89E+01	1.21E+01	1.88E+01	1.91E+01	1.98E+01	2.04E+01	2.47E+01	3.97E+00	5.06E+00	4.11E+00	3.97E+00	4.98E+00	3.68E+01	2.56E+01	2.84E+01
DPM	NV	4.53E+00	1.54E+00	2.19E+00	1.47E+00	1.19E+00	2.36E+00	2.13E+00	6.60E-01	6.14E-01	5.36E-01	6.61E-01	6.32E-01	2.13E+00	3.41E+00	3.35E+00
PM10	25	2.09E+01	6.67E+00	9.36E+00	9.53E+00	9.98E+00	1.04E+01	1.15E+01	2.41E+00	2.88E+00	2.40E+00	2.41E+00	2.86E+00	1.77E+01	1.34E+01	1.55E+01
PM2.5	27	1.04E+01	3.56E+00	4.96E+00	3.73E+00	2.55E+00	5.47E+00	4.25E+00	1.31E+00	1.24E+00	1.13E+00	1.31E+00	1.24E+00	4.48E+00	7.12E+00	7.03E+00
SO2	20	4.89E-01	1.39E-01	2.14E-01	1.63E-01	1.12E-01	2.22E-01	1.54E-01	4.94E-02	4.85E-02	4.01E-02	4.94E-02	4.37E-02	1.37E-01	2.78E-01	2.45E-01
CO	6000	1.49E+02	5.45E+01	4.67E+01	4.64E+01	5.53E+01	7.01E+01	7.50E+01	1.64E+01	1.68E+01	1.28E+01	1.64E+01	1.69E+01	8.19E+01	9.24E+01	7.24E+01
NOX	9000	1.27E+02	4.32E+01	6.36E+01	4.26E+01	3.31E+01	6.88E+01	5.94E+01	1.89E+01	1.71E+01	1.50E+01	1.89E+01	1.78E+01	6.01E+01	9.54E+01	9.35E+01
NO2	120	9.16E+01	4.32E+01	6.36E+01	4.26E+01	3.31E+01	6.88E+01	5.94E+01	1.89E+01	1.71E+01	1.50E+01	1.89E+01	1.78E+01	6.01E+01	8.85E+01	8.83E+01
<b>Metals</b>																
Aluminum	12	2.70E+00	8.36E-01	1.30E+00	1.32E+00	1.37E+00	1.41E+00	1.71E+00	2.75E-01	3.51E-01	2.85E-01	2.75E-01	3.45E-01	2.55E+00	1.78E+00	1.97E+00
Antimony	1	1.52E-04	4.72E-05	7.37E-05	7.46E-05	7.75E-05	7.98E-05	9.66E-05	1.55E-05	1.98E-05	1.61E-05	1.55E-05	1.95E-05	1.44E-04	1.00E-04	1.11E-04
Arsenic	0.015	4.32E-03	1.34E-03	2.09E-03	2.12E-03	2.20E-03	2.26E-03	2.74E-03	4.40E-04	5.62E-04	4.56E-04	4.41E-04	5.53E-04	4.09E-03	2.85E-03	3.15E-03
Barium	10	1.52E-02	4.72E-03	7.36E-03	7.45E-03	7.74E-03	7.97E-03	9.64E-03	1.55E-03	1.98E-03	1.61E-03	1.55E-03	1.95E-03	1.44E-02	1.00E-02	1.11E-02
Beryllium	0.01	2.83E-05	8.78E-06	1.37E-05	1.39E-05	1.44E-05	1.48E-05	1.79E-05	2.89E-06	3.68E-06	2.99E-06	2.89E-06	3.62E-06	2.68E-05	1.87E-05	2.06E-05
Bismuth	2.5	7.78E-06	2.41E-06	3.76E-06	3.81E-06	3.96E-06	4.08E-06	4.93E-06	7.93E-07	1.01E-06	8.22E-07	7.94E-07	9.96E-07	7.36E-06	5.13E-06	5.67E-06
Cadmium	0.025	2.73E-03	9.29E-04	1.32E-03	8.90E-04	7.20E-04	1.42E-03	1.28E-03	3.97E-04	3.70E-04	3.22E-04	3.98E-04	3.80E-04	1.29E-03	2.06E-03	2.02E-03
Calcium	NV	1.54E+00	4.77E-01	7.44E-01	7.53E-01	7.83E-01	8.05E-01	9.75E-01	1.57E-01	2.00E-01	1.62E-01	1.57E-01	1.97E-01	1.45E+00	1.01E+00	1.12E+00
Chromium	0.1	6.93E-03	2.16E-03	3.35E-03	3.32E-03	3.41E-03	3.62E-03	4.31E-03	7.26E-04	9.03E-04	7.37E-04	7.27E-04	8.91E-04	6.34E-03	4.61E-03	5.05E-03
Cobalt	0.1	1.04E-03	3.23E-04	5.04E-04	5.11E-04	5.31E-04	5.46E-04	6.61E-04	1.06E-04	1.36E-04	1.10E-04	1.06E-04	1.33E-04	9.86E-04	6.87E-04	7.60E-04
Copper	50	2.76E-03	8.55E-04	1.33E-03	1.35E-03	1.40E-03	1.44E-03	1.75E-03	2.81E-04	3.59E-04	2.91E-04	2.81E-04	3.53E-04	2.61E-03	1.82E-03	2.01E-03
Gold	1.25	3.01E-06	9.34E-07	1.46E-06	1.48E-06	1.53E-06	1.58E-06	1.91E-06	3.07E-07	3.92E-07	3.18E-07	3.07E-07	3.86E-07	2.85E-06	1.99E-06	2.20E-06
Iron	4	2.96E+00	9.17E-01	1.43E+00	1.45E+00	1.51E+00	1.55E+00	1.87E+00	3.01E-01	3.85E-01	3.12E-01	3.02E-01	3.79E-01	2.80E+00	1.95E+00	2.15E+00
Lead	0.5	9.18E-04	2.98E-04	4.44E-04	3.75E-04	3.56E-04	4.79E-04	5.07E-04	1.13E-04	1.22E-04	1.03E-04	1.14E-04	1.23E-04	6.53E-04	6.48E-04	6.74E-04
Lithium	20	1.26E-03	3.90E-04	6.08E-04	6.16E-04	6.40E-04	6.59E-04	7.97E-04	1.28E-04	1.64E-04	1.33E-04	1.28E-04	1.61E-04	1.19E-03	8.29E-04	9.17E-04
Magnesium	NV	8.16E-01	2.53E-01	3.95E-01	4.00E-01	4.15E-01	4.27E-01	5.17E-01	8.32E-02	1.06E-01	8.62E-02	8.33E-02	1.04E-01	7.72E-01	5.38E-01	5.94E-01
Manganese	0.1	3.07E-02	9.51E-03	1.48E-02	1.50E-02	1.56E-02	1.61E-02	1.94E-02	3.13E-03	3.99E-03	3.24E-03	3.13E-03	3.92E-03	2.90E-02	2.02E-02	2.23E-02
Molybdenum	120	4.67E-05	1.45E-05	2.26E-05	2.29E-05	2.38E-05	2.44E-05	2.96E-05	4.76E-06	6.07E-06	4.93E-06	4.76E-06	5.98E-06	4.42E-05	3.08E-05	3.40E-05
Nickel	0.06	2.71E-03	8.39E-04	1.31E-03	1.32E-03	1.38E-03	1.42E-03	1.71E-03	2.76E-04	3.52E-04	2.86E-04	2.76E-04	3.46E-04	2.56E-03	1.78E-03	1.97E-03
Potassium	NV	5.16E-01	1.60E-01	2.50E-01	2.53E-01	2.63E-01	2.70E-01	3.27E-01	5.26E-02	6.72E-02	5.45E-02	5.27E-02	6.61E-02	4.88E-01	3.40E-01	3.76E-01
Selenium	10	4.66E-05	1.44E-05	2.25E-05	2.28E-05	2.37E-05	2.44E-05	2.95E-05	4.75E-06	6.06E-06	4.92E-06	4.75E-06	5.96E-06	4.41E-05	3.07E-05	3.39E-05
Silver	1	1.15E-05	3.55E-06	5.54E-06	5.61E-06	5.83E-06	6.00E-06	7.26E-06	1.17E-06	1.49E-06	1.21E-06	1.17E-06	1.47E-06	1.08E-05	7.55E-06	8.35E-06
Sodium	NV	6.17E-01	1.91E-01	2.98E-01	3.02E-01	3.14E-01	3.23E-01	3.91E-01	6.28E-02	8.02E-02	6.51E-02	6.29E-02	7.89E-02	5.83E-01	4.06E-01	4.49E-01
Strontium	120	8.24E-03	2.55E-03	3.98E-03	4.04E-03	4.19E-03	4.31E-03	5.22E-03	8.40E-04	1.07E-03	8.70E-04	8.41E-04	1.05E-03	7.79E-03	5.43E-03	6.00E-03
Thallium	0.5	1.19E-05	3.69E-06	5.75E-06	5.83E-06	6.05E-06	6.23E-06	7.54E-06	1.21E-06	1.55E-06	1.26E-06	1.21E-06	1.52E-06	1.13E-05	7.84E-06	8.67E-06
Tin	10	4.20E-05	1.30E-05	2.03E-05	2.05E-05	2.13E-05	2.20E-05	2.66E-05	4.28E-06	5.46E-06	4.43E-06	4.28E-06	5.37E-06	3.97E-05	2.76E-05	3.06E-05
Titanium	120	1.36E-01	4.21E-02	6.56E-02	6.64E-02	6.90E-02	7.10E-02	8.60E-02	1.38E-02	1.76E-02	1.43E-02	1.38E-02	1.74E-02	1.28E-01	8.94E-02	9.88E-02
Uranium	0.1	3.79E-05	1.17E-05	1.83E-05	1.85E-05	1.93E-05	1.98E-05	2.40E-05	3.86E-06	4.92E-06	4.00E-06	3.86E-06	4.84E-06	3.58E-05	2.49E-05	2.76E-05
Vanadium	0.8	4.99E-03	1.55E-03	2.41E-03	2.44E-03	2.54E-03	2.61E-03	3.16E-03	5.08E-04	6.49E-04	5.27E-04	5.09E-04	6.38E-04	4.72E-03	3.29E-03	3.63E-03
Yttrium	NV	3.68E-04	1.14E-04	1.78E-04	1.80E-04	1.87E-04	1.93E-04	2.33E-04	3.75E-05	4.79E-05	3.89E-05	3.76E-05	4.71E-05	3.48E-04	2.43E-04	2.68E-04
Zinc	120	7.07E-03	2.29E-03	3.42E-03	2.94E-03	2.82E-03	3.69E-03	3.96E-03	8.59E-04	9.37E-04	7.86E-04	8.60E-04	9.41E-04	5.18E-03	4.96E-03	5.18E-03

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	4.98E-06	1.70E-06	2.41E-06	1.62E-06	1.31E-06	2.60E-06	2.34E-06	7.27E-07	6.76E-07	5.89E-07	7.28E-07	6.95E-07	2.35E-06	3.76E-06	3.69E-06
naphthalene	22.5	1.97E-03	6.72E-04	9.55E-04	6.42E-04	5.19E-04	1.03E-03	9.27E-04	2.87E-04	2.68E-04	2.33E-04	2.88E-04	2.75E-04	9.30E-04	1.49E-03	1.46E-03
phenanthrene	NV	1.63E-04	5.55E-05	7.89E-05	5.30E-05	4.28E-05	8.48E-05	7.66E-05	2.37E-05	2.21E-05	1.93E-05	2.38E-05	2.27E-05	7.68E-05	1.23E-04	1.21E-04
anthracene	NV	1.82E-05	6.19E-06	8.80E-06	5.91E-06	4.78E-06	9.46E-06	8.54E-06	2.65E-06	2.47E-06	2.15E-06	2.65E-06	2.54E-06	8.56E-06	1.37E-05	1.34E-05
fluorene	NV	7.95E-05	2.71E-05	3.85E-05	2.59E-05	2.09E-05	4.14E-05	3.74E-05	1.16E-05	1.08E-05	9.40E-06	1.16E-05	1.11E-05	3.75E-05	5.99E-05	5.88E-05
pyrene	NV	5.95E-05	2.03E-05	2.88E-05	1.94E-05	1.57E-05	3.10E-05	2.80E-05	8.68E-06	8.08E-06	7.04E-06	8.69E-06	8.31E-06	2.81E-05	4.49E-05	4.41E-05
thiophenes	NV	1.03E-06	3.52E-07	5.00E-07	3.36E-07	2.72E-07	5.38E-07	4.85E-07	1.51E-07	1.40E-07	1.22E-07	1.51E-07	1.44E-07	4.87E-07	7.78E-07	7.64E-07
benz(a)anthracene	NV	2.36E-06	8.06E-07	1.14E-06	7.70E-07	6.22E-07	1.23E-06	1.11E-06	3.45E-07	3.21E-07	2.80E-07	3.45E-07	3.30E-07	1.11E-06	1.78E-06	1.75E-06
acenaphthene	NV	1.53E-05	5.22E-06	7.41E-06	4.98E-06	4.03E-06	7.97E-06	7.20E-06	2.23E-06	2.08E-06	1.81E-06	2.24E-06	2.14E-06	7.22E-06	1.15E-05	1.13E-05
acenaphthylene	NV	5.56E-05	1.90E-05	2.69E-05	1.81E-05	1.46E-05	2.90E-05	2.61E-05	8.11E-06	7.55E-06	6.58E-06	8.12E-06	7.76E-06	2.62E-05	4.19E-05	4.12E-05
fluoranthene	NV	5.92E-05	2.02E-05	2.87E-05	1.93E-05	1.56E-05	3.08E-05	2.78E-05	8.63E-06	8.03E-06	7.00E-06	8.64E-06	8.26E-06	2.79E-05	4.46E-05	4.38E-05
benzo(b)fluoranthene	NV	1.10E-05	3.75E-06	5.32E-06	3.58E-06	2.89E-06	5.72E-06	5.16E-06	1.60E-06	1.49E-06	1.30E-06	1.60E-06	1.53E-06	5.18E-06	8.29E-06	8.13E-06
benzo(g,h,i)perylene	NV	2.09E-07	7.12E-08	1.01E-07	6.80E-08	5.49E-08	1.09E-07	9.81E-08	3.04E-08	2.83E-08	2.47E-08	3.05E-08	2.91E-08	9.84E-08	1.57E-07	1.55E-07
benzo(k)fluoranthene	NV	1.25E-06	4.26E-07	6.05E-07	4.07E-07	3.29E-07	6.51E-07	5.87E-07	1.82E-07	1.70E-07	1.48E-07	1.82E-07	1.74E-07	5.89E-07	9.42E-07	9.25E-07
chrysene	NV	2.66E-06	9.06E-07	1.29E-06	8.65E-07	6.99E-07	1.38E-06	1.25E-06	3.88E-07	3.61E-07	3.14E-07	3.88E-07	3.71E-07	1.25E-06	2.00E-06	1.97E-06
dibenzo(a,h)anthracene	NV	3.46E-06	1.18E-06	1.67E-06	1.13E-06	9.10E-07	1.80E-06	1.63E-06	5.04E-07	4.69E-07	4.09E-07	5.05E-07	4.83E-07	1.63E-06	2.61E-06	2.56E-06
indeno(1,2,3-cd)pyrene	NV	2.20E-06	7.50E-07	1.06E-06	7.16E-07	5.78E-07	1.15E-06	1.03E-06	3.21E-07	2.98E-07	2.60E-07	3.21E-07	3.07E-07	1.04E-06	1.66E-06	1.63E-06
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	2.56E-02	8.80E-03	1.29E-02	8.60E-03	6.80E-03	1.41E-02	1.19E-02	3.74E-03	3.34E-03	3.04E-03	3.74E-03	3.62E-03	1.24E-02	1.96E-02	1.91E-02
acetaldehyde	300	3.45E+00	1.19E+00	1.74E+00	1.16E+00	9.17E-01	1.89E+00	1.61E+00	5.04E-01	4.50E-01	4.10E-01	5.05E-01	4.88E-01	1.67E+00	2.64E+00	2.58E+00
acetone	11880	1.81E+00	6.25E-01	9.15E-01	6.11E-01	4.83E-01	9.97E-01	8.45E-01	2.65E-01	2.37E-01	2.16E-01	2.66E-01	2.57E-01	8.77E-01	1.39E+00	1.36E+00
acrolein	0.09	<b>6.10E-01</b>	<b>2.10E-01</b>	<b>3.08E-01</b>	<b>2.05E-01</b>	<b>1.62E-01</b>	<b>3.35E-01</b>	<b>2.84E-01</b>	8.92E-02	7.97E-02	7.26E-02	8.93E-02	8.64E-02	<b>2.95E-01</b>	<b>4.67E-01</b>	<b>4.57E-01</b>
aldehyde	NV	4.61E+00	1.59E+00	2.32E+00	1.55E+00	1.23E+00	2.53E+00	2.15E+00	6.74E-01	6.02E-01	5.48E-01	6.75E-01	6.53E-01	2.23E+00	3.53E+00	3.45E+00
benzene	23	2.26E-01	7.78E-02	1.14E-01	7.60E-02	6.01E-02	1.24E-01	1.05E-01	3.30E-02	2.95E-02	2.69E-02	3.31E-02	3.20E-02	1.09E-01	1.73E-01	1.69E-01
C10-C12 aliphatic	NV	4.96E-02	1.71E-02	2.50E-02	1.67E-02	1.32E-02	2.73E-02	2.31E-02	7.26E-03	6.48E-03	5.90E-03	7.27E-03	7.03E-03	2.40E-02	3.80E-02	3.71E-02
C12-C16 aliphatic	NV	2.87E-01	9.90E-02	1.45E-01	9.67E-02	7.65E-02	1.58E-01	1.34E-01	4.20E-02	3.75E-02	3.42E-02	4.21E-02	4.07E-02	1.39E-01	2.20E-01	2.15E-01
C12-C16 aromatic	NV	3.88E-03	1.33E-03	1.95E-03	1.30E-03	1.03E-03	2.13E-03	1.81E-03	5.67E-04	5.06E-04	4.61E-04	5.67E-04	5.49E-04	1.87E-03	2.97E-03	2.90E-03
C16-C21 aliphatic	NV	2.88E-01	9.91E-02	1.45E-01	9.68E-02	7.66E-02	1.58E-01	1.34E-01	4.21E-02	3.76E-02	3.42E-02	4.21E-02	4.07E-02	1.39E-01	2.20E-01	2.15E-01
C2-C6 aliphatic	920	1.37E+00	4.72E-01	6.91E-01	4.61E-01	3.64E-01	7.53E-01	6.38E-01	2.00E-01	1.79E-01	1.63E-01	2.01E-01	1.94E-01	6.62E-01	1.05E+00	1.03E+00
C6-C8 aliphatic	6100	9.37E-01	3.23E-01	4.72E-01	3.15E-01	2.49E-01	5.15E-01	4.36E-01	1.37E-01	1.22E-01	1.11E-01	1.37E-01	1.33E-01	4.53E-01	7.17E-01	7.01E-01
C8-C10 aliphatic	60000	1.32E-02	4.54E-03	6.65E-03	4.44E-03	3.51E-03	7.25E-03	6.15E-03	1.93E-03	1.72E-03	1.57E-03	1.93E-03	1.87E-03	6.38E-03	1.01E-02	9.87E-03
C8-C10 aromatic	400	7.42E-02	2.55E-02	3.74E-02	2.50E-02	1.97E-02	4.08E-02	3.45E-02	1.08E-02	9.68E-03	8.82E-03	1.09E-02	1.05E-02	3.59E-02	5.67E-02	5.55E-02
ethylbenzene	1000	3.88E-02	1.33E-02	1.95E-02	1.30E-02	1.03E-02	2.13E-02	1.81E-02	5.67E-03	5.06E-03	4.61E-03	5.67E-03	5.49E-03	1.87E-02	2.97E-02	2.90E-02
ethylene	40	7.06E-01	2.43E-01	3.56E-01	2.38E-01	1.88E-01	3.88E-01	3.29E-01	1.03E-01	9.22E-02	8.40E-02	1.03E-01	1.00E-01	3.41E-01	5.40E-01	5.28E-01
formaldehyde	9	1.84E+00	6.33E-01	9.27E-01	6.19E-01	4.89E-01	1.01E+00	8.57E-01	2.69E-01	2.40E-01	2.19E-01	2.69E-01	2.60E-01	8.89E-01	1.41E+00	1.38E+00
ketone	1000	1.04E+00	3.58E-01	5.24E-01	3.50E-01	2.76E-01	5.71E-01	4.84E-01	1.52E-01	1.36E-01	1.24E-01	1.52E-01	1.47E-01	5.03E-01	7.95E-01	7.78E-01
toluene	2000	3.28E-01	1.13E-01	1.66E-01	1.10E-01	8.73E-02	1.80E-01	1.53E-01	4.80E-02	4.28E-02	3.90E-02	4.80E-02	4.65E-02	1.59E-01	2.51E-01	2.46E-01
trimethylbenzene	220	9.40E-02	3.24E-02	4.74E-02	3.16E-02	2.50E-02	5.17E-02	4.38E-02	1.37E-02	1.23E-02	1.12E-02	1.38E-02	1.33E-02	4.55E-02	7.19E-02	7.04E-02
xylenes	730	2.61E-01	8.97E-02	1.31E-01	8.77E-02	6.93E-02	1.43E-01	1.21E-01	3.81E-02	3.40E-02	3.10E-02	3.82E-02	3.69E-02	1.26E-01	1.99E-01	1.95E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3			
<b>Criteria Pollutants</b>															
SPM	120	7.42E+00	4.77E+00	4.47E+00	4.20E+00	6.39E+00	8.32E+00	1.03E+02	9.65E+00	7.09E+00	7.50E+00	7.63E+00	1.03E+02	No	No
DPM	NV	9.67E-01	7.26E-01	6.67E-01	5.86E-01	8.40E-01	9.50E-01	6.05E+00	1.03E+00	7.87E-01	8.56E-01	8.45E-01	6.05E+00	No	No
PM10	25	4.26E+00	2.83E+00	2.64E+00	2.45E+00	3.69E+00	4.68E+00	<b>5.26E+01</b>	4.89E+00	3.92E+00	4.19E+00	4.23E+00	<b>5.26E+01</b>	Yes	Yes
PM2.5	27	1.99E+00	1.42E+00	1.30E+00	1.15E+00	1.70E+00	1.99E+00	1.27E+01	1.88E+00	1.58E+00	1.75E+00	1.73E+00	1.27E+01	No	No
SO2	20	6.95E-02	5.02E-02	4.56E-02	3.93E-02	5.82E-02	6.61E-02	3.60E-01	7.77E-02	5.03E-02	5.73E-02	5.58E-02	4.89E-01	No	No
CO	6000	2.25E+01	1.51E+01	1.36E+01	1.12E+01	1.60E+01	1.78E+01	2.28E+02	3.19E+01	2.35E+01	2.35E+01	2.46E+01	2.28E+02	No	No
NOX	9000	2.71E+01	2.04E+01	1.87E+01	1.64E+01	2.35E+01	2.66E+01	1.67E+02	2.89E+01	2.20E+01	2.39E+01	2.36E+01	1.67E+02	No	No
NO2	120	2.71E+01	2.04E+01	1.87E+01	1.64E+01	2.35E+01	2.66E+01	9.57E+01	2.89E+01	2.20E+01	2.39E+01	2.36E+01	9.57E+01	No	No
<b>Metals</b>															
Aluminum	12	5.14E-01	3.31E-01	3.10E-01	2.91E-01	4.43E-01	5.76E-01	7.11E+00	6.69E-01	4.92E-01	5.20E-01	5.29E-01	7.11E+00	No	No
Antimony	1	2.90E-05	1.87E-05	1.75E-05	1.64E-05	2.50E-05	3.26E-05	4.02E-04	3.78E-05	2.78E-05	2.94E-05	2.99E-05	4.02E-04	No	No
Arsenic	0.015	8.24E-04	5.29E-04	4.96E-04	4.66E-04	7.09E-04	9.23E-04	1.14E-02	1.07E-03	7.88E-04	8.33E-04	8.47E-04	1.14E-02	No	No
Barium	10	2.90E-03	1.86E-03	1.75E-03	1.64E-03	2.50E-03	3.25E-03	4.01E-02	3.77E-03	2.77E-03	2.93E-03	2.98E-03	4.01E-02	No	No
Beryllium	0.01	5.40E-06	3.47E-06	3.25E-06	3.06E-06	4.65E-06	6.05E-06	7.47E-05	7.03E-06	5.16E-06	5.46E-06	5.55E-06	7.47E-05	No	No
Bismuth	2.5	1.48E-06	9.54E-07	8.93E-07	8.40E-07	1.28E-06	1.66E-06	2.05E-05	1.93E-06	1.42E-06	1.50E-06	1.53E-06	2.05E-05	No	No
Cadmium	0.025	5.82E-04	4.37E-04	4.01E-04	3.53E-04	5.05E-04	5.72E-04	3.66E-03	6.20E-04	4.74E-04	5.16E-04	5.09E-04	3.66E-03	No	No
Calcium	NV	2.93E-01	1.88E-01	1.77E-01	1.66E-01	2.52E-01	3.29E-01	4.06E+00	3.82E-01	2.80E-01	2.97E-01	3.02E-01	4.06E+00	No	No
Chromium	0.1	1.33E-03	8.65E-04	8.10E-04	7.57E-04	1.15E-03	1.48E-03	1.77E-02	1.71E-03	1.26E-03	1.33E-03	1.35E-03	1.77E-02	No	No
Cobalt	0.1	1.99E-04	1.28E-04	1.20E-04	1.12E-04	1.71E-04	2.23E-04	2.75E-03	2.59E-04	1.90E-04	2.01E-04	2.04E-04	2.75E-03	No	No
Copper	50	5.26E-04	3.38E-04	3.17E-04	2.98E-04	4.53E-04	5.89E-04	7.27E-03	6.84E-04	5.03E-04	5.32E-04	5.41E-04	7.27E-03	No	No
Gold	1.25	5.74E-07	3.69E-07	3.46E-07	3.25E-07	4.95E-07	6.44E-07	7.95E-06	7.47E-07	5.49E-07	5.81E-07	5.91E-07	7.95E-06	No	No
Iron	4	5.64E-01	3.62E-01	3.40E-01	3.19E-01	4.86E-01	6.32E-01	<b>7.80E+00</b>	7.34E-01	5.39E-01	5.70E-01	5.80E-01	<b>7.80E+00</b>	Yes	No*
Lead	0.5	1.85E-04	1.29E-04	1.20E-04	1.09E-04	1.60E-04	1.94E-04	1.83E-03	2.18E-04	1.63E-04	1.75E-04	1.76E-04	1.83E-03	No	No
Lithium	20	2.40E-04	1.54E-04	1.44E-04	1.36E-04	2.07E-04	2.69E-04	3.32E-03	3.12E-04	2.29E-04	2.43E-04	2.47E-04	3.32E-03	No	No
Magnesium	NV	1.56E-01	1.00E-01	9.37E-02	8.80E-02	1.34E-01	1.74E-01	2.15E+00	2.02E-01	1.49E-01	1.57E-01	1.60E-01	2.15E+00	No	No
Manganese	0.1	5.85E-03	3.76E-03	3.52E-03	3.31E-03	5.03E-03	6.55E-03	8.09E-02	7.61E-03	5.59E-03	5.91E-03	6.01E-03	8.09E-02	No	No
Molybdenum	120	8.90E-06	5.72E-06	5.36E-06	5.04E-06	7.66E-06	9.98E-06	1.23E-04	1.16E-05	8.51E-06	9.00E-06	9.16E-06	1.23E-04	No	No
Nickel	0.06	5.16E-04	3.31E-04	3.11E-04	2.92E-04	4.44E-04	5.78E-04	7.13E-03	6.71E-04	4.93E-04	5.22E-04	5.30E-04	7.13E-03	No	No
Potassium	NV	9.84E-02	6.32E-02	5.93E-02	5.57E-02	8.47E-02	1.10E-01	1.36E+00	1.28E-01	9.41E-02	9.95E-02	1.01E-01	1.36E+00	No	No
Selenium	10	8.88E-06	5.71E-06	5.35E-06	5.02E-06	7.65E-06	9.95E-06	1.23E-04	1.16E-05	8.49E-06	8.98E-06	9.13E-06	1.23E-04	No	No
Silver	1	2.18E-06	1.40E-06	1.32E-06	1.24E-06	1.88E-06	2.45E-06	3.02E-05	2.84E-06	2.09E-06	2.21E-06	2.25E-06	3.02E-05	No	No
Sodium	NV	1.18E-01	7.55E-02	7.08E-02	6.65E-02	1.01E-01	1.32E-01	1.63E+00	1.53E-01	1.12E-01	1.19E-01	1.21E-01	1.63E+00	No	No
Strontium	120	1.57E-03	1.01E-03	9.46E-04	8.89E-04	1.35E-03	1.76E-03	2.17E-02	2.04E-03	1.50E-03	1.59E-03	1.62E-03	2.17E-02	No	No
Thallium	0.5	2.27E-06	1.46E-06	1.37E-06	1.28E-06	1.95E-06	2.54E-06	3.14E-05	2.95E-06	2.17E-06	2.29E-06	2.33E-06	3.14E-05	No	No
Tin	10	8.00E-06	5.14E-06	4.82E-06	4.53E-06	6.89E-06	8.96E-06	1.11E-04	1.04E-05	7.65E-06	8.09E-06	8.23E-06	1.11E-04	No	No
Titanium	120	2.59E-02	1.66E-02	1.56E-02	1.46E-02	2.23E-02	2.90E-02	3.58E-01	3.37E-02	2.47E-02	2.62E-02	2.66E-02	3.58E-01	No	No
Uranium	0.1	7.22E-06	4.64E-06	4.35E-06	4.08E-06	6.21E-06	8.09E-06	9.98E-05	9.39E-06	6.90E-06	7.30E-06	7.42E-06	9.98E-05	No	No
Vanadium	0.8	9.51E-04	6.11E-04	5.73E-04	5.38E-04	8.19E-04	1.07E-03	1.32E-02	1.24E-03	9.09E-04	9.62E-04	9.78E-04	1.32E-02	No	No
Yttrium	NV	7.02E-05	4.51E-05	4.23E-05	3.97E-05	6.04E-05	7.87E-05	9.71E-04	9.13E-05	6.71E-05	7.10E-05	7.22E-05	9.71E-04	No	No
Zinc	120	1.42E-03	9.85E-04	9.14E-04	8.30E-04	1.23E-03	1.50E-03	1.45E-02	1.69E-03	1.26E-03	1.35E-03	1.36E-03	1.45E-02	No	No

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3			
<b>Polycyclic Aromatic Hydrocarbons</b>															
benzo(a)pyrene	0.00005	1.06E-06	7.98E-07	7.34E-07	6.45E-07	9.24E-07	1.05E-06	6.66E-06	1.13E-06	8.67E-07	9.42E-07	9.30E-07	6.66E-06	No	No
naphthalene	22.5	4.21E-04	3.16E-04	2.90E-04	2.55E-04	3.66E-04	4.14E-04	2.64E-03	4.48E-04	3.43E-04	3.73E-04	3.68E-04	2.64E-03	No	No
phenanthrene	NV	3.48E-05	2.61E-05	2.40E-05	2.11E-05	3.02E-05	3.42E-05	2.18E-04	3.70E-05	2.83E-05	3.08E-05	3.04E-05	2.18E-04	No	No
anthracene	NV	3.88E-06	2.91E-06	2.68E-06	2.35E-06	3.37E-06	3.81E-06	2.43E-05	4.13E-06	3.16E-06	3.44E-06	3.39E-06	2.43E-05	No	No
fluorene	NV	1.70E-05	1.27E-05	1.17E-05	1.03E-05	1.47E-05	1.67E-05	1.06E-04	1.81E-05	1.38E-05	1.50E-05	1.48E-05	1.06E-04	No	No
pyrene	NV	1.27E-05	9.54E-06	8.76E-06	7.70E-06	1.10E-05	1.25E-05	7.96E-05	1.35E-05	1.03E-05	1.13E-05	1.11E-05	7.96E-05	No	No
thiophenes	NV	2.20E-07	1.65E-07	1.52E-07	1.34E-07	1.91E-07	2.17E-07	1.38E-06	2.35E-07	1.80E-07	1.95E-07	1.93E-07	1.38E-06	No	No
benz(a)anthracene	NV	5.05E-07	3.79E-07	3.48E-07	3.06E-07	4.38E-07	4.96E-07	3.16E-06	5.38E-07	4.11E-07	4.47E-07	4.41E-07	3.16E-06	No	No
acenaphthene	NV	3.27E-06	2.45E-06	2.25E-06	1.98E-06	2.84E-06	3.21E-06	2.05E-05	3.48E-06	2.66E-06	2.90E-06	2.86E-06	2.05E-05	No	No
acenaphthylene	NV	1.19E-05	8.91E-06	8.19E-06	7.20E-06	1.03E-05	1.17E-05	7.44E-05	1.26E-05	9.67E-06	1.05E-05	1.04E-05	7.44E-05	No	No
fluoranthene	NV	1.26E-05	9.48E-06	8.71E-06	7.66E-06	1.10E-05	1.24E-05	7.91E-05	1.35E-05	1.03E-05	1.12E-05	1.10E-05	7.91E-05	No	No
benzo(b)fluoranthene	NV	2.35E-06	1.76E-06	1.62E-06	1.42E-06	2.04E-06	2.31E-06	1.47E-05	2.50E-06	1.91E-06	2.08E-06	2.05E-06	1.47E-05	No	No
benzo(g,h,i)perylene	NV	4.46E-08	3.34E-08	3.07E-08	2.70E-08	3.87E-08	4.38E-08	2.79E-07	4.75E-08	3.63E-08	3.95E-08	3.90E-08	2.79E-07	No	No
benzo(k)fluoranthene	NV	2.67E-07	2.00E-07	1.84E-07	1.62E-07	2.32E-07	2.62E-07	1.67E-06	2.84E-07	2.17E-07	2.36E-07	2.33E-07	1.67E-06	No	No
chrysene	NV	5.67E-07	4.26E-07	3.91E-07	3.44E-07	4.93E-07	5.58E-07	3.55E-06	6.04E-07	4.62E-07	5.03E-07	4.96E-07	3.55E-06	No	No
dibenzo(a,h)anthracene	NV	7.38E-07	5.54E-07	5.09E-07	4.48E-07	6.41E-07	7.26E-07	4.62E-06	7.86E-07	6.01E-07	6.54E-07	6.46E-07	4.62E-06	No	No
indeno(1,2,3-cd)pyrene	NV	4.69E-07	3.52E-07	3.24E-07	2.85E-07	4.08E-07	4.61E-07	2.94E-06	5.00E-07	3.82E-07	4.16E-07	4.10E-07	2.94E-06	No	No
<b>Volatile Organic Compounds</b>															
1,3-butadiene	10	5.54E-03	4.15E-03	3.81E-03	3.32E-03	4.79E-03	5.42E-03	3.42E-02	5.76E-03	4.45E-03	4.81E-03	4.76E-03	3.42E-02	No	No
acetaldehyde	300	7.47E-01	5.59E-01	5.13E-01	4.48E-01	6.46E-01	7.30E-01	4.61E+00	7.77E-01	6.00E-01	6.49E-01	6.42E-01	4.61E+00	No	No
acetone	11880	3.93E-01	2.94E-01	2.70E-01	2.36E-01	3.40E-01	3.84E-01	2.43E+00	4.09E-01	3.16E-01	3.42E-01	3.38E-01	2.43E+00	No	No
acrolein	0.09	<b>1.32E-01</b>	<b>9.90E-02</b>	<b>9.09E-02</b>	7.93E-02	<b>1.14E-01</b>	<b>1.29E-01</b>	<b>8.16E-01</b>	<b>1.38E-01</b>	<b>1.06E-01</b>	<b>1.15E-01</b>	<b>1.14E-01</b>	<b>8.16E-01</b>	Yes	Yes
aldehyde	NV	9.99E-01	7.48E-01	6.86E-01	5.99E-01	8.63E-01	9.77E-01	6.17E+00	1.04E+00	8.02E-01	8.68E-01	8.59E-01	6.17E+00	No	No
benzene	23	4.90E-02	3.67E-02	3.36E-02	2.94E-02	4.23E-02	4.79E-02	3.02E-01	5.09E-02	3.93E-02	4.25E-02	4.21E-02	3.02E-01	No	No
C10-C12 aliphatic	NV	1.08E-02	8.05E-03	7.39E-03	6.45E-03	9.29E-03	1.05E-02	6.64E-02	1.12E-02	8.63E-03	9.34E-03	9.25E-03	6.64E-02	No	No
C12-C16 aliphatic	NV	6.23E-02	4.66E-02	4.28E-02	3.73E-02	5.38E-02	6.09E-02	3.84E-01	6.48E-02	5.00E-02	5.41E-02	5.35E-02	3.84E-01	No	No
C12-C16 aromatic	NV	8.40E-04	6.29E-04	5.77E-04	5.04E-04	7.26E-04	8.21E-04	5.18E-03	8.74E-04	6.74E-04	7.30E-04	7.22E-04	5.18E-03	No	No
C16-C21 aliphatic	NV	6.24E-02	4.67E-02	4.28E-02	3.74E-02	5.39E-02	6.10E-02	3.85E-01	6.49E-02	5.01E-02	5.42E-02	5.36E-02	3.85E-01	No	No
C2-C6 aliphatic	920	2.97E-01	2.22E-01	2.04E-01	1.78E-01	2.57E-01	2.90E-01	1.83E+00	3.09E-01	2.38E-01	2.58E-01	2.55E-01	1.83E+00	No	No
C6-C8 aliphatic	6100	2.03E-01	1.52E-01	1.39E-01	1.22E-01	1.75E-01	1.98E-01	1.25E+00	2.11E-01	1.63E-01	1.76E-01	1.75E-01	1.25E+00	No	No
C8-C10 aliphatic	60000	2.86E-03	2.14E-03	1.96E-03	1.71E-03	2.47E-03	2.80E-03	1.76E-02	2.98E-03	2.30E-03	2.48E-03	2.46E-03	1.76E-02	No	No
C8-C10 aromatic	400	1.61E-02	1.20E-02	1.10E-02	9.64E-03	1.39E-02	1.57E-02	9.92E-02	1.67E-02	1.29E-02	1.40E-02	1.38E-02	9.92E-02	No	No
ethylbenzene	1000	8.40E-03	6.29E-03	5.77E-03	5.04E-03	7.26E-03	8.21E-03	5.18E-02	8.74E-03	6.74E-03	7.30E-03	7.22E-03	5.18E-02	No	No
ethylene	40	1.53E-01	1.15E-01	1.05E-01	9.17E-02	1.32E-01	1.50E-01	9.44E-01	1.59E-01	1.23E-01	1.33E-01	1.32E-01	9.44E-01	No	No
formaldehyde	9	3.98E-01	2.98E-01	2.74E-01	2.39E-01	3.44E-01	3.90E-01	2.46E+00	4.15E-01	3.20E-01	3.46E-01	3.43E-01	2.46E+00	No	No
ketone	1000	2.25E-01	1.69E-01	1.55E-01	1.35E-01	1.95E-01	2.20E-01	1.39E+00	2.34E-01	1.81E-01	1.96E-01	1.94E-01	1.39E+00	No	No
toluene	2000	7.11E-02	5.33E-02	4.89E-02	4.27E-02	6.15E-02	6.95E-02	4.39E-01	7.40E-02	5.71E-02	6.18E-02	6.11E-02	4.39E-01	No	No
trimethylbenzene	220	2.04E-02	1.53E-02	1.40E-02	1.22E-02	1.76E-02	1.99E-02	1.26E-01	2.12E-02	1.64E-02	1.77E-02	1.75E-02	1.26E-01	No	No
xylenes	730	5.65E-02	4.23E-02	3.88E-02	3.39E-02	4.88E-02	5.52E-02	3.49E-01	5.88E-02	4.53E-02	4.91E-02	4.85E-02	3.49E-01	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	120	4.87E+01	1.34E+01	3.00E+01	3.29E+01	3.74E+01	3.31E+01	8.40E+01	4.29E+00	4.49E+00	4.25E+00	4.30E+00	4.46E+00	2.06E+01	1.50E+01	1.25E+01
DPM	NV	4.75E+00	1.56E+00	2.22E+00	1.78E+00	2.03E+00	2.45E+00	4.00E+00	6.55E-01	5.63E-01	5.51E-01	6.56E-01	5.74E-01	1.83E+00	2.76E+00	2.47E+00
PM10	25	<b>2.54E+01</b>	7.17E+00	1.53E+01	1.69E+01	1.93E+01	1.77E+01	<b>4.20E+01</b>	2.39E+00	2.66E+00	2.56E+00	2.39E+00	2.61E+00	1.05E+01	8.31E+00	8.22E+00
PM2.5	27	8.99E+00	3.24E+00	5.04E+00	3.98E+00	4.53E+00	5.84E+00	9.59E+00	1.27E+00	1.15E+00	1.17E+00	1.27E+00	1.12E+00	3.31E+00	6.05E+00	5.30E+00
SO2	20	4.61E-01	1.32E-01	2.15E-01	1.64E-01	1.12E-01	2.25E-01	1.69E-01	4.83E-02	4.65E-02	4.07E-02	4.83E-02	4.28E-02	1.33E-01	2.54E-01	2.13E-01
CO	6000	1.33E+02	5.66E+01	5.64E+01	5.73E+01	5.81E+01	7.35E+01	1.29E+02	1.66E+01	1.53E+01	1.26E+01	1.66E+01	1.52E+01	7.27E+01	6.95E+01	5.20E+01
NOX	9000	1.33E+02	4.37E+01	6.44E+01	4.96E+01	5.65E+01	7.10E+01	1.14E+02	1.82E+01	1.59E+01	1.55E+01	1.83E+01	1.62E+01	5.12E+01	7.75E+01	6.92E+01
NO2	120	9.22E+01	4.37E+01	6.44E+01	4.96E+01	5.65E+01	7.10E+01	9.04E+01	1.82E+01	1.59E+01	1.55E+01	1.83E+01	1.62E+01	5.12E+01	7.75E+01	6.92E+01
<b>Metals</b>																
Aluminum	12	3.37E+00	9.31E-01	2.08E+00	2.28E+00	2.59E+00	2.29E+00	5.82E+00	2.98E-01	3.11E-01	2.95E-01	2.98E-01	3.09E-01	1.42E+00	1.04E+00	8.67E-01
Antimony	1	1.91E-04	5.26E-05	1.17E-04	1.29E-04	1.47E-04	1.30E-04	3.29E-04	1.68E-05	1.76E-05	1.66E-05	1.68E-05	1.75E-05	8.05E-05	5.86E-05	4.89E-05
Arsenic	0.015	5.41E-03	1.49E-03	3.33E-03	3.65E-03	4.15E-03	3.68E-03	9.32E-03	4.76E-04	4.98E-04	4.72E-04	4.77E-04	4.95E-04	2.28E-03	1.66E-03	1.39E-03
Barium	10	1.90E-02	5.25E-03	1.17E-02	1.29E-02	1.46E-02	1.29E-02	3.28E-02	1.68E-03	1.76E-03	1.66E-03	1.68E-03	1.74E-03	8.04E-03	5.85E-03	4.89E-03
Beryllium	0.01	3.54E-05	9.77E-06	2.18E-05	2.39E-05	2.72E-05	2.41E-05	6.11E-05	3.12E-06	3.27E-06	3.09E-06	3.13E-06	3.25E-06	1.50E-05	1.09E-05	9.10E-06
Bismuth	2.5	9.74E-06	2.69E-06	6.00E-06	6.58E-06	7.48E-06	6.62E-06	1.68E-05	8.58E-07	8.98E-07	8.50E-07	8.59E-07	8.92E-07	4.11E-06	2.99E-06	2.50E-06
Cadmium	0.025	2.86E-03	9.39E-04	1.34E-03	1.08E-03	1.23E-03	1.48E-03	2.42E-03	3.94E-04	3.39E-04	3.32E-04	3.95E-04	3.46E-04	1.10E-03	1.66E-03	1.49E-03
Calcium	NV	1.92E+00	5.31E-01	1.18E+00	1.30E+00	1.48E+00	1.31E+00	3.32E+00	1.70E-01	1.77E-01	1.68E-01	1.70E-01	1.76E-01	8.13E-01	5.92E-01	4.94E-01
Chromium	0.1	8.57E-03	2.39E-03	5.21E-03	5.65E-03	6.42E-03	5.75E-03	1.44E-02	7.79E-04	8.03E-04	7.62E-04	7.80E-04	7.99E-04	3.60E-03	2.77E-03	2.33E-03
Cobalt	0.1	1.30E-03	3.60E-04	8.03E-04	8.81E-04	1.00E-03	8.87E-04	2.25E-03	1.15E-04	1.20E-04	1.14E-04	1.15E-04	1.20E-04	5.51E-04	4.01E-04	3.35E-04
Copper	50	3.45E-03	9.52E-04	2.12E-03	2.33E-03	2.65E-03	2.35E-03	5.95E-03	3.04E-04	3.18E-04	3.01E-04	3.04E-04	3.16E-04	1.46E-03	1.06E-03	8.86E-04
Gold	1.25	3.77E-06	1.04E-06	2.32E-06	2.55E-06	2.90E-06	2.56E-06	6.50E-06	3.32E-07	3.48E-07	3.29E-07	3.33E-07	3.45E-07	1.59E-06	1.16E-06	9.68E-07
Iron	4	3.70E+00	1.02E+00	2.28E+00	2.50E+00	2.84E+00	2.52E+00	<b>6.38E+00</b>	3.26E-01	3.41E-01	3.23E-01	3.26E-01	3.39E-01	1.56E+00	1.14E+00	9.50E-01
Lead	0.5	1.06E-03	3.16E-04	5.80E-04	5.71E-04	6.50E-04	6.40E-04	1.40E-03	1.17E-04	1.10E-04	1.06E-04	1.17E-04	1.11E-04	4.29E-04	4.55E-04	3.96E-04
Lithium	20	1.57E-03	4.34E-04	9.69E-04	1.06E-03	1.21E-03	1.07E-03	2.71E-03	1.39E-04	1.45E-04	1.37E-04	1.39E-04	1.44E-04	6.65E-04	4.84E-04	4.04E-04
Magnesium	NV	1.02E+00	2.81E-01	6.29E-01	6.89E-01	7.84E-01	6.94E-01	1.76E+00	9.00E-02	9.41E-02	8.91E-02	9.01E-02	9.35E-02	4.31E-01	3.14E-01	2.62E-01
Manganese	0.1	3.84E-02	1.06E-02	2.36E-02	2.59E-02	2.95E-02	2.61E-02	6.62E-02	3.38E-03	3.54E-03	3.35E-03	3.38E-03	3.52E-03	1.62E-02	1.18E-02	9.85E-03
Molybdenum	120	5.84E-05	1.61E-05	3.60E-05	3.94E-05	4.49E-05	3.97E-05	1.01E-04	5.15E-06	5.39E-06	5.10E-06	5.15E-06	5.35E-06	2.47E-05	1.80E-05	1.50E-05
Nickel	0.06	3.38E-03	9.33E-04	2.08E-03	2.29E-03	2.60E-03	2.30E-03	5.84E-03	2.98E-04	3.12E-04	2.95E-04	2.99E-04	3.10E-04	1.43E-03	1.04E-03	8.69E-04
Potassium	NV	6.46E-01	1.78E-01	3.98E-01	4.36E-01	4.96E-01	4.39E-01	1.11E+00	5.69E-02	5.95E-02	5.64E-02	5.70E-02	5.92E-02	2.73E-01	1.99E-01	1.66E-01
Selenium	10	5.83E-05	1.61E-05	3.59E-05	3.93E-05	4.48E-05	3.96E-05	1.00E-04	5.14E-06	5.37E-06	5.08E-06	5.14E-06	5.34E-06	2.46E-05	1.79E-05	1.50E-05
Silver	1	1.43E-05	3.95E-06	8.83E-06	9.68E-06	1.10E-05	9.75E-06	2.47E-05	1.26E-06	1.32E-06	1.25E-06	1.26E-06	1.31E-06	6.06E-06	4.41E-06	3.68E-06
Sodium	NV	7.72E-01	2.13E-01	4.75E-01	5.21E-01	5.93E-01	5.25E-01	1.33E+00	6.80E-02	7.11E-02	6.73E-02	6.81E-02	7.07E-02	3.26E-01	2.37E-01	1.98E-01
Strontium	120	1.03E-02	2.84E-03	6.35E-03	6.96E-03	7.92E-03	7.01E-03	1.78E-02	9.09E-04	9.50E-04	9.00E-04	9.09E-04	9.45E-04	4.35E-03	3.17E-03	2.65E-03
Thallium	0.5	1.49E-05	4.11E-06	9.17E-06	1.01E-05	1.14E-05	1.01E-05	2.57E-05	1.31E-06	1.37E-06	1.30E-06	1.31E-06	1.36E-06	6.29E-06	4.58E-06	3.82E-06
Tin	10	5.25E-05	1.45E-05	3.23E-05	3.54E-05	4.03E-05	3.57E-05	9.05E-05	4.63E-06	4.84E-06	4.58E-06	4.63E-06	4.81E-06	2.22E-05	1.61E-05	1.35E-05
Titanium	120	1.70E-01	4.68E-02	1.05E-01	1.15E-01	1.30E-01	1.15E-01	2.93E-01	1.50E-02	1.56E-02	1.48E-02	1.50E-02	1.56E-02	7.17E-02	5.22E-02	4.36E-02
Uranium	0.1	4.74E-05	1.31E-05	2.92E-05	3.20E-05	3.64E-05	3.22E-05	8.17E-05	4.17E-06	4.37E-06	4.13E-06	4.18E-06	4.34E-06	2.00E-05	1.46E-05	1.22E-05
Vanadium	0.8	6.24E-03	1.72E-03	3.84E-03	4.21E-03	4.80E-03	4.24E-03	1.08E-02	5.50E-04	5.75E-04	5.45E-04	5.51E-04	5.72E-04	2.64E-03	1.92E-03	1.60E-03
Yttrium	NV	4.61E-04	1.27E-04	2.84E-04	3.11E-04	3.54E-04	3.13E-04	7.94E-04	4.06E-05	4.25E-05	4.02E-05	4.06E-05	4.22E-05	1.95E-04	1.42E-04	1.18E-04
Zinc	120	8.20E-03	2.44E-03	4.56E-03	4.54E-03	5.16E-03	5.03E-03	1.12E-02	8.88E-04	8.43E-04	8.11E-04	8.89E-04	8.48E-04	3.34E-03	3.43E-03	2.98E-03

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	5.23E-06	1.72E-06	2.44E-06	1.96E-06	2.23E-06	2.69E-06	4.40E-06	7.21E-07	6.19E-07	6.06E-07	7.22E-07	6.32E-07	2.02E-06	3.04E-06	2.72E-06
naphthalene	22.5	2.07E-03	6.79E-04	9.67E-04	7.76E-04	8.84E-04	1.06E-03	1.74E-03	2.85E-04	2.45E-04	2.40E-04	2.86E-04	2.50E-04	7.98E-04	1.20E-03	1.08E-03
phenanthrene	NV	1.71E-04	5.61E-05	7.99E-05	6.41E-05	7.30E-05	8.80E-05	1.44E-04	2.36E-05	2.02E-05	1.98E-05	2.36E-05	2.06E-05	6.59E-05	9.93E-05	8.88E-05
anthracene	NV	1.91E-05	6.26E-06	8.91E-06	7.15E-06	8.14E-06	9.81E-06	1.60E-05	2.63E-06	2.26E-06	2.21E-06	2.63E-06	2.30E-06	7.35E-06	1.11E-05	9.91E-06
fluorene	NV	8.33E-05	2.74E-05	3.90E-05	3.13E-05	3.56E-05	4.29E-05	7.01E-05	1.15E-05	9.87E-06	9.66E-06	1.15E-05	1.01E-05	3.21E-05	4.85E-05	4.33E-05
pyrene	NV	6.24E-05	2.05E-05	2.92E-05	2.34E-05	2.67E-05	3.21E-05	5.25E-05	8.61E-06	7.39E-06	7.24E-06	8.62E-06	7.54E-06	2.41E-05	3.63E-05	3.25E-05
thiophenes	NV	1.08E-06	3.56E-07	5.06E-07	4.06E-07	4.63E-07	5.57E-07	9.11E-07	1.49E-07	1.28E-07	1.26E-07	1.49E-07	1.31E-07	4.18E-07	6.30E-07	5.63E-07
benz(a)anthracene	NV	2.48E-06	8.14E-07	1.16E-06	9.31E-07	1.06E-06	1.28E-06	2.09E-06	3.42E-07	2.94E-07	2.88E-07	3.42E-07	3.00E-07	9.56E-07	1.44E-06	1.29E-06
acenaphthene	NV	1.61E-05	5.27E-06	7.51E-06	6.03E-06	6.86E-06	8.27E-06	1.35E-05	2.21E-06	1.90E-06	1.86E-06	2.22E-06	1.94E-06	6.19E-06	9.34E-06	8.35E-06
acenaphthylene	NV	5.83E-05	1.92E-05	2.73E-05	2.19E-05	2.49E-05	3.00E-05	4.91E-05	8.04E-06	6.91E-06	6.76E-06	8.05E-06	7.05E-06	2.25E-05	3.39E-05	3.03E-05
fluoranthene	NV	6.21E-05	2.04E-05	2.90E-05	2.33E-05	2.65E-05	3.20E-05	5.22E-05	8.56E-06	7.35E-06	7.20E-06	8.57E-06	7.50E-06	2.39E-05	3.61E-05	3.23E-05
benzo(b)fluoranthene	NV	1.15E-05	3.78E-06	5.39E-06	4.32E-06	4.92E-06	5.93E-06	9.70E-06	1.59E-06	1.37E-06	1.34E-06	1.59E-06	1.39E-06	4.44E-06	6.70E-06	5.99E-06
benzo(g,h,i)perylene	NV	2.19E-07	7.19E-08	1.02E-07	8.22E-08	9.36E-08	1.13E-07	1.84E-07	3.02E-08	2.59E-08	2.54E-08	3.02E-08	2.65E-08	8.44E-08	1.27E-07	1.14E-07
benzo(k)fluoranthene	NV	1.31E-06	4.30E-07	6.13E-07	4.92E-07	5.60E-07	6.75E-07	1.10E-06	1.81E-07	1.55E-07	1.52E-07	1.81E-07	1.58E-07	5.05E-07	7.62E-07	6.82E-07
chrysene	NV	2.79E-06	9.15E-07	1.30E-06	1.05E-06	1.19E-06	1.44E-06	2.35E-06	3.84E-07	3.30E-07	3.23E-07	3.85E-07	3.37E-07	1.07E-06	1.62E-06	1.45E-06
dibenzo(a,h)anthracene	NV	3.63E-06	1.19E-06	1.70E-06	1.36E-06	1.55E-06	1.87E-06	3.05E-06	5.00E-07	4.30E-07	4.21E-07	5.01E-07	4.38E-07	1.40E-06	2.11E-06	1.89E-06
indeno(1,2,3-cd)pyrene	NV	2.31E-06	7.57E-07	1.08E-06	8.65E-07	9.85E-07	1.19E-06	1.94E-06	3.18E-07	2.73E-07	2.67E-07	3.18E-07	2.79E-07	8.89E-07	1.34E-06	1.20E-06
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	2.68E-02	8.88E-03	1.30E-02	1.01E-02	1.15E-02	1.45E-02	2.33E-02	3.57E-03	3.19E-03	3.12E-03	3.57E-03	3.28E-03	1.03E-02	1.58E-02	1.41E-02
acetaldehyde	300	3.61E+00	1.20E+00	1.76E+00	1.36E+00	1.55E+00	1.95E+00	3.15E+00	4.81E-01	4.31E-01	4.21E-01	4.82E-01	4.42E-01	1.38E+00	2.13E+00	1.90E+00
acetone	11880	1.90E+00	6.30E-01	9.25E-01	7.18E-01	8.17E-01	1.03E+00	1.66E+00	2.53E-01	2.27E-01	2.22E-01	2.53E-01	2.33E-01	7.29E-01	1.12E+00	1.00E+00
acrolein	0.09	<b>6.40E-01</b>	<b>2.12E-01</b>	<b>3.11E-01</b>	<b>2.41E-01</b>	<b>2.75E-01</b>	<b>3.46E-01</b>	<b>5.57E-01</b>	8.52E-02	7.62E-02	7.45E-02	8.53E-02	7.83E-02	<b>2.45E-01</b>	<b>3.78E-01</b>	<b>3.37E-01</b>
aldehyde	NV	4.83E+00	1.60E+00	2.35E+00	1.82E+00	2.08E+00	2.61E+00	4.21E+00	6.43E-01	5.76E-01	5.63E-01	6.44E-01	5.91E-01	1.85E+00	2.85E+00	2.54E+00
benzene	23	2.37E-01	7.85E-02	1.15E-01	8.94E-02	1.02E-01	1.28E-01	2.06E-01	3.15E-02	2.82E-02	2.76E-02	3.16E-02	2.90E-02	9.08E-02	1.40E-01	1.25E-01
C10-C12 aliphatic	NV	5.20E-02	1.72E-02	2.53E-02	1.96E-02	2.23E-02	2.81E-02	4.53E-02	6.92E-03	6.20E-03	6.06E-03	6.93E-03	6.37E-03	1.99E-02	3.07E-02	2.74E-02
C12-C16 aliphatic	NV	3.01E-01	9.98E-02	1.47E-01	1.14E-01	1.29E-01	1.63E-01	2.62E-01	4.01E-02	3.59E-02	3.51E-02	4.02E-02	3.69E-02	1.15E-01	1.78E-01	1.59E-01
C12-C16 aromatic	NV	4.06E-03	1.35E-03	1.98E-03	1.53E-03	1.75E-03	2.20E-03	3.54E-03	5.41E-04	4.84E-04	4.73E-04	5.42E-04	4.97E-04	1.56E-03	2.40E-03	2.14E-03
C16-C21 aliphatic	NV	3.02E-01	9.99E-02	1.47E-01	1.14E-01	1.30E-01	1.63E-01	2.63E-01	4.02E-02	3.59E-02	3.51E-02	4.02E-02	3.69E-02	1.16E-01	1.78E-01	1.59E-01
C2-C6 aliphatic	920	1.44E+00	4.76E-01	6.99E-01	5.42E-01	6.17E-01	7.76E-01	1.25E+00	1.91E-01	1.71E-01	1.67E-01	1.91E-01	1.76E-01	5.50E-01	8.48E-01	7.55E-01
C6-C8 aliphatic	6100	9.82E-01	3.25E-01	4.78E-01	3.71E-01	4.22E-01	5.31E-01	8.55E-01	1.31E-01	1.17E-01	1.14E-01	1.31E-01	1.20E-01	3.76E-01	5.80E-01	5.17E-01
C8-C10 aliphatic	60000	1.38E-02	4.58E-03	6.73E-03	5.22E-03	5.94E-03	7.48E-03	1.20E-02	1.84E-03	1.65E-03	1.61E-03	1.84E-03	1.69E-03	5.30E-03	8.17E-03	7.28E-03
C8-C10 aromatic	400	7.77E-02	2.58E-02	3.78E-02	2.94E-02	3.34E-02	4.20E-02	6.77E-02	1.04E-02	9.26E-03	9.06E-03	1.04E-02	9.52E-03	2.98E-02	4.59E-02	4.09E-02
ethylbenzene	1000	4.06E-02	1.35E-02	1.98E-02	1.53E-02	1.75E-02	2.20E-02	3.54E-02	5.41E-03	4.84E-03	4.73E-03	5.42E-03	4.97E-03	1.56E-02	2.40E-02	2.14E-02
ethylene	40	7.40E-01	2.45E-01	3.60E-01	2.79E-01	3.18E-01	4.00E-01	6.44E-01	9.85E-02	8.82E-02	8.62E-02	9.86E-02	9.06E-02	2.84E-01	4.37E-01	3.89E-01
formaldehyde	9	1.93E+00	6.39E-01	9.38E-01	7.28E-01	8.28E-01	1.04E+00	1.68E+00	2.57E-01	2.30E-01	2.25E-01	2.57E-01	2.36E-01	7.39E-01	1.14E+00	1.01E+00
ketone	1000	1.09E+00	3.61E-01	5.30E-01	4.11E-01	4.68E-01	5.89E-01	9.48E-01	1.45E-01	1.30E-01	1.27E-01	1.45E-01	1.33E-01	4.17E-01	6.43E-01	5.73E-01
toluene	2000	3.44E-01	1.14E-01	1.67E-01	1.30E-01	1.48E-01	1.86E-01	3.00E-01	4.58E-02	4.10E-02	4.01E-02	4.59E-02	4.21E-02	1.32E-01	2.03E-01	1.81E-01
trimethylbenzene	220	9.85E-02	3.26E-02	4.80E-02	3.72E-02	4.23E-02	5.33E-02	8.58E-02	1.31E-02	1.17E-02	1.15E-02	1.31E-02	1.21E-02	3.78E-02	5.82E-02	5.19E-02
xylenes	730	2.73E-01	9.05E-02	1.33E-01	1.03E-01	1.17E-01	1.48E-01	2.38E-01	3.64E-02	3.25E-02	3.18E-02	3.64E-02	3.34E-02	1.05E-01	1.61E-01	1.44E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3			
<b>Criteria Pollutants</b>															
SPM	120	5.09E+00	3.52E+00	3.37E+00	3.48E+00	4.92E+00	6.50E+00	3.17E+01	9.91E+00	4.82E+00	5.27E+00	5.32E+00	8.40E+01	No	No
DPM	NV	8.65E-01	6.72E-01	6.22E-01	5.67E-01	7.87E-01	9.04E-01	2.64E+00	1.44E+00	6.56E-01	7.82E-01	7.39E-01	4.75E+00	No	No
PM10	25	3.22E+00	2.28E+00	2.16E+00	2.15E+00	3.04E+00	3.89E+00	1.73E+01	5.57E+00	2.82E+00	3.16E+00	3.11E+00	<b>4.20E+01</b>	Yes	<b>Yes</b>
PM2.5	27	1.76E+00	1.30E+00	1.20E+00	1.10E+00	1.57E+00	1.85E+00	7.19E+00	2.65E+00	1.26E+00	1.54E+00	1.45E+00	9.59E+00	No	No
SO2	20	6.58E-02	4.83E-02	4.39E-02	3.86E-02	5.63E-02	6.44E-02	3.23E-01	9.33E-02	4.53E-02	5.45E-02	5.18E-02	4.61E-01	No	No
CO	6000	2.06E+01	1.53E+01	1.38E+01	1.16E+01	1.64E+01	1.73E+01	1.23E+02	4.83E+01	2.55E+01	2.67E+01	2.62E+01	1.33E+02	No	No
NOX	9000	2.43E+01	1.89E+01	1.75E+01	1.59E+01	2.21E+01	2.54E+01	7.41E+01	4.02E+01	1.83E+01	2.18E+01	2.07E+01	1.33E+02	No	No
NO2	120	2.43E+01	1.89E+01	1.75E+01	1.59E+01	2.21E+01	2.54E+01	7.41E+01	4.02E+01	1.83E+01	2.18E+01	2.07E+01	9.22E+01	No	No
<b>Metals</b>															
Aluminum	12	3.53E-01	2.44E-01	2.34E-01	2.41E-01	3.41E-01	4.50E-01	2.20E+00	6.87E-01	3.34E-01	3.66E-01	3.69E-01	5.82E+00	No	No
Antimony	1	1.99E-05	1.38E-05	1.32E-05	1.36E-05	1.93E-05	2.54E-05	1.24E-04	3.88E-05	1.89E-05	2.07E-05	2.08E-05	3.29E-04	No	No
Arsenic	0.015	5.65E-04	3.91E-04	3.74E-04	3.86E-04	5.47E-04	7.21E-04	3.52E-03	1.10E-03	5.36E-04	5.86E-04	5.91E-04	9.32E-03	No	No
Barium	10	1.99E-03	1.38E-03	1.32E-03	1.36E-03	1.93E-03	2.54E-03	1.24E-02	3.87E-03	1.89E-03	2.06E-03	2.08E-03	3.28E-02	No	No
Beryllium	0.01	3.70E-06	2.56E-06	2.45E-06	2.53E-06	3.58E-06	4.73E-06	2.31E-05	7.21E-06	3.51E-06	3.84E-06	3.87E-06	6.11E-05	No	No
Bismuth	2.5	1.02E-06	7.04E-07	6.74E-07	6.95E-07	9.85E-07	1.30E-06	6.35E-06	1.98E-06	9.65E-07	1.05E-06	1.06E-06	1.68E-05	No	No
Cadmium	0.025	5.21E-04	4.04E-04	3.74E-04	3.41E-04	4.74E-04	5.44E-04	1.59E-03	8.65E-04	3.95E-04	4.70E-04	4.45E-04	2.86E-03	No	No
Calcium	NV	2.01E-01	1.39E-01	1.33E-01	1.37E-01	1.95E-01	2.57E-01	1.25E+00	3.92E-01	1.91E-01	2.08E-01	2.10E-01	3.32E+00	No	No
Chromium	0.1	9.32E-04	6.53E-04	6.23E-04	6.35E-04	8.97E-04	1.17E-03	5.54E-03	1.79E-03	8.68E-04	9.55E-04	9.59E-04	1.44E-02	No	No
Cobalt	0.1	1.36E-04	9.43E-05	9.03E-05	9.31E-05	1.32E-04	1.74E-04	8.50E-04	2.65E-04	1.29E-04	1.41E-04	1.43E-04	2.25E-03	No	No
Copper	50	3.60E-04	2.50E-04	2.39E-04	2.46E-04	3.49E-04	4.60E-04	2.25E-03	7.02E-04	3.42E-04	3.74E-04	3.77E-04	5.95E-03	No	No
Gold	1.25	3.94E-07	2.73E-07	2.61E-07	2.69E-07	3.81E-07	5.03E-07	2.46E-06	7.67E-07	3.73E-07	4.08E-07	4.12E-07	6.50E-06	No	No
Iron	4	3.87E-01	2.68E-01	2.56E-01	2.64E-01	3.74E-01	4.94E-01	2.41E+00	7.53E-01	3.67E-01	4.01E-01	4.04E-01	<b>6.38E+00</b>	Yes	No*
Lead	0.5	1.47E-04	1.09E-04	1.03E-04	9.83E-05	1.38E-04	1.68E-04	6.43E-04	2.62E-04	1.23E-04	1.41E-04	1.37E-04	1.40E-03	No	No
Lithium	20	1.64E-04	1.14E-04	1.09E-04	1.12E-04	1.59E-04	2.10E-04	1.03E-03	3.20E-04	1.56E-04	1.71E-04	1.72E-04	2.71E-03	No	No
Magnesium	NV	1.07E-01	7.38E-02	7.07E-02	7.29E-02	1.03E-01	1.36E-01	6.65E-01	2.08E-01	1.01E-01	1.11E-01	1.12E-01	1.76E+00	No	No
Manganese	0.1	4.01E-03	2.77E-03	2.66E-03	2.74E-03	3.88E-03	5.12E-03	2.50E-02	7.81E-03	3.80E-03	4.16E-03	4.19E-03	6.62E-02	No	No
Molybdenum	120	6.10E-06	4.22E-06	4.05E-06	4.17E-06	5.91E-06	7.79E-06	3.81E-05	1.19E-05	5.79E-06	6.33E-06	6.38E-06	1.01E-04	No	No
Nickel	0.06	3.54E-04	2.45E-04	2.34E-04	2.42E-04	3.42E-04	4.52E-04	2.21E-03	6.89E-04	3.35E-04	3.67E-04	3.70E-04	5.84E-03	No	No
Potassium	NV	6.75E-02	4.67E-02	4.47E-02	4.61E-02	6.53E-02	8.62E-02	4.21E-01	1.31E-01	6.40E-02	7.00E-02	7.06E-02	1.11E+00	No	No
Selenium	10	6.09E-06	4.21E-06	4.04E-06	4.16E-06	5.89E-06	7.77E-06	3.80E-05	1.19E-05	5.77E-06	6.31E-06	6.37E-06	1.00E-04	No	No
Silver	1	1.50E-06	1.04E-06	9.93E-07	1.02E-06	1.45E-06	1.91E-06	9.34E-06	2.92E-06	1.42E-06	1.55E-06	1.57E-06	2.47E-05	No	No
Sodium	NV	8.06E-02	5.58E-02	5.34E-02	5.51E-02	7.80E-02	1.03E-01	5.03E-01	1.57E-01	7.64E-02	8.36E-02	8.43E-02	1.33E+00	No	No
Strontium	120	1.08E-03	7.46E-04	7.14E-04	7.36E-04	1.04E-03	1.38E-03	6.72E-03	2.10E-03	1.02E-03	1.12E-03	1.13E-03	1.78E-02	No	No
Thallium	0.5	1.56E-06	1.08E-06	1.03E-06	1.06E-06	1.51E-06	1.99E-06	9.70E-06	3.03E-06	1.47E-06	1.61E-06	1.63E-06	2.57E-05	No	No
Tin	10	5.48E-06	3.80E-06	3.63E-06	3.75E-06	5.31E-06	7.00E-06	3.42E-05	1.07E-05	5.20E-06	5.69E-06	5.73E-06	9.05E-05	No	No
Titanium	120	1.77E-02	1.23E-02	1.18E-02	1.21E-02	1.72E-02	2.26E-02	1.11E-01	3.45E-02	1.68E-02	1.84E-02	1.85E-02	2.93E-01	No	No
Uranium	0.1	4.95E-06	3.43E-06	3.28E-06	3.38E-06	4.79E-06	6.32E-06	3.09E-05	9.64E-06	4.69E-06	5.13E-06	5.17E-06	8.17E-05	No	No
Vanadium	0.8	6.52E-04	4.51E-04	4.32E-04	4.46E-04	6.31E-04	8.33E-04	4.07E-03	1.27E-03	6.18E-04	6.76E-04	6.82E-04	1.08E-02	No	No
Yttrium	NV	4.81E-05	3.33E-05	3.19E-05	3.29E-05	4.66E-05	6.15E-05	3.00E-04	9.37E-05	4.56E-05	4.99E-05	5.03E-05	7.94E-04	No	No
Zinc	120	1.11E-03	8.23E-04	7.73E-04	7.45E-04	1.04E-03	1.28E-03	5.02E-03	2.00E-03	9.42E-04	1.07E-03	1.05E-03	1.12E-02	No	No

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	9.52E-07	7.40E-07	6.85E-07	6.24E-07	8.66E-07	9.95E-07	2.91E-06	1.58E-06	7.22E-07	8.60E-07	8.14E-07	5.23E-06	No	No	
naphthalene	22.5	3.77E-04	2.93E-04	2.71E-04	2.47E-04	3.43E-04	3.94E-04	1.15E-03	6.26E-04	2.86E-04	3.40E-04	3.22E-04	2.07E-03	No	No	
phenanthrene	NV	3.11E-05	2.42E-05	2.24E-05	2.04E-05	2.83E-05	3.25E-05	9.50E-05	5.17E-05	2.36E-05	2.81E-05	2.66E-05	1.71E-04	No	No	
anthracene	NV	3.47E-06	2.70E-06	2.50E-06	2.28E-06	3.16E-06	3.63E-06	1.06E-05	5.77E-06	2.63E-06	3.14E-06	2.97E-06	1.91E-05	No	No	
fluorene	NV	1.52E-05	1.18E-05	1.09E-05	9.96E-06	1.38E-05	1.59E-05	4.63E-05	2.52E-05	1.15E-05	1.37E-05	1.30E-05	8.33E-05	No	No	
pyrene	NV	1.14E-05	8.83E-06	8.18E-06	7.46E-06	1.03E-05	1.19E-05	3.47E-05	1.89E-05	8.62E-06	1.03E-05	9.72E-06	6.24E-05	No	No	
thiophenes	NV	1.97E-07	1.53E-07	1.42E-07	1.29E-07	1.80E-07	2.06E-07	6.02E-07	3.28E-07	1.49E-07	1.78E-07	1.69E-07	1.08E-06	No	No	
benz(a)anthracene	NV	4.52E-07	3.51E-07	3.25E-07	2.96E-07	4.11E-07	4.72E-07	1.38E-06	7.51E-07	3.42E-07	4.08E-07	3.86E-07	2.48E-06	No	No	
acenaphthene	NV	2.93E-06	2.27E-06	2.10E-06	1.92E-06	2.66E-06	3.06E-06	8.93E-06	4.86E-06	2.22E-06	2.64E-06	2.50E-06	1.61E-05	No	No	
acenaphthylene	NV	1.06E-05	8.25E-06	7.65E-06	6.97E-06	9.67E-06	1.11E-05	3.24E-05	1.77E-05	8.05E-06	9.60E-06	9.08E-06	5.83E-05	No	No	
fluoranthene	NV	1.13E-05	8.78E-06	8.14E-06	7.42E-06	1.03E-05	1.18E-05	3.45E-05	1.88E-05	8.57E-06	1.02E-05	9.66E-06	6.21E-05	No	No	
benzo(b)fluoranthene	NV	2.10E-06	1.63E-06	1.51E-06	1.38E-06	1.91E-06	2.19E-06	6.41E-06	3.49E-06	1.59E-06	1.90E-06	1.79E-06	1.15E-05	No	No	
benzo(g,h,i)perylene	NV	3.99E-08	3.10E-08	2.87E-08	2.62E-08	3.63E-08	4.17E-08	1.22E-07	6.63E-08	3.02E-08	3.60E-08	3.41E-08	2.19E-07	No	No	
benzo(k)fluoranthene	NV	2.39E-07	1.85E-07	1.72E-07	1.57E-07	2.17E-07	2.50E-07	7.29E-07	3.97E-07	1.81E-07	2.16E-07	2.04E-07	1.31E-06	No	No	
chrysene	NV	5.08E-07	3.94E-07	3.65E-07	3.33E-07	4.62E-07	5.31E-07	1.55E-06	8.44E-07	3.85E-07	4.59E-07	4.34E-07	2.79E-06	No	No	
dibenzo(a,h)anthracene	NV	6.61E-07	5.13E-07	4.75E-07	4.33E-07	6.01E-07	6.90E-07	2.02E-06	1.10E-06	5.01E-07	5.97E-07	5.65E-07	3.63E-06	No	No	
indeno(1,2,3-cd)pyrene	NV	4.20E-07	3.26E-07	3.02E-07	2.75E-07	3.82E-07	4.39E-07	1.28E-06	6.98E-07	3.18E-07	3.79E-07	3.59E-07	2.31E-06	No	No	
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	4.96E-03	3.84E-03	3.55E-03	3.21E-03	4.49E-03	5.15E-03	1.51E-02	8.07E-03	3.69E-03	4.38E-03	4.15E-03	2.68E-02	No	No	
acetaldehyde	300	6.69E-01	5.18E-01	4.79E-01	4.33E-01	6.05E-01	6.94E-01	2.03E+00	1.09E+00	4.98E-01	5.90E-01	5.60E-01	3.61E+00	No	No	
acetone	11880	3.52E-01	2.73E-01	2.52E-01	2.28E-01	3.18E-01	3.65E-01	1.07E+00	5.72E-01	2.62E-01	3.11E-01	2.95E-01	1.90E+00	No	No	
acrolein	0.09	<b>1.18E-01</b>	<b>9.17E-02</b>	8.48E-02	7.67E-02	<b>1.07E-01</b>	<b>1.23E-01</b>	<b>3.60E-01</b>	<b>1.93E-01</b>	8.81E-02	<b>1.05E-01</b>	<b>9.91E-02</b>	<b>6.40E-01</b>	Yes	Yes	
aldehyde	NV	8.94E-01	6.93E-01	6.40E-01	5.79E-01	8.09E-01	9.28E-01	2.72E+00	1.45E+00	6.66E-01	7.90E-01	7.49E-01	4.83E+00	No	No	
benzene	23	4.38E-02	3.40E-02	3.14E-02	2.84E-02	3.97E-02	4.55E-02	1.33E-01	7.13E-02	3.26E-02	3.87E-02	3.67E-02	2.37E-01	No	No	
C10-C12 aliphatic	NV	9.63E-03	7.46E-03	6.89E-03	6.24E-03	8.71E-03	9.99E-03	2.93E-02	1.57E-02	7.17E-03	8.50E-03	8.06E-03	5.20E-02	No	No	
C12-C16 aliphatic	NV	5.57E-02	4.32E-02	3.99E-02	3.61E-02	5.04E-02	5.79E-02	1.70E-01	9.07E-02	4.15E-02	4.92E-02	4.67E-02	3.01E-01	No	No	
C12-C16 aromatic	NV	7.52E-04	5.82E-04	5.38E-04	4.87E-04	6.80E-04	7.80E-04	2.29E-03	1.22E-03	5.60E-04	6.64E-04	6.29E-04	4.06E-03	No	No	
C16-C21 aliphatic	NV	5.58E-02	4.32E-02	4.00E-02	3.62E-02	5.05E-02	5.79E-02	1.70E-01	9.08E-02	4.16E-02	4.93E-02	4.67E-02	3.02E-01	No	No	
C2-C6 aliphatic	920	2.66E-01	2.06E-01	1.90E-01	1.72E-01	2.40E-01	2.76E-01	8.08E-01	4.32E-01	1.98E-01	2.35E-01	2.22E-01	1.44E+00	No	No	
C6-C8 aliphatic	6100	1.82E-01	1.41E-01	1.30E-01	1.18E-01	1.64E-01	1.89E-01	5.53E-01	2.96E-01	1.35E-01	1.60E-01	1.52E-01	9.82E-01	No	No	
C8-C10 aliphatic	60000	2.56E-03	1.98E-03	1.83E-03	1.66E-03	2.32E-03	2.66E-03	7.78E-03	4.16E-03	1.91E-03	2.26E-03	2.14E-03	1.38E-02	No	No	
C8-C10 aromatic	400	1.44E-02	1.11E-02	1.03E-02	9.32E-03	1.30E-02	1.49E-02	4.38E-02	2.34E-02	1.07E-02	1.27E-02	1.20E-02	7.77E-02	No	No	
ethylbenzene	1000	7.52E-03	5.82E-03	5.38E-03	4.87E-03	6.80E-03	7.80E-03	2.29E-02	1.22E-02	5.60E-03	6.64E-03	6.29E-03	4.06E-02	No	No	
ethylene	40	1.37E-01	1.06E-01	9.81E-02	8.87E-02	1.24E-01	1.42E-01	4.16E-01	2.23E-01	1.02E-01	1.21E-01	1.15E-01	7.40E-01	No	No	
formaldehyde	9	3.57E-01	2.76E-01	2.55E-01	2.31E-01	3.23E-01	3.70E-01	1.08E+00	5.80E-01	2.66E-01	3.15E-01	2.99E-01	1.93E+00	No	No	
ketone	1000	2.02E-01	1.56E-01	1.44E-01	1.31E-01	1.82E-01	2.09E-01	6.13E-01	3.28E-01	1.50E-01	1.78E-01	1.69E-01	1.09E+00	No	No	
toluene	2000	6.37E-02	4.93E-02	4.56E-02	4.12E-02	5.76E-02	6.61E-02	1.94E-01	1.04E-01	4.74E-02	5.62E-02	5.33E-02	3.44E-01	No	No	
trimethylbenzene	220	1.82E-02	1.41E-02	1.31E-02	1.18E-02	1.65E-02	1.89E-02	5.55E-02	2.97E-02	1.36E-02	1.61E-02	1.53E-02	9.85E-02	No	No	
xylenes	730	5.05E-02	3.92E-02	3.62E-02	3.27E-02	4.57E-02	5.25E-02	1.54E-01	8.22E-02	3.76E-02	4.46E-02	4.23E-02	2.73E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	120	2.22E+01	8.63E+00	1.08E+01	1.11E+01	1.19E+01	1.40E+01	1.65E+01	3.36E+00	3.54E+00	3.36E+00	3.36E+00	3.50E+00	1.00E+01	2.11E+01	3.16E+01
DPM	NV	4.55E+00	1.27E+00	2.11E+00	1.37E+00	1.03E+00	2.18E+00	1.76E+00	5.89E-01	5.60E-01	4.51E-01	5.90E-01	5.84E-01	1.83E+00	2.59E+00	2.12E+00
PM10	25	1.22E+01	4.78E+00	5.45E+00	4.25E+00	4.47E+00	6.65E+00	6.16E+00	1.91E+00	1.81E+00	1.80E+00	1.92E+00	1.86E+00	4.92E+00	9.01E+00	1.48E+01
PM2.5	27	8.53E+00	3.06E+00	4.79E+00	3.53E+00	2.47E+00	4.67E+00	3.42E+00	1.19E+00	1.14E+00	9.56E-01	1.19E+00	9.99E-01	3.19E+00	5.75E+00	4.67E+00
SO2	20	4.55E-01	1.30E-01	2.10E-01	1.59E-01	1.11E-01	2.05E-01	1.44E-01	4.71E-02	4.65E-02	3.69E-02	4.71E-02	4.08E-02	1.29E-01	2.48E-01	2.00E-01
CO	6000	1.36E+02	4.52E+01	4.59E+01	4.26E+01	5.41E+01	7.00E+01	7.08E+01	1.42E+01	1.63E+01	1.22E+01	1.43E+01	1.55E+01	7.17E+01	4.98E+01	5.43E+01
NOX	9000	1.27E+02	3.55E+01	6.11E+01	3.97E+01	2.91E+01	6.11E+01	4.91E+01	1.72E+01	1.56E+01	1.26E+01	1.72E+01	1.63E+01	5.13E+01	7.29E+01	5.95E+01
NO2	120	9.17E+01	3.55E+01	6.11E+01	3.97E+01	2.91E+01	6.11E+01	4.91E+01	1.72E+01	1.56E+01	1.26E+01	1.72E+01	1.63E+01	5.13E+01	7.29E+01	5.95E+01
<b>Metals</b>																
Aluminum	12	1.54E+00	5.99E-01	7.47E-01	7.70E-01	8.24E-01	9.71E-01	1.14E+00	2.33E-01	2.46E-01	2.33E-01	2.33E-01	2.42E-01	6.94E-01	1.46E+00	2.19E+00
Antimony	1	8.70E-05	3.38E-05	4.21E-05	4.35E-05	4.66E-05	5.49E-05	6.45E-05	1.32E-05	1.39E-05	1.32E-05	1.32E-05	1.37E-05	3.92E-05	8.26E-05	1.24E-04
Arsenic	0.015	2.47E-03	9.59E-04	1.19E-03	1.23E-03	1.32E-03	1.56E-03	1.83E-03	3.73E-04	3.93E-04	3.74E-04	3.73E-04	3.88E-04	1.11E-03	2.34E-03	3.51E-03
Barium	10	8.69E-03	3.38E-03	4.21E-03	4.34E-03	4.65E-03	5.48E-03	6.44E-03	1.31E-03	1.39E-03	1.32E-03	1.31E-03	1.37E-03	3.91E-03	8.25E-03	1.24E-02
Beryllium	0.01	1.62E-05	6.28E-06	7.83E-06	8.08E-06	8.66E-06	1.02E-05	1.20E-05	2.44E-06	2.58E-06	2.45E-06	2.45E-06	2.54E-06	7.28E-06	1.54E-05	2.30E-05
Bismuth	2.5	4.44E-06	1.73E-06	2.15E-06	2.22E-06	2.38E-06	2.80E-06	3.29E-06	6.72E-07	7.08E-07	6.73E-07	6.72E-07	6.99E-07	2.00E-06	4.22E-06	6.33E-06
Cadmium	0.025	2.73E-03	7.62E-04	1.27E-03	8.26E-04	6.22E-04	1.31E-03	1.06E-03	3.54E-04	3.37E-04	2.71E-04	3.55E-04	3.51E-04	1.10E-03	1.56E-03	1.28E-03
Calcium	NV	8.78E-01	3.41E-01	4.25E-01	4.39E-01	4.70E-01	5.54E-01	6.51E-01	1.33E-01	1.40E-01	1.33E-01	1.33E-01	1.38E-01	3.96E-01	8.34E-01	1.25E+00
Chromium	0.1	4.15E-03	1.56E-03	2.00E-03	1.98E-03	2.08E-03	2.55E-03	2.91E-03	6.17E-04	6.45E-04	6.05E-04	6.18E-04	6.40E-04	1.85E-03	3.77E-03	5.47E-03
Cobalt	0.1	5.95E-04	2.31E-04	2.88E-04	2.98E-04	3.19E-04	3.75E-04	4.41E-04	9.00E-05	9.49E-05	9.01E-05	9.00E-05	9.37E-05	2.68E-04	5.65E-04	8.48E-04
Copper	50	1.57E-03	6.12E-04	7.63E-04	7.87E-04	8.43E-04	9.93E-04	1.17E-03	2.38E-04	2.51E-04	2.38E-04	2.38E-04	2.48E-04	7.09E-04	1.50E-03	2.24E-03
Gold	1.25	1.72E-06	6.69E-07	8.33E-07	8.60E-07	9.21E-07	1.08E-06	1.28E-06	2.60E-07	2.74E-07	2.60E-07	2.60E-07	2.71E-07	7.75E-07	1.63E-06	2.45E-06
Iron	4	1.69E+00	6.56E-01	8.18E-01	8.44E-01	9.04E-01	1.06E+00	1.25E+00	2.55E-01	2.69E-01	2.56E-01	2.55E-01	2.66E-01	7.61E-01	1.60E+00	2.40E+00
Lead	0.5	7.20E-04	2.30E-04	3.39E-04	2.70E-04	2.45E-04	3.86E-04	3.72E-04	9.90E-05	9.83E-05	8.53E-05	9.91E-05	1.00E-04	3.03E-04	5.11E-04	5.90E-04
Lithium	20	7.18E-04	2.79E-04	3.48E-04	3.59E-04	3.85E-04	4.53E-04	5.33E-04	1.09E-04	1.15E-04	1.09E-04	1.09E-04	1.13E-04	3.24E-04	6.82E-04	1.02E-03
Magnesium	NV	4.66E-01	1.81E-01	2.26E-01	2.33E-01	2.49E-01	2.94E-01	3.45E-01	7.04E-02	7.43E-02	7.05E-02	7.05E-02	7.33E-02	2.10E-01	4.42E-01	6.63E-01
Manganese	0.1	1.75E-02	6.80E-03	8.48E-03	8.75E-03	9.38E-03	1.10E-02	1.30E-02	2.65E-03	2.79E-03	2.65E-03	2.65E-03	2.75E-03	7.89E-03	1.66E-02	2.49E-02
Molybdenum	120	2.67E-05	1.04E-05	1.29E-05	1.33E-05	1.43E-05	1.68E-05	1.98E-05	4.03E-06	4.25E-06	4.04E-06	4.03E-06	4.19E-06	1.20E-05	2.53E-05	3.80E-05
Nickel	0.06	1.54E-03	6.00E-04	7.48E-04	7.72E-04	8.27E-04	9.74E-04	1.15E-03	2.33E-04	2.46E-04	2.34E-04	2.34E-04	2.43E-04	6.96E-04	1.47E-03	2.20E-03
Potassium	NV	2.95E-01	1.15E-01	1.43E-01	1.47E-01	1.58E-01	1.86E-01	2.19E-01	4.46E-02	4.70E-02	4.46E-02	4.46E-02	4.64E-02	1.33E-01	2.80E-01	4.20E-01
Selenium	10	2.66E-05	1.03E-05	1.29E-05	1.33E-05	1.42E-05	1.68E-05	1.97E-05	4.02E-06	4.24E-06	4.03E-06	4.02E-06	4.18E-06	1.20E-05	2.53E-05	3.79E-05
Silver	1	6.54E-06	2.54E-06	3.17E-06	3.27E-06	3.50E-06	4.13E-06	4.85E-06	9.89E-07	1.04E-06	9.91E-07	9.90E-07	1.03E-06	2.95E-06	6.22E-06	9.32E-06
Sodium	NV	3.52E-01	1.37E-01	1.71E-01	1.76E-01	1.89E-01	2.22E-01	2.61E-01	5.32E-02	5.61E-02	5.33E-02	5.32E-02	5.54E-02	1.59E-01	3.34E-01	5.01E-01
Strontium	120	4.70E-03	1.83E-03	2.28E-03	2.35E-03	2.52E-03	2.97E-03	3.49E-03	7.11E-04	7.50E-04	7.12E-04	7.12E-04	7.40E-04	2.12E-03	4.47E-03	6.70E-03
Thallium	0.5	6.79E-06	2.64E-06	3.29E-06	3.40E-06	3.64E-06	4.28E-06	5.04E-06	1.03E-06	1.08E-06	1.03E-06	1.03E-06	1.07E-06	3.06E-06	6.45E-06	9.67E-06
Tin	10	2.39E-05	9.31E-06	1.16E-05	1.20E-05	1.28E-05	1.51E-05	1.78E-05	3.62E-06	3.82E-06	3.63E-06	3.62E-06	3.77E-06	1.08E-05	2.28E-05	3.41E-05
Titanium	120	7.74E-02	3.01E-02	3.75E-02	3.87E-02	4.15E-02	4.88E-02	5.74E-02	1.17E-02	1.23E-02	1.17E-02	1.17E-02	1.22E-02	3.49E-02	7.36E-02	1.10E-01
Uranium	0.1	2.16E-05	8.40E-06	1.05E-05	1.08E-05	1.16E-05	1.36E-05	1.60E-05	3.27E-06	3.45E-06	3.27E-06	3.27E-06	3.40E-06	9.74E-06	2.05E-05	3.08E-05
Vanadium	0.8	2.85E-03	1.11E-03	1.38E-03	1.42E-03	1.53E-03	1.80E-03	2.11E-03	4.31E-04	4.54E-04	4.31E-04	4.31E-04	4.48E-04	1.28E-03	2.71E-03	4.06E-03
Yttrium	NV	2.10E-04	8.17E-05	1.02E-04	1.05E-04	1.13E-04	1.33E-04	1.56E-04	3.18E-05	3.35E-05	3.18E-05	3.18E-05	3.31E-05	9.47E-05	2.00E-04	2.99E-04
Zinc	120	5.41E-03	1.75E-03	2.55E-03	2.07E-03	1.91E-03	2.93E-03	2.88E-03	7.48E-04	7.46E-04	6.52E-04	7.49E-04	7.58E-04	2.28E-03	3.93E-03	4.65E-03
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	5.00E-06	1.39E-06	2.32E-06	1.51E-06	1.13E-06	2.40E-06	1.93E-06	6.48E-07	6.16E-07	4.96E-07	6.49E-07	6.42E-07	2.02E-06	2.85E-06	2.33E-06
naphthalene	22.5	1.98E-03	5.52E-04	9.17E-04	5.97E-04	4.49E-04	9.51E-04	7.64E-04	2.56E-04	2.44E-04	1.96E-04	2.57E-04	2.54E-04	7.98E-04	1.13E-03	9.22E-04
phenanthrene	NV	1.64E-04	4.56E-05	7.57E-05	4.94E-05	3.71E-05	7.86E-05	6.31E-05	2.12E-05	2.01E-05	1.62E-05	2.12E-05	2.10E-05	6.59E-05	9.33E-05	7.62E-05
anthracene	NV	1.82E-05	5.08E-06	8.45E-06	5.51E-06	4.14E-06	8.76E-06	7.04E-06	2.36E-06	2.25E-06	1.81E-06	2.37E-06	2.34E-06	7.35E-06	1.04E-05	8.50E-06
fluorene	NV	7.98E-05	2.22E-05	3.69E-05	2.41E-05	1.81E-05	3.83E-05	3.08E-05	1.03E-05	9.83E-06	7.91E-06	1.04E-05	1.02E-05	3.22E-05	4.55E-05	3.72E-05
pyrene	NV	5.97E-05	1.66E-05	2.77E-05	1.80E-05	1.35E-05	2.87E-05	2.31E-05	7.74E-06	7.36E-06	5.93E-06	7.75E-06	7.67E-06	2.41E-05	3.41E-05	2.78E-05
thiophenes	NV	1.04E-06	2.89E-07	4.80E-07	3.13E-07	2.35E-07	4.98E-07	4.00E-07	1.34E-07	1.28E-07	1.03E-07	1.34E-07	1.33E-07	4.18E-07	5.91E-07	4.83E-07
benz(a)anthracene	NV	2.37E-06	6.61E-07	1.10E-06	7.16E-07	5.38E-07	1.14E-06	9.16E-07	3.08E-07	2.92E-07	2.35E-07	3.08E-07	3.05E-07	9.57E-07	1.35E-06	1.11E-06
acenaphthene	NV	1.54E-05	4.28E-06	7.12E-06	4.64E-06	3.49E-06	7.38E-06	5.93E-06	1.99E-06	1.89E-06	1.52E-06	1.99E-06	1.97E-06	6.20E-06	8.77E-06	7.16E-06
acenaphthylene	NV	5.58E-05	1.56E-05	2.59E-05	1.69E-05	1.27E-05	2.68E-05	2.16E-05	7.23E-06	6.88E-06	5.54E-06	7.25E-06	7.17E-06	2.25E-05	3.19E-05	2.60E-05
fluoranthene	NV	5.94E-05	1.66E-05	2.75E-05	1.79E-05	1.35E-05	2.85E-05	2.29E-05	7.70E-06	7.32E-06	5.89E-06	7.71E-06	7.63E-06	2.40E-05	3.39E-05	2.77E-05
benzo(b)fluoranthene	NV	1.10E-05	3.07E-06	5.11E-06	3.33E-06	2.50E-06	5.30E-06	4.26E-06	1.43E-06	1.36E-06	1.09E-06	1.43E-06	1.42E-06	4.45E-06	6.29	

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
dibenzo(a,h)anthracene	NV	3.47E-06	9.67E-07	1.61E-06	1.05E-06	7.87E-07	1.67E-06	1.34E-06	4.50E-07	4.28E-07	3.44E-07	4.50E-07	4.46E-07	1.40E-06	1.98E-06	1.62E-06
indeno(1,2,3-cd)pyrene	NV	2.21E-06	6.15E-07	1.02E-06	6.66E-07	5.01E-07	1.06E-06	8.52E-07	2.86E-07	2.72E-07	2.19E-07	2.86E-07	2.83E-07	8.90E-07	1.26E-06	1.03E-06
<b>Volatiles Organic Compounds</b>																
1,3-butadiene	10	2.56E-02	7.20E-03	1.24E-02	8.01E-03	5.81E-03	1.21E-02	9.77E-03	3.38E-03	2.99E-03	2.55E-03	3.39E-03	3.22E-03	1.03E-02	1.49E-02	1.21E-02
acetaldehyde	300	3.46E+00	9.70E-01	1.67E+00	1.08E+00	7.83E-01	1.63E+00	1.32E+00	4.56E-01	4.03E-01	3.43E-01	4.57E-01	4.34E-01	1.39E+00	2.01E+00	1.63E+00
acetone	11880	1.82E+00	5.11E-01	8.79E-01	5.68E-01	4.12E-01	8.58E-01	6.93E-01	2.40E-01	2.12E-01	1.81E-01	2.40E-01	2.28E-01	7.29E-01	1.06E+00	8.59E-01
acrolein	0.09	<b>6.12E-01</b>	<b>1.72E-01</b>	<b>2.96E-01</b>	<b>1.91E-01</b>	<b>1.39E-01</b>	<b>2.88E-01</b>	<b>2.33E-01</b>	8.07E-02	7.14E-02	6.08E-02	8.08E-02	7.68E-02	<b>2.45E-01</b>	<b>3.55E-01</b>	<b>2.89E-01</b>
aldehyde	NV	4.62E+00	1.30E+00	2.23E+00	1.44E+00	1.05E+00	2.18E+00	1.76E+00	6.10E-01	5.39E-01	4.59E-01	6.11E-01	5.80E-01	1.85E+00	2.68E+00	2.18E+00
benzene	23	2.27E-01	6.36E-02	1.09E-01	7.08E-02	5.13E-02	1.07E-01	8.64E-02	2.99E-02	2.64E-02	2.25E-02	2.99E-02	2.84E-02	9.08E-02	1.31E-01	1.07E-01
C10-C12 aliphatic	NV	4.98E-02	1.40E-02	2.40E-02	1.55E-02	1.13E-02	2.35E-02	1.90E-02	6.57E-03	5.81E-03	4.94E-03	6.57E-03	6.24E-03	2.00E-02	2.89E-02	2.35E-02
C12-C16 aliphatic	NV	2.88E-01	8.09E-02	1.39E-01	9.00E-02	6.53E-02	1.36E-01	1.10E-01	3.80E-02	3.36E-02	2.86E-02	3.81E-02	3.62E-02	1.16E-01	1.67E-01	1.36E-01
C12-C16 aromatic	NV	3.89E-03	1.09E-03	1.88E-03	1.21E-03	8.80E-04	1.83E-03	1.48E-03	5.13E-04	4.54E-04	3.86E-04	5.13E-04	4.88E-04	1.56E-03	2.26E-03	1.84E-03
C16-C21 aliphatic	NV	2.89E-01	8.10E-02	1.39E-01	9.01E-02	6.53E-02	1.36E-01	1.10E-01	3.81E-02	3.37E-02	2.87E-02	3.81E-02	3.62E-02	1.16E-01	1.67E-01	1.36E-01
C2-C6 aliphatic	920	1.37E+00	3.86E-01	6.63E-01	4.29E-01	3.11E-01	6.48E-01	5.24E-01	1.81E-01	1.60E-01	1.36E-01	1.81E-01	1.72E-01	5.51E-01	7.97E-01	6.49E-01
C6-C8 aliphatic	6100	9.40E-01	2.64E-01	4.54E-01	2.93E-01	2.13E-01	4.43E-01	3.58E-01	1.24E-01	1.10E-01	9.33E-02	1.24E-01	1.18E-01	3.77E-01	5.45E-01	4.44E-01
C8-C10 aliphatic	60000	1.32E-02	3.71E-03	6.39E-03	4.13E-03	3.00E-03	6.24E-03	5.04E-03	1.75E-03	1.54E-03	1.31E-03	1.75E-03	1.66E-03	5.30E-03	7.68E-03	6.25E-03
C8-C10 aromatic	400	7.44E-02	2.09E-02	3.59E-02	2.32E-02	1.68E-02	3.51E-02	2.84E-02	9.81E-03	8.68E-03	7.39E-03	9.83E-03	9.33E-03	2.98E-02	4.32E-02	3.51E-02
ethylbenzene	1000	3.89E-02	1.09E-02	1.88E-02	1.21E-02	8.80E-03	1.83E-02	1.48E-02	5.13E-03	4.54E-03	3.86E-03	5.13E-03	4.88E-03	1.56E-02	2.26E-02	1.84E-02
ethylene	40	7.08E-01	1.99E-01	3.42E-01	2.21E-01	1.60E-01	3.34E-01	2.70E-01	9.34E-02	8.26E-02	7.03E-02	9.35E-02	8.88E-02	2.84E-01	4.11E-01	3.34E-01
formaldehyde	9	1.84E+00	5.18E-01	8.91E-01	5.76E-01	4.18E-01	8.69E-01	7.03E-01	2.43E-01	2.15E-01	1.83E-01	2.44E-01	2.31E-01	7.39E-01	1.07E+00	8.71E-01
ketone	1000	1.04E+00	2.93E-01	5.03E-01	3.25E-01	2.36E-01	4.91E-01	3.97E-01	1.37E-01	1.22E-01	1.03E-01	1.38E-01	1.31E-01	4.18E-01	6.05E-01	4.92E-01
toluene	2000	3.29E-01	9.24E-02	1.59E-01	1.03E-01	7.45E-02	1.55E-01	1.25E-01	4.34E-02	3.84E-02	3.27E-02	4.35E-02	4.13E-02	1.32E-01	1.91E-01	1.55E-01
trimethylbenzene	220	9.43E-02	2.65E-02	4.55E-02	2.94E-02	2.13E-02	4.44E-02	3.59E-02	1.24E-02	1.10E-02	9.36E-03	1.25E-02	1.18E-02	3.78E-02	5.47E-02	4.45E-02
xylenes	730	2.61E-01	7.34E-02	1.26E-01	8.16E-02	5.92E-02	1.23E-01	9.96E-02	3.45E-02	3.05E-02	2.59E-02	3.45E-02	3.28E-02	1.05E-01	1.52E-01	1.23E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>  
 Carbon monoxide results are based on 8-hour averaging times.  
 Cabins = Receptor Locations 1 to 22  
 Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	120	1.95E+01	5.86E+00	5.85E+00	7.66E+00	1.07E+01	1.29E+01	1.49E+01	7.03E+00	4.18E+00	4.39E+00	4.31E+00	3.16E+01	No	No	
DPM	NV	1.40E+00	7.34E-01	6.25E-01	5.04E-01	7.29E-01	9.20E-01	2.56E+00	1.02E+00	5.31E-01	5.88E-01	5.64E-01	4.55E+00	No	No	
PM10	25	1.09E+01	3.18E+00	3.15E+00	3.98E+00	5.69E+00	6.60E+00	9.34E+00	3.04E+00	1.92E+00	2.09E+00	2.03E+00	1.48E+01	No	No	
PM2.5	27	2.77E+00	1.39E+00	1.18E+00	9.99E-01	1.44E+00	1.71E+00	7.11E+00	1.87E+00	1.05E+00	1.19E+00	1.14E+00	8.53E+00	No	No	
SO2	20	6.37E-02	5.04E-02	4.37E-02	3.59E-02	5.23E-02	5.78E-02	3.21E-01	7.75E-02	4.03E-02	4.69E-02	4.48E-02	4.55E-01	No	No	
CO	6000	4.33E+01	2.05E+01	1.65E+01	1.54E+01	2.25E+01	3.49E+01	8.21E+01	3.19E+01	2.28E+01	2.19E+01	2.40E+01	1.36E+02	No	No	
NOX	9000	3.84E+01	2.05E+01	1.75E+01	1.41E+01	2.01E+01	2.54E+01	7.20E+01	2.87E+01	1.48E+01	1.64E+01	1.58E+01	1.27E+02	No	No	
NO2	120	3.84E+01	2.05E+01	1.75E+01	1.41E+01	2.01E+01	2.54E+01	7.20E+01	2.87E+01	1.48E+01	1.64E+01	1.58E+01	9.17E+01	No	No	
<b>Metals</b>																
Aluminum	12	1.35E+00	4.07E-01	4.06E-01	5.31E-01	7.40E-01	8.94E-01	1.04E+00	4.88E-01	2.90E-01	3.05E-01	2.99E-01	2.19E+00	No	No	
Antimony	1	7.64E-05	2.30E-05	2.29E-05	3.00E-05	4.18E-05	5.05E-05	5.85E-05	2.75E-05	1.64E-05	1.72E-05	1.69E-05	1.24E-04	No	No	
Arsenic	0.015	2.17E-03	6.51E-04	6.50E-04	8.51E-04	1.19E-03	1.43E-03	1.66E-03	7.81E-04	4.65E-04	4.88E-04	4.78E-04	3.51E-03	No	No	
Barium	10	7.63E-03	2.29E-03	2.29E-03	3.00E-03	4.17E-03	5.05E-03	5.84E-03	2.75E-03	1.64E-03	1.72E-03	1.68E-03	1.24E-02	No	No	
Beryllium	0.01	1.42E-05	4.27E-06	4.26E-06	5.58E-06	7.77E-06	9.39E-06	1.09E-05	5.12E-06	3.05E-06	3.20E-06	3.13E-06	2.30E-05	No	No	
Bismuth	2.5	3.90E-06	1.17E-06	1.17E-06	1.53E-06	2.14E-06	2.58E-06	2.99E-06	1.41E-06	8.37E-07	8.78E-07	8.61E-07	6.33E-06	No	No	
Cadmium	0.025	8.43E-04	4.42E-04	3.76E-04	3.05E-04	4.40E-04	5.56E-04	1.54E-03	6.16E-04	3.19E-04	3.54E-04	3.39E-04	2.73E-03	No	No	
Calcium	NV	7.71E-01	2.32E-01	2.31E-01	3.03E-01	4.22E-01	5.10E-01	5.90E-01	2.78E-01	1.65E-01	1.74E-01	1.70E-01	1.25E+00	No	No	
Chromium	0.1	3.38E-03	1.05E-03	1.04E-03	1.32E-03	1.85E-03	2.24E-03	2.74E-03	1.27E-03	7.49E-04	7.89E-04	7.73E-04	5.47E-03	No	No	
Cobalt	0.1	5.23E-04	1.57E-04	1.57E-04	2.05E-04	2.86E-04	3.46E-04	4.00E-04	1.88E-04	1.12E-04	1.18E-04	1.15E-04	8.48E-04	No	No	
Copper	50	1.38E-03	4.16E-04	4.15E-04	5.43E-04	7.57E-04	9.15E-04	1.06E-03	4.98E-04	2.97E-04	3.11E-04	3.05E-04	2.24E-03	No	No	
Gold	1.25	1.51E-06	4.54E-07	4.53E-07	5.93E-07	8.27E-07	9.99E-07	1.16E-06	5.45E-07	3.24E-07	3.40E-07	3.33E-07	2.45E-06	No	No	
Iron	4	1.48E+00	4.46E-01	4.45E-01	5.82E-01	8.11E-01	9.81E-01	1.13E+00	5.35E-01	3.18E-01	3.34E-01	3.27E-01	2.40E+00	No	No	
Lead	0.5	3.73E-04	1.43E-04	1.32E-04	1.42E-04	2.00E-04	2.46E-04	4.35E-04	1.86E-04	1.03E-04	1.11E-04	1.08E-04	7.20E-04	No	No	
Lithium	20	6.30E-04	1.90E-04	1.89E-04	2.48E-04	3.45E-04	4.17E-04	4.83E-04	2.27E-04	1.35E-04	1.42E-04	1.39E-04	1.02E-03	No	No	
Magnesium	NV	4.09E-01	1.23E-01	1.23E-01	1.61E-01	2.24E-01	2.71E-01	3.13E-01	1.47E-01	8.77E-02	9.21E-02	9.03E-02	6.63E-01	No	No	
Manganese	0.1	1.54E-02	4.62E-03	4.61E-03	6.04E-03	8.41E-03	1.02E-02	1.18E-02	5.54E-03	3.30E-03	3.46E-03	3.39E-03	2.49E-02	No	No	
Molybdenum	120	2.34E-05	7.04E-06	7.02E-06	9.19E-06	1.28E-05	1.55E-05	1.79E-05	8.44E-06	5.02E-06	5.27E-06	5.17E-06	3.80E-05	No	No	
Nickel	0.06	1.36E-03	4.08E-04	4.07E-04	5.32E-04	7.42E-04	8.97E-04	1.04E-03	4.89E-04	2.91E-04	3.05E-04	2.99E-04	2.20E-03	No	No	
Potassium	NV	2.59E-01	7.78E-02	7.76E-02	1.02E-01	1.42E-01	1.71E-01	1.98E-01	9.33E-02	5.55E-02	5.83E-02	5.71E-02	4.20E-01	No	No	
Selenium	10	2.33E-05	7.02E-06	7.00E-06	9.17E-06	1.28E-05	1.54E-05	1.79E-05	8.42E-06	5.01E-06	5.26E-06	5.15E-06	3.79E-05	No	No	
Silver	1	5.74E-06	1.73E-06	1.72E-06	2.26E-06	3.14E-06	3.80E-06	4.40E-06	2.07E-06	1.23E-06	1.29E-06	1.27E-06	9.32E-06	No	No	
Sodium	NV	3.09E-01	9.29E-02	9.27E-02	1.21E-01	1.69E-01	2.05E-01	2.37E-01	1.11E-01	6.63E-02	6.96E-02	6.82E-02	5.01E-01	No	No	
Strontium	120	4.13E-03	1.24E-03	1.24E-03	1.62E-03	2.26E-03	2.73E-03	3.16E-03	1.49E-03	8.86E-04	9.30E-04	9.12E-04	6.70E-03	No	No	
Thallium	0.5	5.96E-06	1.79E-06	1.79E-06	2.34E-06	3.26E-06	3.95E-06	4.57E-06	2.15E-06	1.28E-06	1.34E-06	1.32E-06	9.67E-06	No	No	
Tin	10	2.10E-05	6.32E-06	6.31E-06	8.26E-06	1.15E-05	1.39E-05	1.61E-05	7.58E-06	4.51E-06	4.73E-06	4.64E-06	3.41E-05	No	No	
Titanium	120	6.80E-02	2.04E-02	2.04E-02	2.67E-02	3.72E-02	4.50E-02	5.20E-02	2.45E-02	1.46E-02	1.53E-02	1.50E-02	1.10E-01	No	No	
Uranium	0.1	1.90E-05	5.70E-06	5.69E-06	7.45E-06	1.04E-05	1.26E-05	1.45E-05	6.84E-06	4.07E-06	4.27E-06	4.19E-06	3.08E-05	No	No	
Vanadium	0.8	2.50E-03	7.52E-04	7.50E-04	9.82E-04	1.37E-03	1.65E-03	1.91E-03	9.02E-04	5.36E-04	5.63E-04	5.52E-04	4.06E-03	No	No	
Yttrium	NV	1.85E-04	5.55E-05	5.54E-05	7.25E-05	1.01E-04	1.22E-04	1.41E-04	6.65E-05	3.96E-05	4.16E-05	4.07E-05	2.99E-04	No	No	
Zinc	120	2.93E-03	1.10E-03	1.02E-03	1.12E-03	1.58E-03	1.94E-03	3.29E-03	1.42E-03	7.90E-04	8.51E-04	8.26E-04	5.41E-03	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	1.54E-06	8.07E-07	6.87E-07	5.55E-07	8.03E-07	1.01E-06	2.82E-06	1.13E-06	5.84E-07	6.47E-07	6.20E-07	5.00E-06	No	No	
naphthalene	22.5	6.08E-04	3.19E-04	2.72E-04	2.20E-04	3.18E-04	4.01E-04	1.12E-03	4.46E-04	2.31E-04	2.56E-04	2.45E-04	1.98E-03	No	No	
phenanthrene	NV	5.02E-05	2.64E-05	2.25E-05	1.81E-05	2.62E-05	3.31E-05	9.22E-05	3.68E-05	1.91E-05	2.11E-05	2.03E-05	1.64E-04	No	No	
anthracene	NV	5.60E-06	2.94E-06	2.51E-06	2.02E-06	2.93E-06	3.69E-06	1.03E-05	4.11E-06	2.13E-06	2.36E-06	2.26E-06	1.82E-05	No	No	
fluorene	NV	2.45E-05	1.29E-05	1.10E-05	8.85E-06	1.28E-05	1.61E-05	4.50E-05	1.80E-05	9.31E-06	1.03E-05	9.89E-06	7.98E-05	No	No	
pyrene	NV	1.84E-05	9.64E-06	8.21E-06	6.63E-06	9.59E-06	1.21E-05	3.37E-05	1.35E-05	6.97E-06	7.72E-06	7.41E-06	5.97E-05	No	No	
thiophenes	NV	3.18E-07	1.67E-07	1.42E-07	1.15E-07	1.66E-07	2.10E-07	5.85E-07	2.33E-07	1.21E-07	1.34E-07	1.29E-07	1.04E-06	No	No	
benz(a)anthracene	NV	7.29E-07	3.83E-07	3.26E-07	2.63E-07	3.81E-07	4.80E-07	1.34E-06	5.34E-07	2.77E-07	3.07E-07	2.94E-07	2.37E-06	No	No	
acenaphthene	NV	4.72E-06	2.48E-06	2.11E-06	1.71E-06	2.47E-06	3.11E-06	8.67E-06	3.46E-06	1.79E-06	1.99E-06	1.91E-06	1.54E-05	No	No	
acenaphthylene	NV	1.72E-05	9.01E-06	7.67E-06	6.19E-06	8.96E-06	1.13E-05	3.15E-05	1.26E-05	6.52E-06	7.22E-06	6.92E-06	5.58E-05	No	No	
fluoranthene	NV	1.82E-05	9.59E-06	8.16E-06	6.59E-06	9.53E-06	1.20E-05	3.35E-05	1.34E-05	6.93E-06	7.68E-06	7.37E-06	5.94E-05	No	No	
benzo(b)fluoranthene	NV	3.39E-06	1.78E-06	1.52E-06	1.22E-06	1.77E-06	2.23E-06	6.22E-06	2.48E-06	1.29E-06	1.43E-06	1.37E-06	1.10E-05	No	No	
benzo(g,h,i)perylene	NV	6.44E-08	3.38E-08	2.88E-08	2.33E-08	3.36E-08	4.24E-08	1.18E-07	4.72E-08	2.45E-08	2.71E-08	2.60E-08	2.10E-07	No	No	
benzo(k)fluoranthene	NV	3.85E-07	2.02E-07	1.72E-07	1.39E-07	2.01E-07	2.54E-07	7.08E-07	2.82E-07	1.46E-07	1.62E-07	1.56E-07	1.25E-06	No	No	
chrysene	NV	8.20E-07	4.31E-07	3.67E-07	2.96E-07	4.28E-07	5.40E-07	1.51E-06	6.01E-07	3.11E-07	3.45E-07	3.31E-07	2.67E-06	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3			
dibenzo(a,h)anthracene	NV	1.07E-06	5.60E-07	4.77E-07	3.85E-07	5.57E-07	7.03E-07	1.96E-06	7.82E-07	4.05E-07	4.49E-07	4.30E-07	3.47E-06	No	No
indeno(1,2,3-cd)pyrene	NV	6.78E-07	3.56E-07	3.03E-07	2.45E-07	3.54E-07	4.47E-07	1.25E-06	4.97E-07	2.58E-07	2.85E-07	2.74E-07	2.21E-06	No	No
<b>Volatiles Organic Compounds</b>															
1,3-butadiene	10	7.73E-03	4.17E-03	3.55E-03	2.85E-03	4.06E-03	5.12E-03	1.46E-02	5.73E-03	2.98E-03	3.32E-03	3.15E-03	2.56E-02	No	No
acetaldehyde	300	1.04E+00	5.62E-01	4.79E-01	3.84E-01	5.47E-01	6.91E-01	1.97E+00	7.72E-01	4.02E-01	4.47E-01	4.25E-01	3.46E+00	No	No
acetone	11880	5.49E-01	2.96E-01	2.52E-01	2.02E-01	2.88E-01	3.64E-01	1.04E+00	4.07E-01	2.11E-01	2.35E-01	2.24E-01	1.82E+00	No	No
acrolein	0.09	<b>1.85E-01</b>	<b>9.95E-02</b>	8.48E-02	6.80E-02	<b>9.69E-02</b>	<b>1.22E-01</b>	<b>3.50E-01</b>	<b>1.37E-01</b>	7.11E-02	7.92E-02	7.53E-02	<b>6.12E-01</b>	Yes	Yes
aldehyde	NV	1.39E+00	7.52E-01	6.40E-01	5.14E-01	7.32E-01	9.24E-01	2.64E+00	1.03E+00	5.37E-01	5.98E-01	5.69E-01	4.62E+00	No	No
benzene	23	6.83E-02	3.68E-02	3.14E-02	2.52E-02	3.59E-02	4.53E-02	1.29E-01	5.06E-02	2.63E-02	2.93E-02	2.79E-02	2.27E-01	No	No
C10-C12 aliphatic	NV	1.50E-02	8.09E-03	6.89E-03	5.53E-03	7.88E-03	9.95E-03	2.84E-02	1.11E-02	5.78E-03	6.44E-03	6.12E-03	4.98E-02	No	No
C12-C16 aliphatic	NV	8.69E-02	4.69E-02	3.99E-02	3.20E-02	4.56E-02	5.76E-02	1.65E-01	6.44E-02	3.35E-02	3.73E-02	3.55E-02	2.88E-01	No	No
C12-C16 aromatic	NV	1.17E-03	6.32E-04	5.38E-04	4.32E-04	6.15E-04	7.77E-04	2.22E-03	8.69E-04	4.52E-04	5.03E-04	4.78E-04	3.89E-03	No	No
C16-C21 aliphatic	NV	8.70E-02	4.69E-02	4.00E-02	3.21E-02	4.57E-02	5.77E-02	1.65E-01	6.45E-02	3.35E-02	3.73E-02	3.55E-02	2.89E-01	No	No
C2-C6 aliphatic	920	4.14E-01	2.23E-01	1.90E-01	1.53E-01	2.17E-01	2.75E-01	7.85E-01	3.07E-01	1.60E-01	1.78E-01	1.69E-01	1.37E+00	No	No
C6-C8 aliphatic	6100	2.83E-01	1.53E-01	1.30E-01	1.04E-01	1.49E-01	1.88E-01	5.37E-01	2.10E-01	1.09E-01	1.22E-01	1.16E-01	9.40E-01	No	No
C8-C10 aliphatic	60000	3.99E-03	2.15E-03	1.83E-03	1.47E-03	2.09E-03	2.64E-03	7.56E-03	2.96E-03	1.54E-03	1.71E-03	1.63E-03	1.32E-02	No	No
C8-C10 aromatic	400	2.24E-02	1.21E-02	1.03E-02	8.27E-03	1.18E-02	1.49E-02	4.25E-02	1.66E-02	8.65E-03	9.63E-03	9.15E-03	7.44E-02	No	No
ethylbenzene	1000	1.17E-02	6.32E-03	5.38E-03	4.32E-03	6.15E-03	7.77E-03	2.22E-02	8.69E-03	4.52E-03	5.03E-03	4.78E-03	3.89E-02	No	No
ethylene	40	2.13E-01	1.15E-01	9.80E-02	7.87E-02	1.12E-01	1.41E-01	4.04E-01	1.58E-01	8.23E-02	9.16E-02	8.71E-02	7.08E-01	No	No
formaldehyde	9	5.56E-01	3.00E-01	2.55E-01	2.05E-01	2.92E-01	3.69E-01	1.05E+00	4.12E-01	2.14E-01	2.39E-01	2.27E-01	1.84E+00	No	No
ketone	1000	3.14E-01	1.69E-01	1.44E-01	1.16E-01	1.65E-01	2.08E-01	5.95E-01	2.33E-01	1.21E-01	1.35E-01	1.28E-01	1.04E+00	No	No
toluene	2000	9.92E-02	5.35E-02	4.56E-02	3.66E-02	5.21E-02	6.58E-02	1.88E-01	7.35E-02	3.83E-02	4.26E-02	4.05E-02	3.29E-01	No	No
trimethylbenzene	220	2.84E-02	1.53E-02	1.31E-02	1.05E-02	1.49E-02	1.88E-02	5.39E-02	2.11E-02	1.10E-02	1.22E-02	1.16E-02	9.43E-02	No	No
xylenes	730	7.88E-02	4.25E-02	3.62E-02	2.90E-02	4.14E-02	5.22E-02	1.49E-01	5.84E-02	3.04E-02	3.38E-02	3.22E-02	2.61E-01	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>  
 Carbon monoxide results are based on 8-hour averaging times.  
 Cabins = Receptor Locations 1 to 22  
 Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	120	3.62E+01	1.16E+01	2.35E+01	2.44E+01	2.55E+01	2.06E+01	6.44E+01	3.53E+00	4.17E+00	3.76E+00	3.53E+00	3.83E+00	2.60E+01	1.39E+01	1.45E+01
DPM	NV	4.87E+00	1.58E+00	2.20E+00	1.50E+00	1.24E+00	2.91E+00	3.01E+00	6.48E-01	5.87E-01	5.36E-01	6.49E-01	6.03E-01	2.10E+00	3.12E+00	2.79E+00
PM10	25	1.97E+01	6.65E+00	1.22E+01	1.25E+01	1.29E+01	1.34E+01	<b>3.22E+01</b>	2.22E+00	2.60E+00	2.35E+00	2.22E+00	2.42E+00	1.46E+01	1.01E+01	9.86E+00
PM2.5	27	9.45E+00	3.46E+00	5.01E+00	3.80E+00	2.88E+00	6.58E+00	7.30E+00	1.27E+00	1.17E+00	1.13E+00	1.27E+00	1.16E+00	4.77E+00	6.64E+00	5.83E+00
SO2	20	4.77E-01	1.40E-01	2.14E-01	1.64E-01	1.19E-01	2.45E-01	1.55E-01	4.91E-02	4.76E-02	4.03E-02	4.91E-02	4.31E-02	1.44E-01	2.69E-01	2.26E-01
CO	6000	1.36E+02	5.87E+01	5.23E+01	5.24E+01	5.74E+01	7.04E+01	9.51E+01	1.71E+01	1.61E+01	1.29E+01	1.71E+01	1.64E+01	7.47E+01	5.95E+01	5.51E+01
NOX	9000	1.36E+02	4.42E+01	6.40E+01	4.34E+01	3.50E+01	8.49E+01	8.62E+01	1.85E+01	1.63E+01	1.50E+01	1.85E+01	1.70E+01	5.84E+01	8.74E+01	7.81E+01
NO2	120	9.26E+01	4.42E+01	6.40E+01	4.34E+01	3.50E+01	8.49E+01	8.62E+01	1.85E+01	1.63E+01	1.50E+01	1.85E+01	1.70E+01	5.84E+01	8.74E+01	7.81E+01
<b>Metals</b>																
Aluminum	12	2.51E+00	8.02E-01	1.63E+00	1.69E+00	1.76E+00	1.43E+00	4.46E+00	2.45E-01	2.89E-01	2.61E-01	2.45E-01	2.65E-01	1.80E+00	9.67E-01	1.01E+00
Antimony	1	1.42E-04	4.53E-05	9.22E-05	9.54E-05	9.97E-05	8.07E-05	2.52E-04	1.38E-05	1.63E-05	1.47E-05	1.38E-05	1.50E-05	1.02E-04	5.46E-05	5.68E-05
Arsenic	0.015	4.02E-03	1.28E-03	2.61E-03	2.71E-03	2.83E-03	2.29E-03	7.15E-03	3.92E-04	4.64E-04	4.17E-04	3.92E-04	4.25E-04	2.89E-03	1.55E-03	1.61E-03
Barium	10	1.42E-02	4.52E-03	9.21E-03	9.53E-03	9.95E-03	8.06E-03	2.52E-02	1.38E-03	1.63E-03	1.47E-03	1.38E-03	1.50E-03	1.02E-02	5.45E-03	5.68E-03
Beryllium	0.01	2.63E-05	8.42E-06	1.71E-05	1.77E-05	1.85E-05	1.50E-05	4.69E-05	2.57E-06	3.04E-06	2.74E-06	2.57E-06	2.79E-06	1.89E-05	1.01E-05	1.06E-05
Bismuth	2.5	7.24E-06	2.31E-06	4.71E-06	4.87E-06	5.09E-06	4.12E-06	1.29E-05	7.05E-07	8.35E-07	7.52E-07	7.06E-07	7.66E-07	5.20E-06	2.79E-06	2.90E-06
Cadmium	0.025	2.93E-03	9.49E-04	1.33E-03	9.05E-04	7.53E-04	1.75E-03	1.82E-03	3.90E-04	3.53E-04	3.22E-04	3.90E-04	3.63E-04	1.26E-03	1.87E-03	1.68E-03
Calcium	NV	1.43E+00	4.57E-01	9.31E-01	9.63E-01	1.01E+00	8.15E-01	2.55E+00	1.39E-01	1.65E-01	1.49E-01	1.40E-01	1.51E-01	1.03E+00	5.51E-01	5.74E-01
Chromium	0.1	6.51E-03	2.08E-03	4.14E-03	4.20E-03	4.36E-03	3.72E-03	1.10E-02	6.51E-04	7.53E-04	6.79E-04	6.52E-04	6.97E-04	4.53E-03	2.63E-03	2.69E-03
Cobalt	0.1	9.70E-04	3.10E-04	6.31E-04	6.53E-04	6.82E-04	5.52E-04	1.73E-03	9.45E-05	1.12E-04	1.01E-04	9.46E-05	1.03E-04	6.96E-04	3.73E-04	3.89E-04
Copper	50	2.57E-03	8.20E-04	1.67E-03	1.73E-03	1.80E-03	1.46E-03	4.57E-03	2.50E-04	2.96E-04	2.66E-04	2.50E-04	2.71E-04	1.84E-03	9.88E-04	1.03E-03
Gold	1.25	2.80E-06	8.96E-07	1.82E-06	1.89E-06	1.97E-06	1.60E-06	4.99E-06	2.73E-07	3.23E-07	2.91E-07	2.73E-07	2.96E-07	2.01E-06	1.08E-06	1.12E-06
Iron	4	2.75E+00	8.79E-01	1.79E+00	1.85E+00	1.93E+00	1.57E+00	<b>4.90E+00</b>	2.68E-01	3.17E-01	2.86E-01	2.68E-01	2.91E-01	1.97E+00	1.06E+00	1.10E+00
Lead	0.5	9.19E-04	2.96E-04	5.02E-04	4.41E-04	4.28E-04	5.37E-04	1.07E-03	1.07E-04	1.09E-04	9.84E-05	1.07E-04	1.06E-04	5.20E-04	4.78E-04	4.52E-04
Lithium	20	1.17E-03	3.74E-04	7.61E-04	7.88E-04	8.23E-04	6.67E-04	2.08E-03	1.14E-04	1.35E-04	1.22E-04	1.14E-04	1.24E-04	8.40E-04	4.50E-04	4.69E-04
Magnesium	NV	7.59E-01	2.43E-01	4.94E-01	5.11E-01	5.34E-01	4.32E-01	1.35E+00	7.39E-02	8.75E-02	7.88E-02	7.40E-02	8.03E-02	5.45E-01	2.92E-01	3.04E-01
Manganese	0.1	2.85E-02	9.12E-03	1.86E-02	1.92E-02	2.01E-02	1.62E-02	5.08E-02	2.78E-03	3.29E-03	2.96E-03	2.78E-03	3.02E-03	2.05E-02	1.10E-02	1.14E-02
Molybdenum	120	4.34E-05	1.39E-05	2.83E-05	2.92E-05	3.05E-05	2.47E-05	7.73E-05	4.23E-06	5.01E-06	4.51E-06	4.24E-06	4.59E-06	3.12E-05	1.67E-05	1.74E-05
Nickel	0.06	2.52E-03	8.04E-04	1.64E-03	1.69E-03	1.77E-03	1.43E-03	4.48E-03	2.45E-04	2.90E-04	2.61E-04	2.45E-04	2.66E-04	1.81E-03	9.69E-04	1.01E-03
Potassium	NV	4.80E-01	1.53E-01	3.12E-01	3.23E-01	3.38E-01	2.74E-01	8.55E-01	4.68E-02	5.54E-02	4.99E-02	4.68E-02	5.08E-02	3.45E-01	1.85E-01	1.93E-01
Selenium	10	4.33E-05	1.38E-05	2.82E-05	2.92E-05	3.05E-05	2.47E-05	7.71E-05	4.22E-06	5.00E-06	4.50E-06	4.23E-06	4.58E-06	3.11E-05	1.67E-05	1.74E-05
Silver	1	1.07E-05	3.41E-06	6.94E-06	7.18E-06	7.50E-06	6.07E-06	1.90E-05	1.04E-06	1.23E-06	1.11E-06	1.04E-06	1.13E-06	7.65E-06	4.10E-06	4.27E-06
Sodium	NV	5.74E-01	1.83E-01	3.73E-01	3.86E-01	4.03E-01	3.27E-01	1.02E+00	5.59E-02	6.61E-02	5.95E-02	5.59E-02	6.06E-02	4.12E-01	2.21E-01	2.30E-01
Strontium	120	7.67E-03	2.45E-03	4.99E-03	5.16E-03	5.39E-03	4.37E-03	1.36E-02	7.47E-04	8.84E-04	7.96E-04	7.48E-04	8.10E-04	5.50E-03	2.95E-03	3.07E-03
Thallium	0.5	1.11E-05	3.54E-06	7.20E-06	7.45E-06	7.78E-06	6.30E-06	1.97E-05	1.08E-06	1.28E-06	1.15E-06	1.08E-06	1.17E-06	7.94E-06	4.26E-06	4.44E-06
Tin	10	3.90E-05	1.25E-05	2.54E-05	2.63E-05	2.74E-05	2.22E-05	6.95E-05	3.80E-06	4.50E-06	4.05E-06	3.81E-06	4.13E-06	2.80E-05	1.50E-05	1.56E-05
Titanium	120	1.26E-01	4.03E-02	8.21E-02	8.49E-02	8.87E-02	7.19E-02	2.25E-01	1.23E-02	1.46E-02	1.31E-02	1.23E-02	1.33E-02	9.06E-02	4.86E-02	5.06E-02
Uranium	0.1	3.52E-05	1.13E-05	2.29E-05	2.37E-05	2.48E-05	2.01E-05	6.27E-05	3.43E-06	4.06E-06	3.66E-06	3.43E-06	3.72E-06	2.53E-05	1.36E-05	1.41E-05
Vanadium	0.8	4.64E-03	1.48E-03	3.02E-03	3.12E-03	3.26E-03	2.64E-03	8.26E-03	4.52E-04	5.35E-04	4.82E-04	4.53E-04	4.91E-04	3.33E-03	1.79E-03	1.86E-03
Yttrium	NV	3.43E-04	1.09E-04	2.23E-04	2.31E-04	2.41E-04	1.95E-04	6.10E-04	3.34E-05	3.95E-05	3.56E-05	3.34E-05	3.62E-05	2.46E-04	1.32E-04	1.37E-04
Zinc	120	7.03E-03	2.26E-03	3.90E-03	3.49E-03	3.42E-03	4.10E-03	8.55E-03	8.07E-04	8.28E-04	7.51E-04	8.08E-04	8.05E-04	4.07E-03	3.58E-03	3.40E-03

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	5.36E-06	1.74E-06	2.43E-06	1.65E-06	1.37E-06	3.20E-06	3.31E-06	7.13E-07	6.45E-07	5.89E-07	7.14E-07	6.63E-07	2.31E-06	3.43E-06	3.07E-06
naphthalene	22.5	2.12E-03	6.87E-04	9.60E-04	6.52E-04	5.41E-04	1.27E-03	1.31E-03	2.82E-04	2.55E-04	2.33E-04	2.83E-04	2.62E-04	9.13E-04	1.36E-03	1.21E-03
phenanthrene	NV	1.75E-04	5.67E-05	7.93E-05	5.38E-05	4.47E-05	1.05E-04	1.08E-04	2.33E-05	2.11E-05	1.93E-05	2.33E-05	2.17E-05	7.54E-05	1.12E-04	1.00E-04
anthracene	NV	1.95E-05	6.33E-06	8.84E-06	6.01E-06	4.99E-06	1.17E-05	1.21E-05	2.60E-06	2.35E-06	2.15E-06	2.60E-06	2.42E-06	8.41E-06	1.25E-05	1.12E-05
fluorene	NV	8.54E-05	2.77E-05	3.87E-05	2.63E-05	2.18E-05	5.10E-05	5.27E-05	1.14E-05	1.03E-05	9.40E-06	1.14E-05	1.06E-05	3.68E-05	5.47E-05	4.89E-05
pyrene	NV	6.40E-05	2.07E-05	2.90E-05	1.97E-05	1.63E-05	3.82E-05	3.95E-05	8.52E-06	7.71E-06	7.04E-06	8.53E-06	7.92E-06	2.76E-05	4.10E-05	3.66E-05
thiophenes	NV	1.11E-06	3.59E-07	5.02E-07	3.41E-07	2.83E-07	6.63E-07	6.85E-07	1.48E-07	1.34E-07	1.22E-07	1.48E-07	1.37E-07	4.78E-07	7.10E-07	6.35E-07
benz(a)anthracene	NV	2.54E-06	8.23E-07	1.15E-06	7.82E-07	6.49E-07	1.52E-06	1.57E-06	3.38E-07	3.06E-07	2.80E-07	3.39E-07	3.15E-07	1.09E-06	1.63E-06	1.46E-06
acenaphthene	NV	1.65E-05	5.33E-06	7.45E-06	5.06E-06	4.20E-06	9.83E-06	1.02E-05	2.19E-06	1.98E-06	1.81E-06	2.19E-06	2.04E-06	7.09E-06	1.05E-05	9.43E-06
acenaphthylene	NV	5.98E-05	1.94E-05	2.71E-05	1.84E-05	1.53E-05	3.57E-05	3.69E-05	7.96E-06	7.20E-06	6.58E-06	7.97E-06	7.40E-06	2.58E-05	3.83E-05	3.42E-05
fluoranthene	NV	6.36E-05	2.06E-05	2.88E-05	1.96E-05	1.62E-05	3.80E-05	3.93E-05	8.47E-06	7.67E-06	7.00E-06	8.48E-06	7.88E-06	2.74E-05	4.07E-05	3.64E-05
benzo(b)fluoranthene	NV	1.18E-05	3.83E-06	5.35E-06	3.63E-06	3.02E-06	7.06E-06	7.29E-06	1.57E-06	1.42E-06	1.30E-06	1.57E-06	1.46E-06	5.09E-06	7.56E-06	6.76E-06
benzo(g,h,i)perylene	NV	2.24E-07	7.27E-08	1.02E-07	6.90E-08	5.73E-08	1.34E-07	1.39E-07	2.99E-08	2.70E-08	2.47E-08	2.99E-08	2.78E-08	9.67E-08	1.44E-07	1.28E-07
benzo(k)fluoranthene	NV	1.34E-06	4.35E-07	6.08E-07	4.13E-07	3.43E-07	8.03E-07	8.29E-07	1.79E-07	1.62E-07	1.48E-07	1.79E-07	1.66E-07	5.79E-07	8.60E-07	7.69E-07
chrysene	NV	2.86E-06	9.25E-07	1.29E-06	8.79E-07	7.30E-07	1.71E-06	1.76E-06	3.80E-07	3.44E-07	3.14E-07	3.81E-07	3.54E-07	1.23E-06	1.83E-06	1.64E-06
dibenzo(a,h)anthracene	NV	3.72E-06	1.20E-06	1.68E-06	1.14E-06	9.49E-07	2.22E-06	2.29E-06	4.95E-07	4.48E-07	4.09E-07	4.96E-07	4.60E-07	1.60E-06	2.38E-06	2.13E-06
indeno(1,2,3-cd)pyrene	NV	2.36E-06	7.66E-07	1.07E-06	7.27E-07	6.04E-07	1.41E-06	1.46E-06	3.15E-07	2.85E-07	2.60E-07	3.15E-07	2.93E-07	1.02E-06	1.51E-06	1.35E-06
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	2.75E-02	8.96E-03	1.30E-02	8.74E-03	7.00E-03	1.73E-02	1.75E-02	3.66E-03	3.25E-03	3.03E-03	3.66E-03	3.44E-03	1.18E-02	1.78E-02	1.59E-02
acetaldehyde	300	3.70E+00	1.21E+00	1.75E+00	1.18E+00	9.44E-01	2.33E+00	2.37E+00	4.93E-01	4.38E-01	4.09E-01	4.94E-01	4.64E-01	1.58E+00	2.40E+00	2.14E+00
acetone	11880	1.95E+00	6.36E-01	9.20E-01	6.20E-01	4.97E-01	1.23E+00	1.25E+00	2.59E-01	2.31E-01	2.15E-01	2.60E-01	2.44E-01	8.34E-01	1.26E+00	1.13E+00
acrolein	0.09	<b>6.56E-01</b>	<b>2.14E-01</b>	<b>3.09E-01</b>	<b>2.09E-01</b>	<b>1.67E-01</b>	<b>4.12E-01</b>	<b>4.19E-01</b>	8.73E-02	7.76E-02	7.24E-02	8.74E-02	8.21E-02	<b>2.81E-01</b>	<b>4.25E-01</b>	<b>3.79E-01</b>
aldehyde	NV	4.95E+00	1.62E+00	2.34E+00	1.58E+00	1.26E+00	3.12E+00	3.16E+00	6.59E-01	5.86E-01	5.47E-01	6.60E-01	6.20E-01	2.12E+00	3.21E+00	2.86E+00
benzene	23	2.43E-01	7.92E-02	1.15E-01	7.73E-02	6.19E-02	1.53E-01	1.55E-01	3.23E-02	2.87E-02	2.68E-02	3.24E-02	3.04E-02	1.04E-01	1.57E-01	1.40E-01
C10-C12 aliphatic	NV	5.33E-02	1.74E-02	2.52E-02	1.70E-02	1.36E-02	3.35E-02	3.41E-02	7.10E-03	6.31E-03	5.89E-03	7.11E-03	6.68E-03	2.28E-02	3.46E-02	3.08E-02
C12-C16 aliphatic	NV	3.09E-01	1.01E-01	1.46E-01	9.83E-02	7.87E-02	1.94E-01	1.97E-01	4.11E-02	3.65E-02	3.41E-02	4.11E-02	3.87E-02	1.32E-01	2.00E-01	1.79E-01
C12-C16 aromatic	NV	4.16E-03	1.36E-03	1.97E-03	1.33E-03	1.06E-03	2.62E-03	2.66E-03	5.54E-04	4.93E-04	4.60E-04	5.55E-04	5.22E-04	1.78E-03	2.70E-03	2.41E-03
C16-C21 aliphatic	NV	3.09E-01	1.01E-01	1.46E-01	9.84E-02	7.88E-02	1.95E-01	1.98E-01	4.12E-02	3.66E-02	3.41E-02	4.12E-02	3.87E-02	1.32E-01	2.01E-01	1.79E-01
C2-C6 aliphatic	920	1.47E+00	4.80E-01	6.94E-01	4.68E-01	3.75E-01	9.26E-01	9.40E-01	1.96E-01	1.74E-01	1.62E-01	1.96E-01	1.84E-01	6.30E-01	9.55E-01	8.51E-01
C6-C8 aliphatic	6100	1.01E+00	3.28E-01	4.75E-01	3.20E-01	2.56E-01	6.33E-01	6.43E-01	1.34E-01	1.19E-01	1.11E-01	1.34E-01	1.26E-01	4.31E-01	6.53E-01	5.82E-01
C8-C10 aliphatic	60000	1.42E-02	4.63E-03	6.69E-03	4.51E-03	3.61E-03	8.92E-03	9.06E-03	1.89E-03	1.68E-03	1.56E-03	1.89E-03	1.78E-03	6.06E-03	9.20E-03	8.20E-03
C8-C10 aromatic	400	7.97E-02	2.60E-02	3.76E-02	2.54E-02	2.03E-02	5.01E-02	5.09E-02	1.06E-02	9.43E-03	8.80E-03	1.06E-02	9.98E-03	3.41E-02	5.17E-02	4.61E-02
ethylbenzene	1000	4.16E-02	1.36E-02	1.97E-02	1.33E-02	1.06E-02	2.62E-02	2.66E-02	5.54E-03	4.93E-03	4.60E-03	5.55E-03	5.22E-03	1.78E-02	2.70E-02	2.41E-02
ethylene	40	7.59E-01	2.47E-01	3.58E-01	2.41E-01	1.93E-01	4.77E-01	4.85E-01	1.01E-01	8.97E-02	8.37E-02	1.01E-01	9.50E-02	3.24E-01	4.92E-01	4.39E-01
formaldehyde	9	1.98E+00	6.45E-01	9.32E-01	6.29E-01	5.03E-01	1.24E+00	1.26E+00	2.63E-01	2.34E-01	2.18E-01	2.63E-01	2.47E-01	8.45E-01	1.28E+00	1.14E+00
ketone	1000	1.12E+00	3.64E-01	5.27E-01	3.55E-01	2.84E-01	7.02E-01	7.13E-01	1.49E-01	1.32E-01	1.23E-01	1.49E-01	1.40E-01	4.78E-01	7.24E-01	6.45E-01
toluene	2000	3.53E-01	1.15E-01	1.66E-01	1.12E-01	8.98E-02	2.22E-01	2.25E-01	4.69E-02	4.17E-02	3.89E-02	4.70E-02	4.42E-02	1.51E-01	2.29E-01	2.04E-01
trimethylbenzene	220	1.01E-01	3.30E-02	4.77E-02	3.22E-02	2.57E-02	6.35E-02	6.45E-02	1.34E-02	1.19E-02	1.11E-02	1.35E-02	1.26E-02	4.32E-02	6.55E-02	5.84E-02
xylenes	730	2.80E-01	9.14E-02	1.32E-01	8.91E-02	7.13E-02	1.76E-01	1.79E-01	3.73E-02	3.31E-02	3.09E-02	3.73E-02	3.51E-02	1.20E-01	1.82E-01	1.62E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3			
<b>Criteria Pollutants</b>															
SPM	120	4.68E+00	3.19E+00	2.99E+00	2.88E+00	4.20E+00	5.30E+00	2.00E+01	7.49E+00	3.86E+00	4.48E+00	4.21E+00	6.44E+01	No	No
DPM	NV	8.59E-01	6.63E-01	6.07E-01	5.32E-01	7.50E-01	8.27E-01	3.47E+00	1.30E+00	6.39E-01	7.36E-01	7.08E-01	4.87E+00	No	No
PM10	25	3.09E+00	2.16E+00	2.00E+00	1.86E+00	2.72E+00	3.32E+00	1.39E+01	4.37E+00	2.34E+00	2.82E+00	2.67E+00	<b>3.22E+01</b>	Yes	<b>Yes</b>
PM2.5	27	1.74E+00	1.28E+00	1.17E+00	1.03E+00	1.49E+00	1.70E+00	8.59E+00	2.39E+00	1.23E+00	1.46E+00	1.39E+00	9.45E+00	No	No
SO2	20	6.57E-02	4.80E-02	4.35E-02	3.74E-02	5.50E-02	6.17E-02	3.56E-01	8.79E-02	4.50E-02	5.30E-02	5.08E-02	4.77E-01	No	No
CO	6000	1.99E+01	1.42E+01	1.28E+01	1.07E+01	1.51E+01	1.57E+01	1.12E+02	4.42E+01	2.48E+01	2.55E+01	2.56E+01	1.36E+02	No	No
NOX	9000	2.41E+01	1.86E+01	1.71E+01	1.49E+01	2.11E+01	2.32E+01	9.73E+01	3.63E+01	1.79E+01	2.06E+01	1.98E+01	1.36E+02	No	No
NO2	120	2.41E+01	1.86E+01	1.71E+01	1.49E+01	2.11E+01	2.32E+01	8.87E+01	3.63E+01	1.79E+01	2.06E+01	1.98E+01	9.26E+01	No	No
<b>Metals</b>															
Aluminum	12	3.24E-01	2.21E-01	2.07E-01	2.00E-01	2.91E-01	3.67E-01	1.39E+00	5.20E-01	2.68E-01	3.11E-01	2.92E-01	4.46E+00	No	No
Antimony	1	1.83E-05	1.25E-05	1.17E-05	1.13E-05	1.64E-05	2.07E-05	7.84E-05	2.93E-05	1.51E-05	1.75E-05	1.65E-05	2.52E-04	No	No
Arsenic	0.015	5.19E-04	3.54E-04	3.32E-04	3.20E-04	4.66E-04	5.88E-04	2.22E-03	8.32E-04	4.29E-04	4.97E-04	4.67E-04	7.15E-03	No	No
Barium	10	1.83E-03	1.25E-03	1.17E-03	1.13E-03	1.64E-03	2.07E-03	7.82E-03	2.93E-03	1.51E-03	1.75E-03	1.64E-03	2.52E-02	No	No
Beryllium	0.01	3.40E-06	2.32E-06	2.17E-06	2.10E-06	3.06E-06	3.86E-06	1.46E-05	5.45E-06	2.81E-06	3.26E-06	3.06E-06	4.69E-05	No	No
Bismuth	2.5	9.35E-07	6.37E-07	5.97E-07	5.76E-07	8.40E-07	1.06E-06	4.00E-06	1.50E-06	7.72E-07	8.96E-07	8.41E-07	1.29E-05	No	No
Cadmium	0.025	5.17E-04	3.98E-04	3.65E-04	3.20E-04	4.51E-04	4.98E-04	2.09E-03	7.80E-04	3.85E-04	4.43E-04	4.26E-04	2.93E-03	No	No
Calcium	NV	1.85E-01	1.26E-01	1.18E-01	1.14E-01	1.66E-01	2.09E-01	7.91E-01	2.96E-01	1.53E-01	1.77E-01	1.66E-01	2.55E+00	No	No
Chromium	0.1	8.64E-04	5.96E-04	5.57E-04	5.32E-04	7.73E-04	9.64E-04	3.67E-03	1.38E-03	7.06E-04	8.18E-04	7.70E-04	1.10E-02	No	No
Cobalt	0.1	1.25E-04	8.54E-05	8.00E-05	7.72E-05	1.12E-04	1.42E-04	5.36E-04	2.01E-04	1.03E-04	1.20E-04	1.13E-04	1.73E-03	No	No
Copper	50	3.31E-04	2.26E-04	2.12E-04	2.04E-04	2.97E-04	3.75E-04	1.42E-03	5.31E-04	2.74E-04	3.17E-04	2.98E-04	4.57E-03	No	No
Gold	1.25	3.62E-07	2.47E-07	2.31E-07	2.23E-07	3.25E-07	4.10E-07	1.55E-06	5.80E-07	2.99E-07	3.47E-07	3.26E-07	4.99E-06	No	No
Iron	4	3.55E-01	2.42E-01	2.27E-01	2.19E-01	3.19E-01	4.03E-01	1.52E+00	5.69E-01	2.93E-01	3.40E-01	3.20E-01	<b>4.90E+00</b>	Yes	No*
Lead	0.5	1.42E-04	1.04E-04	9.64E-05	8.76E-05	1.25E-04	1.46E-04	5.86E-04	2.19E-04	1.10E-04	1.27E-04	1.21E-04	1.07E-03	No	No
Lithium	20	1.51E-04	1.03E-04	9.66E-05	9.32E-05	1.36E-04	1.71E-04	6.47E-04	2.42E-04	1.25E-04	1.45E-04	1.36E-04	2.08E-03	No	No
Magnesium	NV	9.81E-02	6.68E-02	6.26E-02	6.04E-02	8.80E-02	1.11E-01	4.20E-01	1.57E-01	8.09E-02	9.39E-02	8.82E-02	1.35E+00	No	No
Manganese	0.1	3.69E-03	2.51E-03	2.35E-03	2.27E-03	3.31E-03	4.17E-03	1.58E-02	5.90E-03	3.04E-03	3.53E-03	3.31E-03	5.08E-02	No	No
Molybdenum	120	5.61E-06	3.82E-06	3.58E-06	3.46E-06	5.04E-06	6.36E-06	2.40E-05	8.99E-06	4.63E-06	5.37E-06	5.05E-06	7.73E-05	No	No
Nickel	0.06	3.25E-04	2.22E-04	2.08E-04	2.00E-04	2.92E-04	3.68E-04	1.39E-03	5.21E-04	2.68E-04	3.11E-04	2.92E-04	4.48E-03	No	No
Potassium	NV	6.20E-02	4.23E-02	3.96E-02	3.82E-02	5.57E-02	7.03E-02	2.65E-01	9.94E-02	5.12E-02	5.94E-02	5.58E-02	8.55E-01	No	No
Selenium	10	5.60E-06	3.81E-06	3.57E-06	3.45E-06	5.02E-06	6.34E-06	2.39E-05	8.97E-06	4.62E-06	5.36E-06	5.03E-06	7.71E-05	No	No
Silver	1	1.38E-06	9.38E-07	8.80E-07	8.49E-07	1.24E-06	1.56E-06	5.89E-06	2.21E-06	1.14E-06	1.32E-06	1.24E-06	1.90E-05	No	No
Sodium	NV	7.41E-02	5.05E-02	4.73E-02	4.57E-02	6.65E-02	8.39E-02	3.17E-01	1.19E-01	6.12E-02	7.10E-02	6.66E-02	1.02E+00	No	No
Strontium	120	9.90E-04	6.75E-04	6.32E-04	6.10E-04	8.89E-04	1.12E-03	4.24E-03	1.59E-03	8.17E-04	9.48E-04	8.91E-04	1.36E-02	No	No
Thallium	0.5	1.43E-06	9.74E-07	9.13E-07	8.81E-07	1.28E-06	1.62E-06	6.12E-06	2.29E-06	1.18E-06	1.37E-06	1.29E-06	1.97E-05	No	No
Tin	10	5.04E-06	3.44E-06	3.22E-06	3.11E-06	4.52E-06	5.71E-06	2.16E-05	8.07E-06	4.16E-06	4.83E-06	4.53E-06	6.95E-05	No	No
Titanium	120	1.63E-02	1.11E-02	1.04E-02	1.00E-02	1.46E-02	1.85E-02	6.98E-02	2.61E-02	1.35E-02	1.56E-02	1.47E-02	2.25E-01	No	No
Uranium	0.1	4.55E-06	3.10E-06	2.91E-06	2.80E-06	4.08E-06	5.15E-06	1.95E-05	7.29E-06	3.75E-06	4.36E-06	4.09E-06	6.27E-05	No	No
Vanadium	0.8	6.00E-04	4.09E-04	3.83E-04	3.69E-04	5.38E-04	6.79E-04	2.57E-03	9.60E-04	4.95E-04	5.74E-04	5.39E-04	8.26E-03	No	No
Yttrium	NV	4.43E-05	3.02E-05	2.83E-05	2.73E-05	3.97E-05	5.01E-05	1.89E-04	7.09E-05	3.65E-05	4.24E-05	3.98E-05	6.10E-04	No	No
Zinc	120	1.07E-03	7.83E-04	7.24E-04	6.61E-04	9.45E-04	1.11E-03	4.43E-03	1.66E-03	8.34E-04	9.63E-04	9.16E-04	8.55E-03	No	No

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	9.45E-07	7.29E-07	6.68E-07	5.85E-07	8.25E-07	9.10E-07	3.82E-06	1.43E-06	7.04E-07	8.10E-07	7.79E-07	5.36E-06	No	No	
naphthalene	22.5	3.74E-04	2.89E-04	2.64E-04	2.32E-04	3.26E-04	3.60E-04	1.51E-03	5.65E-04	2.78E-04	3.20E-04	3.08E-04	2.12E-03	No	No	
phenanthrene	NV	3.09E-05	2.38E-05	2.18E-05	1.91E-05	2.70E-05	2.98E-05	1.25E-04	4.67E-05	2.30E-05	2.65E-05	2.55E-05	1.75E-04	No	No	
anthracene	NV	3.45E-06	2.66E-06	2.44E-06	2.13E-06	3.01E-06	3.32E-06	1.39E-05	5.20E-06	2.57E-06	2.95E-06	2.84E-06	1.95E-05	No	No	
fluorene	NV	1.51E-05	1.16E-05	1.07E-05	9.33E-06	1.32E-05	1.45E-05	6.09E-05	2.28E-05	1.12E-05	1.29E-05	1.24E-05	8.54E-05	No	No	
pyrene	NV	1.13E-05	8.71E-06	7.98E-06	6.99E-06	9.85E-06	1.09E-05	4.56E-05	1.70E-05	8.40E-06	9.67E-06	9.30E-06	6.40E-05	No	No	
thiophenes	NV	1.96E-07	1.51E-07	1.38E-07	1.21E-07	1.71E-07	1.89E-07	7.92E-07	2.96E-07	1.46E-07	1.68E-07	1.61E-07	1.11E-06	No	No	
benz(a)anthracene	NV	4.49E-07	3.46E-07	3.17E-07	2.78E-07	3.91E-07	4.32E-07	1.81E-06	6.77E-07	3.34E-07	3.84E-07	3.70E-07	2.54E-06	No	No	
acenaphthene	NV	2.90E-06	2.24E-06	2.05E-06	1.80E-06	2.53E-06	2.80E-06	1.17E-05	4.39E-06	2.16E-06	2.49E-06	2.39E-06	1.65E-05	No	No	
acenaphthylene	NV	1.06E-05	8.14E-06	7.46E-06	6.53E-06	9.21E-06	1.02E-05	4.27E-05	1.59E-05	7.85E-06	9.04E-06	8.69E-06	5.98E-05	No	No	
fluoranthene	NV	1.12E-05	8.66E-06	7.93E-06	6.95E-06	9.80E-06	1.08E-05	4.54E-05	1.70E-05	8.36E-06	9.62E-06	9.25E-06	6.36E-05	No	No	
benzo(b)fluoranthene	NV	2.08E-06	1.61E-06	1.47E-06	1.29E-06	1.82E-06	2.01E-06	8.43E-06	3.15E-06	1.55E-06	1.79E-06	1.72E-06	1.18E-05	No	No	
benzo(g,h,i)perylene	NV	3.96E-08	3.06E-08	2.80E-08	2.45E-08	3.46E-08	3.81E-08	1.60E-07	5.98E-08	2.95E-08	3.39E-08	3.26E-08	2.24E-07	No	No	
benzo(k)fluoranthene	NV	2.37E-07	1.83E-07	1.68E-07	1.47E-07	2.07E-07	2.28E-07	9.58E-07	3.58E-07	1.76E-07	2.03E-07	1.95E-07	1.34E-06	No	No	
chrysene	NV	5.04E-07	3.89E-07	3.56E-07	3.12E-07	4.40E-07	4.86E-07	2.04E-06	7.61E-07	3.75E-07	4.32E-07	4.15E-07	2.86E-06	No	No	
dibenzo(a,h)anthracene	NV	6.56E-07	5.06E-07	4.64E-07	4.06E-07	5.72E-07	6.32E-07	2.65E-06	9.90E-07	4.88E-07	5.62E-07	5.41E-07	3.72E-06	No	No	
indeno(1,2,3-cd)pyrene	NV	4.17E-07	3.22E-07	2.95E-07	2.58E-07	3.64E-07	4.02E-07	1.69E-06	6.30E-07	3.10E-07	3.57E-07	3.44E-07	2.36E-06	No	No	
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	4.92E-03	3.79E-03	3.46E-03	3.01E-03	4.27E-03	4.71E-03	1.98E-02	7.27E-03	3.60E-03	4.12E-03	3.97E-03	2.75E-02	No	No	
acetaldehyde	300	6.63E-01	5.10E-01	4.67E-01	4.06E-01	5.76E-01	6.35E-01	2.66E+00	9.80E-01	4.85E-01	5.55E-01	5.35E-01	3.70E+00	No	No	
acetone	11880	3.49E-01	2.69E-01	2.46E-01	2.13E-01	3.03E-01	3.34E-01	1.40E+00	5.16E-01	2.55E-01	2.92E-01	2.82E-01	1.95E+00	No	No	
acrolein	0.09	<b>1.17E-01</b>	<b>9.04E-02</b>	8.26E-02	7.18E-02	<b>1.02E-01</b>	<b>1.12E-01</b>	<b>4.72E-01</b>	<b>1.74E-01</b>	8.59E-02	<b>9.83E-02</b>	<b>9.48E-02</b>	<b>6.56E-01</b>	Yes	Yes	
aldehyde	NV	8.87E-01	6.83E-01	6.24E-01	5.42E-01	7.70E-01	8.49E-01	3.56E+00	1.31E+00	6.49E-01	7.42E-01	7.16E-01	4.95E+00	No	No	
benzene	23	4.35E-02	3.35E-02	3.06E-02	2.66E-02	3.77E-02	4.16E-02	1.75E-01	6.43E-02	3.18E-02	3.64E-02	3.51E-02	2.43E-01	No	No	
C10-C12 aliphatic	NV	9.55E-03	7.35E-03	6.72E-03	5.84E-03	8.29E-03	9.14E-03	3.84E-02	1.41E-02	6.98E-03	7.99E-03	7.71E-03	5.33E-02	No	No	
C12-C16 aliphatic	NV	5.53E-02	4.26E-02	3.89E-02	3.38E-02	4.80E-02	5.29E-02	2.22E-01	8.17E-02	4.04E-02	4.63E-02	4.46E-02	3.09E-01	No	No	
C12-C16 aromatic	NV	7.46E-04	5.74E-04	5.25E-04	4.56E-04	6.47E-04	7.14E-04	3.00E-03	1.10E-03	5.45E-04	6.24E-04	6.02E-04	4.16E-03	No	No	
C16-C21 aliphatic	NV	5.54E-02	4.26E-02	3.90E-02	3.39E-02	4.80E-02	5.30E-02	2.22E-01	8.18E-02	4.05E-02	4.63E-02	4.47E-02	3.09E-01	No	No	
C2-C6 aliphatic	920	2.64E-01	2.03E-01	1.85E-01	1.61E-01	2.29E-01	2.52E-01	1.06E+00	3.90E-01	1.93E-01	2.21E-01	2.13E-01	1.47E+00	No	No	
C6-C8 aliphatic	6100	1.80E-01	1.39E-01	1.27E-01	1.10E-01	1.56E-01	1.72E-01	7.24E-01	2.66E-01	1.32E-01	1.51E-01	1.45E-01	1.01E+00	No	No	
C8-C10 aliphatic	60000	2.54E-03	1.95E-03	1.79E-03	1.55E-03	2.20E-03	2.43E-03	1.02E-02	3.75E-03	1.86E-03	2.12E-03	2.05E-03	1.42E-02	No	No	
C8-C10 aromatic	400	1.43E-02	1.10E-02	1.00E-02	8.73E-03	1.24E-02	1.37E-02	5.73E-02	2.11E-02	1.04E-02	1.19E-02	1.15E-02	7.97E-02	No	No	
ethylbenzene	1000	7.46E-03	5.74E-03	5.25E-03	4.56E-03	6.47E-03	7.14E-03	3.00E-02	1.10E-02	5.45E-03	6.24E-03	6.02E-03	4.16E-02	No	No	
ethylene	40	1.36E-01	1.05E-01	9.56E-02	8.31E-02	1.18E-01	1.30E-01	5.46E-01	2.01E-01	9.93E-02	1.14E-01	1.10E-01	7.59E-01	No	No	
formaldehyde	9	3.54E-01	2.72E-01	2.49E-01	2.16E-01	3.07E-01	3.39E-01	1.42E+00	5.23E-01	2.59E-01	2.96E-01	2.86E-01	1.98E+00	No	No	
ketone	1000	2.00E-01	1.54E-01	1.41E-01	1.22E-01	1.73E-01	1.91E-01	8.03E-01	2.95E-01	1.46E-01	1.67E-01	1.61E-01	1.12E+00	No	No	
toluene	2000	6.31E-02	4.86E-02	4.44E-02	3.86E-02	5.48E-02	6.04E-02	2.54E-01	9.33E-02	4.62E-02	5.29E-02	5.10E-02	3.53E-01	No	No	
trimethylbenzene	220	1.81E-02	1.39E-02	1.27E-02	1.11E-02	1.57E-02	1.73E-02	7.26E-02	2.67E-02	1.32E-02	1.51E-02	1.46E-02	1.01E-01	No	No	
xylenes	730	5.01E-02	3.86E-02	3.53E-02	3.07E-02	4.35E-02	4.80E-02	2.01E-01	7.41E-02	3.67E-02	4.20E-02	4.05E-02	2.80E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

\* The selected air threshold is based upon particulate matter toxicity rather than chemical toxicity; particulate matter health effects are assessed further in the particulate matter assessment section of the HHRA.

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	120	8.25E+00	2.84E+00	4.83E+00	3.53E+00	2.58E+00	4.75E+00	3.58E+00	1.04E+00	1.09E+00	8.05E-01	1.04E+00	9.51E-01	3.33E+00	5.88E+00	4.69E+00
DPM	NV	4.40E+00	1.08E+00	2.04E+00	1.31E+00	1.01E+00	2.14E+00	1.76E+00	4.99E-01	5.04E-01	3.48E-01	5.00E-01	5.28E-01	1.83E+00	2.47E+00	2.00E+00
PM10	25	8.24E+00	2.83E+00	4.83E+00	3.53E+00	2.57E+00	4.73E+00	3.57E+00	1.04E+00	1.09E+00	8.07E-01	1.04E+00	9.51E-01	3.32E+00	5.88E+00	4.69E+00
PM2.5	27	8.15E+00	2.67E+00	4.66E+00	3.39E+00	2.43E+00	4.41E+00	3.41E+00	1.01E+00	1.03E+00	7.45E-01	1.01E+00	9.01E-01	3.17E+00	5.51E+00	4.43E+00
SO2	20	4.48E-01	1.22E-01	2.08E-01	1.56E-01	1.10E-01	1.98E-01	1.44E-01	4.37E-02	4.45E-02	3.29E-02	4.37E-02	3.90E-02	1.29E-01	2.44E-01	1.96E-01
CO	6000	1.32E+02	4.32E+01	4.57E+01	4.26E+01	5.34E+01	7.00E+01	7.08E+01	1.28E+01	1.49E+01	1.12E+01	1.28E+01	1.43E+01	7.16E+01	4.88E+01	3.97E+01
NOX	9000	1.23E+02	3.01E+01	5.94E+01	3.78E+01	2.86E+01	5.99E+01	4.91E+01	1.46E+01	1.40E+01	1.10E+01	1.46E+01	1.48E+01	5.11E+01	6.96E+01	5.62E+01
NO2	120	9.13E+01	3.01E+01	5.94E+01	3.78E+01	2.86E+01	5.99E+01	4.91E+01	1.46E+01	1.40E+01	1.10E+01	1.46E+01	1.48E+01	5.11E+01	6.96E+01	5.62E+01
<b>Metals</b>																
Aluminum	12	5.75E-01	1.98E-01	3.36E-01	2.46E-01	1.79E-01	3.31E-01	2.49E-01	7.23E-02	7.61E-02	5.60E-02	7.24E-02	6.63E-02	2.32E-01	4.09E-01	3.26E-01
Antimony	1	3.23E-05	1.11E-05	1.89E-05	1.38E-05	1.01E-05	1.86E-05	1.40E-05	4.07E-06	4.28E-06	3.15E-06	4.07E-06	3.72E-06	1.30E-05	2.30E-05	1.84E-05
Arsenic	0.015	9.17E-04	3.16E-04	5.37E-04	3.92E-04	2.86E-04	5.27E-04	3.97E-04	1.15E-04	1.21E-04	8.94E-05	1.15E-04	1.06E-04	3.69E-04	6.53E-04	5.20E-04
Barium	10	3.23E-03	1.11E-03	1.89E-03	1.38E-03	1.01E-03	1.86E-03	1.40E-03	4.06E-04	4.27E-04	3.15E-04	4.07E-04	3.72E-04	1.30E-03	2.30E-03	1.83E-03
Beryllium	0.01	6.01E-06	2.07E-06	3.52E-06	2.57E-06	1.88E-06	3.46E-06	2.60E-06	7.56E-07	7.96E-07	5.86E-07	7.57E-07	6.92E-07	2.42E-06	4.28E-06	3.41E-06
Bismuth	2.5	1.65E-06	5.68E-07	9.67E-07	7.06E-07	5.15E-07	9.50E-07	7.15E-07	2.08E-07	2.19E-07	1.61E-07	2.08E-07	1.90E-07	6.65E-07	1.18E-06	9.37E-07
Cadmium	0.025	2.64E-03	6.46E-04	1.23E-03	7.86E-04	6.09E-04	1.28E-03	1.05E-03	2.99E-04	3.03E-04	2.09E-04	3.00E-04	3.17E-04	1.10E-03	1.49E-03	1.20E-03
Calcium	NV	3.26E-01	1.12E-01	1.91E-01	1.40E-01	1.02E-01	1.88E-01	1.41E-01	4.11E-02	4.32E-02	3.18E-02	4.11E-02	3.76E-02	1.32E-01	2.32E-01	1.85E-01
Chromium	0.1	1.81E-03	5.80E-04	1.01E-03	7.18E-04	5.30E-04	1.00E-03	7.70E-04	2.23E-04	2.32E-04	1.69E-04	2.23E-04	2.11E-04	7.36E-04	1.23E-03	9.79E-04
Cobalt	0.1	2.21E-04	7.61E-05	1.30E-04	9.46E-05	6.91E-05	1.27E-04	9.58E-05	2.78E-05	2.93E-05	2.16E-05	2.79E-05	2.55E-05	8.91E-05	1.58E-04	1.26E-04
Copper	50	5.85E-04	2.01E-04	3.43E-04	2.50E-04	1.83E-04	3.37E-04	2.53E-04	7.36E-05	7.75E-05	5.71E-05	7.37E-05	6.74E-05	2.36E-04	4.17E-04	3.32E-04
Gold	1.25	6.39E-07	2.20E-07	3.74E-07	2.73E-07	2.00E-07	3.68E-07	2.77E-07	8.04E-08	8.46E-08	6.23E-08	8.05E-08	7.36E-08	2.58E-07	4.55E-07	3.63E-07
Iron	4	6.27E-01	2.16E-01	3.67E-01	2.68E-01	1.96E-01	3.61E-01	2.72E-01	7.90E-02	8.31E-02	6.12E-02	7.91E-02	7.23E-02	2.53E-01	4.47E-01	3.56E-01
Lead	0.5	5.39E-04	1.41E-04	2.62E-04	1.73E-04	1.32E-04	2.71E-04	2.18E-04	6.23E-05	6.35E-05	4.44E-05	6.24E-05	6.42E-05	2.22E-04	3.17E-04	2.56E-04
Lithium	20	2.67E-04	9.19E-05	1.56E-04	1.14E-04	8.33E-05	1.54E-04	1.16E-04	3.36E-05	3.53E-05	2.60E-05	3.36E-05	3.07E-05	1.08E-04	1.90E-04	1.52E-04
Magnesium	NV	1.73E-01	5.96E-02	1.01E-01	7.41E-02	5.40E-02	9.96E-02	7.50E-02	2.18E-02	2.29E-02	1.69E-02	2.18E-02	1.99E-02	6.98E-02	1.23E-01	9.83E-02
Manganese	0.1	6.50E-03	2.24E-03	3.81E-03	2.78E-03	2.03E-03	3.74E-03	2.82E-03	8.19E-04	8.62E-04	6.35E-04	8.20E-04	7.50E-04	2.62E-03	4.63E-03	3.69E-03
Molybdenum	120	9.90E-06	3.41E-06	5.80E-06	4.24E-06	3.09E-06	5.70E-06	4.29E-06	1.25E-06	1.31E-06	9.66E-07	1.25E-06	1.14E-06	3.99E-06	7.06E-06	5.62E-06
Nickel	0.06	5.74E-04	1.98E-04	3.36E-04	2.46E-04	1.79E-04	3.30E-04	2.49E-04	7.22E-05	7.60E-05	5.60E-05	7.23E-05	6.61E-05	2.31E-04	4.09E-04	3.26E-04
Potassium	NV	1.09E-01	3.77E-02	6.41E-02	4.69E-02	3.42E-02	6.30E-02	4.74E-02	1.38E-02	1.45E-02	1.07E-02	1.38E-02	1.26E-02	4.41E-02	7.80E-02	6.22E-02
Selenium	10	9.88E-06	3.40E-06	5.79E-06	4.23E-06	3.08E-06	5.68E-06	4.28E-06	1.24E-06	1.31E-06	9.64E-07	1.24E-06	1.14E-06	3.98E-06	7.04E-06	5.61E-06
Silver	1	2.43E-06	8.37E-07	1.42E-06	1.04E-06	7.59E-07	1.40E-06	1.05E-06	3.06E-07	3.22E-07	2.37E-07	3.06E-07	2.80E-07	9.80E-07	1.73E-06	1.38E-06
Sodium	NV	1.31E-01	4.50E-02	7.66E-02	5.60E-02	4.08E-02	7.53E-02	5.67E-02	1.65E-02	1.73E-02	1.28E-02	1.65E-02	1.51E-02	5.27E-02	9.32E-02	7.43E-02
Strontium	120	1.75E-03	6.02E-04	1.02E-03	7.48E-04	5.46E-04	1.01E-03	7.57E-04	2.20E-04	2.31E-04	1.70E-04	2.20E-04	2.01E-04	7.04E-04	1.25E-03	9.92E-04
Thallium	0.5	2.52E-06	8.69E-07	1.48E-06	1.08E-06	7.88E-07	1.45E-06	1.09E-06	3.18E-07	3.34E-07	2.46E-07	3.18E-07	2.91E-07	1.02E-06	1.80E-06	1.43E-06
Tin	10	8.90E-06	3.06E-06	5.21E-06	3.81E-06	2.78E-06	5.12E-06	3.85E-06	1.12E-06	1.18E-06	8.68E-07	1.12E-06	1.03E-06	3.59E-06	6.34E-06	5.05E-06
Titanium	120	2.88E-02	9.90E-03	1.69E-02	1.23E-02	8.98E-03	1.66E-02	1.25E-02	3.62E-03	3.81E-03	2.81E-03	3.63E-03	3.32E-03	1.16E-02	2.05E-02	1.63E-02
Uranium	0.1	8.03E-06	2.76E-06	4.70E-06	3.44E-06	2.51E-06	4.62E-06	3.48E-06	1.01E-06	1.06E-06	7.83E-07	1.01E-06	9.25E-07	3.24E-06	5.72E-06	4.56E-06
Vanadium	0.8	1.06E-03	3.64E-04	6.20E-04	4.53E-04	3.30E-04	6.09E-04	4.58E-04	1.33E-04	1.40E-04	1.03E-04	1.33E-04	1.22E-04	4.27E-04	7.54E-04	6.01E-04
Yttrium	NV	7.81E-05	2.69E-05	4.57E-05	3.34E-05	2.44E-05	4.49E-05	3.38E-05	9.83E-06	1.03E-05	7.62E-06	9.84E-06	9.00E-06	3.15E-05	5.56E-05	4.43E-05
Zinc	120	3.91E-03	1.04E-03	1.91E-03	1.27E-03	9.67E-04	1.97E-03	1.59E-03	4.53E-04	4.62E-04	3.24E-04	4.54E-04	4.65E-04	1.61E-03	2.32E-03	1.87E-03

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	4.84E-06	1.18E-06	2.25E-06	1.44E-06	1.12E-06	2.35E-06	1.93E-06	5.49E-07	5.55E-07	3.83E-07	5.50E-07	5.81E-07	2.01E-06	2.72E-06	2.20E-06
naphthalene	22.5	1.92E-03	4.68E-04	8.90E-04	5.70E-04	4.41E-04	9.32E-04	7.64E-04	2.17E-04	2.19E-04	1.52E-04	2.18E-04	2.30E-04	7.95E-04	1.08E-03	8.70E-04
phenanthrene	NV	1.58E-04	3.87E-05	7.35E-05	4.70E-05	3.65E-05	7.70E-05	6.31E-05	1.79E-05	1.81E-05	1.25E-05	1.80E-05	1.90E-05	6.57E-05	8.89E-05	7.19E-05
anthracene	NV	1.77E-05	4.31E-06	8.20E-06	5.25E-06	4.07E-06	8.58E-06	7.04E-06	2.00E-06	2.02E-06	1.40E-06	2.00E-06	2.12E-06	7.33E-06	9.92E-06	8.02E-06
fluorene	NV	7.72E-05	1.89E-05	3.58E-05	2.30E-05	1.78E-05	3.75E-05	3.08E-05	8.75E-06	8.84E-06	6.11E-06	8.77E-06	9.27E-06	3.20E-05	4.34E-05	3.51E-05
pyrene	NV	5.79E-05	1.41E-05	2.68E-05	1.72E-05	1.33E-05	2.81E-05	2.31E-05	6.55E-06	6.62E-06	4.58E-06	6.57E-06	6.94E-06	2.40E-05	3.25E-05	2.63E-05
thiophenes	NV	1.00E-06	2.45E-07	4.66E-07	2.98E-07	2.31E-07	4.88E-07	4.00E-07	1.14E-07	1.15E-07	7.94E-08	1.14E-07	1.20E-07	4.16E-07	5.64E-07	4.56E-07
benz(a)anthracene	NV	2.30E-06	5.61E-07	1.07E-06	6.83E-07	5.29E-07	1.12E-06	9.16E-07	2.60E-07	2.63E-07	1.82E-07	2.61E-07	2.76E-07	9.54E-07	1.29E-06	1.04E-06
acenaphthene	NV	1.49E-05	3.64E-06	6.91E-06	4.42E-06	3.43E-06	7.23E-06	5.93E-06	1.69E-06	1.70E-06	1.18E-06	1.69E-06	1.79E-06	6.18E-06	8.36E-06	6.76E-06
acenaphthylene	NV	5.41E-05	1.32E-05	2.51E-05	1.61E-05	1.24E-05	2.63E-05	2.16E-05	6.13E-06	6.19E-06	4.28E-06	6.14E-06	6.49E-06	2.24E-05	3.04E-05	2.45E-05
fluoranthene	NV	5.75E-05	1.41E-05	2.67E-05	1.71E-05	1.32E-05	2.80E-05	2.29E-05	6.52E-06	6.59E-06	4.55E-06	6.53E-06	6.90E-06	2.39E-05	3.23E-05	2.61E-05
benzo(b)fluoranthene	NV	1.07E-05	2.61E-06	4.96E-06	3.17E-06	2.46E-06	5.19E-06	4.26E-06	1.21E-06	1.22E-06	8.45E-07	1.21E-06	1.28E-06	4.43E-06	6.00E-06	4.85E-06
benzo(g,h,i)perylene	NV	2.03E-07	4.96E-08	9.42E-08	6.03E-08	4.67E-08	9.86E-08	8.09E-08	2.30E-08	2.32E-08	1.61E-08	2.30E-08	2.43E-08	8.42E-08	1.14E-07	9.21E-08
benzo(k)fluoranthene	NV	1.21E-06	2.97E-07	5.64E-07	3.61E-07	2.80E-07	5.90E-07	4.84E-07	1.38E-07	1.39E-07	9.61E-08	1.38E-07	1.46E-07	5.04E-07	6.82E-07	5.52E-07
chrysene	NV	2.58E-06	6.31E-07	1.20E-06	7.68E-07	5.95E-07	1.26E-06	1.03E-06	2.93E-07	2.96E-07	2.04E-07	2.93E-07	3.10E-07	1.07E-06	1.45E-06	1.17E-06
dibenzo(a,h)anthracene	NV	3.36E-06	8.21E-07	1.56E-06	9.99E-07	7.74E-07	1.63E-06	1.34E-06	3.81E-07	3.85E-07	2.66E-07	3.81E-07	4.03E-07	1.39E-06	1.89E-06	1.53E-06
indeno(1,2,3-cd)pyrene	NV	2.14E-06	5.22E-07	9.92E-07	6.35E-07	4.92E-07	1.04E-06	8.52E-07	2.42E-07	2.45E-07	1.69E-07	2.43E-07	2.56E-07	8.87E-07	1.20E-06	9.70E-07
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	2.48E-02	5.88E-03	1.20E-02	7.60E-03	5.71E-03	1.18E-02	9.77E-03	2.86E-03	2.68E-03	2.15E-03	2.86E-03	2.91E-03	1.02E-02	1.42E-02	1.14E-02
acetaldehyde	300	3.35E+00	7.92E-01	1.62E+00	1.03E+00	7.70E-01	1.60E+00	1.32E+00	3.86E-01	3.61E-01	2.90E-01	3.86E-01	3.92E-01	1.38E+00	1.91E+00	1.54E+00
acetone	11880	1.76E+00	4.17E-01	8.54E-01	5.40E-01	4.05E-01	8.40E-01	6.93E-01	2.03E-01	1.90E-01	1.53E-01	2.03E-01	2.06E-01	7.27E-01	1.01E+00	8.12E-01
acrolein	0.09	<b>5.93E-01</b>	<b>1.40E-01</b>	<b>2.87E-01</b>	<b>1.81E-01</b>	<b>1.36E-01</b>	<b>2.83E-01</b>	<b>2.33E-01</b>	6.83E-02	6.40E-02	5.13E-02	6.84E-02	6.94E-02	<b>2.44E-01</b>	<b>3.39E-01</b>	<b>2.73E-01</b>
aldehyde	NV	4.48E+00	1.06E+00	2.17E+00	1.37E+00	1.03E+00	2.13E+00	1.76E+00	5.16E-01	4.83E-01	3.88E-01	5.16E-01	5.24E-01	1.85E+00	2.56E+00	2.06E+00
benzene	23	2.20E-01	5.19E-02	1.06E-01	6.72E-02	5.05E-02	1.05E-01	8.64E-02	2.53E-02	2.37E-02	1.90E-02	2.53E-02	2.57E-02	9.05E-02	1.25E-01	1.01E-01
C10-C12 aliphatic	NV	4.82E-02	1.14E-02	2.34E-02	1.48E-02	1.11E-02	2.30E-02	1.90E-02	5.55E-03	5.20E-03	4.17E-03	5.56E-03	5.64E-03	1.99E-02	2.76E-02	2.22E-02
C12-C16 aliphatic	NV	2.79E-01	6.61E-02	1.35E-01	8.55E-02	6.42E-02	1.33E-01	1.10E-01	3.21E-02	3.01E-02	2.42E-02	3.22E-02	3.27E-02	1.15E-01	1.60E-01	1.29E-01
C12-C16 aromatic	NV	3.77E-03	8.91E-04	1.82E-03	1.15E-03	8.66E-04	1.79E-03	1.48E-03	4.33E-04	4.06E-04	3.26E-04	4.34E-04	4.41E-04	1.55E-03	2.15E-03	1.73E-03
C16-C21 aliphatic	NV	2.80E-01	6.62E-02	1.35E-01	8.56E-02	6.43E-02	1.33E-01	1.10E-01	3.22E-02	3.02E-02	2.42E-02	3.22E-02	3.27E-02	1.15E-01	1.60E-01	1.29E-01
C2-C6 aliphatic	920	1.33E+00	3.15E-01	6.45E-01	4.07E-01	3.06E-01	6.34E-01	5.24E-01	1.53E-01	1.44E-01	1.15E-01	1.53E-01	1.56E-01	5.49E-01	7.61E-01	6.13E-01
C6-C8 aliphatic	6100	9.11E-01	2.15E-01	4.41E-01	2.79E-01	2.09E-01	4.34E-01	3.58E-01	1.05E-01	9.82E-02	7.88E-02	1.05E-01	1.07E-01	3.75E-01	5.20E-01	4.19E-01
C8-C10 aliphatic	60000	1.28E-02	3.03E-03	6.21E-03	3.92E-03	2.95E-03	6.11E-03	5.04E-03	1.48E-03	1.38E-03	1.11E-03	1.48E-03	1.50E-03	5.29E-03	7.33E-03	5.90E-03
C8-C10 aromatic	400	7.21E-02	1.71E-02	3.49E-02	2.21E-02	1.66E-02	3.43E-02	2.84E-02	8.30E-03	7.77E-03	6.24E-03	8.31E-03	8.43E-03	2.97E-02	4.12E-02	3.32E-02
ethylbenzene	1000	3.77E-02	8.91E-03	1.82E-02	1.15E-02	8.66E-03	1.79E-02	1.48E-02	4.33E-03	4.06E-03	3.26E-03	4.34E-03	4.41E-03	1.55E-02	2.15E-02	1.73E-02
ethylene	40	6.86E-01	1.62E-01	3.32E-01	2.10E-01	1.58E-01	3.27E-01	2.70E-01	7.90E-02	7.40E-02	5.94E-02	7.91E-02	8.03E-02	2.83E-01	3.92E-01	3.16E-01
formaldehyde	9	1.79E+00	4.23E-01	8.65E-01	5.47E-01	4.11E-01	8.51E-01	7.03E-01	2.06E-01	1.93E-01	1.55E-01	2.06E-01	2.09E-01	7.37E-01	1.02E+00	8.23E-01
ketone	1000	1.01E+00	2.39E-01	4.89E-01	3.09E-01	2.32E-01	4.81E-01	3.97E-01	1.16E-01	1.09E-01	8.74E-02	1.16E-01	1.18E-01	4.16E-01	5.77E-01	4.65E-01
toluene	2000	3.19E-01	7.55E-02	1.54E-01	9.76E-02	7.33E-02	1.52E-01	1.25E-01	3.67E-02	3.44E-02	2.76E-02	3.68E-02	3.73E-02	1.31E-01	1.82E-01	1.47E-01
trimethylbenzene	220	9.14E-02	2.16E-02	4.42E-02	2.80E-02	2.10E-02	4.35E-02	3.59E-02	1.05E-02	9.85E-03	7.91E-03	1.05E-02	1.07E-02	3.77E-02	5.22E-02	4.21E-02
xylenes	730	2.53E-01	5.99E-02	1.23E-01	7.75E-02	5.82E-02	1.21E-01	9.96E-02	2.91E-02	2.73E-02	2.19E-02	2.92E-02	2.96E-02	1.04E-01	1.45E-01	1.17E-01

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>  
 Carbon monoxide results are based on 8-hour averaging times.  
 Cabins = Receptor Locations 1 to 22  
 Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3			
<b>Criteria Pollutants</b>															
SPM	120	1.38E+00	1.05E+00	9.49E-01	8.02E-01	1.16E+00	1.25E+00	7.03E+00	1.97E+00	9.21E-01	1.07E+00	1.02E+00	8.25E+00	No	No
DPM	NV	6.27E-01	5.19E-01	4.72E-01	4.02E-01	5.53E-01	5.65E-01	2.35E+00	1.02E+00	4.31E-01	5.17E-01	4.72E-01	4.40E+00	No	No
PM10	25	1.39E+00	1.06E+00	9.56E-01	8.08E-01	1.17E+00	1.26E+00	7.03E+00	1.97E+00	9.22E-01	1.07E+00	1.02E+00	8.24E+00	No	No
PM2.5	27	1.31E+00	1.00E+00	9.04E-01	7.67E-01	1.11E+00	1.19E+00	6.69E+00	1.86E+00	8.60E-01	1.00E+00	9.54E-01	8.15E+00	No	No
SO2	20	5.69E-02	4.25E-02	3.83E-02	3.24E-02	4.75E-02	5.17E-02	3.13E-01	7.73E-02	3.70E-02	4.35E-02	4.15E-02	4.48E-01	No	No
CO	6000	1.62E+01	1.03E+01	9.39E+00	8.00E+00	1.08E+01	1.29E+01	7.73E+01	3.18E+01	1.84E+01	1.89E+01	1.91E+01	1.32E+02	No	No
NOX	9000	1.77E+01	1.46E+01	1.33E+01	1.13E+01	1.56E+01	1.59E+01	6.61E+01	2.86E+01	1.21E+01	1.46E+01	1.33E+01	1.23E+02	No	No
NO2	120	1.77E+01	1.46E+01	1.33E+01	1.13E+01	1.56E+01	1.59E+01	6.61E+01	2.86E+01	1.21E+01	1.46E+01	1.33E+01	9.13E+01	No	No
<b>Metals</b>															
Aluminum	12	9.64E-02	7.33E-02	6.60E-02	5.59E-02	8.09E-02	8.69E-02	4.89E-01	1.37E-01	6.41E-02	7.45E-02	7.12E-02	5.75E-01	No	No
Antimony	1	5.42E-06	4.12E-06	3.71E-06	3.14E-06	4.55E-06	4.89E-06	2.75E-05	7.71E-06	3.61E-06	4.19E-06	4.00E-06	3.23E-05	No	No
Arsenic	0.015	1.54E-04	1.17E-04	1.05E-04	8.91E-05	1.29E-04	1.39E-04	7.81E-04	2.19E-04	1.02E-04	1.19E-04	1.14E-04	9.17E-04	No	No
Barium	10	5.41E-04	4.12E-04	3.71E-04	3.14E-04	4.54E-04	4.88E-04	2.75E-03	7.70E-04	3.60E-04	4.19E-04	4.00E-04	3.23E-03	No	No
Beryllium	0.01	1.01E-06	7.66E-07	6.90E-07	5.84E-07	8.46E-07	9.08E-07	5.12E-06	1.43E-06	6.70E-07	7.79E-07	7.44E-07	6.01E-06	No	No
Bismuth	2.5	2.77E-07	2.11E-07	1.90E-07	1.60E-07	2.32E-07	2.50E-07	1.41E-06	3.94E-07	1.84E-07	2.14E-07	2.05E-07	1.65E-06	No	No
Cadmium	0.025	3.77E-04	3.12E-04	2.83E-04	2.41E-04	3.32E-04	3.40E-04	1.41E-03	6.12E-04	2.59E-04	3.11E-04	2.83E-04	2.64E-03	No	No
Calcium	NV	5.47E-02	4.16E-02	3.75E-02	3.17E-02	4.59E-02	4.93E-02	2.78E-01	7.78E-02	3.64E-02	4.23E-02	4.04E-02	3.26E-01	No	No
Chromium	0.1	2.93E-04	2.27E-04	2.05E-04	1.74E-04	2.49E-04	2.64E-04	1.40E-03	4.29E-04	1.96E-04	2.30E-04	2.17E-04	1.81E-03	No	No
Cobalt	0.1	3.71E-05	2.82E-05	2.54E-05	2.15E-05	3.11E-05	3.34E-05	1.88E-04	5.27E-05	2.47E-05	2.87E-05	2.74E-05	2.21E-04	No	No
Copper	50	9.81E-05	7.46E-05	6.72E-05	5.69E-05	8.23E-05	8.85E-05	4.98E-04	1.40E-04	6.53E-05	7.59E-05	7.25E-05	5.85E-04	No	No
Gold	1.25	1.07E-07	8.15E-08	7.35E-08	6.21E-08	9.00E-08	9.67E-08	5.44E-07	1.52E-07	7.13E-08	8.29E-08	7.92E-08	6.39E-07	No	No
Iron	4	1.05E-01	8.00E-02	7.21E-02	6.10E-02	8.83E-02	9.49E-02	5.34E-01	1.50E-01	7.00E-02	8.14E-02	7.77E-02	6.27E-01	No	No
Lead	0.5	7.93E-05	6.45E-05	5.85E-05	4.97E-05	6.92E-05	7.14E-05	3.19E-04	1.25E-04	5.41E-05	6.45E-05	5.94E-05	5.39E-04	No	No
Lithium	20	4.48E-05	3.40E-05	3.07E-05	2.59E-05	3.76E-05	4.04E-05	2.27E-04	6.36E-05	2.98E-05	3.46E-05	3.31E-05	2.67E-04	No	No
Magnesium	NV	2.90E-02	2.21E-02	1.99E-02	1.68E-02	2.44E-02	2.62E-02	1.47E-01	4.13E-02	1.93E-02	2.24E-02	2.14E-02	1.73E-01	No	No
Manganese	0.1	1.09E-03	8.30E-04	7.48E-04	6.32E-04	9.16E-04	9.84E-04	5.54E-03	1.55E-03	7.26E-04	8.44E-04	8.06E-04	6.50E-03	No	No
Molybdenum	120	1.66E-06	1.26E-06	1.14E-06	9.63E-07	1.39E-06	1.50E-06	8.44E-06	2.36E-06	1.10E-06	1.28E-06	1.23E-06	9.90E-06	No	No
Nickel	0.06	9.63E-05	7.32E-05	6.59E-05	5.58E-05	8.08E-05	8.68E-05	4.89E-04	1.37E-04	6.40E-05	7.44E-05	7.11E-05	5.74E-04	No	No
Potassium	NV	1.84E-02	1.40E-02	1.26E-02	1.06E-02	1.54E-02	1.66E-02	9.33E-02	2.61E-02	1.22E-02	1.42E-02	1.36E-02	1.09E-01	No	No
Selenium	10	1.66E-06	1.26E-06	1.14E-06	9.60E-07	1.39E-06	1.49E-06	8.41E-06	2.36E-06	1.10E-06	1.28E-06	1.22E-06	9.88E-06	No	No
Silver	1	4.08E-07	3.10E-07	2.79E-07	2.36E-07	3.42E-07	3.68E-07	2.07E-06	5.80E-07	2.71E-07	3.15E-07	3.01E-07	2.43E-06	No	No
Sodium	NV	2.19E-02	1.67E-02	1.50E-02	1.27E-02	1.84E-02	1.98E-02	1.11E-01	3.12E-02	1.46E-02	1.70E-02	1.62E-02	1.31E-01	No	No
Strontium	120	2.93E-04	2.23E-04	2.01E-04	1.70E-04	2.46E-04	2.64E-04	1.49E-03	4.17E-04	1.95E-04	2.27E-04	2.17E-04	1.75E-03	No	No
Thallium	0.5	4.23E-07	3.22E-07	2.90E-07	2.45E-07	3.55E-07	3.82E-07	2.15E-06	6.02E-07	2.82E-07	3.27E-07	3.13E-07	2.52E-06	No	No
Tin	10	1.49E-06	1.13E-06	1.02E-06	8.65E-07	1.25E-06	1.35E-06	7.58E-06	2.12E-06	9.93E-07	1.15E-06	1.10E-06	8.90E-06	No	No
Titanium	120	4.83E-03	3.67E-03	3.31E-03	2.80E-03	4.05E-03	4.35E-03	2.45E-02	6.86E-03	3.21E-03	3.73E-03	3.57E-03	2.88E-02	No	No
Uranium	0.1	1.35E-06	1.02E-06	9.23E-07	7.80E-07	1.13E-06	1.21E-06	6.84E-06	1.91E-06	8.96E-07	1.04E-06	9.95E-07	8.03E-06	No	No
Vanadium	0.8	1.78E-04	1.35E-04	1.22E-04	1.03E-04	1.49E-04	1.60E-04	9.01E-04	2.52E-04	1.18E-04	1.37E-04	1.31E-04	1.06E-03	No	No
Yttrium	NV	1.31E-05	9.96E-06	8.98E-06	7.59E-06	1.10E-05	1.18E-05	6.65E-05	1.86E-05	8.71E-06	1.01E-05	9.68E-06	7.81E-05	No	No
Zinc	120	5.78E-04	4.69E-04	4.25E-04	3.61E-04	5.04E-04	5.21E-04	2.35E-03	9.10E-04	3.94E-04	4.69E-04	4.33E-04	3.91E-03	No	No

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3				
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00005	6.90E-07	5.71E-07	5.19E-07	4.42E-07	6.09E-07	6.22E-07	2.58E-06	1.12E-06	4.75E-07	5.69E-07	5.19E-07	4.84E-06	No	No	
naphthalene	22.5	2.73E-04	2.26E-04	2.05E-04	1.75E-04	2.41E-04	2.46E-04	1.02E-03	4.44E-04	1.88E-04	2.25E-04	2.05E-04	1.92E-03	No	No	
phenanthrene	NV	2.26E-05	1.87E-05	1.70E-05	1.44E-05	1.99E-05	2.03E-05	8.45E-05	3.67E-05	1.55E-05	1.86E-05	1.70E-05	1.58E-04	No	No	
anthracene	NV	2.52E-06	2.08E-06	1.89E-06	1.61E-06	2.22E-06	2.27E-06	9.42E-06	4.09E-06	1.73E-06	2.08E-06	1.89E-06	1.77E-05	No	No	
fluorene	NV	1.10E-05	9.11E-06	8.28E-06	7.05E-06	9.71E-06	9.92E-06	4.12E-05	1.79E-05	7.57E-06	9.08E-06	8.28E-06	7.72E-05	No	No	
pyrene	NV	8.24E-06	6.82E-06	6.20E-06	5.28E-06	7.27E-06	7.43E-06	3.09E-05	1.34E-05	5.67E-06	6.80E-06	6.20E-06	5.79E-05	No	No	
thiophenes	NV	1.43E-07	1.18E-07	1.08E-07	9.15E-08	1.26E-07	1.29E-07	5.35E-07	2.32E-07	9.84E-08	1.18E-07	1.08E-07	1.00E-06	No	No	
benz(a)anthracene	NV	3.27E-07	2.71E-07	2.46E-07	2.10E-07	2.89E-07	2.95E-07	1.23E-06	5.32E-07	2.25E-07	2.70E-07	2.46E-07	2.30E-06	No	No	
acenaphthene	NV	2.12E-06	1.76E-06	1.60E-06	1.36E-06	1.87E-06	1.91E-06	7.94E-06	3.45E-06	1.46E-06	1.75E-06	1.59E-06	1.49E-05	No	No	
acenaphthylene	NV	7.70E-06	6.37E-06	5.80E-06	4.93E-06	6.79E-06	6.94E-06	2.88E-05	1.25E-05	5.30E-06	6.35E-06	5.79E-06	5.41E-05	No	No	
fluoranthene	NV	8.20E-06	6.78E-06	6.17E-06	5.25E-06	7.23E-06	7.39E-06	3.07E-05	1.33E-05	5.64E-06	6.76E-06	6.16E-06	5.75E-05	No	No	
benzo(b)fluoranthene	NV	1.52E-06	1.26E-06	1.14E-06	9.74E-07	1.34E-06	1.37E-06	5.70E-06	2.47E-06	1.05E-06	1.26E-06	1.14E-06	1.07E-05	No	No	
benzo(g,h,i)perylene	NV	2.89E-08	2.39E-08	2.18E-08	1.85E-08	2.55E-08	2.61E-08	1.08E-07	4.70E-08	1.99E-08	2.38E-08	2.17E-08	2.03E-07	No	No	
benzo(k)fluoranthene	NV	1.73E-07	1.43E-07	1.30E-07	1.11E-07	1.53E-07	1.56E-07	6.48E-07	2.81E-07	1.19E-07	1.43E-07	1.30E-07	1.21E-06	No	No	
chrysene	NV	3.68E-07	3.05E-07	2.77E-07	2.36E-07	3.25E-07	3.32E-07	1.38E-06	5.98E-07	2.53E-07	3.04E-07	2.77E-07	2.58E-06	No	No	
dibenzo(a,h)anthracene	NV	4.79E-07	3.96E-07	3.60E-07	3.07E-07	4.22E-07	4.32E-07	1.79E-06	7.78E-07	3.29E-07	3.95E-07	3.60E-07	3.36E-06	No	No	
indeno(1,2,3-cd)pyrene	NV	3.05E-07	2.52E-07	2.29E-07	1.95E-07	2.69E-07	2.74E-07	1.14E-06	4.95E-07	2.09E-07	2.51E-07	2.29E-07	2.14E-06	No	No	
<b>Volatile Organic Compounds</b>																
1,3-butadiene	10	3.61E-03	2.97E-03	2.70E-03	2.27E-03	3.16E-03	3.23E-03	1.34E-02	5.70E-03	2.42E-03	2.94E-03	2.69E-03	2.48E-02	No	No	
acetaldehyde	300	4.86E-01	4.01E-01	3.64E-01	3.06E-01	4.26E-01	4.35E-01	1.81E+00	7.69E-01	3.27E-01	3.96E-01	3.63E-01	3.35E+00	No	No	
acetone	11880	2.56E-01	2.11E-01	1.91E-01	1.61E-01	2.24E-01	2.29E-01	9.54E-01	4.05E-01	1.72E-01	2.09E-01	1.91E-01	1.76E+00	No	No	
acrolein	0.09	8.61E-02	7.10E-02	6.44E-02	5.42E-02	7.54E-02	7.70E-02	<b>3.21E-01</b>	<b>1.36E-01</b>	5.79E-02	7.02E-02	6.42E-02	<b>5.93E-01</b>	Yes	Yes	
aldehyde	NV	6.51E-01	5.36E-01	4.86E-01	4.10E-01	5.69E-01	5.82E-01	2.42E+00	1.03E+00	4.37E-01	5.30E-01	4.85E-01	4.48E+00	No	No	
benzene	23	3.19E-02	2.63E-02	2.38E-02	2.01E-02	2.79E-02	2.85E-02	1.19E-01	5.04E-02	2.14E-02	2.60E-02	2.38E-02	2.20E-01	No	No	
C10-C12 aliphatic	NV	7.00E-03	5.77E-03	5.23E-03	4.41E-03	6.13E-03	6.26E-03	2.61E-02	1.11E-02	4.71E-03	5.71E-03	5.22E-03	4.82E-02	No	No	
C12-C16 aliphatic	NV	4.06E-02	3.34E-02	3.03E-02	2.55E-02	3.55E-02	3.63E-02	1.51E-01	6.41E-02	2.72E-02	3.31E-02	3.02E-02	2.79E-01	No	No	
C12-C16 aromatic	NV	5.47E-04	4.51E-04	4.09E-04	3.44E-04	4.79E-04	4.89E-04	2.04E-03	8.65E-04	3.67E-04	4.46E-04	4.08E-04	3.77E-03	No	No	
C16-C21 aliphatic	NV	4.06E-02	3.35E-02	3.03E-02	2.56E-02	3.55E-02	3.63E-02	1.51E-01	6.42E-02	2.73E-02	3.31E-02	3.03E-02	2.80E-01	No	No	
C2-C6 aliphatic	920	1.93E-01	1.59E-01	1.44E-01	1.22E-01	1.69E-01	1.73E-01	7.20E-01	3.06E-01	1.30E-01	1.58E-01	1.44E-01	1.33E+00	No	No	
C6-C8 aliphatic	6100	1.32E-01	1.09E-01	9.88E-02	8.32E-02	1.16E-01	1.18E-01	4.92E-01	2.09E-01	8.88E-02	1.08E-01	9.85E-02	9.11E-01	No	No	
C8-C10 aliphatic	60000	1.86E-03	1.53E-03	1.39E-03	1.17E-03	1.63E-03	1.66E-03	6.94E-03	2.94E-03	1.25E-03	1.52E-03	1.39E-03	1.28E-02	No	No	
C8-C10 aromatic	400	1.05E-02	8.62E-03	7.82E-03	6.59E-03	9.16E-03	9.36E-03	3.90E-02	1.66E-02	7.03E-03	8.53E-03	7.80E-03	7.21E-02	No	No	
ethylbenzene	1000	5.47E-03	4.51E-03	4.09E-03	3.44E-03	4.79E-03	4.89E-03	2.04E-02	8.65E-03	3.67E-03	4.46E-03	4.08E-03	3.77E-02	No	No	
ethylene	40	9.96E-02	8.21E-02	7.44E-02	6.27E-02	8.72E-02	8.91E-02	3.71E-01	1.57E-01	6.69E-02	8.12E-02	7.43E-02	6.86E-01	No	No	
formaldehyde	9	2.60E-01	2.14E-01	1.94E-01	1.63E-01	2.27E-01	2.32E-01	9.67E-01	4.10E-01	1.74E-01	2.11E-01	1.93E-01	1.79E+00	No	No	
ketone	1000	1.47E-01	1.21E-01	1.10E-01	9.23E-02	1.28E-01	1.31E-01	5.46E-01	2.32E-01	9.85E-02	1.19E-01	1.09E-01	1.01E+00	No	No	
toluene	2000	4.63E-02	3.82E-02	3.46E-02	2.92E-02	4.05E-02	4.14E-02	1.73E-01	7.32E-02	3.11E-02	3.77E-02	3.45E-02	3.19E-01	No	No	
trimethylbenzene	220	1.33E-02	1.09E-02	9.91E-03	8.35E-03	1.16E-02	1.19E-02	4.94E-02	2.10E-02	8.91E-03	1.08E-02	9.89E-03	9.14E-02	No	No	
xylenes	730	3.68E-02	3.03E-02	2.75E-02	2.32E-02	3.22E-02	3.29E-02	1.37E-01	5.81E-02	2.47E-02	3.00E-02	2.74E-02	2.53E-01	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>  
 Carbon monoxide results are based on 8-hour averaging times.  
 Cabins = Receptor Locations 1 to 22  
 Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than 24-hour air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	12	1.36E+00	2.75E-01	3.55E-01	3.59E-01	4.03E-01	5.75E-01	8.86E-01	7.43E-02	8.43E-02	6.09E-02	7.43E-02	9.26E-02	5.92E-01	4.60E-01	4.13E-01
DPM	0.03	1.71E-01	4.05E-02	4.35E-02	4.37E-02	4.78E-02	6.70E-02	9.62E-02	1.31E-02	1.39E-02	9.88E-03	1.31E-02	1.50E-02	6.78E-02	8.00E-02	7.22E-02
PM10	20	7.96E-01	1.63E-01	1.97E-01	2.00E-01	2.23E-01	3.18E-01	4.85E-01	4.58E-02	5.16E-02	3.67E-02	4.58E-02	5.36E-02	3.15E-01	2.70E-01	2.45E-01
PM2.5	8.8	3.75E-01	8.02E-02	8.56E-02	8.61E-02	9.22E-02	1.31E-01	1.99E-01	2.46E-02	2.82E-02	1.90E-02	2.47E-02	2.92E-02	1.26E-01	1.47E-01	1.31E-01
CO	NV	3.40E+00	7.96E-01	8.97E-01	9.22E-01	1.01E+00	1.38E+00	1.90E+00	2.56E-01	2.83E-01	1.98E-01	2.56E-01	3.02E-01	1.34E+00	1.48E+00	1.34E+00
<b>Metals</b>																
Aluminum	3	9.40E-02	1.90E-02	2.46E-02	2.49E-02	2.79E-02	3.99E-02	6.14E-02	5.15E-03	5.85E-03	4.22E-03	5.16E-03	6.42E-03	4.11E-02	3.19E-02	2.86E-02
Antimony	0.3	5.31E-06	1.08E-06	1.39E-06	1.41E-06	1.58E-06	2.25E-06	3.47E-06	2.91E-07	3.30E-07	2.38E-07	2.91E-07	3.63E-07	2.32E-06	1.80E-06	1.62E-06
Arsenic	0.003	1.51E-04	3.05E-05	3.94E-05	3.99E-05	4.47E-05	6.39E-05	9.84E-05	8.25E-06	9.37E-06	6.76E-06	8.26E-06	1.03E-05	6.58E-05	5.11E-05	4.58E-05
Barium	0.3	5.30E-04	1.07E-04	1.39E-04	1.40E-04	1.58E-04	2.25E-04	3.47E-04	2.91E-05	3.30E-05	2.38E-05	2.91E-05	3.62E-05	2.32E-04	1.80E-04	1.61E-04
Beryllium	0.0042	9.87E-07	2.00E-07	2.58E-07	2.61E-07	2.93E-07	4.19E-07	6.45E-07	5.41E-08	6.14E-08	4.43E-08	5.41E-08	6.74E-08	4.31E-07	3.35E-07	3.00E-07
Bismuth	3	2.71E-07	5.49E-08	7.10E-08	7.18E-08	8.06E-08	1.15E-07	1.77E-07	1.49E-08	1.69E-08	1.22E-08	1.49E-08	1.85E-08	1.18E-07	9.20E-08	8.25E-08
Cadmium	0.0024	1.03E-04	2.44E-05	2.62E-05	2.63E-05	2.88E-05	4.04E-05	5.79E-05	7.89E-06	8.35E-06	5.94E-06	7.90E-06	9.00E-06	4.08E-05	4.81E-05	4.34E-05
Calcium	NV	5.36E-02	1.09E-02	1.40E-02	1.42E-02	1.59E-02	2.27E-02	3.50E-02	2.94E-03	3.33E-03	2.41E-03	2.94E-03	3.66E-03	2.34E-02	1.82E-02	1.63E-02
Chromium	0.03	2.43E-04	4.97E-05	6.34E-05	6.41E-05	7.18E-05	1.02E-04	1.57E-04	1.37E-05	1.54E-05	1.11E-05	1.37E-05	1.69E-05	1.05E-04	8.45E-05	7.58E-05
Cobalt	0.1	3.63E-05	7.36E-06	9.51E-06	9.62E-06	1.08E-05	1.54E-05	2.37E-05	1.99E-06	2.26E-06	1.63E-06	1.99E-06	2.48E-06	1.59E-05	1.23E-05	1.11E-05
Copper	0.7	9.61E-05	1.95E-05	2.52E-05	2.54E-05	2.86E-05	4.08E-05	6.28E-05	5.27E-06	5.98E-06	4.31E-06	5.27E-06	6.56E-06	4.20E-05	3.26E-05	2.92E-05
Gold	1.7	1.05E-07	2.13E-08	2.75E-08	2.78E-08	3.12E-08	4.45E-08	6.86E-08	5.75E-09	6.53E-09	4.71E-09	5.76E-09	7.17E-09	4.59E-08	3.56E-08	3.19E-08
Iron	0.7	1.03E-01	2.09E-02	2.70E-02	2.73E-02	3.06E-02	4.37E-02	6.74E-02	5.65E-03	6.41E-03	4.63E-03	5.65E-03	7.04E-03	4.50E-02	3.50E-02	3.14E-02
Lead	0.2	3.33E-05	7.33E-06	8.59E-06	8.65E-06	9.59E-06	1.36E-05	2.02E-05	2.20E-06	2.40E-06	1.71E-06	2.20E-06	2.60E-06	1.39E-05	1.35E-05	1.21E-05
Lithium	NV	4.38E-05	8.88E-06	1.15E-05	1.16E-05	1.30E-05	1.86E-05	2.87E-05	2.40E-06	2.73E-06	1.97E-06	2.40E-06	2.99E-06	1.92E-05	1.49E-05	1.33E-05
Magnesium	3	2.84E-02	5.76E-03	7.44E-03	7.53E-03	8.45E-03	1.21E-02	1.86E-02	1.56E-03	1.77E-03	1.28E-03	1.56E-03	1.94E-03	1.24E-02	9.64E-03	8.65E-03
Manganese	0.09	1.07E-03	2.16E-04	2.80E-04	2.83E-04	3.17E-04	4.53E-04	6.99E-04	5.86E-05	6.65E-05	4.80E-05	5.86E-05	7.30E-05	4.67E-04	3.62E-04	3.25E-04
Molybdenum	2	1.63E-06	3.29E-07	4.26E-07	4.31E-07	4.83E-07	6.90E-07	1.06E-06	8.92E-08	1.01E-07	7.30E-08	8.92E-08	1.11E-07	7.11E-07	5.52E-07	4.95E-07
Nickel	0.014	9.43E-05	1.91E-05	2.47E-05	2.50E-05	2.80E-05	4.00E-05	6.16E-05	5.17E-06	5.86E-06	4.23E-06	5.17E-06	6.44E-06	4.12E-05	3.20E-05	2.87E-05
Potassium	1	1.80E-02	3.64E-03	4.71E-03	4.76E-03	5.34E-03	7.63E-03	1.18E-02	9.86E-04	1.12E-03	8.07E-04	9.86E-04	1.23E-03	7.86E-03	6.10E-03	5.47E-03
Selenium	4	1.62E-06	3.29E-07	4.25E-07	4.30E-07	4.82E-07	6.89E-07	1.06E-06	8.89E-08	1.01E-07	7.28E-08	8.90E-08	1.11E-07	7.09E-07	5.50E-07	4.94E-07
Silver	0.007	3.99E-07	8.09E-08	1.05E-07	1.06E-07	1.19E-07	1.69E-07	2.61E-07	2.19E-08	2.48E-08	1.79E-08	2.19E-08	2.73E-08	1.74E-07	1.35E-07	1.22E-07
Sodium	NV	2.15E-02	4.35E-03	5.62E-03	5.69E-03	6.38E-03	9.12E-03	1.40E-02	1.18E-03	1.34E-03	9.64E-04	1.18E-03	1.47E-03	9.39E-03	7.29E-03	6.54E-03
Strontium	1	2.87E-04	5.81E-05	7.52E-05	7.60E-05	8.53E-05	1.22E-04	1.88E-04	1.57E-05	1.79E-05	1.29E-05	1.57E-05	1.96E-05	1.25E-04	9.74E-05	8.74E-05
Thallium	0.07	4.15E-07	8.40E-08	1.09E-07	1.10E-07	1.23E-07	1.76E-07	2.71E-07	2.27E-08	2.58E-08	1.86E-08	2.27E-08	2.83E-08	1.81E-07	1.41E-07	1.26E-07
Tin	1	1.46E-06	2.96E-07	3.83E-07	3.87E-07	4.34E-07	6.20E-07	9.55E-07	8.01E-08	9.09E-08	6.56E-08	8.01E-08	9.98E-08	6.39E-07	4.96E-07	4.45E-07
Titanium	3	4.73E-03	9.57E-04	1.24E-03	1.25E-03	1.40E-03	2.01E-03	3.09E-03	2.59E-04	2.94E-04	2.12E-04	2.59E-04	3.23E-04	2.07E-03	1.60E-03	1.44E-03
Uranium	0.03	1.32E-06	2.67E-07	3.45E-07	3.49E-07	3.92E-07	5.60E-07	8.62E-07	7.23E-08	8.20E-08	5.92E-08	7.23E-08	9.01E-08	5.76E-07	4.47E-07	4.01E-07
Vanadium	0.1	1.74E-04	3.52E-05	4.55E-05	4.60E-05	5.16E-05	7.38E-05	1.14E-04	9.53E-06	1.08E-05	7.80E-06	9.53E-06	1.19E-05	7.59E-05	5.90E-05	5.29E-05
Yttrium	0.7	1.28E-05	2.60E-06	3.36E-06	3.40E-06	3.81E-06	5.44E-06	8.39E-06	7.03E-07	7.98E-07	5.76E-07	7.03E-07	8.76E-07	5.61E-06	4.35E-06	3.90E-06
Zinc	1	2.55E-04	5.58E-05	6.60E-05	6.65E-05	7.38E-05	1.05E-04	1.56E-04	1.66E-05	1.82E-05	1.30E-05	1.66E-05	1.97E-05	1.07E-04	1.02E-04	9.18E-05
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	1.88E-07	4.46E-08	4.79E-08	4.80E-08	5.26E-08	7.38E-08	1.06E-07	1.44E-08	1.53E-08	1.09E-08	1.44E-08	1.65E-08	7.46E-08	8.80E-08	7.94E-08
naphthalene	0.3	7.44E-05	1.76E-05	1.89E-05	1.90E-05	2.08E-05	2.92E-05	4.19E-05	5.71E-06	6.05E-06	4.30E-06	5.72E-06	6.51E-06	2.95E-05	3.48E-05	3.14E-05
phenanthrene	0.03	6.14E-06	1.46E-06	1.56E-06	1.57E-06	1.72E-06	2.41E-06	3.46E-06	4.72E-07	4.99E-07	3.55E-07	4.72E-07	5.38E-07	2.44E-06	2.88E-06	2.60E-06
anthracene	0.07	6.85E-07	1.63E-07	1.74E-07	1.75E-07	1.92E-07	2.69E-07	3.86E-07	5.26E-08	5.57E-08	3.96E-08	5.27E-08	6.00E-08	2.72E-07	3.21E-07	2.90E-07
fluorene	0.7	3.00E-06	7.11E-07	7.63E-07	7.66E-07	8.39E-07	1.18E-06	1.69E-06	2.30E-07	2.44E-07	1.73E-07	2.30E-07	2.62E-07	1.19E-06	1.40E-06	1.27E-06
pyrene	0.03	2.24E-06	5.32E-07	5.72E-07	5.74E-07	6.28E-07	8.81E-07	1.26E-06	1.72E-07	1.82E-07	1.30E-07	1.73E-07	1.97E-07	8.91E-07	1.05E-06	9.49E-07
thiophenes	2	3.89E-08	9.24E-09	9.91E-09	9.95E-09	1.09E-08	1.53E-08	2.19E-08	2.99E-09	3.17E-09	2.25E-09	2.99E-09	3.41E-09	1.54E-08	1.82E-08	1.65E-08
benz(a)anthracene	0.0001	8.92E-08	2.12E-08	2.27E-08	2.28E-08	2.50E-08	3.50E-08	5.02E-08	6.85E-09	7.25E-09	5.16E-09	6.86E-09	7.81E-09	3.54E-08	4.18E-08	3.77E-08
acenaphthene	6.67	5.77E-07	1.37E-07	1.47E-07	1.48E-07	1.62E-07	2.27E-07	3.25E-07	4.44E-08	4.70E-08	3.34E-08	4.44E-08	5.06E-08	2.29E-07	2.71E-07	2.44E-07
acenaphthylene	6.67	2.10E-06	4.98E-07	5.34E-07	5.36E-07	5.87E-07	8.23E-07	1.18E-06	1.61E-07	1.71E-07	1.21E-07	1.61E-07	1.84E-07	8.32E-07	9.83E-07	8.87E-07
fluoranthene	0.03	2.23E-06	5.29E-07	5.68E-07	5.71E-07	6.25E-07	8.76E-07	1.26E-06	1.71E-07	1.81E-07	1.29E-07	1.72E-07	1.95E-07	8.86E-07	1.05E-06	9.44E-07
benzo(b)fluoranthene	0.09	4.14E-07	9.83E-08	1.06E-07	1.06E-07	1.16E-07	1.63E-07	2.33E-07	3.18E-08	3.37E-08	2.40E-08	3.19E-08	3.63E-08	1.64E-07	1.94E-07	1.75E-07
benzo(g,h,i)perylene	0.03	7.87E-09	1.87E-09	2.00E-09	2.01E-09	2.20E-09	3.09E-09	4.43E-09	6.05E-10	6.40E-10	4.55E-10	6.05E-10	6.90E-10	3.12E-09	3.69E-09	3.33E-09
benzo(k)fluoranthene	0.09	4.71E-08	1.12E-08	1.20E-08	1.20E-08	1.32E-08	1.85E-08	2.65E-08	3.62E-09	3.83E-09	2.73E-09	3.62E-09	4.13E-09	1.87E-08	2.21E-08	1.99E-08
chrysene	0.9	1.00E-07	2.38E-08	2.55E-08	2.56E-08	2.81E-08	3.93E-08	5.64E-08	7.70E-09	8.15E-09	5.80E-09	7.				

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	9.68E-04	2.31E-04	2.53E-04	2.60E-04	2.84E-04	3.92E-04	5.43E-04	7.54E-05	8.25E-05	5.79E-05	7.55E-05	8.86E-05	3.84E-04	4.53E-04	4.07E-04
acetaldehyde	4	1.31E-01	3.12E-02	3.42E-02	3.50E-02	3.83E-02	5.29E-02	7.33E-02	1.02E-02	1.11E-02	7.81E-03	1.02E-02	1.19E-02	5.18E-02	6.10E-02	5.49E-02
acetone	6176	6.87E-02	1.64E-02	1.80E-02	1.84E-02	2.01E-02	2.78E-02	3.86E-02	5.35E-03	5.86E-03	4.11E-03	5.35E-03	6.29E-03	2.73E-02	3.21E-02	2.89E-02
acrolein	0.07	2.31E-02	5.52E-03	6.05E-03	6.20E-03	6.78E-03	9.36E-03	1.30E-02	1.80E-03	1.97E-03	1.38E-03	1.80E-03	2.11E-03	9.17E-03	1.08E-02	9.72E-03
aldehyde	0.6	1.75E-01	4.17E-02	4.57E-02	4.69E-02	5.12E-02	7.07E-02	9.80E-02	1.36E-02	1.49E-02	1.04E-02	1.36E-02	1.60E-02	6.93E-02	8.16E-02	7.34E-02
benzene	0.3	8.56E-03	2.04E-03	2.24E-03	2.30E-03	2.51E-03	3.47E-03	4.80E-03	6.66E-04	7.30E-04	5.12E-04	6.67E-04	7.83E-04	3.40E-03	4.00E-03	3.60E-03
C10-C12 aliphatic	233	1.88E-03	4.49E-04	4.92E-04	5.04E-04	5.51E-04	7.61E-04	1.05E-03	1.46E-04	1.60E-04	1.12E-04	1.46E-04	1.72E-04	7.46E-04	8.79E-04	7.90E-04
C12-C16 aliphatic	233	1.09E-02	2.60E-03	2.85E-03	2.92E-03	3.19E-03	4.41E-03	6.11E-03	8.48E-04	9.28E-04	6.51E-04	8.48E-04	9.96E-04	4.32E-03	5.09E-03	4.58E-03
C12-C16 aromatic	83	1.47E-04	3.51E-05	3.84E-05	3.94E-05	4.30E-05	5.94E-05	8.24E-05	1.14E-05	1.25E-05	8.78E-06	1.14E-05	1.34E-05	5.82E-05	6.86E-05	6.17E-05
C16-C21 aliphatic	7	1.09E-02	2.60E-03	2.85E-03	2.92E-03	3.20E-03	4.41E-03	6.12E-03	8.49E-04	9.29E-04	6.52E-04	8.49E-04	9.97E-04	4.32E-03	5.10E-03	4.58E-03
C2-C6 aliphatic	38.5	5.19E-02	1.24E-02	1.36E-02	1.39E-02	1.52E-02	2.10E-02	2.91E-02	4.04E-03	4.42E-03	3.10E-03	4.04E-03	4.75E-03	2.06E-02	2.43E-02	2.18E-02
C6-C8 aliphatic	67	3.55E-02	8.47E-03	9.29E-03	9.52E-03	1.04E-02	1.44E-02	1.99E-02	2.76E-03	3.03E-03	2.12E-03	2.76E-03	3.25E-03	1.41E-02	1.66E-02	1.49E-02
C8-C10 aliphatic	67	5.00E-04	1.19E-04	1.31E-04	1.34E-04	1.47E-04	2.02E-04	2.80E-04	3.89E-05	4.26E-05	2.99E-05	3.89E-05	4.57E-05	1.98E-04	2.34E-04	2.10E-04
C8-C10 aromatic	83	2.81E-03	6.71E-04	7.36E-04	7.54E-04	8.24E-04	1.14E-03	1.58E-03	2.19E-04	2.40E-04	1.68E-04	2.19E-04	2.57E-04	1.11E-03	1.31E-03	1.18E-03
ethylbenzene	4	1.47E-03	3.51E-04	3.84E-04	3.94E-04	4.30E-04	5.94E-04	8.24E-04	1.14E-04	1.25E-04	8.78E-05	1.14E-04	1.34E-04	5.82E-04	6.86E-04	6.17E-04
ethylene	1200	2.67E-02	6.38E-03	7.00E-03	7.18E-03	7.84E-03	1.08E-02	1.50E-02	2.08E-03	2.28E-03	1.60E-03	2.08E-03	2.45E-03	1.06E-02	1.25E-02	1.12E-02
formaldehyde	1.67	6.96E-02	1.66E-02	1.82E-02	1.87E-02	2.04E-02	2.82E-02	3.91E-02	5.42E-03	5.94E-03	4.17E-03	5.43E-03	6.37E-03	2.76E-02	3.26E-02	2.93E-02
ketone	0.4	3.93E-02	9.40E-03	1.03E-02	1.06E-02	1.15E-02	1.59E-02	2.21E-02	3.06E-03	3.36E-03	2.35E-03	3.07E-03	3.60E-03	1.56E-02	1.84E-02	1.65E-02
toluene	52	1.24E-02	2.97E-03	3.25E-03	3.34E-03	3.64E-03	5.03E-03	6.98E-03	9.68E-04	1.06E-03	7.44E-04	9.69E-04	1.14E-03	4.93E-03	5.81E-03	5.23E-03
trimethylbenzene	83	3.56E-03	8.50E-04	9.32E-04	9.56E-04	1.04E-03	1.44E-03	2.00E-03	2.77E-04	3.04E-04	2.13E-04	2.77E-04	3.26E-04	1.41E-03	1.66E-03	1.50E-03
xylenes	44	9.87E-03	2.36E-03	2.58E-03	2.65E-03	2.89E-03	4.00E-03	5.54E-03	7.68E-04	8.41E-04	5.91E-04	7.69E-04	9.03E-04	3.92E-03	4.62E-03	4.15E-03

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	12	1.32E-01	9.16E-02	8.49E-02	8.93E-02	1.14E-01	1.45E-01	8.42E-01	4.13E-01	2.61E-01	2.70E-01	2.78E-01	1.36E+00	No	No	
DPM	0.03	2.44E-02	1.84E-02	1.78E-02	1.96E-02	2.36E-02	2.89E-02	<b>1.42E-01</b>	<b>5.95E-02</b>	<b>4.64E-02</b>	<b>4.79E-02</b>	<b>4.91E-02</b>	<b>1.71E-01</b>	<b>Yes</b>	<b>Yes</b>	
PM10	20	8.12E-02	5.75E-02	5.34E-02	5.78E-02	7.10E-02	8.96E-02	4.87E-01	2.38E-01	1.57E-01	1.64E-01	1.68E-01	7.96E-01	No	No	
PM2.5	8.8	4.46E-02	3.32E-02	3.19E-02	3.48E-02	4.25E-02	5.22E-02	2.57E-01	1.14E-01	8.50E-02	8.81E-02	9.04E-02	3.75E-01	No	No	
CO	NV	4.60E-01	3.46E-01	3.35E-01	3.67E-01	4.43E-01	5.43E-01	2.68E+00	1.14E+00	8.81E-01	9.10E-01	9.33E-01	3.40E+00	No	No	
<b>Metals</b>																
Aluminum	3	9.13E-03	6.36E-03	5.89E-03	6.20E-03	7.88E-03	1.01E-02	5.84E-02	2.86E-02	1.81E-02	1.88E-02	1.93E-02	9.40E-02	No	No	
Antimony	0.3	5.15E-07	3.59E-07	3.32E-07	3.50E-07	4.44E-07	5.68E-07	3.30E-06	1.62E-06	1.02E-06	1.06E-06	1.09E-06	5.31E-06	No	No	
Arsenic	0.003	1.46E-05	1.02E-05	9.42E-06	9.92E-06	1.26E-05	1.61E-05	9.35E-05	4.59E-05	2.89E-05	3.00E-05	3.09E-05	1.51E-04	No	No	
Barium	0.3	5.14E-05	3.58E-05	3.32E-05	3.49E-05	4.44E-05	5.67E-05	3.29E-04	1.62E-04	1.02E-04	1.06E-04	1.09E-04	5.30E-04	No	No	
Beryllium	0.0042	9.57E-08	6.67E-08	6.18E-08	6.50E-08	8.26E-08	1.06E-07	6.13E-07	3.01E-07	1.90E-07	1.97E-07	2.03E-07	9.87E-07	No	No	
Bismuth	3	2.63E-08	1.83E-08	1.70E-08	1.79E-08	2.27E-08	2.90E-08	1.68E-07	8.26E-08	5.21E-08	5.41E-08	5.57E-08	2.71E-07	No	No	
Cadmium	0.0024	1.47E-05	1.11E-05	1.07E-05	1.18E-05	1.42E-05	1.74E-05	8.52E-05	3.58E-05	2.79E-05	2.88E-05	2.95E-05	1.03E-04	No	No	
Calcium	NV	5.20E-03	3.62E-03	3.35E-03	3.53E-03	4.49E-03	5.73E-03	3.33E-02	1.63E-02	1.03E-02	1.07E-02	1.10E-02	5.36E-02	No	No	
Chromium	0.03	2.43E-05	1.71E-05	1.59E-05	1.68E-05	2.12E-05	2.70E-05	1.54E-04	7.46E-05	4.80E-05	4.97E-05	5.12E-05	2.43E-04	No	No	
Cobalt	0.1	3.52E-06	2.45E-06	2.27E-06	2.39E-06	3.04E-06	3.88E-06	2.26E-05	1.11E-05	6.98E-06	7.24E-06	7.46E-06	3.63E-05	No	No	
Copper	0.7	9.32E-06	6.49E-06	6.01E-06	6.33E-06	8.04E-06	1.03E-05	5.97E-05	2.93E-05	1.85E-05	1.92E-05	1.97E-05	9.61E-05	No	No	
Gold	1.7	1.02E-08	7.09E-09	6.57E-09	6.92E-09	8.79E-09	1.12E-08	6.52E-08	3.20E-08	2.02E-08	2.09E-08	2.16E-08	1.05E-07	No	No	
Iron	0.7	1.00E-02	6.96E-03	6.45E-03	6.79E-03	8.63E-03	1.10E-02	6.40E-02	3.14E-02	1.98E-02	2.05E-02	2.12E-02	1.03E-01	No	No	
Lead	0.2	4.02E-06	2.93E-06	2.79E-06	3.02E-06	3.71E-06	4.62E-06	2.42E-05	1.09E-05	7.75E-06	8.02E-06	8.23E-06	3.33E-05	No	No	
Lithium	NV	4.25E-06	2.96E-06	2.74E-06	2.89E-06	3.67E-06	4.69E-06	2.72E-05	1.34E-05	8.43E-06	8.74E-06	9.00E-06	4.38E-05	No	No	
Magnesium	3	2.76E-03	1.92E-03	1.78E-03	1.87E-03	2.38E-03	3.04E-03	1.77E-02	8.66E-03	5.47E-03	5.67E-03	5.84E-03	2.84E-02	No	No	
Manganese	0.09	1.04E-04	7.22E-05	6.69E-05	7.04E-05	8.94E-05	1.14E-04	6.64E-04	3.26E-04	2.05E-04	2.13E-04	2.19E-04	1.07E-03	No	No	
Molybdenum	2	1.58E-07	1.10E-07	1.02E-07	1.07E-07	1.36E-07	1.74E-07	1.01E-06	4.96E-07	3.13E-07	3.24E-07	3.34E-07	1.63E-06	No	No	
Nickel	0.014	9.14E-06	6.37E-06	5.90E-06	6.21E-06	7.89E-06	1.01E-05	5.86E-05	2.87E-05	1.81E-05	1.88E-05	1.94E-05	9.43E-05	No	No	
Potassium	1	1.75E-03	1.22E-03	1.13E-03	1.18E-03	1.51E-03	1.92E-03	1.12E-02	5.48E-03	3.46E-03	3.59E-03	3.69E-03	1.80E-02	No	No	
Selenium	4	1.57E-07	1.10E-07	1.02E-07	1.07E-07	1.36E-07	1.74E-07	1.01E-06	4.94E-07	3.12E-07	3.24E-07	3.33E-07	1.62E-06	No	No	
Silver	0.007	3.87E-08	2.70E-08	2.50E-08	2.63E-08	3.34E-08	4.27E-08	2.48E-07	1.22E-07	7.68E-08	7.96E-08	8.20E-08	3.99E-07	No	No	
Sodium	NV	2.08E-03	1.45E-03	1.34E-03	1.42E-03	1.80E-03	2.30E-03	1.33E-02	6.55E-03	4.13E-03	4.28E-03	4.41E-03	2.15E-02	No	No	
Strontium	1	2.79E-05	1.94E-05	1.80E-05	1.89E-05	2.40E-05	3.07E-05	1.78E-04	8.75E-05	5.52E-05	5.72E-05	5.89E-05	2.87E-04	No	No	
Thallium	0.07	4.02E-08	2.80E-08	2.59E-08	2.73E-08	3.47E-08	4.43E-08	2.58E-07	1.26E-07	7.97E-08	8.27E-08	8.51E-08	4.15E-07	No	No	
Tin	1	1.42E-07	9.87E-08	9.15E-08	9.63E-08	1.22E-07	1.56E-07	9.08E-07	4.45E-07	2.81E-07	2.91E-07	3.00E-07	1.46E-06	No	No	
Titanium	3	4.59E-04	3.19E-04	2.96E-04	3.11E-04	3.96E-04	5.05E-04	2.94E-03	1.44E-03	9.09E-04	9.42E-04	9.70E-04	4.73E-03	No	No	
Uranium	0.03	1.28E-07	8.91E-08	8.25E-08	8.69E-08	1.10E-07	1.41E-07	8.19E-07	4.02E-07	2.54E-07	2.63E-07	2.71E-07	1.32E-06	No	No	
Vanadium	0.1	1.69E-05	1.17E-05	1.09E-05	1.14E-05	1.46E-05	1.86E-05	1.08E-04	5.30E-05	3.34E-05	3.47E-05	3.57E-05	1.74E-04	No	No	
Yttrium	0.7	1.24E-06	8.67E-07	8.03E-07	8.45E-07	1.07E-06	1.37E-06	7.97E-06	3.91E-06	2.47E-06	2.56E-06	2.63E-06	1.28E-05	No	No	
Zinc	1	3.03E-05	2.20E-05	2.10E-05	2.26E-05	2.79E-05	3.47E-05	1.83E-04	8.30E-05	5.86E-05	6.06E-05	6.22E-05	2.55E-04	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	2.69E-08	2.02E-08	1.96E-08	2.15E-08	2.59E-08	3.18E-08	1.56E-07	6.55E-08	5.11E-08	5.27E-08	5.40E-08	1.88E-07	No	No	
naphthalene	0.3	1.06E-05	8.01E-06	7.75E-06	8.51E-06	1.03E-05	1.26E-05	6.17E-05	2.59E-05	2.02E-05	2.09E-05	2.14E-05	7.44E-05	No	No	
phenanthrene	0.03	8.79E-07	6.62E-07	6.40E-07	7.03E-07	8.48E-07	1.04E-06	5.09E-06	2.14E-06	1.67E-06	1.72E-06	1.77E-06	6.14E-06	No	No	
anthracene	0.07	9.81E-08	7.38E-08	7.14E-08	7.85E-08	9.45E-08	1.16E-07	5.68E-07	2.39E-07	1.86E-07	1.92E-07	1.97E-07	6.85E-07	No	No	
fluorene	0.7	4.29E-07	3.23E-07	3.12E-07	3.43E-07	4.14E-07	5.07E-07	2.48E-06	1.04E-06	8.14E-07	8.41E-07	8.62E-07	3.00E-06	No	No	
pyrene	0.03	3.21E-07	2.42E-07	2.34E-07	2.57E-07	3.10E-07	3.80E-07	1.86E-06	7.82E-07	6.10E-07	6.30E-07	6.45E-07	2.24E-06	No	No	
thiophenes	2	5.57E-09	4.19E-09	4.06E-09	4.46E-09	5.37E-09	6.59E-09	3.23E-08	1.36E-08	1.06E-08	1.09E-08	1.12E-08	3.89E-08	No	No	
benz(a)anthracene	0.0001	1.28E-08	9.60E-09	9.29E-09	1.02E-08	1.23E-08	1.51E-08	7.39E-08	3.11E-08	2.42E-08	2.50E-08	2.56E-08	8.92E-08	No	No	
acenaphthene	6.67	8.27E-08	6.22E-08	6.02E-08	6.61E-08	7.97E-08	9.77E-08	4.79E-07	2.01E-07	1.57E-07	1.62E-07	1.66E-07	5.77E-07	No	No	
acenaphthylene	6.67	3.00E-07	2.26E-07	2.19E-07	2.40E-07	2.89E-07	3.55E-07	1.74E-06	7.31E-07	5.70E-07	5.89E-07	6.03E-07	2.10E-06	No	No	
fluoranthene	0.03	3.20E-07	2.40E-07	2.33E-07	2.56E-07	3.08E-07	3.78E-07	1.85E-06	7.78E-07	6.06E-07	6.26E-07	6.42E-07	2.23E-06	No	No	
benzo(b)fluoranthene	0.09	5.93E-08	4.46E-08	4.32E-08	4.74E-08	5.72E-08	7.01E-08	3.44E-07	1.44E-07	1.13E-07	1.16E-07	1.19E-07	4.14E-07	No	No	
benzo(g,h,i)perylene	0.03	1.13E-09	8.48E-10	8.21E-10	9.01E-10	1.09E-09	1.33E-09	6.53E-09	2.74E-09	2.14E-09	2.21E-09	2.26E-09	7.87E-09	No	No	
benzo(k)fluoranthene	0.09	6.75E-09	5.08E-09	4.91E-09	5.40E-09	6.50E-09	7.98E-09	3.91E-08	1.64E-08	1.28E-08	1.32E-08	1.36E-08	4.71E-08	No	No	
chrysene	0.9	1.44E-08	1.08E-08	1.04E-08	1.15E-08	1.38E-08	1.70E-08	8.31E-08	3.49E-08	2.72E-08	2.81E-08	2.88E-08	1.00E-07	No	No	
dibenzo(a,h)anthracene	0.008	1.87E-08	1.40E-08	1.36E-08	1.49E-08	1.80E-08	2.21E-08	1.08E-07	4.55E-08	3.54E-08	3.66E-08	3.75E-08	1.30E-07	No	No	
indeno(1,2,3-cd)pyrene	0.0009	1.19E-08	8.93E-09	8.64E-09	9.49E-09	1.14E-08	1.40E-08	6.87E-08	2.89E-08	2.25E-08	2.33E-08	2.38E-08	8.29E-08	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3			
<b>Volatile Organic Compounds</b>															
1,3-butadiene	0.06	1.39E-04	1.04E-04	1.01E-04	1.10E-04	1.33E-04	1.63E-04	8.06E-04	3.33E-04	2.59E-04	2.67E-04	2.74E-04	9.68E-04	No	No
acetaldehyde	4	1.87E-02	1.41E-02	1.36E-02	1.48E-02	1.79E-02	2.19E-02	1.09E-01	4.49E-02	3.49E-02	3.60E-02	3.69E-02	1.31E-01	No	No
acetone	6176	9.86E-03	7.41E-03	7.16E-03	7.80E-03	9.44E-03	1.15E-02	5.72E-02	2.36E-02	1.84E-02	1.89E-02	1.94E-02	6.87E-02	No	No
acrolein	0.07	3.32E-03	2.49E-03	2.41E-03	2.62E-03	3.17E-03	3.88E-03	1.93E-02	7.94E-03	6.18E-03	6.37E-03	6.53E-03	2.31E-02	No	No
aldehyde	0.6	2.51E-02	1.88E-02	1.82E-02	1.98E-02	2.40E-02	2.93E-02	1.45E-01	6.00E-02	4.67E-02	4.81E-02	4.93E-02	1.75E-01	No	No
benzene	0.3	1.23E-03	9.23E-04	8.91E-04	9.72E-04	1.18E-03	1.44E-03	7.13E-03	2.94E-03	2.29E-03	2.36E-03	2.42E-03	8.56E-03	No	No
C10-C12 aliphatic	233	2.70E-04	2.03E-04	1.96E-04	2.13E-04	2.58E-04	3.16E-04	1.57E-03	6.46E-04	5.02E-04	5.18E-04	5.31E-04	1.88E-03	No	No
C12-C16 aliphatic	233	1.56E-03	1.17E-03	1.13E-03	1.24E-03	1.49E-03	1.83E-03	9.07E-03	3.74E-03	2.91E-03	3.00E-03	3.08E-03	1.09E-02	No	No
C12-C16 aromatic	83	2.11E-05	1.58E-05	1.53E-05	1.67E-05	2.02E-05	2.47E-05	1.22E-04	5.04E-05	3.92E-05	4.04E-05	4.15E-05	1.47E-04	No	No
C16-C21 aliphatic	7	1.56E-03	1.18E-03	1.13E-03	1.24E-03	1.50E-03	1.83E-03	9.08E-03	3.74E-03	2.91E-03	3.00E-03	3.08E-03	1.09E-02	No	No
C2-C6 aliphatic	38.5	7.45E-03	5.60E-03	5.40E-03	5.89E-03	7.12E-03	8.72E-03	4.32E-02	1.78E-02	1.39E-02	1.43E-02	1.47E-02	5.19E-02	No	No
C6-C8 aliphatic	67	5.09E-03	3.83E-03	3.69E-03	4.03E-03	4.87E-03	5.96E-03	2.96E-02	1.22E-02	9.48E-03	9.78E-03	1.00E-02	3.55E-02	No	No
C8-C10 aliphatic	67	7.17E-05	5.39E-05	5.20E-05	5.67E-05	6.86E-05	8.40E-05	4.16E-04	1.72E-04	1.34E-04	1.38E-04	1.41E-04	5.00E-04	No	No
C8-C10 aromatic	83	4.03E-04	3.03E-04	2.93E-04	3.19E-04	3.86E-04	4.72E-04	2.34E-03	9.65E-04	7.51E-04	7.74E-04	7.94E-04	2.81E-03	No	No
ethylbenzene	4	2.11E-04	1.58E-04	1.53E-04	1.67E-04	2.02E-04	2.47E-04	1.22E-03	5.04E-04	3.92E-04	4.04E-04	4.15E-04	1.47E-03	No	No
ethylene	1200	3.84E-03	2.88E-03	2.78E-03	3.04E-03	3.67E-03	4.49E-03	2.23E-02	9.19E-03	7.15E-03	7.37E-03	7.55E-03	2.67E-02	No	No
formaldehyde	1.67	1.00E-02	7.52E-03	7.25E-03	7.91E-03	9.56E-03	1.17E-02	5.80E-02	2.39E-02	1.86E-02	1.92E-02	1.97E-02	6.96E-02	No	No
ketone	0.4	5.65E-03	4.25E-03	4.10E-03	4.47E-03	5.40E-03	6.61E-03	3.28E-02	1.35E-02	1.05E-02	1.08E-02	1.11E-02	3.93E-02	No	No
toluene	52	1.78E-03	1.34E-03	1.29E-03	1.41E-03	1.71E-03	2.09E-03	1.04E-02	4.27E-03	3.32E-03	3.43E-03	3.51E-03	1.24E-02	No	No
trimethylbenzene	83	5.11E-04	3.84E-04	3.71E-04	4.04E-04	4.89E-04	5.98E-04	2.97E-03	1.22E-03	9.52E-04	9.81E-04	1.01E-03	3.56E-03	No	No
xylenes	44	1.42E-03	1.06E-03	1.03E-03	1.12E-03	1.36E-03	1.66E-03	8.22E-03	3.39E-03	2.64E-03	2.72E-03	2.79E-03	9.87E-03	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	12	1.13E+00	2.83E-01	3.27E-01	3.32E-01	3.53E-01	4.53E-01	6.48E-01	8.42E-02	9.35E-02	6.91E-02	8.43E-02	9.49E-02	9.38E-01	9.77E-01	8.31E-01
DPM	0.03	1.22E-01	3.59E-02	3.80E-02	3.77E-02	3.95E-02	5.38E-02	7.27E-02	1.24E-02	1.29E-02	9.35E-03	1.24E-02	1.41E-02	7.42E-02	9.88E-02	8.62E-02
PM10	20	6.61E-01	1.63E-01	1.84E-01	1.87E-01	1.99E-01	2.54E-01	3.53E-01	5.02E-02	5.55E-02	4.06E-02	5.02E-02	5.68E-02	4.79E-01	5.21E-01	4.49E-01
PM2.5	8.8	3.16E-01	7.65E-02	7.87E-02	7.82E-02	8.39E-02	1.13E-01	1.61E-01	2.47E-02	2.80E-02	1.92E-02	2.48E-02	2.92E-02	1.51E-01	1.96E-01	1.72E-01
CO	NV	2.32E+00	6.90E-01	7.31E-01	7.39E-01	7.78E-01	1.04E+00	1.39E+00	2.39E-01	2.61E-01	1.85E-01	2.39E-01	2.80E-01	1.46E+00	1.93E+00	1.69E+00
<b>Metals</b>																
Aluminum	3	7.86E-02	1.96E-02	2.27E-02	2.30E-02	2.45E-02	3.14E-02	4.49E-02	5.84E-03	6.48E-03	4.79E-03	5.84E-03	6.58E-03	6.50E-02	6.77E-02	5.76E-02
Antimony	0.3	4.44E-06	1.11E-06	1.28E-06	1.30E-06	1.38E-06	1.77E-06	2.54E-06	3.30E-07	3.66E-07	2.71E-07	3.30E-07	3.72E-07	3.67E-06	3.83E-06	3.25E-06
Arsenic	0.003	1.26E-04	3.14E-05	3.63E-05	3.69E-05	3.92E-05	5.03E-05	7.20E-05	9.35E-06	1.04E-05	7.68E-06	9.36E-06	1.05E-05	1.04E-04	1.09E-04	9.22E-05
Barium	0.3	4.43E-04	1.11E-04	1.28E-04	1.30E-04	1.38E-04	1.77E-04	2.53E-04	3.29E-05	3.66E-05	2.70E-05	3.29E-05	3.71E-05	3.67E-04	3.82E-04	3.25E-04
Beryllium	0.0042	8.25E-07	2.06E-07	2.38E-07	2.42E-07	2.57E-07	3.30E-07	4.72E-07	6.13E-08	6.81E-08	5.03E-08	6.13E-08	6.91E-08	6.83E-07	7.11E-07	6.05E-07
Bismuth	3	2.27E-07	5.66E-08	6.54E-08	6.64E-08	7.06E-08	9.06E-08	1.30E-07	1.68E-08	1.87E-08	1.38E-08	1.69E-08	1.90E-08	1.88E-07	1.95E-07	1.66E-07
Cadmium	0.0024	7.35E-05	2.16E-05	2.29E-05	2.27E-05	2.38E-05	3.24E-05	4.38E-05	7.46E-06	7.79E-06	5.63E-06	7.47E-06	8.47E-06	4.48E-05	5.95E-05	5.20E-05
Calcium	NV	4.48E-02	1.12E-02	1.29E-02	1.31E-02	1.39E-02	1.79E-02	2.56E-02	3.33E-03	3.70E-03	2.73E-03	3.33E-03	3.75E-03	3.71E-02	3.86E-02	3.28E-02
Chromium	0.03	2.01E-04	5.06E-05	5.82E-05	5.90E-05	6.26E-05	8.07E-05	1.15E-04	1.52E-05	1.68E-05	1.24E-05	1.53E-05	1.72E-05	1.63E-04	1.72E-04	1.47E-04
Cobalt	0.1	3.04E-05	7.58E-06	8.76E-06	8.89E-06	9.46E-06	1.21E-05	1.74E-05	2.26E-06	2.51E-06	1.85E-06	2.26E-06	2.54E-06	2.51E-05	2.62E-05	2.23E-05
Copper	0.7	8.04E-05	2.00E-05	2.32E-05	2.35E-05	2.50E-05	3.21E-05	4.59E-05	5.97E-06	6.63E-06	4.90E-06	5.97E-06	6.73E-06	6.65E-05	6.93E-05	5.89E-05
Gold	1.7	8.78E-08	2.19E-08	2.53E-08	2.57E-08	2.73E-08	3.51E-08	5.02E-08	6.52E-09	7.24E-09	5.35E-09	6.52E-09	7.35E-09	7.26E-08	7.57E-08	6.43E-08
Iron	0.7	8.62E-02	2.15E-02	2.49E-02	2.52E-02	2.68E-02	3.44E-02	4.93E-02	6.40E-03	7.11E-03	5.25E-03	6.40E-03	7.22E-03	7.13E-02	7.43E-02	6.31E-02
Lead	0.2	2.57E-05	6.97E-06	7.70E-06	7.73E-06	8.17E-06	1.08E-05	1.50E-05	2.25E-06	2.41E-06	1.76E-06	2.25E-06	2.54E-06	1.86E-05	2.16E-05	1.85E-05
Lithium	NV	3.67E-05	9.14E-06	1.06E-05	1.07E-05	1.14E-05	1.46E-05	2.10E-05	2.72E-06	3.02E-06	2.23E-06	2.72E-06	3.07E-06	3.03E-05	3.16E-05	2.69E-05
Magnesium	3	2.38E-02	5.93E-03	6.85E-03	6.96E-03	7.40E-03	9.50E-03	1.36E-02	1.77E-03	1.96E-03	1.45E-03	1.77E-03	1.99E-03	1.97E-02	2.05E-02	1.74E-02
Manganese	0.09	8.94E-04	2.23E-04	2.58E-04	2.62E-04	2.78E-04	3.57E-04	5.11E-04	6.64E-05	7.37E-05	5.45E-05	6.64E-05	7.48E-05	7.39E-04	7.70E-04	6.55E-04
Molybdenum	2	1.36E-06	3.39E-07	3.92E-07	3.98E-07	4.23E-07	5.44E-07	7.78E-07	1.01E-07	1.12E-07	8.29E-08	1.01E-07	1.14E-07	1.13E-06	1.17E-06	9.97E-07
Nickel	0.014	7.88E-05	1.97E-05	2.27E-05	2.31E-05	2.45E-05	3.15E-05	4.50E-05	5.85E-06	6.50E-06	4.81E-06	5.86E-06	6.60E-06	6.52E-05	6.79E-05	5.77E-05
Potassium	1	1.50E-02	3.75E-03	4.34E-03	4.40E-03	4.68E-03	6.01E-03	8.60E-03	1.12E-03	1.24E-03	9.17E-04	1.12E-03	1.26E-03	1.24E-02	1.30E-02	1.10E-02
Selenium	4	1.36E-06	3.38E-07	3.91E-07	3.97E-07	4.22E-07	5.42E-07	7.76E-07	1.01E-07	1.12E-07	8.27E-08	1.01E-07	1.14E-07	1.12E-06	1.17E-06	9.94E-07
Silver	0.007	3.34E-07	8.33E-08	9.63E-08	9.78E-08	1.04E-07	1.33E-07	1.91E-07	2.48E-08	2.75E-08	2.04E-08	2.48E-08	2.80E-08	2.76E-07	2.88E-07	2.45E-07
Sodium	NV	1.80E-02	4.48E-03	5.18E-03	5.26E-03	5.59E-03	7.18E-03	1.03E-02	1.33E-03	1.48E-03	1.10E-03	1.34E-03	1.50E-03	1.49E-02	1.55E-02	1.32E-02
Strontium	1	2.40E-04	5.99E-05	6.92E-05	7.03E-05	7.47E-05	9.59E-05	1.37E-04	1.78E-05	1.98E-05	1.46E-05	1.78E-05	2.01E-05	1.99E-04	2.07E-04	1.76E-04
Thallium	0.07	3.47E-07	8.65E-08	1.00E-07	1.02E-07	1.08E-07	1.39E-07	1.98E-07	2.58E-08	2.86E-08	2.11E-08	2.58E-08	2.90E-08	2.87E-07	2.99E-07	2.54E-07
Tin	1	1.22E-06	3.05E-07	3.52E-07	3.58E-07	3.80E-07	4.88E-07	6.99E-07	9.08E-08	1.01E-07	7.45E-08	9.08E-08	1.02E-07	1.01E-06	1.05E-06	8.95E-07
Titanium	3	3.95E-03	9.86E-04	1.14E-03	1.16E-03	1.23E-03	1.58E-03	2.26E-03	2.94E-04	3.26E-04	2.41E-04	2.94E-04	3.31E-04	3.27E-03	3.41E-03	2.90E-03
Uranium	0.03	1.10E-06	2.75E-07	3.18E-07	3.23E-07	3.43E-07	4.41E-07	6.30E-07	8.19E-08	9.10E-08	6.72E-08	8.20E-08	9.24E-08	9.12E-07	9.51E-07	8.08E-07
Vanadium	0.1	1.45E-04	3.62E-05	4.19E-05	4.26E-05	4.52E-05	5.81E-05	8.31E-05	1.08E-05	1.20E-05	8.86E-06	1.08E-05	1.22E-05	1.20E-04	1.25E-04	1.06E-04
Yttrium	0.7	1.07E-05	2.68E-06	3.09E-06	3.14E-06	3.34E-06	4.29E-06	6.13E-06	7.97E-07	8.85E-07	6.54E-07	7.97E-07	8.98E-07	8.87E-06	9.25E-06	7.86E-06
Zinc	1	1.99E-04	5.34E-05	5.93E-05	5.96E-05	6.30E-05	8.30E-05	1.16E-04	1.71E-05	1.84E-05	1.35E-05	1.71E-05	1.94E-05	1.46E-04	1.67E-04	1.43E-04
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	1.34E-07	3.95E-08	4.18E-08	4.15E-08	4.35E-08	5.92E-08	8.00E-08	1.36E-08	1.42E-08	1.03E-08	1.37E-08	1.55E-08	8.17E-08	1.09E-07	9.49E-08
naphthalene	0.3	5.31E-05	1.56E-05	1.65E-05	1.64E-05	1.72E-05	2.34E-05	3.17E-05	5.40E-06	5.63E-06	4.07E-06	5.40E-06	6.13E-06	3.23E-05	4.30E-05	3.75E-05
phenanthrene	0.03	4.39E-06	1.29E-06	1.37E-06	1.36E-06	1.42E-06	1.94E-06	2.62E-06	4.46E-07	4.65E-07	3.36E-07	4.46E-07	5.06E-07	2.67E-06	3.55E-06	3.10E-06
anthracene	0.07	4.89E-07	1.44E-07	1.52E-07	1.51E-07	1.59E-07	2.16E-07	2.92E-07	4.97E-08	5.19E-08	3.75E-08	4.98E-08	5.65E-08	2.98E-07	3.96E-07	3.46E-07
fluorene	0.7	2.14E-06	6.30E-07	6.67E-07	6.61E-07	6.93E-07	9.45E-07	1.28E-06	2.18E-07	2.27E-07	1.64E-07	2.18E-07	2.47E-07	1.30E-06	1.73E-06	1.51E-06
pyrene	0.03	1.60E-06	4.72E-07	4.99E-07	4.95E-07	5.19E-07	7.07E-07	9.56E-07	1.63E-07	1.70E-07	1.23E-07	1.63E-07	1.85E-07	9.75E-07	1.30E-06	1.13E-06
thiophenes	2	2.78E-08	8.19E-09	8.66E-09	8.59E-09	9.01E-09	1.23E-08	1.66E-08	2.83E-09	2.95E-09	2.13E-09	2.83E-09	3.21E-09	1.69E-08	2.25E-08	1.97E-08
benz(a)anthracene	0.0001	6.37E-08	1.88E-08	1.98E-08	1.97E-08	2.06E-08	2.81E-08	3.80E-08	6.47E-09	6.76E-09	4.88E-09	6.48E-09	7.35E-09	3.87E-08	5.16E-08	4.50E-08
acenaphthene	6.67	4.12E-07	1.21E-07	1.28E-07	1.27E-07	1.34E-07	1.82E-07	2.46E-07	4.19E-08	4.38E-08	3.16E-08	4.19E-08	4.76E-08	2.51E-07	3.34E-07	2.92E-07
acenaphthylene	6.67	1.50E-06	4.41E-07	4.67E-07	4.63E-07	4.85E-07	6.61E-07	8.93E-07	1.52E-07	1.59E-07	1.15E-07	1.52E-07	1.73E-07	9.12E-07	1.21E-06	1.06E-06
fluoranthene	0.03	1.59E-06	4.69E-07	4.97E-07	4.92E-07	5.16E-07	7.04E-07	9.51E-07	1.62E-07	1.69E-07	1.22E-07	1.62E-07	1.84E-07	9.70E-07	1.29E-06	1.13E-06
benzo(b)fluoranthene	0.09	2.96E-07	8.71E-08	9.22E-08	9.14E-08	9.59E-08	1.31E-07	1.76E-07	3.01E-08	3.14E-08	2.27E-08	3.01E-08	3.41E-08	1.80E-07	2.40E-07	2.09E-07
benzo(g,h,i)perylene	0.03	5.62E-09	1.66E-09	1.75E-09	1.74E-09	1.82E-09	2.48E-09	3.35E-09	5.71E-10	5.97E-10	4.31E-10	5.72E-10	6.49E-10	3.42E-09	4.55E-09	3.98E-09
benzo(k)fluoranthene	0.09	3.37E-08	9.91E-09	1.05E-08	1.04E-08	1.09E-08	1.49E-08	2.01E-08	3.42E-09	3.57E-09	2.58E-09	3.42E-09	3.88E-09	2.05E-08	2.73E-08	2.38E-08
chrysene	0.9	7.16E-08	2.11E-08	2.23E-08	2.21E-08	2.32E-08	3.16E-08	4.27E-08	7.28E-09	7.59E-09	5.49E-09					

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	6.89E-04	2.05E-04	2.17E-04	2.16E-04	2.27E-04	3.04E-04	4.10E-04	7.13E-05	7.69E-05	5.49E-05	7.13E-05	8.32E-05	4.22E-04	5.68E-04	4.97E-04
acetaldehyde	4	9.30E-02	2.76E-02	2.93E-02	2.91E-02	3.06E-02	4.10E-02	5.53E-02	9.61E-03	1.04E-02	7.41E-03	9.62E-03	1.12E-02	5.69E-02	7.66E-02	6.70E-02
acetone	6176	4.89E-02	1.46E-02	1.54E-02	1.53E-02	1.61E-02	2.16E-02	2.91E-02	5.06E-03	5.46E-03	3.90E-03	5.06E-03	5.91E-03	3.00E-02	4.03E-02	3.52E-02
acrolein	0.07	1.65E-02	4.89E-03	5.18E-03	5.15E-03	5.42E-03	7.25E-03	9.80E-03	1.70E-03	1.84E-03	1.31E-03	1.70E-03	1.99E-03	1.01E-02	1.36E-02	1.19E-02
aldehyde	0.6	1.24E-01	3.70E-02	3.92E-02	3.89E-02	4.09E-02	5.48E-02	7.40E-02	1.28E-02	1.39E-02	9.91E-03	1.29E-02	1.50E-02	7.62E-02	1.02E-01	8.96E-02
benzene	0.3	6.09E-03	1.81E-03	1.92E-03	1.91E-03	2.01E-03	2.69E-03	3.63E-03	6.30E-04	6.80E-04	4.86E-04	6.30E-04	7.36E-04	3.73E-03	5.02E-03	4.39E-03
C10-C12 aliphatic	233	1.34E-03	3.98E-04	4.22E-04	4.19E-04	4.41E-04	5.90E-04	7.97E-04	1.38E-04	1.49E-04	1.07E-04	1.38E-04	1.62E-04	8.20E-04	1.10E-03	9.64E-04
C12-C16 aliphatic	233	7.75E-03	2.31E-03	2.44E-03	2.43E-03	2.55E-03	3.42E-03	4.61E-03	8.01E-04	8.65E-04	6.18E-04	8.02E-04	9.36E-04	4.75E-03	6.39E-03	5.58E-03
C12-C16 aromatic	83	1.05E-04	3.11E-05	3.29E-05	3.27E-05	3.44E-05	4.61E-05	6.22E-05	1.08E-05	1.17E-05	8.33E-06	1.08E-05	1.26E-05	6.40E-05	8.61E-05	7.53E-05
C16-C21 aliphatic	7	7.76E-03	2.31E-03	2.44E-03	2.43E-03	2.55E-03	3.42E-03	4.62E-03	8.02E-04	8.66E-04	6.18E-04	8.03E-04	9.37E-04	4.75E-03	6.39E-03	5.59E-03
C2-C6 aliphatic	38.5	3.69E-02	1.10E-02	1.16E-02	1.16E-02	1.22E-02	1.63E-02	2.20E-02	3.82E-03	4.12E-03	2.94E-03	3.82E-03	4.46E-03	2.26E-02	3.04E-02	2.66E-02
C6-C8 aliphatic	67	2.53E-02	7.51E-03	7.96E-03	7.91E-03	8.32E-03	1.11E-02	1.50E-02	2.61E-03	2.82E-03	2.01E-03	2.61E-03	3.05E-03	1.55E-02	2.08E-02	1.82E-02
C8-C10 aliphatic	67	3.56E-04	1.06E-04	1.12E-04	1.11E-04	1.17E-04	1.57E-04	2.12E-04	3.68E-05	3.97E-05	2.84E-05	3.68E-05	4.30E-05	2.18E-04	2.93E-04	2.56E-04
C8-C10 aromatic	83	2.00E-03	5.95E-04	6.30E-04	6.27E-04	6.58E-04	8.82E-04	1.19E-03	2.07E-04	2.23E-04	1.59E-04	2.07E-04	2.41E-04	1.23E-03	1.65E-03	1.44E-03
ethylbenzene	4	1.05E-03	3.11E-04	3.29E-04	3.27E-04	3.44E-04	4.61E-04	6.22E-04	1.08E-04	1.17E-04	8.33E-05	1.08E-04	1.26E-04	6.40E-04	8.61E-04	7.53E-04
ethylene	1200	1.90E-02	5.66E-03	6.00E-03	5.96E-03	6.27E-03	8.39E-03	1.13E-02	1.97E-03	2.12E-03	1.52E-03	1.97E-03	2.30E-03	1.17E-02	1.57E-02	1.37E-02
formaldehyde	1.67	4.96E-02	1.47E-02	1.56E-02	1.55E-02	1.63E-02	2.19E-02	2.95E-02	5.13E-03	5.53E-03	3.95E-03	5.13E-03	5.99E-03	3.04E-02	4.09E-02	3.57E-02
ketone	0.4	2.80E-02	8.33E-03	8.83E-03	8.78E-03	9.22E-03	1.24E-02	1.67E-02	2.90E-03	3.13E-03	2.23E-03	2.90E-03	3.38E-03	1.72E-02	2.31E-02	2.02E-02
toluene	52	8.85E-03	2.63E-03	2.79E-03	2.77E-03	2.91E-03	3.90E-03	5.27E-03	9.15E-04	9.87E-04	7.05E-04	9.16E-04	1.07E-03	5.42E-03	7.29E-03	6.38E-03
trimethylbenzene	83	2.54E-03	7.54E-04	7.98E-04	7.94E-04	8.35E-04	1.12E-03	1.51E-03	2.62E-04	2.83E-04	2.02E-04	2.62E-04	3.06E-04	1.55E-03	2.09E-03	1.83E-03
xylenes	44	7.03E-03	2.09E-03	2.21E-03	2.20E-03	2.31E-03	3.10E-03	4.18E-03	7.26E-04	7.84E-04	5.60E-04	7.27E-04	8.48E-04	4.31E-03	5.79E-03	5.06E-03

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	12	2.10E-01	1.43E-01	1.33E-01	1.41E-01	1.81E-01	2.36E-01	2.54E+00	4.70E-01	3.60E-01	3.69E-01	3.82E-01	2.54E+00	No	No	
DPM	0.03	2.63E-02	1.96E-02	1.90E-02	2.10E-02	2.55E-02	<b>3.17E-02</b>	<b>2.15E-01</b>	<b>5.85E-02</b>	<b>4.83E-02</b>	<b>4.95E-02</b>	<b>5.08E-02</b>	<b>2.15E-01</b>	<b>Yes</b>	<b>Yes</b>	
PM10	20	1.20E-01	8.29E-02	7.70E-02	8.35E-02	1.04E-01	1.35E-01	1.31E+00	2.69E-01	2.09E-01	2.14E-01	2.21E-01	1.31E+00	No	No	
PM2.5	8.8	5.23E-02	3.75E-02	3.63E-02	3.98E-02	4.89E-02	6.12E-02	4.28E-01	1.18E-01	9.45E-02	9.70E-02	9.98E-02	4.28E-01	No	No	
CO	NV	4.98E-01	3.71E-01	3.60E-01	3.97E-01	4.83E-01	6.02E-01	4.25E+00	1.12E+00	9.22E-01	9.45E-01	9.70E-01	4.25E+00	No	No	
<b>Metals</b>																
Aluminum	3	1.46E-02	9.91E-03	9.19E-03	9.79E-03	1.25E-02	1.64E-02	1.76E-01	3.26E-02	2.50E-02	2.56E-02	2.65E-02	1.76E-01	No	No	
Antimony	0.3	8.24E-07	5.59E-07	5.19E-07	5.53E-07	7.09E-07	9.26E-07	9.95E-06	1.84E-06	1.41E-06	1.45E-06	1.49E-06	9.95E-06	No	No	
Arsenic	0.003	2.34E-05	1.59E-05	1.47E-05	1.57E-05	2.01E-05	2.63E-05	2.82E-04	5.22E-05	4.00E-05	4.10E-05	4.24E-05	2.82E-04	No	No	
Barium	0.3	8.23E-05	5.59E-05	5.18E-05	5.52E-05	7.08E-05	9.25E-05	9.94E-04	1.84E-04	1.41E-04	1.44E-04	1.49E-04	9.94E-04	No	No	
Beryllium	0.0042	1.53E-07	1.04E-07	9.65E-08	1.03E-07	1.32E-07	1.72E-07	1.85E-06	3.42E-07	2.62E-07	2.69E-07	2.78E-07	1.85E-06	No	No	
Bismuth	3	4.21E-08	2.86E-08	2.65E-08	2.82E-08	3.62E-08	4.73E-08	5.08E-07	9.40E-08	7.21E-08	7.38E-08	7.63E-08	5.08E-07	No	No	
Cadmium	0.0024	1.58E-05	1.18E-05	1.14E-05	1.26E-05	1.53E-05	1.91E-05	1.30E-04	3.52E-05	2.91E-05	2.98E-05	3.06E-05	1.30E-04	No	No	
Calcium	NV	8.31E-03	5.65E-03	5.24E-03	5.58E-03	7.15E-03	9.35E-03	1.00E-01	1.86E-02	1.42E-02	1.46E-02	1.51E-02	1.00E-01	No	No	
Chromium	0.03	3.76E-05	2.57E-05	2.39E-05	2.56E-05	3.26E-05	4.25E-05	4.44E-04	8.40E-05	6.48E-05	6.64E-05	6.85E-05	4.44E-04	No	No	
Cobalt	0.1	5.64E-06	3.83E-06	3.55E-06	3.78E-06	4.85E-06	6.34E-06	6.81E-05	1.26E-05	9.66E-06	9.89E-06	1.02E-05	6.81E-05	No	No	
Copper	0.7	1.49E-05	1.01E-05	9.39E-06	1.00E-05	1.28E-05	1.68E-05	1.80E-04	3.33E-05	2.55E-05	2.62E-05	2.70E-05	1.80E-04	No	No	
Gold	1.7	1.63E-08	1.11E-08	1.03E-08	1.09E-08	1.40E-08	1.83E-08	1.97E-07	3.64E-08	2.79E-08	2.86E-08	2.95E-08	1.97E-07	No	No	
Iron	0.7	1.60E-02	1.09E-02	1.01E-02	1.07E-02	1.38E-02	1.80E-02	1.93E-01	3.57E-02	2.74E-02	2.81E-02	2.90E-02	1.93E-01	No	No	
Lead	0.2	5.14E-06	3.67E-06	3.48E-06	3.79E-06	4.71E-06	5.99E-06	5.19E-05	1.15E-05	9.13E-06	9.36E-06	9.63E-06	5.19E-05	No	No	
Lithium	NV	6.80E-06	4.62E-06	4.28E-06	4.56E-06	5.85E-06	7.65E-06	8.22E-05	1.52E-05	1.17E-05	1.19E-05	1.23E-05	8.22E-05	No	No	
Magnesium	3	4.41E-03	3.00E-03	2.78E-03	2.96E-03	3.79E-03	4.96E-03	5.33E-02	9.85E-03	7.56E-03	7.74E-03	8.00E-03	5.33E-02	No	No	
Manganese	0.09	1.66E-04	1.13E-04	1.04E-04	1.11E-04	1.43E-04	1.86E-04	2.00E-03	3.70E-04	2.84E-04	2.91E-04	3.01E-04	2.00E-03	No	No	
Molybdenum	2	2.52E-07	1.71E-07	1.59E-07	1.69E-07	2.17E-07	2.84E-07	3.05E-06	5.64E-07	4.32E-07	4.43E-07	4.58E-07	3.05E-06	No	No	
Nickel	0.014	1.46E-05	9.93E-06	9.21E-06	9.81E-06	1.26E-05	1.64E-05	1.77E-04	3.27E-05	2.51E-05	2.57E-05	2.65E-05	1.77E-04	No	No	
Potassium	1	2.79E-03	1.90E-03	1.76E-03	1.87E-03	2.40E-03	3.14E-03	3.37E-02	6.23E-03	4.78E-03	4.90E-03	5.06E-03	3.37E-02	No	No	
Selenium	4	2.52E-07	1.71E-07	1.59E-07	1.69E-07	2.17E-07	2.83E-07	3.04E-06	5.62E-07	4.31E-07	4.42E-07	4.57E-07	3.04E-06	No	No	
Silver	0.007	6.20E-08	4.21E-08	3.90E-08	4.16E-08	5.33E-08	6.96E-08	7.49E-07	1.38E-07	1.06E-07	1.09E-07	1.12E-07	7.49E-07	No	No	
Sodium	NV	3.33E-03	2.26E-03	2.10E-03	2.24E-03	2.87E-03	3.75E-03	4.03E-02	7.45E-03	5.71E-03	5.85E-03	6.05E-03	4.03E-02	No	No	
Strontium	1	4.45E-05	3.03E-05	2.81E-05	2.99E-05	3.83E-05	5.01E-05	5.38E-04	9.95E-05	7.63E-05	7.82E-05	8.08E-05	5.38E-04	No	No	
Thallium	0.07	6.43E-08	4.37E-08	4.05E-08	4.32E-08	5.53E-08	7.23E-08	7.77E-07	1.44E-07	1.10E-07	1.13E-07	1.17E-07	7.77E-07	No	No	
Tin	1	2.27E-07	1.54E-07	1.43E-07	1.52E-07	1.95E-07	2.55E-07	2.74E-06	5.07E-07	3.88E-07	3.98E-07	4.11E-07	2.74E-06	No	No	
Titanium	3	7.33E-04	4.98E-04	4.62E-04	4.92E-04	6.31E-04	8.24E-04	8.86E-03	1.64E-03	1.26E-03	1.29E-03	1.33E-03	8.86E-03	No	No	
Uranium	0.03	2.05E-07	1.39E-07	1.29E-07	1.37E-07	1.76E-07	2.30E-07	2.47E-06	4.57E-07	3.51E-07	3.59E-07	3.71E-07	2.47E-06	No	No	
Vanadium	0.1	2.70E-05	1.83E-05	1.70E-05	1.81E-05	2.32E-05	3.03E-05	3.26E-04	6.02E-05	4.62E-05	4.73E-05	4.89E-05	3.26E-04	No	No	
Yttrium	0.7	1.99E-06	1.35E-06	1.25E-06	1.34E-06	1.71E-06	2.24E-06	2.41E-05	4.45E-06	3.41E-06	3.49E-06	3.61E-06	2.41E-05	No	No	
Zinc	1	3.94E-05	2.80E-05	2.66E-05	2.88E-05	3.59E-05	4.58E-05	4.05E-04	8.80E-05	6.99E-05	7.16E-05	7.37E-05	4.05E-04	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	2.89E-08	2.16E-08	2.09E-08	2.31E-08	2.80E-08	3.48E-08	2.37E-07	6.43E-08	5.31E-08	5.45E-08	5.59E-08	2.37E-07	No	No	
naphthalene	0.3	1.14E-05	8.53E-06	8.28E-06	9.14E-06	1.11E-05	1.38E-05	9.38E-05	2.55E-05	2.10E-05	2.16E-05	2.21E-05	9.38E-05	No	No	
phenanthrene	0.03	9.45E-07	7.05E-07	6.84E-07	7.55E-07	9.16E-07	1.14E-06	7.75E-06	2.10E-06	1.74E-06	1.78E-06	1.83E-06	7.75E-06	No	No	
anthracene	0.07	1.05E-07	7.86E-08	7.63E-08	8.42E-08	1.02E-07	1.27E-07	8.64E-07	2.35E-07	1.94E-07	1.99E-07	2.04E-07	8.64E-07	No	No	
fluorene	0.7	4.61E-07	3.44E-07	3.34E-07	3.68E-07	4.47E-07	5.55E-07	3.78E-06	1.03E-06	8.47E-07	8.68E-07	8.91E-07	3.78E-06	No	No	
pyrene	0.03	3.45E-07	2.57E-07	2.50E-07	2.76E-07	3.35E-07	4.16E-07	2.83E-06	7.68E-07	6.35E-07	6.50E-07	6.67E-07	2.83E-06	No	No	
thiophenes	2	5.99E-09	4.47E-09	4.34E-09	4.79E-09	5.81E-09	7.22E-09	4.91E-08	1.33E-08	1.10E-08	1.13E-08	1.16E-08	4.91E-08	No	No	
benz(a)anthracene	0.0001	1.37E-08	1.02E-08	9.93E-09	1.10E-08	1.33E-08	1.65E-08	1.12E-07	3.05E-08	2.52E-08	2.58E-08	2.65E-08	1.12E-07	No	No	
acenaphthene	6.67	8.89E-08	6.62E-08	6.43E-08	7.10E-08	8.62E-08	1.07E-07	7.28E-07	1.98E-07	1.63E-07	1.67E-07	1.72E-07	7.28E-07	No	No	
acenaphthylene	6.67	3.23E-07	2.41E-07	2.34E-07	2.58E-07	3.13E-07	3.89E-07	2.65E-06	7.18E-07	5.93E-07	6.08E-07	6.24E-07	2.65E-06	No	No	
fluoranthene	0.03	3.43E-07	2.56E-07	2.49E-07	2.74E-07	3.33E-07	4.14E-07	2.81E-06	7.64E-07	6.31E-07	6.47E-07	6.64E-07	2.81E-06	No	No	
benzo(b)fluoranthene	0.09	6.38E-08	4.75E-08	4.61E-08	5.09E-08	6.18E-08	7.68E-08	5.23E-07	1.42E-07	1.17E-07	1.20E-07	1.23E-07	5.23E-07	No	No	
benzo(g,h,i)perylene	0.03	1.21E-09	9.03E-10	8.77E-10	9.68E-10	1.17E-09	1.46E-09	9.93E-09	2.70E-09	2.23E-09	2.28E-09	2.34E-09	9.93E-09	No	No	
benzo(k)fluoranthene	0.09	7.25E-09	5.41E-09	5.25E-09	5.79E-09	7.03E-09	8.73E-09	5.94E-08	1.61E-08	1.33E-08	1.37E-08	1.40E-08	5.94E-08	No	No	
chrysene	0.9	1.54E-08	1.15E-08	1.12E-08	1.23E-08	1.50E-08	1.86E-08	1.26E-07	3.43E-08	2.83E-08	2.90E-08	2.98E-08	1.26E-07	No	No	
dibenzo(a,h)anthracene	0.008	2.01E-08	1.50E-08	1.45E-08	1.60E-08	1.95E-08	2.42E-08	1.64E-07	4.47E-08	3.69E-08	3.78E-08	3.88E-08	1.64E-07	No	No	
indeno(1,2,3-cd)pyrene	0.0009	1.28E-08	9.51E-09	9.23E-09	1.02E-08	1.24E-08	1.54E-08	1.05E-07	2.84E-08	2.34E-08	2.40E-08	2.47E-08	1.05E-07	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3			
<b>Volatile Organic Compounds</b>															
1,3-butadiene	0.06	1.50E-04	1.12E-04	1.08E-04	1.18E-04	1.44E-04	1.79E-04	1.23E-03	3.28E-04	2.70E-04	2.76E-04	2.84E-04	1.23E-03	No	No
acetaldehyde	4	2.02E-02	1.50E-02	1.46E-02	1.60E-02	1.94E-02	2.41E-02	1.66E-01	4.42E-02	3.64E-02	3.73E-02	3.83E-02	1.66E-01	No	No
acetone	6176	1.06E-02	7.91E-03	7.66E-03	8.40E-03	1.02E-02	1.27E-02	8.72E-02	2.33E-02	1.92E-02	1.96E-02	2.01E-02	8.72E-02	No	No
acrolein	0.07	3.57E-03	2.66E-03	2.58E-03	2.83E-03	3.44E-03	4.26E-03	2.93E-02	7.82E-03	6.45E-03	6.60E-03	6.77E-03	2.93E-02	No	No
aldehyde	0.6	2.70E-02	2.01E-02	1.95E-02	2.13E-02	2.60E-02	3.22E-02	2.22E-01	5.91E-02	4.87E-02	4.98E-02	5.12E-02	2.22E-01	No	No
benzene	0.3	1.32E-03	9.86E-04	9.54E-04	1.05E-03	1.27E-03	1.58E-03	1.09E-02	2.90E-03	2.39E-03	2.44E-03	2.51E-03	1.09E-02	No	No
C10-C12 aliphatic	233	2.91E-04	2.16E-04	2.10E-04	2.30E-04	2.80E-04	3.47E-04	2.39E-03	6.36E-04	5.24E-04	5.36E-04	5.51E-04	2.39E-03	No	No
C12-C16 aliphatic	233	1.68E-03	1.25E-03	1.21E-03	1.33E-03	1.62E-03	2.01E-03	1.38E-02	3.68E-03	3.04E-03	3.11E-03	3.19E-03	1.38E-02	No	No
C12-C16 aromatic	83	2.27E-05	1.69E-05	1.64E-05	1.79E-05	2.19E-05	2.71E-05	1.86E-04	4.97E-05	4.09E-05	4.19E-05	4.30E-05	1.86E-04	No	No
C16-C21 aliphatic	7	1.69E-03	1.26E-03	1.22E-03	1.33E-03	1.62E-03	2.01E-03	1.38E-02	3.69E-03	3.04E-03	3.11E-03	3.19E-03	1.38E-02	No	No
C2-C6 aliphatic	38.5	8.02E-03	5.97E-03	5.78E-03	6.34E-03	7.72E-03	9.57E-03	6.59E-02	1.76E-02	1.45E-02	1.48E-02	1.52E-02	6.59E-02	No	No
C6-C8 aliphatic	67	5.49E-03	4.09E-03	3.96E-03	4.34E-03	5.28E-03	6.55E-03	4.50E-02	1.20E-02	9.90E-03	1.01E-02	1.04E-02	4.50E-02	No	No
C8-C10 aliphatic	67	7.73E-05	5.75E-05	5.57E-05	6.11E-05	7.44E-05	9.22E-05	6.34E-04	1.69E-04	1.39E-04	1.43E-04	1.46E-04	6.34E-04	No	No
C8-C10 aromatic	83	4.34E-04	3.24E-04	3.13E-04	3.43E-04	4.18E-04	5.18E-04	3.57E-03	9.51E-04	7.84E-04	8.02E-04	8.23E-04	3.57E-03	No	No
ethylbenzene	4	2.27E-04	1.69E-04	1.64E-04	1.79E-04	2.19E-04	2.71E-04	1.86E-03	4.97E-04	4.09E-04	4.19E-04	4.30E-04	1.86E-03	No	No
ethylene	1200	4.13E-03	3.08E-03	2.98E-03	3.27E-03	3.98E-03	4.93E-03	3.39E-02	9.05E-03	7.46E-03	7.63E-03	7.83E-03	3.39E-02	No	No
formaldehyde	1.67	1.08E-02	8.02E-03	7.77E-03	8.51E-03	1.04E-02	1.29E-02	8.84E-02	2.36E-02	1.94E-02	1.99E-02	2.04E-02	8.84E-02	No	No
ketone	0.4	6.08E-03	4.53E-03	4.39E-03	4.81E-03	5.86E-03	7.26E-03	5.00E-02	1.33E-02	1.10E-02	1.12E-02	1.15E-02	5.00E-02	No	No
toluene	52	1.92E-03	1.43E-03	1.39E-03	1.52E-03	1.85E-03	2.29E-03	1.58E-02	4.21E-03	3.47E-03	3.55E-03	3.64E-03	1.58E-02	No	No
trimethylbenzene	83	5.50E-04	4.10E-04	3.97E-04	4.35E-04	5.30E-04	6.57E-04	4.52E-03	1.20E-03	9.93E-04	1.02E-03	1.04E-03	4.52E-03	No	No
xylenes	44	1.53E-03	1.14E-03	1.10E-03	1.21E-03	1.47E-03	1.82E-03	1.25E-02	3.34E-03	2.75E-03	2.82E-03	2.89E-03	1.25E-02	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	12	1.52E+00	3.55E-01	4.78E-01	4.93E-01	5.36E-01	7.30E-01	1.33E+00	8.58E-02	1.04E-01	7.41E-02	8.59E-02	1.20E-01	6.47E-01	5.44E-01	4.83E-01
DPM	0.03	1.56E-01	3.71E-02	4.56E-02	4.63E-02	4.92E-02	6.52E-02	9.98E-02	1.27E-02	1.34E-02	9.81E-03	1.27E-02	1.45E-02	6.15E-02	7.94E-02	7.15E-02
PM10	20	8.75E-01	2.02E-01	2.68E-01	2.76E-01	3.00E-01	4.04E-01	7.12E-01	5.27E-02	6.10E-02	4.45E-02	5.28E-02	6.97E-02	3.53E-01	3.26E-01	2.90E-01
PM2.5	8.8	3.59E-01	8.05E-02	9.66E-02	9.91E-02	1.07E-01	1.44E-01	2.30E-01	2.55E-02	2.92E-02	2.03E-02	2.55E-02	3.03E-02	1.28E-01	1.53E-01	1.38E-01
CO	NV	3.04E+00	7.20E-01	9.11E-01	9.28E-01	9.90E-01	1.33E+00	1.98E+00	2.46E-01	2.72E-01	1.96E-01	2.46E-01	2.91E-01	1.20E+00	1.52E+00	1.37E+00
<b>Metals</b>																
Aluminum	3	1.05E-01	2.46E-02	3.31E-02	3.41E-02	3.72E-02	5.06E-02	9.24E-02	5.95E-03	7.24E-03	5.14E-03	5.95E-03	8.33E-03	4.48E-02	3.77E-02	3.35E-02
Antimony	0.3	5.95E-06	1.39E-06	1.87E-06	1.93E-06	2.10E-06	2.86E-06	5.22E-06	3.36E-07	4.09E-07	2.90E-07	3.36E-07	4.71E-07	2.53E-06	2.13E-06	1.89E-06
Arsenic	0.003	1.69E-04	3.94E-05	5.31E-05	5.47E-05	5.95E-05	8.10E-05	1.48E-04	9.53E-06	1.16E-05	8.23E-06	9.53E-06	1.33E-05	7.18E-05	6.04E-05	5.36E-05
Barium	0.3	5.94E-04	1.39E-04	1.87E-04	1.93E-04	2.10E-04	2.85E-04	5.21E-04	3.36E-05	4.08E-05	2.90E-05	3.36E-05	4.70E-05	2.53E-04	2.13E-04	1.89E-04
Beryllium	0.0042	1.11E-06	2.59E-07	3.48E-07	3.58E-07	3.90E-07	5.31E-07	9.71E-07	6.25E-08	7.60E-08	5.39E-08	6.25E-08	8.75E-08	4.71E-07	3.96E-07	3.51E-07
Bismuth	3	3.04E-07	7.10E-08	9.56E-08	9.85E-08	1.07E-07	1.46E-07	2.67E-07	1.72E-08	2.09E-08	1.48E-08	1.72E-08	2.40E-08	1.29E-07	1.09E-07	9.66E-08
Cadmium	0.0024	9.42E-05	2.24E-05	2.75E-05	2.79E-05	2.97E-05	3.93E-05	6.02E-05	7.63E-06	8.05E-06	5.90E-06	7.64E-06	8.72E-06	3.71E-05	4.78E-05	4.30E-05
Calcium	NV	6.01E-02	1.40E-02	1.89E-02	1.95E-02	2.12E-02	2.88E-02	5.27E-02	3.39E-03	4.13E-03	2.93E-03	3.39E-03	4.75E-03	2.56E-02	2.15E-02	1.91E-02
Chromium	0.03	2.68E-04	6.28E-05	8.41E-05	8.65E-05	9.41E-05	1.28E-04	2.32E-04	1.55E-05	1.87E-05	1.33E-05	1.55E-05	2.14E-05	1.14E-04	9.84E-05	8.74E-05
Cobalt	0.1	4.07E-05	9.52E-06	1.28E-05	1.32E-05	1.44E-05	1.95E-05	3.57E-05	2.30E-06	2.80E-06	1.98E-06	2.30E-06	3.22E-06	1.73E-05	1.46E-05	1.29E-05
Copper	0.7	1.08E-04	2.52E-05	3.39E-05	3.49E-05	3.80E-05	5.17E-05	9.45E-05	6.08E-06	7.40E-06	5.25E-06	6.08E-06	8.52E-06	4.59E-05	3.86E-05	3.42E-05
Gold	1.7	1.18E-07	2.75E-08	3.70E-08	3.81E-08	4.15E-08	5.65E-08	1.03E-07	6.64E-09	8.08E-09	5.74E-09	6.65E-09	9.31E-09	5.01E-08	4.21E-08	3.74E-08
Iron	0.7	1.16E-01	2.70E-02	3.63E-02	3.74E-02	4.08E-02	5.54E-02	1.01E-01	6.52E-03	7.94E-03	5.63E-03	6.53E-03	9.14E-03	4.92E-02	4.13E-02	3.67E-02
Lead	0.2	3.38E-05	7.95E-06	1.03E-05	1.05E-05	1.13E-05	1.52E-05	2.59E-05	2.29E-06	2.58E-06	1.87E-06	2.29E-06	2.88E-06	1.39E-05	1.44E-05	1.29E-05
Lithium	NV	4.91E-05	1.15E-05	1.55E-05	1.59E-05	1.73E-05	2.36E-05	4.31E-05	2.77E-06	3.38E-06	2.39E-06	2.78E-06	3.89E-06	2.09E-05	1.76E-05	1.56E-05
Magnesium	3	3.19E-02	7.45E-03	1.00E-02	1.03E-02	1.12E-02	1.53E-02	2.80E-02	1.80E-03	2.19E-03	1.55E-03	1.80E-03	2.52E-03	1.36E-02	1.14E-02	1.01E-02
Manganese	0.09	1.20E-03	2.80E-04	3.77E-04	3.88E-04	4.23E-04	5.75E-04	1.05E-03	6.76E-05	8.23E-05	5.84E-05	6.77E-05	9.47E-05	5.10E-04	4.29E-04	3.80E-04
Molybdenum	2	1.82E-06	4.26E-07	5.74E-07	5.91E-07	6.43E-07	8.75E-07	1.60E-06	1.03E-07	1.25E-07	8.89E-08	1.03E-07	1.44E-07	7.76E-07	6.53E-07	5.79E-07
Nickel	0.014	1.06E-04	2.47E-05	3.32E-05	3.42E-05	3.73E-05	5.07E-05	9.27E-05	5.97E-06	7.26E-06	5.15E-06	5.97E-06	8.35E-06	4.50E-05	3.78E-05	3.36E-05
Potassium	1	2.02E-02	4.71E-03	6.34E-03	6.53E-03	7.11E-03	9.68E-03	1.77E-02	1.14E-03	1.39E-03	9.83E-04	1.14E-03	1.59E-03	8.58E-03	7.22E-03	6.40E-03
Selenium	4	1.82E-06	4.25E-07	5.72E-07	5.89E-07	6.42E-07	8.73E-07	1.60E-06	1.03E-07	1.25E-07	8.87E-08	1.03E-07	1.44E-07	7.74E-07	6.51E-07	5.78E-07
Silver	0.007	4.48E-07	1.05E-07	1.41E-07	1.45E-07	1.58E-07	2.15E-07	3.93E-07	2.53E-08	3.07E-08	2.18E-08	2.53E-08	3.54E-08	1.91E-07	1.60E-07	1.42E-07
Sodium	NV	2.41E-02	5.63E-03	7.57E-03	7.80E-03	8.50E-03	1.16E-02	2.11E-02	1.36E-03	1.65E-03	1.17E-03	1.36E-03	1.90E-03	1.03E-02	8.62E-03	7.65E-03
Strontium	1	3.22E-04	7.52E-05	1.01E-04	1.04E-04	1.14E-04	1.54E-04	2.82E-04	1.82E-05	2.21E-05	1.57E-05	1.82E-05	2.54E-05	1.37E-04	1.15E-04	1.02E-04
Thallium	0.07	4.65E-07	1.09E-07	1.46E-07	1.51E-07	1.64E-07	2.23E-07	4.08E-07	2.62E-08	3.19E-08	2.27E-08	2.63E-08	3.68E-08	1.98E-07	1.66E-07	1.48E-07
Tin	1	1.64E-06	3.83E-07	5.15E-07	5.31E-07	5.78E-07	7.86E-07	1.44E-06	9.25E-08	1.13E-07	7.99E-08	9.25E-08	1.30E-07	6.97E-07	5.86E-07	5.20E-07
Titanium	3	5.30E-03	1.24E-03	1.67E-03	1.72E-03	1.87E-03	2.54E-03	4.65E-03	2.99E-04	3.64E-04	2.58E-04	2.99E-04	4.19E-04	2.26E-03	1.90E-03	1.68E-03
Uranium	0.03	1.48E-06	3.45E-07	4.65E-07	4.79E-07	5.22E-07	7.10E-07	1.30E-06	8.35E-08	1.02E-07	7.21E-08	8.35E-08	1.17E-07	6.29E-07	5.29E-07	4.70E-07
Vanadium	0.1	1.95E-04	4.55E-05	6.13E-05	6.31E-05	6.87E-05	9.35E-05	1.71E-04	1.10E-05	1.34E-05	9.50E-06	1.10E-05	1.54E-05	8.29E-05	6.97E-05	6.19E-05
Yttrium	0.7	1.44E-05	3.36E-06	4.52E-06	4.66E-06	5.07E-06	6.90E-06	1.26E-05	8.12E-07	9.88E-07	7.01E-07	8.12E-07	1.14E-06	6.12E-06	5.15E-06	4.57E-06
Zinc	1	2.61E-04	6.15E-05	7.97E-05	8.17E-05	8.81E-05	1.19E-04	2.03E-04	1.75E-05	1.98E-05	1.43E-05	1.75E-05	2.22E-05	1.08E-04	1.10E-04	9.84E-05
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	1.72E-07	4.08E-08	5.01E-08	5.09E-08	5.41E-08	7.18E-08	1.10E-07	1.40E-08	1.47E-08	1.08E-08	1.40E-08	1.59E-08	6.77E-08	8.74E-08	7.87E-08
naphthalene	0.3	6.80E-05	1.62E-05	1.98E-05	2.02E-05	2.14E-05	2.84E-05	4.35E-05	5.52E-06	5.82E-06	4.27E-06	5.52E-06	6.30E-06	2.68E-05	3.46E-05	3.11E-05
phenanthrene	0.03	5.62E-06	1.33E-06	1.64E-06	1.67E-06	1.77E-06	2.35E-06	3.59E-06	4.56E-07	4.81E-07	3.53E-07	4.56E-07	5.21E-07	2.21E-06	2.86E-06	2.57E-06
anthracene	0.07	6.27E-07	1.49E-07	1.83E-07	1.86E-07	1.97E-07	2.62E-07	4.00E-07	5.09E-08	5.36E-08	3.94E-08	5.09E-08	5.81E-08	2.47E-07	3.19E-07	2.87E-07
fluorene	0.7	2.74E-06	6.51E-07	7.99E-07	8.12E-07	8.63E-07	1.14E-06	1.75E-06	2.22E-07	2.35E-07	1.72E-07	2.23E-07	2.54E-07	1.08E-06	1.39E-06	1.25E-06
pyrene	0.03	2.05E-06	4.88E-07	5.99E-07	6.08E-07	6.46E-07	8.57E-07	1.31E-06	1.67E-07	1.76E-07	1.29E-07	1.67E-07	1.90E-07	8.09E-07	1.04E-06	9.39E-07
thiophenes	2	3.56E-08	8.46E-09	1.04E-08	1.06E-08	1.12E-08	1.49E-08	2.28E-08	2.89E-09	3.05E-09	2.24E-09	2.89E-09	3.30E-09	1.40E-08	1.81E-08	1.63E-08
benz(a)anthracene	0.0001	8.16E-08	1.94E-08	2.38E-08	2.42E-08	2.57E-08	3.40E-08	5.21E-08	6.62E-09	6.98E-09	5.12E-09	6.62E-09	7.56E-09	3.21E-08	4.15E-08	3.73E-08
acenaphthene	6.67	5.28E-07	1.25E-07	1.54E-07	1.57E-07	1.66E-07	2.21E-07	3.38E-07	4.29E-08	4.52E-08	3.32E-08	4.29E-08	4.90E-08	2.08E-07	2.69E-07	2.42E-07
acenaphthylene	6.67	1.92E-06	4.56E-07	5.60E-07	5.69E-07	6.04E-07	8.01E-07	1.23E-06	1.56E-07	1.64E-07	1.20E-07	1.56E-07	1.78E-07	7.56E-07	9.76E-07	8.78E-07
fluoranthene	0.03	2.04E-06	4.85E-07	5.95E-07	6.05E-07	6.43E-07	8.52E-07	1.30E-06	1.66E-07	1.75E-07	1.28E-07	1.66E-07	1.89E-07	8.04E-07	1.04E-06	9.34E-07
benzo(b)fluoranthene	0.09	3.79E-07	9.00E-08	1.11E-07	1.12E-07	1.19E-07	1.58E-07	2.42E-07	3.08E-08	3.24E-08	2.38E-08	3.08E-08	3.51E-08	1.49E-07	1.93E-07	1.73E-07
benzo(g,h,i)perylene	0.03	7.20E-09	1.71E-09	2.10E-09	2.13E-09	2.27E-09	3.01E-09	4.60E-09	5.84E-10	6.16E-10	4.52E-10	5.85E-10	6.67E-10	2.84E-09	3.66E-09	3.30E-09
benzo(k)fluoranthene	0.09	4.31E-08	1.02E-08	1.26E-08	1.28E-08	1.36E-08	1.80E-08	2.75E-08	3.50E-09	3.69E-09	2.71E-09	3.50E-09	4.00E-09	1.70E-08	2.19E-08	1.97E-08
chrysene	0.9	9.17E-08	2.18E-08	2.67E-08	2.72E-08	2.89E-08	3.83E-08	5.86E-08	7.44E-09	7.85E-09	5.76E-09	7.				

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	8.85E-04	2.12E-04	2.60E-04	2.65E-04	2.82E-04	3.80E-04	5.63E-04	7.28E-05	7.97E-05	5.74E-05	7.29E-05	8.58E-05	3.49E-04	4.56E-04	4.11E-04
acetaldehyde	4	1.19E-01	2.85E-02	3.51E-02	3.57E-02	3.80E-02	5.12E-02	7.60E-02	9.82E-03	1.07E-02	7.75E-03	9.83E-03	1.16E-02	4.71E-02	6.15E-02	5.54E-02
acetone	6176	6.28E-02	1.50E-02	1.85E-02	1.88E-02	2.00E-02	2.70E-02	4.00E-02	5.17E-03	5.66E-03	4.08E-03	5.17E-03	6.09E-03	2.48E-02	3.24E-02	2.92E-02
acrolein	0.07	2.11E-02	5.05E-03	6.21E-03	6.32E-03	6.72E-03	9.07E-03	1.34E-02	1.74E-03	1.90E-03	1.37E-03	1.74E-03	2.05E-03	8.33E-03	1.09E-02	9.81E-03
aldehyde	0.6	1.59E-01	3.82E-02	4.69E-02	4.77E-02	5.08E-02	6.85E-02	1.02E-01	1.31E-02	1.44E-02	1.04E-02	1.31E-02	1.55E-02	6.30E-02	8.22E-02	7.41E-02
benzene	0.3	7.82E-03	1.87E-03	2.30E-03	2.34E-03	2.49E-03	3.36E-03	4.98E-03	6.44E-04	7.05E-04	5.08E-04	6.44E-04	7.59E-04	3.09E-03	4.03E-03	3.63E-03
C10-C12 aliphatic	233	1.72E-03	4.11E-04	5.05E-04	5.14E-04	5.47E-04	7.38E-04	1.09E-03	1.41E-04	1.55E-04	1.12E-04	1.42E-04	1.67E-04	6.78E-04	8.85E-04	7.98E-04
C12-C16 aliphatic	233	9.94E-03	2.38E-03	2.93E-03	2.98E-03	3.17E-03	4.27E-03	6.33E-03	8.19E-04	8.96E-04	6.46E-04	8.20E-04	9.65E-04	3.93E-03	5.13E-03	4.62E-03
C12-C16 aromatic	83	1.34E-04	3.21E-05	3.95E-05	4.01E-05	4.27E-05	5.76E-05	8.54E-05	1.10E-05	1.21E-05	8.71E-06	1.11E-05	1.30E-05	5.29E-05	6.91E-05	6.23E-05
C16-C21 aliphatic	7	9.96E-03	2.38E-03	2.93E-03	2.98E-03	3.17E-03	4.28E-03	6.34E-03	8.20E-04	8.97E-04	6.47E-04	8.21E-04	9.66E-04	3.93E-03	5.13E-03	4.62E-03
C2-C6 aliphatic	38.5	4.74E-02	1.13E-02	1.39E-02	1.42E-02	1.51E-02	2.04E-02	3.02E-02	3.90E-03	4.27E-03	3.08E-03	3.91E-03	4.60E-03	1.87E-02	2.44E-02	2.20E-02
C6-C8 aliphatic	67	3.24E-02	7.76E-03	9.54E-03	9.70E-03	1.03E-02	1.39E-02	2.06E-02	2.67E-03	2.92E-03	2.11E-03	2.67E-03	3.15E-03	1.28E-02	1.67E-02	1.51E-02
C8-C10 aliphatic	67	4.57E-04	1.09E-04	1.34E-04	1.37E-04	1.45E-04	1.96E-04	2.91E-04	3.76E-05	4.11E-05	2.96E-05	3.76E-05	4.43E-05	1.80E-04	2.35E-04	2.12E-04
C8-C10 aromatic	83	2.57E-03	6.14E-04	7.55E-04	7.68E-04	8.17E-04	1.10E-03	1.63E-03	2.11E-04	2.31E-04	1.67E-04	2.12E-04	2.49E-04	1.01E-03	1.32E-03	1.19E-03
ethylbenzene	4	1.34E-03	3.21E-04	3.95E-04	4.01E-04	4.27E-04	5.76E-04	8.54E-04	1.10E-04	1.21E-04	8.71E-05	1.11E-04	1.30E-04	5.29E-04	6.91E-04	6.23E-04
ethylene	1200	2.44E-02	5.84E-03	7.19E-03	7.31E-03	7.78E-03	1.05E-02	1.56E-02	2.01E-03	2.20E-03	1.59E-03	2.01E-03	2.37E-03	9.64E-03	1.26E-02	1.13E-02
formaldehyde	1.67	6.36E-02	1.52E-02	1.87E-02	1.90E-02	2.03E-02	2.73E-02	4.05E-02	5.24E-03	5.73E-03	4.13E-03	5.24E-03	6.17E-03	2.51E-02	3.28E-02	2.96E-02
ketone	0.4	3.60E-02	8.60E-03	1.06E-02	1.08E-02	1.14E-02	1.54E-02	2.29E-02	2.96E-03	3.24E-03	2.33E-03	2.96E-03	3.49E-03	1.42E-02	1.85E-02	1.67E-02
toluene	52	1.14E-02	2.72E-03	3.34E-03	3.40E-03	3.62E-03	4.88E-03	7.23E-03	9.35E-04	1.02E-03	7.38E-04	9.36E-04	1.10E-03	4.48E-03	5.85E-03	5.27E-03
trimethylbenzene	83	3.25E-03	7.78E-04	9.57E-04	9.73E-04	1.04E-03	1.40E-03	2.07E-03	2.68E-04	2.93E-04	2.11E-04	2.68E-04	3.16E-04	1.28E-03	1.68E-03	1.51E-03
xylenes	44	9.02E-03	2.16E-03	2.65E-03	2.70E-03	2.87E-03	3.87E-03	5.74E-03	7.42E-04	8.13E-04	5.86E-04	7.43E-04	8.75E-04	3.56E-03	4.65E-03	4.19E-03

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	12	1.56E-01	1.08E-01	1.00E-01	1.05E-01	1.35E-01	1.74E-01	9.75E-01	5.68E-01	3.38E-01	3.50E-01	3.62E-01	1.52E+00	No	No	
DPM	0.03	2.39E-02	1.81E-02	1.75E-02	1.95E-02	2.33E-02	2.88E-02	<b>1.43E-01</b>	<b>6.46E-02</b>	<b>4.84E-02</b>	<b>5.02E-02</b>	<b>5.15E-02</b>	<b>1.56E-01</b>	<b>Yes</b>	<b>Yes</b>	
PM10	20	9.61E-02	6.76E-02	6.29E-02	6.65E-02	8.41E-02	1.07E-01	5.77E-01	3.28E-01	2.02E-01	2.10E-01	2.16E-01	8.75E-01	No	No	
PM2.5	8.8	4.71E-02	3.43E-02	3.28E-02	3.62E-02	4.39E-02	5.44E-02	2.73E-01	1.32E-01	9.35E-02	9.74E-02	1.00E-01	3.59E-01	No	No	
CO	NV	4.51E-01	3.38E-01	3.28E-01	3.65E-01	4.37E-01	5.41E-01	2.71E+00	1.26E+00	9.25E-01	9.60E-01	9.86E-01	3.04E+00	No	No	
<b>Metals</b>																
Aluminum	3	1.08E-02	7.49E-03	6.96E-03	7.30E-03	9.39E-03	1.21E-02	6.76E-02	3.94E-02	2.34E-02	2.43E-02	2.51E-02	1.05E-01	No	No	
Antimony	0.3	6.10E-07	4.23E-07	3.93E-07	4.12E-07	5.30E-07	6.80E-07	3.82E-06	2.23E-06	1.32E-06	1.37E-06	1.42E-06	5.95E-06	No	No	
Arsenic	0.003	1.73E-05	1.20E-05	1.11E-05	1.17E-05	1.50E-05	1.93E-05	1.08E-04	6.31E-05	3.75E-05	3.88E-05	4.02E-05	1.69E-04	No	No	
Barium	0.3	6.09E-05	4.23E-05	3.93E-05	4.12E-05	5.29E-05	6.80E-05	3.81E-04	2.22E-04	1.32E-04	1.37E-04	1.42E-04	5.94E-04	No	No	
Beryllium	0.0042	1.13E-07	7.86E-08	7.31E-08	7.66E-08	9.85E-08	1.26E-07	7.10E-07	4.14E-07	2.46E-07	2.55E-07	2.64E-07	1.11E-06	No	No	
Bismuth	3	3.11E-08	2.16E-08	2.01E-08	2.11E-08	2.71E-08	3.48E-08	1.95E-07	1.14E-07	6.76E-08	7.00E-08	7.25E-08	3.04E-07	No	No	
Cadmium	0.0024	1.44E-05	1.09E-05	1.05E-05	1.17E-05	1.40E-05	1.73E-05	8.59E-05	3.89E-05	2.91E-05	3.02E-05	3.10E-05	9.42E-05	No	No	
Calcium	NV	6.15E-03	4.27E-03	3.97E-03	4.16E-03	5.35E-03	6.87E-03	3.85E-02	2.25E-02	1.34E-02	1.38E-02	1.43E-02	6.01E-02	No	No	
Chromium	0.03	2.83E-05	1.98E-05	1.84E-05	1.94E-05	2.48E-05	3.18E-05	1.76E-04	1.01E-04	6.11E-05	6.32E-05	6.54E-05	2.68E-04	No	No	
Cobalt	0.1	4.17E-06	2.90E-06	2.69E-06	2.82E-06	3.63E-06	4.66E-06	2.61E-05	1.52E-05	9.06E-06	9.37E-06	9.71E-06	4.07E-05	No	No	
Copper	0.7	1.10E-05	7.66E-06	7.11E-06	7.46E-06	9.59E-06	1.23E-05	6.91E-05	4.03E-05	2.40E-05	2.48E-05	2.57E-05	1.08E-04	No	No	
Gold	1.7	1.21E-08	8.37E-09	7.77E-09	8.15E-09	1.05E-08	1.35E-08	7.55E-08	4.40E-08	2.62E-08	2.71E-08	2.81E-08	1.18E-07	No	No	
Iron	0.7	1.18E-02	8.21E-03	7.63E-03	8.00E-03	1.03E-02	1.32E-02	7.41E-02	4.32E-02	2.57E-02	2.66E-02	2.75E-02	1.16E-01	No	No	
Lead	0.2	4.25E-06	3.10E-06	2.95E-06	3.20E-06	3.95E-06	4.95E-06	2.59E-05	1.33E-05	8.88E-06	9.20E-06	9.48E-06	3.38E-05	No	No	
Lithium	NV	5.03E-06	3.49E-06	3.25E-06	3.40E-06	4.38E-06	5.62E-06	3.15E-05	1.84E-05	1.09E-05	1.13E-05	1.17E-05	4.91E-05	No	No	
Magnesium	3	3.26E-03	2.27E-03	2.10E-03	2.21E-03	2.84E-03	3.64E-03	2.04E-02	1.19E-02	7.09E-03	7.33E-03	7.60E-03	3.19E-02	No	No	
Manganese	0.09	1.23E-04	8.52E-05	7.91E-05	8.29E-05	1.07E-04	1.37E-04	7.69E-04	4.48E-04	2.66E-04	2.76E-04	2.86E-04	1.20E-03	No	No	
Molybdenum	2	1.87E-07	1.30E-07	1.20E-07	1.26E-07	1.62E-07	2.08E-07	1.17E-06	6.82E-07	4.06E-07	4.20E-07	4.35E-07	1.82E-06	No	No	
Nickel	0.014	1.08E-05	7.51E-06	6.98E-06	7.32E-06	9.41E-06	1.21E-05	6.78E-05	3.95E-05	2.35E-05	2.43E-05	2.52E-05	1.06E-04	No	No	
Potassium	1	2.07E-03	1.43E-03	1.33E-03	1.40E-03	1.80E-03	2.31E-03	1.29E-02	7.54E-03	4.48E-03	4.64E-03	4.81E-03	2.02E-02	No	No	
Selenium	4	1.86E-07	1.29E-07	1.20E-07	1.26E-07	1.62E-07	2.08E-07	1.17E-06	6.80E-07	4.05E-07	4.19E-07	4.34E-07	1.82E-06	No	No	
Silver	0.007	4.58E-08	3.18E-08	2.96E-08	3.10E-08	3.99E-08	5.12E-08	2.87E-07	1.67E-07	9.96E-08	1.03E-07	1.07E-07	4.48E-07	No	No	
Sodium	NV	2.47E-03	1.71E-03	1.59E-03	1.67E-03	2.14E-03	2.75E-03	1.55E-02	9.01E-03	5.36E-03	5.54E-03	5.74E-03	2.41E-02	No	No	
Strontium	1	3.30E-05	2.29E-05	2.13E-05	2.23E-05	2.87E-05	3.68E-05	2.06E-04	1.20E-04	7.16E-05	7.41E-05	7.67E-05	3.22E-04	No	No	
Thallium	0.07	4.76E-08	3.30E-08	3.07E-08	3.22E-08	4.14E-08	5.31E-08	2.98E-07	1.74E-07	1.03E-07	1.07E-07	1.11E-07	4.65E-07	No	No	
Tin	1	1.68E-07	1.16E-07	1.08E-07	1.13E-07	1.46E-07	1.87E-07	1.05E-06	6.13E-07	3.64E-07	3.77E-07	3.91E-07	1.64E-06	No	No	
Titanium	3	5.43E-04	3.77E-04	3.50E-04	3.67E-04	4.72E-04	6.06E-04	3.40E-03	1.98E-03	1.18E-03	1.22E-03	1.26E-03	5.30E-03	No	No	
Uranium	0.03	1.51E-07	1.05E-07	9.76E-08	1.02E-07	1.32E-07	1.69E-07	9.49E-07	5.53E-07	3.29E-07	3.40E-07	3.52E-07	1.48E-06	No	No	
Vanadium	0.1	2.00E-05	1.39E-05	1.29E-05	1.35E-05	1.74E-05	2.23E-05	1.25E-04	7.29E-05	4.33E-05	4.48E-05	4.64E-05	1.95E-04	No	No	
Yttrium	0.7	1.47E-06	1.02E-06	9.50E-07	9.96E-07	1.28E-06	1.64E-06	9.23E-06	5.38E-06	3.20E-06	3.31E-06	3.43E-06	1.44E-05	No	No	
Zinc	1	3.23E-05	2.35E-05	2.23E-05	2.42E-05	2.99E-05	3.75E-05	1.98E-04	1.02E-04	6.77E-05	7.02E-05	7.23E-05	2.61E-04	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	2.63E-08	1.99E-08	1.93E-08	2.14E-08	2.57E-08	3.17E-08	1.57E-07	7.11E-08	5.33E-08	5.52E-08	5.67E-08	1.72E-07	No	No	
naphthalene	0.3	1.04E-05	7.86E-06	7.63E-06	8.47E-06	1.02E-05	1.25E-05	6.21E-05	2.81E-05	2.11E-05	2.19E-05	2.24E-05	6.80E-05	No	No	
phenanthrene	0.03	8.59E-07	6.50E-07	6.30E-07	7.00E-07	8.39E-07	1.04E-06	5.13E-06	2.32E-06	1.74E-06	1.81E-06	1.85E-06	5.62E-06	No	No	
anthracene	0.07	9.59E-08	7.25E-08	7.03E-08	7.81E-08	9.36E-08	1.15E-07	5.73E-07	2.59E-07	1.94E-07	2.01E-07	2.07E-07	6.27E-07	No	No	
fluorene	0.7	4.19E-07	3.17E-07	3.07E-07	3.41E-07	4.09E-07	5.05E-07	2.50E-06	1.13E-06	8.50E-07	8.81E-07	9.04E-07	2.74E-06	No	No	
pyrene	0.03	3.14E-07	2.37E-07	2.30E-07	2.56E-07	3.06E-07	3.78E-07	1.88E-06	8.49E-07	6.37E-07	6.60E-07	6.77E-07	2.05E-06	No	No	
thiophenes	2	5.45E-09	4.12E-09	3.99E-09	4.44E-09	5.32E-09	6.56E-09	3.25E-08	1.47E-08	1.10E-08	1.14E-08	1.17E-08	3.56E-08	No	No	
benz(a)anthracene	0.0001	1.25E-08	9.43E-09	9.15E-09	1.02E-08	1.22E-08	1.50E-08	7.45E-08	3.37E-08	2.53E-08	2.62E-08	2.69E-08	8.16E-08	No	No	
acenaphthene	6.67	8.08E-08	6.11E-08	5.93E-08	6.58E-08	7.88E-08	9.73E-08	4.83E-07	2.19E-07	1.64E-07	1.70E-07	1.74E-07	5.28E-07	No	No	
acenaphthylene	6.67	2.93E-07	2.22E-07	2.15E-07	2.39E-07	2.86E-07	3.54E-07	1.75E-06	7.94E-07	5.95E-07	6.17E-07	6.33E-07	1.92E-06	No	No	
fluoranthene	0.03	3.12E-07	2.36E-07	2.29E-07	2.54E-07	3.05E-07	3.76E-07	1.87E-06	8.45E-07	6.33E-07	6.56E-07	6.73E-07	2.04E-06	No	No	
benzo(b)fluoranthene	0.09	5.80E-08	4.38E-08	4.25E-08	4.72E-08	5.66E-08	6.98E-08	3.46E-07	1.57E-07	1.18E-07	1.22E-07	1.25E-07	3.79E-07	No	No	
benzo(g,h,i)perylene	0.03	1.10E-09	8.33E-10	8.08E-10	8.97E-10	1.07E-09	1.33E-09	6.58E-09	2.98E-09	2.23E-09	2.31E-09	2.38E-09	7.20E-09	No	No	
benzo(k)fluoranthene	0.09	6.59E-09	4.98E-09	4.84E-09	5.37E-09	6.43E-09	7.94E-09	3.94E-08	1.78E-08	1.34E-08	1.39E-08	1.42E-08	4.31E-08	No	No	
chrysene	0.9	1.40E-08	1.06E-08	1.03E-08	1.14E-08	1.37E-08	1.69E-08	8.38E-08	3.79E-08	2.84E-08	2.95E-08	3.02E-08	9.17E-08	No	No	
dibenzo(a,h)anthracene	0.008	1.82E-08	1.38E-08	1.34E-08	1.49E-08	1.78E-08	2.20E-08	1.09E-07	4.94E-08	3.70E-08	3.83E-08	3.93E-08	1.19E-07	No	No	
indeno(1,2,3-cd)pyrene	0.0009	1.16E-08	8.77E-09	8.51E-09	9.45E-09	1.13E-08	1.40E-08	6.93E-08	3.14E-08	2.35E-08	2.44E-08	2.50E-08	7.59E-08	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	1.36E-04	1.03E-04	9.92E-05	1.09E-04	1.32E-04	1.62E-04	8.13E-04	3.62E-04	2.70E-04	2.80E-04	2.87E-04	8.85E-04	No	No	
acetaldehyde	4	1.83E-02	1.38E-02	1.34E-02	1.47E-02	1.77E-02	2.18E-02	1.10E-01	4.88E-02	3.64E-02	3.77E-02	3.87E-02	1.19E-01	No	No	
acetone	6176	9.63E-03	7.28E-03	7.04E-03	7.76E-03	9.33E-03	1.15E-02	5.77E-02	2.57E-02	1.92E-02	1.98E-02	2.04E-02	6.28E-02	No	No	
acrolein	0.07	3.24E-03	2.45E-03	2.37E-03	2.61E-03	3.14E-03	3.87E-03	1.94E-02	8.63E-03	6.45E-03	6.67E-03	6.85E-03	2.11E-02	No	No	
aldehyde	0.6	2.45E-02	1.85E-02	1.79E-02	1.97E-02	2.37E-02	2.92E-02	1.47E-01	6.52E-02	4.87E-02	5.04E-02	5.18E-02	1.59E-01	No	No	
benzene	0.3	1.20E-03	9.06E-04	8.77E-04	9.67E-04	1.16E-03	1.43E-03	7.19E-03	3.20E-03	2.39E-03	2.47E-03	2.54E-03	7.82E-03	No	No	
C10-C12 aliphatic	233	2.64E-04	1.99E-04	1.93E-04	2.12E-04	2.55E-04	3.14E-04	1.58E-03	7.02E-04	5.24E-04	5.43E-04	5.57E-04	1.72E-03	No	No	
C12-C16 aliphatic	233	1.53E-03	1.15E-03	1.12E-03	1.23E-03	1.48E-03	1.82E-03	9.14E-03	4.06E-03	3.04E-03	3.14E-03	3.23E-03	9.94E-03	No	No	
C12-C16 aromatic	83	2.06E-05	1.55E-05	1.50E-05	1.66E-05	1.99E-05	2.46E-05	1.23E-04	5.48E-05	4.10E-05	4.24E-05	4.35E-05	1.34E-04	No	No	
C16-C21 aliphatic	7	1.53E-03	1.15E-03	1.12E-03	1.23E-03	1.48E-03	1.82E-03	9.15E-03	4.07E-03	3.04E-03	3.15E-03	3.23E-03	9.96E-03	No	No	
C2-C6 aliphatic	38.5	7.27E-03	5.49E-03	5.32E-03	5.86E-03	7.05E-03	8.68E-03	4.36E-02	1.94E-02	1.45E-02	1.50E-02	1.54E-02	4.74E-02	No	No	
C6-C8 aliphatic	67	4.97E-03	3.76E-03	3.64E-03	4.01E-03	4.82E-03	5.93E-03	2.98E-02	1.32E-02	9.90E-03	1.02E-02	1.05E-02	3.24E-02	No	No	
C8-C10 aliphatic	67	7.01E-05	5.29E-05	5.12E-05	5.64E-05	6.79E-05	8.36E-05	4.20E-04	1.87E-04	1.39E-04	1.44E-04	1.48E-04	4.57E-04	No	No	
C8-C10 aromatic	83	3.94E-04	2.98E-04	2.88E-04	3.17E-04	3.82E-04	4.70E-04	2.36E-03	1.05E-03	7.84E-04	8.11E-04	8.33E-04	2.57E-03	No	No	
ethylbenzene	4	2.06E-04	1.55E-04	1.50E-04	1.66E-04	1.99E-04	2.46E-04	1.23E-03	5.48E-04	4.10E-04	4.24E-04	4.35E-04	1.34E-03	No	No	
ethylene	1200	3.75E-03	2.83E-03	2.74E-03	3.02E-03	3.63E-03	4.47E-03	2.25E-02	9.98E-03	7.46E-03	7.72E-03	7.93E-03	2.44E-02	No	No	
formaldehyde	1.67	9.77E-03	7.38E-03	7.14E-03	7.87E-03	9.46E-03	1.16E-02	5.85E-02	2.60E-02	1.94E-02	2.01E-02	2.07E-02	6.36E-02	No	No	
ketone	0.4	5.52E-03	4.17E-03	4.03E-03	4.44E-03	5.35E-03	6.58E-03	3.31E-02	1.47E-02	1.10E-02	1.14E-02	1.17E-02	3.60E-02	No	No	
toluene	52	1.74E-03	1.32E-03	1.27E-03	1.40E-03	1.69E-03	2.08E-03	1.04E-02	4.64E-03	3.47E-03	3.59E-03	3.69E-03	1.14E-02	No	No	
trimethylbenzene	83	4.99E-04	3.77E-04	3.65E-04	4.02E-04	4.84E-04	5.96E-04	2.99E-03	1.33E-03	9.93E-04	1.03E-03	1.06E-03	3.25E-03	No	No	
xylenes	44	1.38E-03	1.05E-03	1.01E-03	1.11E-03	1.34E-03	1.65E-03	8.29E-03	3.69E-03	2.75E-03	2.85E-03	2.93E-03	9.02E-03	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	12	7.45E-01	2.14E-01	2.52E-01	2.56E-01	2.73E-01	3.23E-01	4.43E-01	7.28E-02	7.74E-02	6.06E-02	7.28E-02	8.17E-02	6.32E-01	1.14E+00	1.56E+00
DPM	0.03	1.01E-01	2.88E-02	3.22E-02	3.07E-02	2.98E-02	4.26E-02	5.45E-02	1.08E-02	1.08E-02	8.01E-03	1.08E-02	1.20E-02	5.00E-02	9.81E-02	1.04E-01
PM10	20	4.08E-01	1.14E-01	1.20E-01	1.23E-01	1.31E-01	1.63E-01	2.27E-01	3.89E-02	4.05E-02	3.11E-02	3.89E-02	4.22E-02	2.62E-01	4.67E-01	6.11E-01
PM2.5	8.8	2.48E-01	6.25E-02	6.72E-02	6.54E-02	6.41E-02	9.08E-02	1.26E-01	2.14E-02	2.35E-02	1.64E-02	2.14E-02	2.47E-02	9.96E-02	1.88E-01	1.97E-01
CO	NV	1.81E+00	5.33E-01	5.87E-01	5.59E-01	5.56E-01	7.72E-01	9.88E-01	2.02E-01	2.09E-01	1.54E-01	2.02E-01	2.29E-01	9.55E-01	1.84E+00	1.96E+00
<b>Metals</b>																
Aluminum	3	5.16E-02	1.49E-02	1.74E-02	1.78E-02	1.89E-02	2.24E-02	3.07E-02	5.05E-03	5.37E-03	4.20E-03	5.05E-03	5.66E-03	4.38E-02	7.89E-02	1.08E-01
Antimony	0.3	2.92E-06	8.40E-07	9.85E-07	1.00E-06	1.07E-06	1.27E-06	1.73E-06	2.85E-07	3.03E-07	2.37E-07	2.85E-07	3.20E-07	2.47E-06	4.46E-06	6.12E-06
Arsenic	0.003	8.27E-05	2.38E-05	2.79E-05	2.85E-05	3.03E-05	3.59E-05	4.91E-05	8.08E-06	8.59E-06	6.72E-06	8.09E-06	9.07E-06	7.02E-05	1.26E-04	1.74E-04
Barium	0.3	2.91E-04	8.39E-05	9.84E-05	1.00E-04	1.07E-04	1.26E-04	1.73E-04	2.85E-05	3.03E-05	2.37E-05	2.85E-05	3.19E-05	2.47E-04	4.45E-04	6.11E-04
Beryllium	0.0042	5.42E-07	1.56E-07	1.83E-07	1.87E-07	1.98E-07	2.35E-07	3.22E-07	5.30E-08	5.63E-08	4.41E-08	5.30E-08	5.94E-08	4.60E-07	8.29E-07	1.14E-06
Bismuth	3	1.49E-07	4.29E-08	5.03E-08	5.13E-08	5.45E-08	6.47E-08	8.85E-08	1.46E-08	1.55E-08	1.21E-08	1.46E-08	1.63E-08	1.26E-07	2.28E-07	3.13E-07
Cadmium	0.0024	6.06E-05	1.73E-05	1.94E-05	1.85E-05	1.79E-05	2.57E-05	3.28E-05	6.47E-06	6.51E-06	4.82E-06	6.48E-06	7.20E-06	3.01E-05	5.92E-05	6.27E-05
Calcium	NV	2.94E-02	8.48E-03	9.95E-03	1.01E-02	1.08E-02	1.28E-02	1.75E-02	2.88E-03	3.06E-03	2.39E-03	2.88E-03	3.23E-03	2.50E-02	4.50E-02	6.18E-02
Chromium	0.03	1.34E-04	3.85E-05	4.51E-05	4.57E-05	4.83E-05	5.80E-05	7.90E-05	1.32E-05	1.39E-05	1.09E-05	1.32E-05	1.48E-05	1.10E-04	1.99E-04	2.70E-04
Cobalt	0.1	2.00E-05	5.75E-06	6.74E-06	6.87E-06	7.30E-06	8.66E-06	1.19E-05	1.95E-06	2.07E-06	1.62E-06	1.95E-06	2.19E-06	1.69E-05	3.05E-05	4.19E-05
Copper	0.7	5.28E-05	1.52E-05	1.78E-05	1.82E-05	1.93E-05	2.29E-05	3.14E-05	5.16E-06	5.48E-06	4.29E-06	5.16E-06	5.79E-06	4.48E-05	8.07E-05	1.11E-04
Gold	1.7	5.77E-08	1.66E-08	1.95E-08	1.99E-08	2.11E-08	2.50E-08	3.43E-08	5.64E-09	5.99E-09	4.69E-09	5.64E-09	6.32E-09	4.89E-08	8.82E-08	1.21E-07
Iron	0.7	5.66E-02	1.63E-02	1.91E-02	1.95E-02	2.07E-02	2.46E-02	3.36E-02	5.53E-03	5.88E-03	4.60E-03	5.54E-03	6.21E-03	4.80E-02	8.65E-02	1.19E-01
Lead	0.2	1.90E-05	5.44E-06	6.23E-06	6.13E-06	6.23E-06	8.12E-06	1.07E-05	1.95E-06	2.00E-06	1.52E-06	1.95E-06	2.17E-06	1.25E-05	2.34E-05	2.91E-05
Lithium	NV	2.41E-05	6.93E-06	8.14E-06	8.29E-06	8.81E-06	1.05E-05	1.43E-05	2.35E-06	2.50E-06	1.96E-06	2.35E-06	2.64E-06	2.04E-05	3.68E-05	5.06E-05
Magnesium	3	1.56E-02	4.50E-03	5.28E-03	5.38E-03	5.71E-03	6.78E-03	9.28E-03	1.53E-03	1.62E-03	1.27E-03	1.53E-03	1.71E-03	1.32E-02	2.39E-02	3.28E-02
Manganese	0.09	5.87E-04	1.69E-04	1.98E-04	2.02E-04	2.15E-04	2.55E-04	3.49E-04	5.74E-05	6.10E-05	4.77E-05	5.74E-05	6.43E-05	4.98E-04	8.97E-04	1.23E-03
Molybdenum	2	8.94E-07	2.57E-07	3.02E-07	3.08E-07	3.27E-07	3.88E-07	5.31E-07	8.73E-08	9.28E-08	7.27E-08	8.74E-08	9.80E-08	7.58E-07	1.37E-06	1.88E-06
Nickel	0.014	5.18E-05	1.49E-05	1.75E-05	1.78E-05	1.89E-05	2.25E-05	3.08E-05	5.06E-06	5.38E-06	4.21E-06	5.06E-06	5.68E-06	4.39E-05	7.91E-05	1.09E-04
Potassium	1	9.88E-03	2.84E-03	3.34E-03	3.40E-03	3.61E-03	4.29E-03	5.87E-03	9.66E-04	1.03E-03	8.03E-04	9.66E-04	1.08E-03	8.38E-03	1.51E-02	2.07E-02
Selenium	4	8.91E-07	2.57E-07	3.01E-07	3.07E-07	3.26E-07	3.87E-07	5.30E-07	8.71E-08	9.26E-08	7.25E-08	8.72E-08	9.77E-08	7.56E-07	1.36E-06	1.87E-06
Silver	0.007	2.19E-07	6.32E-08	7.41E-08	7.55E-08	8.03E-08	9.52E-08	1.30E-07	2.14E-08	2.28E-08	1.78E-08	2.14E-08	2.40E-08	1.86E-07	3.35E-07	4.61E-07
Sodium	NV	1.18E-02	3.40E-03	3.99E-03	4.06E-03	4.32E-03	5.12E-03	7.01E-03	1.15E-03	1.23E-03	9.59E-04	1.15E-03	1.29E-03	1.00E-02	1.80E-02	2.48E-02
Strontium	1	1.58E-04	4.54E-05	5.33E-05	5.43E-05	5.77E-05	6.85E-05	9.37E-05	1.54E-05	1.64E-05	1.28E-05	1.54E-05	1.73E-05	1.34E-04	2.41E-04	3.31E-04
Thallium	0.07	2.28E-07	6.56E-08	7.69E-08	7.84E-08	8.33E-08	9.89E-08	1.35E-07	2.23E-08	2.37E-08	1.85E-08	2.23E-08	2.50E-08	1.93E-07	3.48E-07	4.78E-07
Tin	1	8.03E-07	2.31E-07	2.71E-07	2.76E-07	2.94E-07	3.49E-07	4.77E-07	7.85E-08	8.34E-08	6.53E-08	7.85E-08	8.80E-08	6.81E-07	1.23E-06	1.69E-06
Titanium	3	2.60E-03	7.48E-04	8.77E-04	8.94E-04	9.50E-04	1.13E-03	1.54E-03	2.54E-04	2.70E-04	2.11E-04	2.54E-04	2.85E-04	2.20E-03	3.97E-03	5.45E-03
Uranium	0.03	7.24E-07	2.09E-07	2.45E-07	2.49E-07	2.65E-07	3.15E-07	4.30E-07	7.08E-08	7.53E-08	5.89E-08	7.08E-08	7.94E-08	6.15E-07	1.11E-06	1.52E-06
Vanadium	0.1	9.55E-05	2.75E-05	3.23E-05	3.29E-05	3.49E-05	4.15E-05	5.67E-05	9.33E-06	9.92E-06	7.76E-06	9.34E-06	1.05E-05	8.10E-05	1.46E-04	2.00E-04
Yttrium	0.7	7.05E-06	2.03E-06	2.38E-06	2.43E-06	2.58E-06	3.06E-06	4.19E-06	6.89E-07	7.32E-07	5.73E-07	6.89E-07	7.73E-07	5.98E-06	1.08E-05	1.48E-05
Zinc	1	1.45E-04	4.16E-05	4.77E-05	4.71E-05	4.81E-05	6.22E-05	8.24E-05	1.48E-05	1.53E-05	1.17E-05	1.48E-05	1.66E-05	9.82E-05	1.83E-04	2.29E-04
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	1.11E-07	3.16E-08	3.54E-08	3.38E-08	3.28E-08	4.69E-08	6.00E-08	1.18E-08	1.19E-08	8.81E-09	1.18E-08	1.32E-08	5.50E-08	1.08E-07	1.14E-07
naphthalene	0.3	4.39E-05	1.25E-05	1.40E-05	1.34E-05	1.30E-05	1.86E-05	2.37E-05	4.68E-06	4.71E-06	3.49E-06	4.69E-06	5.21E-06	2.18E-05	4.27E-05	4.52E-05
phenanthrene	0.03	3.62E-06	1.03E-06	1.16E-06	1.10E-06	1.07E-06	1.53E-06	1.96E-06	3.87E-07	3.89E-07	2.88E-07	3.87E-07	4.31E-07	1.80E-06	3.53E-06	3.73E-06
anthracene	0.07	4.04E-07	1.15E-07	1.29E-07	1.23E-07	1.19E-07	1.71E-07	2.19E-07	4.32E-08	4.34E-08	3.21E-08	4.32E-08	4.80E-08	2.00E-07	3.94E-07	4.16E-07
fluorene	0.7	1.77E-06	5.05E-07	5.65E-07	5.38E-07	5.22E-07	7.48E-07	9.57E-07	1.89E-07	1.90E-07	1.40E-07	1.89E-07	2.10E-07	8.77E-07	1.72E-06	1.82E-06
pyrene	0.03	1.32E-06	3.78E-07	4.23E-07	4.03E-07	3.91E-07	5.60E-07	7.16E-07	1.41E-07	1.42E-07	1.05E-07	1.42E-07	1.57E-07	6.57E-07	1.29E-06	1.36E-06
thiophenes	2	2.30E-08	6.56E-09	7.34E-09	6.99E-09	6.78E-09	9.71E-09	1.24E-08	2.45E-09	2.46E-09	1.83E-09	2.45E-09	2.73E-09	1.14E-08	2.24E-08	2.37E-08
benz(a)anthracene	0.0001	5.26E-08	1.50E-08	1.68E-08	1.60E-08	1.55E-08	2.22E-08	2.85E-08	5.62E-09	5.64E-09	4.18E-09	5.62E-09	6.25E-09	2.61E-08	5.12E-08	5.42E-08
acenaphthene	6.67	3.41E-07	9.73E-08	1.09E-07	1.04E-07	1.01E-07	1.44E-07	1.84E-07	3.64E-08	3.65E-08	2.71E-08	3.64E-08	4.05E-08	1.69E-07	3.32E-07	3.51E-07
acenaphthylene	6.67	1.24E-06	3.53E-07	3.96E-07	3.77E-07	3.66E-07	5.23E-07	6.70E-07	1.32E-07	1.33E-07	9.83E-08	1.32E-07	1.47E-07	6.14E-07	1.21E-06	1.27E-06
fluoranthene	0.03	1.32E-06	3.76E-07	4.21E-07	4.01E-07	3.89E-07	5.57E-07	7.12E-07	1.41E-07	1.41E-07	1.05E-07	1.41E-07	1.56E-07	6.53E-07	1.28E-06	1.36E-06
benzo(b)fluoranthene	0.09	2.44E-07	6.98E-08	7.82E-08	7.44E-08	7.22E-08	1.03E-07	1.32E-07	2.61E-08	2.62E-08	1.94E-08	2.61E-08	2.90E-08	1.21E-07	2.38E-07	2.52E-07
benzo(g,h,i)perylene	0.03	4.64E-09	1.33E-09	1.48E-09	1.41E-09	1.37E-09	1.96E-09	2.51E-09	4.96E-10	4.98E-10	3.69E-10	4.96E-10	5.52E-10	2.30E-09	4.52E-09	4.78E-09
benzo(k)fluoranthene	0.09	2.78E-08	7.94E-09	8.89E-09	8.47E-09	8.21E-09	1.18E-08	1.50E-08	2.97E-09	2.98E-09	2.21E-09	2.97E-09	3.30E-09	1.38E-08	2.71E-08	2.86E-08
chrysene	0.9	5.91E-08	1.69E-08	1.89E-08	1.80E-08	1.75E-08	2.50E-08	3.20E-08	6.31E-09	6.34E-09	4.70E-09	6.				

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	5.63E-04	1.63E-04	1.82E-04	1.72E-04	1.70E-04	2.38E-04	3.05E-04	6.13E-05	6.33E-05	4.68E-05	6.14E-05	6.98E-05	2.80E-04	5.53E-04	5.83E-04
acetaldehyde	4	7.60E-02	2.19E-02	2.46E-02	2.32E-02	2.29E-02	3.22E-02	4.12E-02	8.27E-03	8.53E-03	6.31E-03	8.28E-03	9.41E-03	3.78E-02	7.46E-02	7.86E-02
acetone	6176	4.00E-02	1.15E-02	1.29E-02	1.22E-02	1.21E-02	1.69E-02	2.17E-02	4.35E-03	4.49E-03	3.32E-03	4.36E-03	4.95E-03	1.99E-02	3.93E-02	4.14E-02
acrolein	0.07	1.34E-02	3.88E-03	4.35E-03	4.11E-03	4.05E-03	5.69E-03	7.29E-03	1.46E-03	1.51E-03	1.12E-03	1.47E-03	1.67E-03	6.69E-03	1.32E-02	1.39E-02
aldehyde	0.6	1.02E-01	2.93E-02	3.29E-02	3.10E-02	3.06E-02	4.30E-02	5.51E-02	1.11E-02	1.14E-02	8.43E-03	1.11E-02	1.26E-02	5.06E-02	9.98E-02	1.05E-01
benzene	0.3	4.98E-03	1.44E-03	1.61E-03	1.52E-03	1.50E-03	2.11E-03	2.70E-03	5.42E-04	5.59E-04	4.13E-04	5.43E-04	6.17E-04	2.48E-03	4.89E-03	5.15E-03
C10-C12 aliphatic	233	1.09E-03	3.16E-04	3.54E-04	3.34E-04	3.30E-04	4.63E-04	5.93E-04	1.19E-04	1.23E-04	9.08E-05	1.19E-04	1.35E-04	5.44E-04	1.07E-03	1.13E-03
C12-C16 aliphatic	233	6.33E-03	1.83E-03	2.05E-03	1.94E-03	1.91E-03	2.68E-03	3.43E-03	6.90E-04	7.11E-04	5.26E-04	6.90E-04	7.84E-04	3.15E-03	6.22E-03	6.55E-03
C12-C16 aromatic	83	8.54E-05	2.47E-05	2.76E-05	2.61E-05	2.57E-05	3.62E-05	4.63E-05	9.30E-06	9.59E-06	7.09E-06	9.31E-06	1.06E-05	4.25E-05	8.39E-05	8.83E-05
C16-C21 aliphatic	7	6.34E-03	1.83E-03	2.05E-03	1.94E-03	1.91E-03	2.68E-03	3.44E-03	6.91E-04	7.12E-04	5.27E-04	6.91E-04	7.85E-04	3.16E-03	6.23E-03	6.56E-03
C2-C6 aliphatic	38.5	3.02E-02	8.72E-03	9.76E-03	9.22E-03	9.10E-03	1.28E-02	1.64E-02	3.29E-03	3.39E-03	2.51E-03	3.29E-03	3.74E-03	1.50E-02	2.96E-02	3.12E-02
C6-C8 aliphatic	67	2.06E-02	5.96E-03	6.68E-03	6.31E-03	6.22E-03	8.74E-03	1.12E-02	2.25E-03	2.32E-03	1.71E-03	2.25E-03	2.56E-03	1.03E-02	2.03E-02	2.14E-02
C8-C10 aliphatic	67	2.91E-04	8.40E-05	9.41E-05	8.89E-05	8.77E-05	1.23E-04	1.58E-04	3.17E-05	3.26E-05	2.41E-05	3.17E-05	3.60E-05	1.45E-04	2.86E-04	3.01E-04
C8-C10 aromatic	83	1.63E-03	4.72E-04	5.29E-04	5.00E-04	4.93E-04	6.92E-04	8.86E-04	1.78E-04	1.84E-04	1.36E-04	1.78E-04	2.02E-04	8.14E-04	1.61E-03	1.69E-03
ethylbenzene	4	8.54E-04	2.47E-04	2.76E-04	2.61E-04	2.57E-04	3.62E-04	4.63E-04	9.30E-05	9.59E-05	7.09E-05	9.31E-05	1.06E-04	4.25E-04	8.39E-04	8.83E-04
ethylene	1200	1.56E-02	4.49E-03	5.03E-03	4.75E-03	4.69E-03	6.58E-03	8.44E-03	1.69E-03	1.75E-03	1.29E-03	1.70E-03	1.93E-03	7.74E-03	1.53E-02	1.61E-02
formaldehyde	1.67	4.05E-02	1.17E-02	1.31E-02	1.24E-02	1.22E-02	1.72E-02	2.20E-02	4.41E-03	4.55E-03	3.36E-03	4.42E-03	5.02E-03	2.02E-02	3.98E-02	4.19E-02
ketone	0.4	2.29E-02	6.61E-03	7.41E-03	7.00E-03	6.90E-03	9.69E-03	1.24E-02	2.49E-03	2.57E-03	1.90E-03	2.50E-03	2.84E-03	1.14E-02	2.25E-02	2.37E-02
toluene	52	7.23E-03	2.09E-03	2.34E-03	2.21E-03	2.18E-03	3.06E-03	3.92E-03	7.88E-04	8.12E-04	6.01E-04	7.88E-04	8.96E-04	3.60E-03	7.10E-03	7.48E-03
trimethylbenzene	83	2.07E-03	5.98E-04	6.70E-04	6.33E-04	6.25E-04	8.77E-04	1.12E-03	2.26E-04	2.33E-04	1.72E-04	2.26E-04	2.57E-04	1.03E-03	2.03E-03	2.14E-03
xylenes	44	5.74E-03	1.66E-03	1.86E-03	1.75E-03	1.73E-03	2.43E-03	3.11E-03	6.25E-04	6.45E-04	4.77E-04	6.26E-04	7.11E-04	2.86E-03	5.64E-03	5.94E-03

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	12	8.44E-01	4.13E-01	3.60E-01	3.58E-01	5.33E-01	9.06E-01	1.30E+00	4.25E-01	3.87E-01	3.96E-01	4.03E-01	1.56E+00	No	No	
DPM	0.03	<b>6.22E-02</b>	<b>3.29E-02</b>	<b>3.01E-02</b>	<b>3.12E-02</b>	<b>4.31E-02</b>	<b>6.83E-02</b>	<b>1.38E-01</b>	<b>4.82E-02</b>	<b>4.40E-02</b>	<b>4.52E-02</b>	<b>4.60E-02</b>	<b>1.38E-01</b>	<b>Yes</b>	<b>Yes</b>	
PM10	20	4.33E-01	2.06E-01	1.79E-01	1.79E-01	2.68E-01	4.56E-01	5.52E-01	2.01E-01	1.83E-01	1.87E-01	1.90E-01	6.11E-01	No	No	
PM2.5	8.8	1.27E-01	6.57E-02	5.91E-02	6.13E-02	8.64E-02	1.37E-01	2.65E-01	9.69E-02	8.48E-02	8.72E-02	8.90E-02	2.65E-01	No	No	
CO	NV	1.33E+00	6.80E-01	6.16E-01	6.31E-01	8.91E-01	1.44E+00	2.50E+00	8.84E-01	8.20E-01	8.42E-01	8.57E-01	2.50E+00	No	No	
<b>Metals</b>																
Aluminum	3	5.85E-02	2.86E-02	2.49E-02	2.48E-02	3.70E-02	6.27E-02	8.99E-02	2.95E-02	2.69E-02	2.75E-02	2.79E-02	1.08E-01	No	No	
Antimony	0.3	3.30E-06	1.62E-06	1.41E-06	1.40E-06	2.09E-06	3.55E-06	5.08E-06	1.66E-06	1.52E-06	1.55E-06	1.58E-06	6.12E-06	No	No	
Arsenic	0.003	9.37E-05	4.58E-05	3.99E-05	3.97E-05	5.92E-05	1.01E-04	1.44E-04	4.72E-05	4.30E-05	4.40E-05	4.47E-05	1.74E-04	No	No	
Barium	0.3	3.30E-04	1.61E-04	1.41E-04	1.40E-04	2.09E-04	3.54E-04	5.07E-04	1.66E-04	1.51E-04	1.55E-04	1.58E-04	6.11E-04	No	No	
Beryllium	0.0042	6.14E-07	3.00E-07	2.62E-07	2.60E-07	3.88E-07	6.59E-07	9.44E-07	3.09E-07	2.82E-07	2.88E-07	2.93E-07	1.14E-06	No	No	
Bismuth	3	1.69E-07	8.26E-08	7.20E-08	7.15E-08	1.07E-07	1.81E-07	2.59E-07	8.50E-08	7.75E-08	7.92E-08	8.06E-08	3.13E-07	No	No	
Cadmium	0.0024	3.75E-05	1.99E-05	1.81E-05	1.88E-05	2.60E-05	4.12E-05	8.34E-05	2.90E-05	2.65E-05	2.72E-05	2.77E-05	8.34E-05	No	No	
Calcium	NV	3.34E-02	1.63E-02	1.42E-02	1.41E-02	2.11E-02	3.58E-02	5.13E-02	1.68E-02	1.53E-02	1.57E-02	1.59E-02	6.18E-02	No	No	
Chromium	0.03	1.47E-04	7.19E-05	6.28E-05	6.26E-05	9.30E-05	1.57E-04	2.30E-04	7.55E-05	6.88E-05	7.04E-05	7.16E-05	2.70E-04	No	No	
Cobalt	0.1	2.26E-05	1.11E-05	9.64E-06	9.58E-06	1.43E-05	2.43E-05	3.48E-05	1.14E-05	1.04E-05	1.06E-05	1.08E-05	4.19E-05	No	No	
Copper	0.7	5.98E-05	2.93E-05	2.55E-05	2.54E-05	3.78E-05	6.42E-05	9.19E-05	3.01E-05	2.75E-05	2.81E-05	2.86E-05	1.11E-04	No	No	
Gold	1.7	6.54E-08	3.20E-08	2.79E-08	2.77E-08	4.13E-08	7.01E-08	1.00E-07	3.29E-08	3.00E-08	3.07E-08	3.12E-08	1.21E-07	No	No	
Iron	0.7	6.42E-02	3.14E-02	2.73E-02	2.72E-02	4.05E-02	6.88E-02	9.86E-02	3.23E-02	2.94E-02	3.01E-02	3.06E-02	1.19E-01	No	No	
Lead	0.2	1.63E-05	8.22E-06	7.30E-06	7.39E-06	1.07E-05	1.76E-05	2.93E-05	9.90E-06	9.03E-06	9.25E-06	9.41E-06	2.93E-05	No	No	
Lithium	NV	2.73E-05	1.33E-05	1.16E-05	1.16E-05	1.72E-05	2.93E-05	4.19E-05	1.37E-05	1.25E-05	1.28E-05	1.30E-05	5.06E-05	No	No	
Magnesium	3	1.77E-02	8.65E-03	7.54E-03	7.50E-03	1.12E-02	1.90E-02	2.72E-02	8.91E-03	8.12E-03	8.31E-03	8.45E-03	3.28E-02	No	No	
Manganese	0.09	6.65E-04	3.25E-04	2.84E-04	2.82E-04	4.20E-04	7.14E-04	1.02E-03	3.35E-04	3.05E-04	3.12E-04	3.18E-04	1.23E-03	No	No	
Molybdenum	2	1.01E-06	4.95E-07	4.32E-07	4.29E-07	6.40E-07	1.09E-06	1.56E-06	5.10E-07	4.65E-07	4.75E-07	4.84E-07	1.88E-06	No	No	
Nickel	0.014	5.87E-05	2.87E-05	2.50E-05	2.49E-05	3.71E-05	6.29E-05	9.02E-05	2.96E-05	2.69E-05	2.75E-05	2.80E-05	1.09E-04	No	No	
Potassium	1	1.12E-02	5.48E-03	4.77E-03	4.74E-03	7.08E-03	1.20E-02	1.72E-02	5.64E-03	5.14E-03	5.26E-03	5.35E-03	2.07E-02	No	No	
Selenium	4	1.01E-06	4.94E-07	4.31E-07	4.28E-07	6.38E-07	1.08E-06	1.55E-06	5.09E-07	4.64E-07	4.74E-07	4.82E-07	1.87E-06	No	No	
Silver	0.007	2.49E-07	1.22E-07	1.06E-07	1.05E-07	1.57E-07	2.67E-07	3.82E-07	1.25E-07	1.14E-07	1.17E-07	1.19E-07	4.61E-07	No	No	
Sodium	NV	1.34E-02	6.54E-03	5.70E-03	5.67E-03	8.45E-03	1.43E-02	2.06E-02	6.74E-03	6.14E-03	6.28E-03	6.39E-03	2.48E-02	No	No	
Strontium	1	1.79E-04	8.74E-05	7.62E-05	7.57E-05	1.13E-04	1.92E-04	2.75E-04	9.00E-05	8.20E-05	8.39E-05	8.53E-05	3.31E-04	No	No	
Thallium	0.07	2.58E-07	1.26E-07	1.10E-07	1.09E-07	1.63E-07	2.77E-07	3.97E-07	1.30E-07	1.18E-07	1.21E-07	1.23E-07	4.78E-07	No	No	
Tin	1	9.10E-07	4.45E-07	3.88E-07	3.86E-07	5.75E-07	9.76E-07	1.40E-06	4.58E-07	4.18E-07	4.27E-07	4.34E-07	1.69E-06	No	No	
Titanium	3	2.94E-03	1.44E-03	1.25E-03	1.25E-03	1.86E-03	3.16E-03	4.52E-03	1.48E-03	1.35E-03	1.38E-03	1.40E-03	5.45E-03	No	No	
Uranium	0.03	8.21E-07	4.01E-07	3.50E-07	3.48E-07	5.19E-07	8.81E-07	1.26E-06	4.14E-07	3.77E-07	3.85E-07	3.92E-07	1.52E-06	No	No	
Vanadium	0.1	1.08E-04	5.29E-05	4.61E-05	4.59E-05	6.84E-05	1.16E-04	1.66E-04	5.45E-05	4.97E-05	5.08E-05	5.17E-05	2.00E-04	No	No	
Yttrium	0.7	7.99E-06	3.91E-06	3.40E-06	3.38E-06	5.05E-06	8.57E-06	1.23E-05	4.02E-06	3.67E-06	3.75E-06	3.81E-06	1.48E-05	No	No	
Zinc	1	1.28E-04	6.43E-05	5.70E-05	5.76E-05	8.36E-05	1.38E-04	2.27E-04	7.63E-05	6.96E-05	7.13E-05	7.25E-05	2.29E-04	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	6.84E-08	3.62E-08	3.31E-08	3.43E-08	4.75E-08	7.52E-08	1.52E-07	5.30E-08	4.84E-08	4.97E-08	5.06E-08	1.52E-07	No	No	
naphthalene	0.3	2.71E-05	1.43E-05	1.31E-05	1.36E-05	1.88E-05	2.97E-05	6.03E-05	2.10E-05	1.92E-05	1.97E-05	2.00E-05	6.03E-05	No	No	
phenanthrene	0.03	2.24E-06	1.18E-06	1.08E-06	1.12E-06	1.55E-06	2.46E-06	4.98E-06	1.73E-06	1.58E-06	1.63E-06	1.65E-06	4.98E-06	No	No	
anthracene	0.07	2.49E-07	1.32E-07	1.21E-07	1.25E-07	1.73E-07	2.74E-07	5.55E-07	1.93E-07	1.77E-07	1.81E-07	1.85E-07	5.55E-07	No	No	
fluorene	0.7	1.09E-06	5.78E-07	5.28E-07	5.47E-07	7.57E-07	1.20E-06	2.43E-06	8.46E-07	7.73E-07	7.93E-07	8.07E-07	2.43E-06	No	No	
pyrene	0.03	8.17E-07	4.33E-07	3.95E-07	4.10E-07	5.67E-07	8.98E-07	1.82E-06	6.34E-07	5.79E-07	5.94E-07	6.05E-07	1.82E-06	No	No	
thiophenes	2	1.42E-08	7.50E-09	6.85E-09	7.10E-09	9.84E-09	1.56E-08	3.16E-08	1.10E-08	1.00E-08	1.03E-08	1.05E-08	3.16E-08	No	No	
benz(a)anthracene	0.0001	3.25E-08	1.72E-08	1.57E-08	1.63E-08	2.25E-08	3.57E-08	7.23E-08	2.52E-08	2.30E-08	2.36E-08	2.40E-08	7.23E-08	No	No	
acenaphthene	6.67	2.10E-07	1.11E-07	1.02E-07	1.05E-07	1.46E-07	2.31E-07	4.68E-07	1.63E-07	1.49E-07	1.53E-07	1.56E-07	4.68E-07	No	No	
acenaphthylene	6.67	7.64E-07	4.04E-07	3.69E-07	3.83E-07	5.30E-07	8.39E-07	1.70E-06	5.92E-07	5.41E-07	5.55E-07	5.65E-07	1.70E-06	No	No	
fluoranthene	0.03	8.13E-07	4.30E-07	3.93E-07	4.07E-07	5.64E-07	8.93E-07	1.81E-06	6.30E-07	5.75E-07	5.91E-07	6.01E-07	1.81E-06	No	No	
benzo(b)fluoranthene	0.09	1.51E-07	7.99E-08	7.29E-08	7.56E-08	1.05E-07	1.66E-07	3.36E-07	1.17E-07	1.07E-07	1.10E-07	1.12E-07	3.36E-07	No	No	
benzo(g,h,i)perylene	0.03	2.87E-09	1.52E-09	1.39E-09	1.44E-09	1.99E-09	3.15E-09	6.38E-09	2.22E-09	2.03E-09	2.08E-09	2.12E-09	6.38E-09	No	No	
benzo(k)fluoranthene	0.09	1.72E-08	9.08E-09	8.30E-09	8.60E-09	1.19E-08	1.89E-08	3.82E-08	1.33E-08	1.21E-08	1.25E-08	1.27E-08	3.82E-08	No	No	
chrysene	0.9	3.65E-08	1.93E-08	1.76E-08	1.83E-08	2.53E-08	4.01E-08	8.12E-08	2.83E-08	2.58E-08	2.65E-08	2.70E-08	8.12E-08	No	No	
dibenzo(a,h)anthracene	0.008	4.75E-08	2.51E-08	2.30E-08	2.38E-08	3.29E-08	5.22E-08	1.06E-07	3.68E-08	3.36E-08	3.45E-08	3.51E-08	1.06E-07	No	No	
indeno(1,2,3-cd)pyrene	0.0009	3.02E-08	1.60E-08	1.46E-08	1.51E-08	2.09E-08	3.32E-08	6.72E-08	2.34E-08	2.14E-08	2.19E-08	2.23E-08	6.72E-08	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3			
<b>Volatile Organic Compounds</b>															
1,3-butadiene	0.06	3.49E-04	1.85E-04	1.69E-04	1.75E-04	2.42E-04	3.81E-04	7.80E-04	2.67E-04	2.45E-04	2.51E-04	2.56E-04	7.80E-04	No	No
acetaldehyde	4	4.70E-02	2.50E-02	2.28E-02	2.36E-02	3.27E-02	5.14E-02	1.05E-01	3.60E-02	3.30E-02	3.39E-02	3.45E-02	1.05E-01	No	No
acetone	6176	2.47E-02	1.32E-02	1.20E-02	1.24E-02	1.72E-02	2.70E-02	5.53E-02	1.90E-02	1.74E-02	1.78E-02	1.82E-02	5.53E-02	No	No
acrolein	0.07	8.32E-03	4.43E-03	4.04E-03	4.18E-03	5.78E-03	9.10E-03	1.86E-02	6.38E-03	5.85E-03	5.99E-03	6.11E-03	1.86E-02	No	No
aldehyde	0.6	6.29E-02	3.34E-02	3.05E-02	3.15E-02	4.37E-02	6.87E-02	1.41E-01	4.82E-02	4.42E-02	4.53E-02	4.61E-02	1.41E-01	No	No
benzene	0.3	3.08E-03	1.64E-03	1.50E-03	1.55E-03	2.14E-03	3.37E-03	6.89E-03	2.36E-03	2.17E-03	2.22E-03	2.26E-03	6.89E-03	No	No
C10-C12 aliphatic	233	6.77E-04	3.60E-04	3.29E-04	3.40E-04	4.70E-04	7.40E-04	1.51E-03	5.19E-04	4.76E-04	4.88E-04	4.97E-04	1.51E-03	No	No
C12-C16 aliphatic	233	3.92E-03	2.09E-03	1.90E-03	1.97E-03	2.72E-03	4.28E-03	8.76E-03	3.00E-03	2.76E-03	2.82E-03	2.88E-03	8.76E-03	No	No
C12-C16 aromatic	83	5.29E-05	2.81E-05	2.57E-05	2.65E-05	3.67E-05	5.78E-05	1.18E-04	4.05E-05	3.72E-05	3.81E-05	3.88E-05	1.18E-04	No	No
C16-C21 aliphatic	7	3.93E-03	2.09E-03	1.91E-03	1.97E-03	2.73E-03	4.29E-03	8.78E-03	3.01E-03	2.76E-03	2.83E-03	2.88E-03	8.78E-03	No	No
C2-C6 aliphatic	38.5	1.87E-02	9.94E-03	9.07E-03	9.37E-03	1.30E-02	2.04E-02	4.18E-02	1.43E-02	1.31E-02	1.35E-02	1.37E-02	4.18E-02	No	No
C6-C8 aliphatic	67	1.28E-02	6.80E-03	6.21E-03	6.41E-03	8.88E-03	1.40E-02	2.86E-02	9.79E-03	8.98E-03	9.20E-03	9.38E-03	2.86E-02	No	No
C8-C10 aliphatic	67	1.80E-04	9.57E-05	8.74E-05	9.03E-05	1.25E-04	1.97E-04	4.02E-04	1.38E-04	1.27E-04	1.30E-04	1.32E-04	4.02E-04	No	No
C8-C10 aromatic	83	1.01E-03	5.38E-04	4.91E-04	5.08E-04	7.03E-04	1.11E-03	2.26E-03	7.75E-04	7.11E-04	7.29E-04	7.43E-04	2.26E-03	No	No
ethylbenzene	4	5.29E-04	2.81E-04	2.57E-04	2.65E-04	3.67E-04	5.78E-04	1.18E-03	4.05E-04	3.72E-04	3.81E-04	3.88E-04	1.18E-03	No	No
ethylene	1200	9.63E-03	5.12E-03	4.68E-03	4.83E-03	6.69E-03	1.05E-02	2.15E-02	7.38E-03	6.77E-03	6.93E-03	7.07E-03	2.15E-02	No	No
formaldehyde	1.67	2.51E-02	1.33E-02	1.22E-02	1.26E-02	1.74E-02	2.74E-02	5.61E-02	1.92E-02	1.76E-02	1.81E-02	1.84E-02	5.61E-02	No	No
ketone	0.4	1.42E-02	7.54E-03	6.88E-03	7.11E-03	9.85E-03	1.55E-02	3.17E-02	1.09E-02	9.96E-03	1.02E-02	1.04E-02	3.17E-02	No	No
toluene	52	4.48E-03	2.38E-03	2.17E-03	2.25E-03	3.11E-03	4.89E-03	1.00E-02	3.43E-03	3.15E-03	3.22E-03	3.29E-03	1.00E-02	No	No
trimethylbenzene	83	1.28E-03	6.82E-04	6.23E-04	6.43E-04	8.91E-04	1.40E-03	2.87E-03	9.82E-04	9.01E-04	9.24E-04	9.41E-04	2.87E-03	No	No
xylenes	44	3.55E-03	1.89E-03	1.73E-03	1.78E-03	2.47E-03	3.89E-03	7.95E-03	2.72E-03	2.50E-03	2.56E-03	2.61E-03	7.95E-03	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	12	1.31E+00	2.79E-01	3.78E-01	3.85E-01	4.11E-01	5.99E-01	9.93E-01	7.45E-02	8.45E-02	6.20E-02	7.46E-02	9.57E-02	6.08E-01	4.65E-01	4.19E-01
DPM	0.03	1.46E-01	3.62E-02	3.97E-02	3.97E-02	4.13E-02	5.89E-02	8.60E-02	1.22E-02	1.28E-02	9.15E-03	1.22E-02	1.39E-02	6.37E-02	7.63E-02	6.95E-02
PM10	20	7.94E-01	1.66E-01	2.17E-01	2.21E-01	2.35E-01	3.41E-01	5.35E-01	4.76E-02	5.36E-02	3.87E-02	4.77E-02	5.72E-02	3.49E-01	2.90E-01	2.63E-01
PM2.5	8.8	3.58E-01	7.79E-02	8.41E-02	8.54E-02	9.09E-02	1.29E-01	2.00E-01	2.43E-02	2.78E-02	1.89E-02	2.43E-02	2.89E-02	1.29E-01	1.45E-01	1.31E-01
CO	NV	2.90E+00	7.12E-01	7.92E-01	7.96E-01	8.75E-01	1.22E+00	1.71E+00	2.38E-01	2.62E-01	1.83E-01	2.38E-01	2.80E-01	1.29E+00	1.45E+00	1.31E+00
<b>Metals</b>																
Aluminum	3	9.06E-02	1.93E-02	2.62E-02	2.67E-02	2.85E-02	4.15E-02	6.88E-02	5.17E-03	5.86E-03	4.30E-03	5.17E-03	6.64E-03	4.21E-02	3.23E-02	2.91E-02
Antimony	0.3	5.12E-06	1.09E-06	1.48E-06	1.51E-06	1.61E-06	2.34E-06	3.89E-06	2.92E-07	3.31E-07	2.43E-07	2.92E-07	3.75E-07	2.38E-06	1.82E-06	1.64E-06
Arsenic	0.003	1.45E-04	3.10E-05	4.19E-05	4.27E-05	4.56E-05	6.65E-05	1.10E-04	8.28E-06	9.39E-06	6.89E-06	8.28E-06	1.06E-05	6.75E-05	5.16E-05	4.65E-05
Barium	0.3	5.11E-04	1.09E-04	1.48E-04	1.50E-04	1.61E-04	2.34E-04	3.88E-04	2.91E-05	3.31E-05	2.43E-05	2.92E-05	3.74E-05	2.38E-04	1.82E-04	1.64E-04
Beryllium	0.0042	9.51E-07	2.03E-07	2.75E-07	2.80E-07	2.99E-07	4.36E-07	7.23E-07	5.42E-08	6.15E-08	4.51E-08	5.43E-08	6.97E-08	4.43E-07	3.38E-07	3.05E-07
Bismuth	3	2.61E-07	5.58E-08	7.55E-08	7.69E-08	8.22E-08	1.20E-07	1.99E-07	1.49E-08	1.69E-08	1.24E-08	1.49E-08	1.91E-08	1.22E-07	9.30E-08	8.38E-08
Cadmium	0.0024	8.77E-05	2.18E-05	2.39E-05	2.39E-05	2.49E-05	3.55E-05	5.19E-05	7.33E-06	7.71E-06	5.51E-06	7.34E-06	8.36E-06	3.84E-05	4.59E-05	4.18E-05
Calcium	NV	5.16E-02	1.10E-02	1.49E-02	1.52E-02	1.62E-02	2.37E-02	3.93E-02	2.95E-03	3.34E-03	2.45E-03	2.95E-03	3.78E-03	2.40E-02	1.84E-02	1.66E-02
Chromium	0.03	2.32E-04	5.00E-05	6.68E-05	6.79E-05	7.25E-05	1.05E-04	1.74E-04	1.36E-05	1.53E-05	1.12E-05	1.36E-05	1.73E-05	1.07E-04	8.50E-05	7.67E-05
Cobalt	0.1	3.50E-05	7.47E-06	1.01E-05	1.03E-05	1.10E-05	1.60E-05	2.66E-05	2.00E-06	2.26E-06	1.66E-06	2.00E-06	2.56E-06	1.63E-05	1.25E-05	1.12E-05
Copper	0.7	9.26E-05	1.98E-05	2.68E-05	2.73E-05	2.91E-05	4.24E-05	7.04E-05	5.28E-06	5.99E-06	4.40E-06	5.29E-06	6.78E-06	4.31E-05	3.30E-05	2.97E-05
Gold	1.7	1.01E-07	2.16E-08	2.92E-08	2.98E-08	3.18E-08	4.63E-08	7.69E-08	5.77E-09	6.54E-09	4.80E-09	5.77E-09	7.41E-09	4.71E-08	3.60E-08	3.25E-08
Iron	0.7	9.93E-02	2.12E-02	2.87E-02	2.92E-02	3.12E-02	4.55E-02	7.55E-02	5.67E-03	6.42E-03	4.71E-03	5.67E-03	7.27E-03	4.62E-02	3.53E-02	3.19E-02
Lead	0.2	3.02E-05	6.95E-06	8.48E-06	8.56E-06	9.04E-06	1.30E-05	2.05E-05	2.11E-06	2.29E-06	1.66E-06	2.11E-06	2.53E-06	1.36E-05	1.32E-05	1.20E-05
Lithium	NV	4.22E-05	9.01E-06	1.22E-05	1.24E-05	1.33E-05	1.94E-05	3.21E-05	2.41E-06	2.73E-06	2.01E-06	2.41E-06	3.09E-06	1.97E-05	1.50E-05	1.36E-05
Magnesium	3	2.74E-02	5.85E-03	7.92E-03	8.07E-03	8.61E-03	1.25E-02	2.08E-02	1.56E-03	1.77E-03	1.30E-03	1.56E-03	2.01E-03	1.27E-02	9.75E-03	8.79E-03
Manganese	0.09	1.03E-03	2.20E-04	2.98E-04	3.03E-04	3.24E-04	4.72E-04	7.83E-04	5.87E-05	6.66E-05	4.89E-05	5.88E-05	7.54E-05	4.79E-04	3.66E-04	3.30E-04
Molybdenum	2	1.57E-06	3.35E-07	4.53E-07	4.62E-07	4.93E-07	7.18E-07	1.19E-06	8.94E-08	1.01E-07	7.44E-08	8.95E-08	1.15E-07	7.30E-07	5.58E-07	5.03E-07
Nickel	0.014	9.08E-05	1.94E-05	2.63E-05	2.67E-05	2.86E-05	4.16E-05	6.90E-05	5.18E-06	5.88E-06	4.31E-06	5.18E-06	6.65E-06	4.23E-05	3.23E-05	2.91E-05
Potassium	1	1.73E-02	3.70E-03	5.01E-03	5.10E-03	5.45E-03	7.94E-03	1.32E-02	9.89E-04	1.12E-03	8.23E-04	9.89E-04	1.27E-03	8.07E-03	6.17E-03	5.56E-03
Selenium	4	1.56E-06	3.34E-07	4.52E-07	4.60E-07	4.92E-07	7.16E-07	1.19E-06	8.92E-08	1.01E-07	7.42E-08	8.92E-08	1.15E-07	7.28E-07	5.57E-07	5.02E-07
Silver	0.007	3.85E-07	8.21E-08	1.11E-07	1.13E-07	1.21E-07	1.76E-07	2.93E-07	2.20E-08	2.49E-08	1.83E-08	2.20E-08	2.82E-08	1.79E-07	1.37E-07	1.23E-07
Sodium	NV	2.07E-02	4.42E-03	5.98E-03	6.10E-03	6.51E-03	9.48E-03	1.57E-02	1.18E-03	1.34E-03	9.83E-04	1.18E-03	1.52E-03	9.63E-03	7.37E-03	6.64E-03
Strontium	1	2.77E-04	5.90E-05	8.00E-05	8.14E-05	8.70E-05	1.27E-04	2.10E-04	1.58E-05	1.79E-05	1.31E-05	1.58E-05	2.03E-05	1.29E-04	9.85E-05	8.88E-05
Thallium	0.07	4.00E-07	8.53E-08	1.15E-07	1.18E-07	1.26E-07	1.83E-07	3.04E-07	2.28E-08	2.58E-08	1.90E-08	2.28E-08	2.93E-08	1.86E-07	1.42E-07	1.28E-07
Tin	1	1.41E-06	3.01E-07	4.07E-07	4.15E-07	4.43E-07	6.45E-07	1.07E-06	8.03E-08	9.11E-08	6.69E-08	8.04E-08	1.03E-07	6.55E-07	5.01E-07	4.52E-07
Titanium	3	4.55E-03	9.72E-04	1.32E-03	1.34E-03	1.43E-03	2.09E-03	3.46E-03	2.60E-04	2.95E-04	2.16E-04	2.60E-04	3.34E-04	2.12E-03	1.62E-03	1.46E-03
Uranium	0.03	1.27E-06	2.71E-07	3.67E-07	3.74E-07	4.00E-07	5.82E-07	9.66E-07	7.25E-08	8.22E-08	6.03E-08	7.25E-08	9.31E-08	5.91E-07	4.52E-07	4.08E-07
Vanadium	0.1	1.67E-04	3.57E-05	4.84E-05	4.93E-05	5.27E-05	7.67E-05	1.27E-04	9.55E-06	1.08E-05	7.95E-06	9.56E-06	1.23E-05	7.79E-05	5.96E-05	5.37E-05
Yttrium	0.7	1.24E-05	2.64E-06	3.57E-06	3.64E-06	3.89E-06	5.66E-06	9.40E-06	7.05E-07	8.00E-07	5.87E-07	7.06E-07	9.05E-07	5.75E-06	4.40E-06	3.97E-06
Zinc	1	2.33E-04	5.33E-05	6.56E-05	6.63E-05	7.01E-05	1.01E-04	1.60E-04	1.60E-05	1.74E-05	1.26E-05	1.60E-05	1.93E-05	1.05E-04	9.99E-05	9.06E-05
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	1.60E-07	3.99E-08	4.37E-08	4.37E-08	4.55E-08	6.48E-08	9.46E-08	1.34E-08	1.41E-08	1.01E-08	1.34E-08	1.53E-08	7.01E-08	8.39E-08	7.64E-08
naphthalene	0.3	6.34E-05	1.58E-05	1.73E-05	1.73E-05	1.80E-05	2.56E-05	3.74E-05	5.31E-06	5.58E-06	3.99E-06	5.31E-06	6.05E-06	2.78E-05	3.32E-05	3.02E-05
phenanthrene	0.03	5.23E-06	1.30E-06	1.43E-06	1.43E-06	1.49E-06	2.12E-06	3.09E-06	4.38E-07	4.61E-07	3.29E-07	4.39E-07	5.00E-07	2.29E-06	2.74E-06	2.50E-06
anthracene	0.07	5.84E-07	1.45E-07	1.59E-07	1.59E-07	1.66E-07	2.36E-07	3.45E-07	4.89E-08	5.14E-08	3.67E-08	4.89E-08	5.57E-08	2.56E-07	3.06E-07	2.79E-07
fluorene	0.7	2.55E-06	6.36E-07	6.97E-07	6.96E-07	7.26E-07	1.03E-06	1.51E-06	2.14E-07	2.25E-07	1.61E-07	2.14E-07	2.44E-07	1.12E-06	1.34E-06	1.22E-06
pyrene	0.03	1.91E-06	4.76E-07	5.22E-07	5.21E-07	5.43E-07	7.74E-07	1.13E-06	1.60E-07	1.68E-07	1.20E-07	1.60E-07	1.83E-07	8.38E-07	1.00E-06	9.13E-07
thiophenes	2	3.32E-08	8.26E-09	9.05E-09	9.04E-09	9.43E-09	1.34E-08	1.96E-08	2.78E-09	2.92E-09	2.09E-09	2.78E-09	3.17E-09	1.45E-08	1.74E-08	1.58E-08
benz(a)anthracene	0.0001	7.60E-08	1.89E-08	2.07E-08	2.07E-08	2.16E-08	3.08E-08	4.49E-08	6.36E-09	6.69E-09	4.78E-09	6.37E-09	7.25E-09	3.33E-08	3.98E-08	3.63E-08
acenaphthene	6.67	4.92E-07	1.23E-07	1.34E-07	1.34E-07	1.40E-07	1.99E-07	2.91E-07	4.12E-08	4.33E-08	3.10E-08	4.12E-08	4.70E-08	2.16E-07	2.58E-07	2.35E-07
acenaphthylene	6.67	1.79E-06	4.45E-07	4.88E-07	4.87E-07	5.08E-07	7.23E-07	1.06E-06	1.50E-07	1.57E-07	1.12E-07	1.50E-07	1.71E-07	7.83E-07	9.37E-07	8.53E-07
fluoranthene	0.03	1.90E-06	4.74E-07	5.19E-07	5.18E-07	5.40E-07	7.70E-07	1.12E-06	1.59E-07	1.67E-07	1.20E-07	1.59E-07	1.82E-07	8.33E-07	9.97E-07	9.08E-07
benzo(b)fluoranthene	0.09	3.53E-07	8.80E-08	9.64E-08	9.62E-08	1.00E-07	1.43E-07	2.09E-07	2.96E-08	3.11E-08	2.22E-08	2.96E-08	3.37E-08	1.55E-07	1.85E-07	1.69E-07
benzo(g,h,i)perylene	0.03	6.71E-09	1.67E-09	1.83E-09	1.83E-09	1.91E-09	2.72E-09	3.96E-09	5.62E-10	5.91E-10	4.22E-10	5.62E-10	6.40E-10	2.94E-09	3.52E-09	3.20E-09
benzo(k)fluoranthene	0.09	4.02E-08	1.00E-08	1.10E-08	1.09E-08	1.14E-08	1.63E-08	2.37E-08	3.36E-09	3.54E-09	2.53E-09	3.37E-09	3.83E-09	1.76E-08	2.11E-08	1.92E-08
chrysene	0.9	8.54E-08	2.13E-08	2.33E-08	2.33E-08	2.43E-08	3.46E-08	5.05E-08	7.15E-09	7.52E-09	5.37E-09	7.				

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	8.12E-04	2.06E-04	2.26E-04	2.26E-04	2.45E-04	3.43E-04	4.84E-04	6.98E-05	7.58E-05	5.35E-05	6.98E-05	8.19E-05	3.60E-04	4.31E-04	3.91E-04
acetaldehyde	4	1.09E-01	2.78E-02	3.05E-02	3.05E-02	3.30E-02	4.63E-02	6.53E-02	9.41E-03	1.02E-02	7.22E-03	9.42E-03	1.10E-02	4.86E-02	5.81E-02	5.27E-02
acetone	6176	5.76E-02	1.46E-02	1.61E-02	1.61E-02	1.74E-02	2.44E-02	3.44E-02	4.95E-03	5.38E-03	3.80E-03	4.96E-03	5.81E-03	2.56E-02	3.06E-02	2.77E-02
acrolein	0.07	1.94E-02	4.92E-03	5.40E-03	5.40E-03	5.84E-03	8.20E-03	1.16E-02	1.67E-03	1.81E-03	1.28E-03	1.67E-03	1.95E-03	8.60E-03	1.03E-02	9.33E-03
aldehyde	0.6	1.46E-01	3.72E-02	4.08E-02	4.08E-02	4.41E-02	6.19E-02	8.73E-02	1.26E-02	1.37E-02	9.65E-03	1.26E-02	1.48E-02	6.50E-02	7.77E-02	7.05E-02
benzene	0.3	7.17E-03	1.82E-03	2.00E-03	2.00E-03	2.16E-03	3.04E-03	4.28E-03	6.17E-04	6.70E-04	4.73E-04	6.17E-04	7.24E-04	3.19E-03	3.81E-03	3.46E-03
C10-C12 aliphatic	233	1.58E-03	4.00E-04	4.39E-04	4.39E-04	4.75E-04	6.67E-04	9.40E-04	1.35E-04	1.47E-04	1.04E-04	1.36E-04	1.59E-04	7.00E-04	8.37E-04	7.59E-04
C12-C16 aliphatic	233	9.12E-03	2.32E-03	2.55E-03	2.54E-03	2.75E-03	3.86E-03	5.44E-03	7.85E-04	8.53E-04	6.02E-04	7.85E-04	9.20E-04	4.05E-03	4.85E-03	4.40E-03
C12-C16 aromatic	83	1.23E-04	3.13E-05	3.43E-05	3.43E-05	3.71E-05	5.21E-05	7.34E-05	1.06E-05	1.15E-05	8.12E-06	1.06E-05	1.24E-05	5.46E-05	6.54E-05	5.93E-05
C16-C21 aliphatic	7	9.14E-03	2.32E-03	2.55E-03	2.55E-03	2.76E-03	3.87E-03	5.45E-03	7.86E-04	8.54E-04	6.03E-04	7.86E-04	9.22E-04	4.06E-03	4.85E-03	4.40E-03
C2-C6 aliphatic	38.5	4.35E-02	1.10E-02	1.21E-02	1.21E-02	1.31E-02	1.84E-02	2.59E-02	3.74E-03	4.06E-03	2.87E-03	3.74E-03	4.39E-03	1.93E-02	2.31E-02	2.09E-02
C6-C8 aliphatic	67	2.97E-02	7.56E-03	8.30E-03	8.29E-03	8.97E-03	1.26E-02	1.77E-02	2.56E-03	2.78E-03	1.96E-03	2.56E-03	3.00E-03	1.32E-02	1.58E-02	1.43E-02
C8-C10 aliphatic	67	4.19E-04	1.06E-04	1.17E-04	1.17E-04	1.26E-04	1.77E-04	2.50E-04	3.60E-05	3.91E-05	2.76E-05	3.60E-05	4.23E-05	1.86E-04	2.22E-04	2.02E-04
C8-C10 aromatic	83	2.35E-03	5.98E-04	6.57E-04	6.56E-04	7.10E-04	9.96E-04	1.40E-03	2.02E-04	2.20E-04	1.55E-04	2.03E-04	2.38E-04	1.05E-03	1.25E-03	1.13E-03
ethylbenzene	4	1.23E-03	3.13E-04	3.43E-04	3.43E-04	3.71E-04	5.21E-04	7.34E-04	1.06E-04	1.15E-04	8.12E-05	1.06E-04	1.24E-04	5.46E-04	6.54E-04	5.93E-04
ethylene	1200	2.24E-02	5.69E-03	6.25E-03	6.25E-03	6.76E-03	9.48E-03	1.34E-02	1.93E-03	2.09E-03	1.48E-03	1.93E-03	2.26E-03	9.95E-03	1.19E-02	1.08E-02
formaldehyde	1.67	5.84E-02	1.48E-02	1.63E-02	1.63E-02	1.76E-02	2.47E-02	3.48E-02	5.02E-03	5.46E-03	3.85E-03	5.02E-03	5.89E-03	2.59E-02	3.10E-02	2.81E-02
ketone	0.4	3.30E-02	8.38E-03	9.20E-03	9.20E-03	9.95E-03	1.40E-02	1.97E-02	2.84E-03	3.08E-03	2.18E-03	2.84E-03	3.33E-03	1.47E-02	1.75E-02	1.59E-02
toluene	52	1.04E-02	2.65E-03	2.91E-03	2.90E-03	3.14E-03	4.41E-03	6.22E-03	8.96E-04	9.74E-04	6.87E-04	8.97E-04	1.05E-03	4.63E-03	5.53E-03	5.02E-03
trimethylbenzene	83	2.98E-03	7.58E-04	8.33E-04	8.32E-04	9.00E-04	1.26E-03	1.78E-03	2.57E-04	2.79E-04	1.97E-04	2.57E-04	3.01E-04	1.33E-03	1.59E-03	1.44E-03
xylenes	44	8.27E-03	2.10E-03	2.31E-03	2.31E-03	2.50E-03	3.50E-03	4.93E-03	7.11E-04	7.73E-04	5.46E-04	7.12E-04	8.35E-04	3.67E-03	4.39E-03	3.99E-03

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	12	1.34E-01	9.31E-02	8.64E-02	9.08E-02	1.16E-01	1.48E-01	8.50E-01	4.36E-01	2.71E-01	2.81E-01	2.90E-01	1.31E+00	No	No	
DPM	0.03	2.35E-02	1.77E-02	1.71E-02	1.89E-02	2.27E-02	2.78E-02	<b>1.38E-01</b>	<b>5.55E-02</b>	<b>4.44E-02</b>	<b>4.57E-02</b>	<b>4.69E-02</b>	<b>1.46E-01</b>	<b>Yes</b>	<b>Yes</b>	
PM10	20	8.62E-02	6.10E-02	5.66E-02	6.10E-02	7.53E-02	9.56E-02	5.29E-01	2.59E-01	1.69E-01	1.76E-01	1.82E-01	7.94E-01	No	No	
PM2.5	8.8	4.48E-02	3.31E-02	3.20E-02	3.49E-02	4.26E-02	5.25E-02	2.63E-01	1.15E-01	8.58E-02	8.88E-02	9.12E-02	3.58E-01	No	No	
CO	NV	4.43E-01	3.34E-01	3.23E-01	3.55E-01	4.29E-01	5.26E-01	2.64E+00	1.07E+00	8.47E-01	8.73E-01	8.96E-01	2.90E+00	No	No	
<b>Metals</b>																
Aluminum	3	9.28E-03	6.46E-03	6.00E-03	6.30E-03	8.05E-03	1.03E-02	5.89E-02	3.02E-02	1.88E-02	1.95E-02	2.01E-02	9.06E-02	No	No	
Antimony	0.3	5.24E-07	3.65E-07	3.38E-07	3.55E-07	4.54E-07	5.81E-07	3.33E-06	1.71E-06	1.06E-06	1.10E-06	1.13E-06	5.12E-06	No	No	
Arsenic	0.003	1.49E-05	1.03E-05	9.60E-06	1.01E-05	1.29E-05	1.65E-05	9.43E-05	4.84E-05	3.01E-05	3.12E-05	3.22E-05	1.45E-04	No	No	
Barium	0.3	5.23E-05	3.64E-05	3.38E-05	3.55E-05	4.53E-05	5.80E-05	3.32E-04	1.70E-04	1.06E-04	1.10E-04	1.13E-04	5.11E-04	No	No	
Beryllium	0.0042	9.74E-08	6.78E-08	6.29E-08	6.61E-08	8.44E-08	1.08E-07	6.18E-07	3.17E-07	1.98E-07	2.05E-07	2.11E-07	9.51E-07	No	No	
Bismuth	3	2.68E-08	1.86E-08	1.73E-08	1.82E-08	2.32E-08	2.97E-08	1.70E-07	8.72E-08	5.43E-08	5.62E-08	5.80E-08	2.61E-07	No	No	
Cadmium	0.0024	1.41E-05	1.06E-05	1.03E-05	1.13E-05	1.37E-05	1.67E-05	8.29E-05	3.34E-05	2.67E-05	2.75E-05	2.82E-05	8.77E-05	No	No	
Calcium	NV	5.29E-03	3.68E-03	3.42E-03	3.59E-03	4.58E-03	5.86E-03	3.36E-02	1.72E-02	1.07E-02	1.11E-02	1.15E-02	5.16E-02	No	No	
Chromium	0.03	2.46E-05	1.73E-05	1.61E-05	1.70E-05	2.16E-05	2.75E-05	1.55E-04	7.80E-05	4.96E-05	5.13E-05	5.29E-05	2.32E-04	No	No	
Cobalt	0.1	3.58E-06	2.50E-06	2.32E-06	2.43E-06	3.11E-06	3.97E-06	2.28E-05	1.17E-05	7.27E-06	7.54E-06	7.77E-06	3.50E-05	No	No	
Copper	0.7	9.48E-06	6.60E-06	6.13E-06	6.43E-06	8.22E-06	1.05E-05	6.02E-05	3.09E-05	1.92E-05	1.99E-05	2.05E-05	9.26E-05	No	No	
Gold	1.7	1.04E-08	7.21E-09	6.69E-09	7.03E-09	8.98E-09	1.15E-08	6.58E-08	3.37E-08	2.10E-08	2.18E-08	2.24E-08	1.01E-07	No	No	
Iron	0.7	1.02E-02	7.08E-03	6.57E-03	6.90E-03	8.81E-03	1.13E-02	6.46E-02	3.31E-02	2.06E-02	2.14E-02	2.20E-02	9.93E-02	No	No	
Lead	0.2	3.94E-06	2.88E-06	2.75E-06	2.97E-06	3.66E-06	4.56E-06	2.39E-05	1.08E-05	7.68E-06	7.93E-06	8.15E-06	3.02E-05	No	No	
Lithium	NV	4.32E-06	3.01E-06	2.79E-06	2.93E-06	3.75E-06	4.80E-06	2.75E-05	1.41E-05	8.77E-06	9.09E-06	9.37E-06	4.22E-05	No	No	
Magnesium	3	2.80E-03	1.95E-03	1.81E-03	1.90E-03	2.43E-03	3.11E-03	1.78E-02	9.14E-03	5.69E-03	5.90E-03	6.08E-03	2.74E-02	No	No	
Manganese	0.09	1.05E-04	7.34E-05	6.81E-05	7.15E-05	9.14E-05	1.17E-04	6.70E-04	3.43E-04	2.14E-04	2.22E-04	2.28E-04	1.03E-03	No	No	
Molybdenum	2	1.61E-07	1.12E-07	1.04E-07	1.09E-07	1.39E-07	1.78E-07	1.02E-06	5.23E-07	3.26E-07	3.37E-07	3.48E-07	1.57E-06	No	No	
Nickel	0.014	9.30E-06	6.47E-06	6.01E-06	6.31E-06	8.06E-06	1.03E-05	5.91E-05	3.03E-05	1.89E-05	1.96E-05	2.01E-05	9.08E-05	No	No	
Potassium	1	1.77E-03	1.24E-03	1.15E-03	1.20E-03	1.54E-03	1.97E-03	1.13E-02	5.78E-03	3.60E-03	3.73E-03	3.84E-03	1.73E-02	No	No	
Selenium	4	1.60E-07	1.11E-07	1.03E-07	1.09E-07	1.39E-07	1.78E-07	1.02E-06	5.22E-07	3.25E-07	3.37E-07	3.47E-07	1.56E-06	No	No	
Silver	0.007	3.94E-08	2.74E-08	2.55E-08	2.67E-08	3.42E-08	4.37E-08	2.50E-07	1.28E-07	7.99E-08	8.28E-08	8.54E-08	3.85E-07	No	No	
Sodium	NV	2.12E-03	1.48E-03	1.37E-03	1.44E-03	1.84E-03	2.35E-03	1.35E-02	6.91E-03	4.30E-03	4.46E-03	4.59E-03	2.07E-02	No	No	
Strontium	1	2.83E-05	1.97E-05	1.83E-05	1.92E-05	2.46E-05	3.14E-05	1.80E-04	9.23E-05	5.75E-05	5.95E-05	6.14E-05	2.77E-04	No	No	
Thallium	0.07	4.09E-08	2.85E-08	2.64E-08	2.78E-08	3.55E-08	4.54E-08	2.60E-07	1.33E-07	8.30E-08	8.60E-08	8.86E-08	4.00E-07	No	No	
Tin	1	1.44E-07	1.00E-07	9.32E-08	9.79E-08	1.25E-07	1.60E-07	9.16E-07	4.70E-07	2.93E-07	3.03E-07	3.12E-07	1.41E-06	No	No	
Titanium	3	4.66E-04	3.25E-04	3.01E-04	3.16E-04	4.04E-04	5.17E-04	2.96E-03	1.52E-03	9.46E-04	9.80E-04	1.01E-03	4.55E-03	No	No	
Uranium	0.03	1.30E-07	9.06E-08	8.41E-08	8.83E-08	1.13E-07	1.44E-07	8.26E-07	4.24E-07	2.64E-07	2.74E-07	2.82E-07	1.27E-06	No	No	
Vanadium	0.1	1.71E-05	1.19E-05	1.11E-05	1.16E-05	1.49E-05	1.90E-05	1.09E-04	5.59E-05	3.48E-05	3.61E-05	3.72E-05	1.67E-04	No	No	
Yttrium	0.7	1.27E-06	8.81E-07	8.18E-07	8.59E-07	1.10E-06	1.40E-06	8.04E-06	4.12E-06	2.57E-06	2.66E-06	2.74E-06	1.24E-05	No	No	
Zinc	1	2.98E-05	2.17E-05	2.07E-05	2.23E-05	2.75E-05	3.43E-05	1.81E-04	8.25E-05	5.82E-05	6.02E-05	6.18E-05	2.33E-04	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	2.58E-08	1.95E-08	1.89E-08	2.08E-08	2.50E-08	3.06E-08	1.52E-07	6.11E-08	4.89E-08	5.03E-08	5.16E-08	1.60E-07	No	No	
naphthalene	0.3	1.02E-05	7.71E-06	7.47E-06	8.21E-06	9.89E-06	1.21E-05	6.00E-05	2.42E-05	1.93E-05	1.99E-05	2.04E-05	6.34E-05	No	No	
phenanthrene	0.03	8.44E-07	6.37E-07	6.17E-07	6.79E-07	8.17E-07	1.00E-06	4.95E-06	2.00E-06	1.60E-06	1.65E-06	1.69E-06	5.23E-06	No	No	
anthracene	0.07	9.42E-08	7.10E-08	6.88E-08	7.57E-08	9.11E-08	1.12E-07	5.53E-07	2.23E-07	1.78E-07	1.83E-07	1.88E-07	5.84E-07	No	No	
fluorene	0.7	4.12E-07	3.11E-07	3.01E-07	3.31E-07	3.98E-07	4.89E-07	2.42E-06	9.75E-07	7.79E-07	8.02E-07	8.23E-07	2.55E-06	No	No	
pyrene	0.03	3.08E-07	2.33E-07	2.25E-07	2.48E-07	2.98E-07	3.66E-07	1.81E-06	7.30E-07	5.83E-07	6.01E-07	6.17E-07	1.91E-06	No	No	
thiophenes	2	5.35E-09	4.03E-09	3.91E-09	4.30E-09	5.18E-09	6.35E-09	3.14E-08	1.27E-08	1.01E-08	1.04E-08	1.07E-08	3.32E-08	No	No	
benz(a)anthracene	0.0001	1.23E-08	9.24E-09	8.95E-09	9.85E-09	1.19E-08	1.45E-08	7.19E-08	2.90E-08	2.32E-08	2.39E-08	2.45E-08	7.60E-08	No	No	
acenaphthene	6.67	7.94E-08	5.98E-08	5.80E-08	6.38E-08	7.68E-08	9.42E-08	4.66E-07	1.88E-07	1.50E-07	1.55E-07	1.59E-07	4.92E-07	No	No	
acenaphthylene	6.67	2.88E-07	2.17E-07	2.11E-07	2.32E-07	2.79E-07	3.42E-07	1.69E-06	6.82E-07	5.45E-07	5.62E-07	5.76E-07	1.79E-06	No	No	
fluoranthene	0.03	3.07E-07	2.31E-07	2.24E-07	2.47E-07	2.97E-07	3.64E-07	1.80E-06	7.26E-07	5.80E-07	5.98E-07	6.13E-07	1.90E-06	No	No	
benzo(b)fluoranthene	0.09	5.69E-08	4.29E-08	4.16E-08	4.58E-08	5.51E-08	6.76E-08	3.34E-07	1.35E-07	1.08E-07	1.11E-07	1.14E-07	3.53E-07	No	No	
benzo(g,h,i)perylene	0.03	1.08E-09	8.16E-10	7.91E-10	8.70E-10	1.05E-09	1.28E-09	6.35E-09	2.56E-09	2.05E-09	2.11E-09	2.16E-09	6.71E-09	No	No	
benzo(k)fluoranthene	0.09	6.48E-09	4.88E-09	4.73E-09	5.21E-09	6.27E-09	7.68E-09	3.80E-08	1.53E-08	1.23E-08	1.26E-08	1.29E-08	4.02E-08	No	No	
chrysene	0.9	1.38E-08	1.04E-08	1.01E-08	1.11E-08	1.33E-08	1.63E-08	8.08E-08	3.26E-08	2.61E-08	2.68E-08	2.75E-08	8.54E-08	No	No	
dibenzo(a,h)anthracene	0.008	1.79E-08	1.35E-08	1.31E-08	1.44E-08	1.73E-08	2.13E-08	1.05E-07	4.24E-08	3.39E-08	3.49E-08	3.58E-08	1.11E-07	No	No	
indeno(1,2,3-cd)pyrene	0.0009	1.14E-08	8.59E-09	8.33E-09	9.16E-09	1.10E-08	1.35E-08	6.69E-08	2.70E-08	2.16E-08	2.22E-08	2.28E-08	7.07E-08	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3			
<b>Volatile Organic Compounds</b>															
1,3-butadiene	0.06	1.33E-04	1.00E-04	9.69E-05	1.06E-04	1.28E-04	1.56E-04	7.83E-04	3.09E-04	2.47E-04	2.54E-04	2.61E-04	8.12E-04	No	No
acetaldehyde	4	1.80E-02	1.35E-02	1.31E-02	1.43E-02	1.72E-02	2.11E-02	1.06E-01	4.17E-02	3.33E-02	3.42E-02	3.51E-02	1.09E-01	No	No
acetone	6176	9.45E-03	7.12E-03	6.88E-03	7.51E-03	9.07E-03	1.11E-02	5.56E-02	2.20E-02	1.75E-02	1.80E-02	1.85E-02	5.76E-02	No	No
acrolein	0.07	3.18E-03	2.40E-03	2.31E-03	2.53E-03	3.05E-03	3.73E-03	1.87E-02	7.39E-03	5.89E-03	6.06E-03	6.22E-03	1.94E-02	No	No
aldehyde	0.6	2.40E-02	1.81E-02	1.75E-02	1.91E-02	2.31E-02	2.82E-02	1.41E-01	5.58E-02	4.45E-02	4.58E-02	4.70E-02	1.46E-01	No	No
benzene	0.3	1.18E-03	8.87E-04	8.57E-04	9.35E-04	1.13E-03	1.38E-03	6.92E-03	2.73E-03	2.18E-03	2.24E-03	2.30E-03	7.17E-03	No	No
C10-C12 aliphatic	233	2.59E-04	1.95E-04	1.88E-04	2.05E-04	2.48E-04	3.04E-04	1.52E-03	6.01E-04	4.79E-04	4.93E-04	5.06E-04	1.58E-03	No	No
C12-C16 aliphatic	233	1.50E-03	1.13E-03	1.09E-03	1.19E-03	1.44E-03	1.76E-03	8.80E-03	3.48E-03	2.78E-03	2.85E-03	2.93E-03	9.12E-03	No	No
C12-C16 aromatic	83	2.02E-05	1.52E-05	1.47E-05	1.60E-05	1.94E-05	2.37E-05	1.19E-04	4.69E-05	3.74E-05	3.85E-05	3.95E-05	1.23E-04	No	No
C16-C21 aliphatic	7	1.50E-03	1.13E-03	1.09E-03	1.19E-03	1.44E-03	1.76E-03	8.81E-03	3.48E-03	2.78E-03	2.86E-03	2.93E-03	9.14E-03	No	No
C2-C6 aliphatic	38.5	7.14E-03	5.38E-03	5.19E-03	5.67E-03	6.85E-03	8.38E-03	4.20E-02	1.66E-02	1.32E-02	1.36E-02	1.40E-02	4.35E-02	No	No
C6-C8 aliphatic	67	4.88E-03	3.68E-03	3.55E-03	3.88E-03	4.68E-03	5.73E-03	2.87E-02	1.13E-02	9.05E-03	9.30E-03	9.55E-03	2.97E-02	No	No
C8-C10 aliphatic	67	6.87E-05	5.18E-05	5.00E-05	5.46E-05	6.60E-05	8.07E-05	4.04E-04	1.60E-04	1.27E-04	1.31E-04	1.35E-04	4.19E-04	No	No
C8-C10 aromatic	83	3.86E-04	2.91E-04	2.81E-04	3.07E-04	3.71E-04	4.54E-04	2.27E-03	8.98E-04	7.16E-04	7.37E-04	7.56E-04	2.35E-03	No	No
ethylbenzene	4	2.02E-04	1.52E-04	1.47E-04	1.60E-04	1.94E-04	2.37E-04	1.19E-03	4.69E-04	3.74E-04	3.85E-04	3.95E-04	1.23E-03	No	No
ethylene	1200	3.68E-03	2.77E-03	2.68E-03	2.92E-03	3.53E-03	4.32E-03	2.16E-02	8.54E-03	6.82E-03	7.01E-03	7.20E-03	2.24E-02	No	No
formaldehyde	1.67	9.58E-03	7.22E-03	6.97E-03	7.61E-03	9.20E-03	1.12E-02	5.63E-02	2.23E-02	1.78E-02	1.83E-02	1.87E-02	5.84E-02	No	No
ketone	0.4	5.41E-03	4.08E-03	3.94E-03	4.30E-03	5.20E-03	6.36E-03	3.18E-02	1.26E-02	1.00E-02	1.03E-02	1.06E-02	3.30E-02	No	No
toluene	52	1.71E-03	1.29E-03	1.24E-03	1.36E-03	1.64E-03	2.01E-03	1.01E-02	3.97E-03	3.17E-03	3.26E-03	3.35E-03	1.04E-02	No	No
trimethylbenzene	83	4.90E-04	3.69E-04	3.56E-04	3.89E-04	4.70E-04	5.75E-04	2.88E-03	1.14E-03	9.08E-04	9.33E-04	9.58E-04	2.98E-03	No	No
xylenes	44	1.36E-03	1.02E-03	9.88E-04	1.08E-03	1.30E-03	1.59E-03	7.98E-03	3.15E-03	2.52E-03	2.59E-03	2.66E-03	8.27E-03	No	No

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Criteria Pollutants</b>																
SPM	12	2.37E-01	5.38E-02	6.26E-02	6.07E-02	5.62E-02	8.03E-02	1.12E-01	1.76E-02	1.95E-02	1.29E-02	1.76E-02	2.07E-02	7.21E-02	1.20E-01	1.05E-01
DPM	0.03	<b>8.75E-02</b>	2.24E-02	2.81E-02	2.64E-02	2.31E-02	<b>3.39E-02</b>	<b>4.25E-02</b>	8.48E-03	8.59E-03	6.06E-03	8.49E-03	9.68E-03	2.87E-02	<b>5.92E-02</b>	<b>5.24E-02</b>
PM10	20	2.36E-01	5.37E-02	6.27E-02	6.07E-02	5.61E-02	8.02E-02	1.11E-01	1.77E-02	1.96E-02	1.29E-02	1.77E-02	2.08E-02	7.17E-02	1.20E-01	1.05E-01
PM2.5	8.8	2.14E-01	4.97E-02	5.89E-02	5.68E-02	5.20E-02	7.37E-02	1.02E-01	1.67E-02	1.89E-02	1.24E-02	1.67E-02	2.00E-02	6.34E-02	1.13E-01	9.88E-02
CO	NV	1.55E+00	4.01E-01	5.04E-01	4.71E-01	4.12E-01	6.00E-01	7.55E-01	1.53E-01	1.60E-01	1.13E-01	1.53E-01	1.78E-01	5.07E-01	1.04E+00	9.23E-01
<b>Metals</b>																
Aluminum	3	1.65E-02	3.74E-03	4.36E-03	4.23E-03	3.91E-03	5.59E-03	7.76E-03	1.22E-03	1.36E-03	8.95E-04	1.23E-03	1.44E-03	5.01E-03	8.33E-03	7.28E-03
Antimony	0.3	9.29E-07	2.11E-07	2.45E-07	2.38E-07	2.20E-07	3.15E-07	4.37E-07	6.89E-08	7.65E-08	5.04E-08	6.90E-08	8.10E-08	2.82E-07	4.69E-07	4.10E-07
Arsenic	0.003	2.63E-05	5.98E-06	6.95E-06	6.74E-06	6.25E-06	8.92E-06	1.24E-05	1.95E-06	2.17E-06	1.43E-06	1.96E-06	2.30E-06	8.00E-06	1.33E-05	1.16E-05
Barium	0.3	9.28E-05	2.10E-05	2.45E-05	2.37E-05	2.20E-05	3.14E-05	4.36E-05	6.88E-06	7.64E-06	5.03E-06	6.89E-06	8.08E-06	2.82E-05	4.68E-05	4.09E-05
Beryllium	0.0042	1.73E-07	3.92E-08	4.56E-08	4.42E-08	4.09E-08	5.85E-08	8.12E-08	1.28E-08	1.42E-08	9.36E-09	1.28E-08	1.50E-08	5.24E-08	8.71E-08	7.61E-08
Bismuth	3	4.75E-08	1.08E-08	1.25E-08	1.21E-08	1.12E-08	1.61E-08	2.23E-08	3.52E-09	3.91E-09	2.57E-09	3.52E-09	4.14E-09	1.44E-08	2.39E-08	2.09E-08
Cadmium	0.0024	5.25E-05	1.35E-05	1.69E-05	1.58E-05	1.38E-05	2.04E-05	2.55E-05	5.09E-06	5.16E-06	3.64E-06	5.10E-06	5.82E-06	1.72E-05	3.56E-05	3.14E-05
Calcium	NV	9.38E-03	2.13E-03	2.47E-03	2.40E-03	2.22E-03	3.17E-03	4.41E-03	6.96E-04	7.73E-04	5.08E-04	6.96E-04	8.17E-04	2.85E-03	4.73E-03	4.13E-03
Chromium	0.03	4.82E-05	1.12E-05	1.32E-05	1.27E-05	1.17E-05	1.68E-05	2.28E-05	3.77E-06	4.11E-06	2.75E-06	3.78E-06	4.41E-06	1.48E-05	2.58E-05	2.26E-05
Cobalt	0.1	6.36E-06	1.44E-06	1.68E-06	1.63E-06	1.51E-06	2.15E-06	2.99E-06	4.71E-07	5.24E-07	3.45E-07	4.72E-07	5.54E-07	1.93E-06	3.21E-06	2.80E-06
Copper	0.7	1.68E-05	3.81E-06	4.44E-06	4.30E-06	3.99E-06	5.69E-06	7.91E-06	1.25E-06	1.39E-06	9.12E-07	1.25E-06	1.47E-06	5.11E-06	8.48E-06	7.41E-06
Gold	1.7	1.84E-08	4.17E-09	4.85E-09	4.70E-09	4.36E-09	6.22E-09	8.64E-09	1.36E-09	1.51E-09	9.96E-10	1.36E-09	1.60E-09	5.58E-09	9.27E-09	8.10E-09
Iron	0.7	1.80E-02	4.09E-03	4.76E-03	4.62E-03	4.28E-03	6.11E-03	8.48E-03	1.34E-03	1.49E-03	9.78E-04	1.34E-03	1.57E-03	5.48E-03	9.10E-03	7.95E-03
Lead	0.2	1.16E-05	2.88E-06	3.56E-06	3.36E-06	2.98E-06	4.35E-06	5.58E-06	1.06E-06	1.09E-06	7.59E-07	1.06E-06	1.22E-06	3.73E-06	7.35E-06	6.49E-06
Lithium	NV	7.67E-06	1.74E-06	2.02E-06	1.96E-06	1.82E-06	2.60E-06	3.61E-06	5.69E-07	6.32E-07	4.16E-07	5.70E-07	6.68E-07	2.33E-06	3.87E-06	3.38E-06
Magnesium	3	4.97E-03	1.13E-03	1.31E-03	1.27E-03	1.18E-03	1.68E-03	2.34E-03	3.69E-04	4.10E-04	2.70E-04	3.69E-04	4.33E-04	1.51E-03	2.51E-03	2.19E-03
Manganese	0.09	1.87E-04	4.24E-05	4.93E-05	4.79E-05	4.43E-05	6.33E-05	8.79E-05	1.39E-05	1.54E-05	1.01E-05	1.39E-05	1.63E-05	5.68E-05	9.43E-05	8.24E-05
Molybdenum	2	2.85E-07	6.46E-08	7.51E-08	7.29E-08	6.75E-08	9.64E-08	1.34E-07	2.11E-08	2.35E-08	1.54E-08	2.11E-08	2.48E-08	8.65E-08	1.44E-07	1.26E-07
Nickel	0.014	1.65E-05	3.74E-06	4.35E-06	4.22E-06	3.91E-06	5.58E-06	7.75E-06	1.22E-06	1.36E-06	8.94E-07	1.22E-06	1.44E-06	5.01E-06	8.32E-06	7.27E-06
Potassium	1	3.15E-03	7.14E-04	8.31E-04	8.06E-04	7.46E-04	1.07E-03	1.48E-03	2.33E-04	2.59E-04	1.71E-04	2.34E-04	2.74E-04	9.56E-04	1.59E-03	1.39E-03
Selenium	4	2.84E-07	6.44E-08	7.49E-08	7.27E-08	6.73E-08	9.61E-08	1.34E-07	2.11E-08	2.34E-08	1.54E-08	2.11E-08	2.47E-08	8.62E-08	1.43E-07	1.25E-07
Silver	0.007	6.99E-08	1.58E-08	1.84E-08	1.79E-08	1.66E-08	2.37E-08	3.29E-08	5.18E-09	5.76E-09	3.79E-09	5.19E-09	6.09E-09	2.12E-08	3.53E-08	3.08E-08
Sodium	NV	3.76E-03	8.53E-04	9.92E-04	9.62E-04	8.91E-04	1.27E-03	1.77E-03	2.79E-04	3.10E-04	2.04E-04	2.79E-04	3.28E-04	1.14E-03	1.90E-03	1.66E-03
Strontium	1	5.02E-05	1.14E-05	1.33E-05	1.29E-05	1.19E-05	1.70E-05	2.36E-05	3.73E-06	4.14E-06	2.72E-06	3.73E-06	4.38E-06	1.53E-05	2.53E-05	2.21E-05
Thallium	0.07	7.26E-08	1.65E-08	1.91E-08	1.86E-08	1.72E-08	2.46E-08	3.41E-08	5.38E-09	5.98E-09	3.93E-09	5.39E-09	6.32E-09	2.20E-08	3.66E-08	3.20E-08
Tin	1	2.56E-07	5.80E-08	6.75E-08	6.55E-08	6.06E-08	8.66E-08	1.20E-07	1.90E-08	2.11E-08	1.39E-08	1.90E-08	2.23E-08	7.77E-08	1.29E-07	1.13E-07
Titanium	3	8.27E-04	1.88E-04	2.18E-04	2.12E-04	1.96E-04	2.80E-04	3.89E-04	6.13E-05	6.81E-05	4.48E-05	6.14E-05	7.21E-05	2.51E-04	4.17E-04	3.65E-04
Uranium	0.03	2.31E-07	5.23E-08	6.09E-08	5.91E-08	5.47E-08	7.81E-08	1.09E-07	1.71E-08	1.90E-08	1.25E-08	1.71E-08	2.01E-08	7.01E-08	1.16E-07	1.02E-07
Vanadium	0.1	3.04E-05	6.90E-06	8.03E-06	7.79E-06	7.21E-06	1.03E-05	1.43E-05	2.26E-06	2.51E-06	1.65E-06	2.26E-06	2.65E-06	9.24E-06	1.53E-05	1.34E-05
Yttrium	0.7	2.25E-06	5.09E-07	5.92E-07	5.75E-07	5.32E-07	7.60E-07	1.06E-06	1.66E-07	1.85E-07	1.22E-07	1.67E-07	1.96E-07	6.82E-07	1.13E-06	9.90E-07
Zinc	1	8.50E-05	2.11E-05	2.59E-05	2.45E-05	2.18E-05	3.18E-05	4.09E-05	7.70E-06	7.97E-06	5.53E-06	7.71E-06	8.85E-06	2.73E-05	5.35E-05	4.71E-05
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	9.62E-08	2.47E-08	3.09E-08	2.90E-08	2.54E-08	3.73E-08	4.68E-08	9.33E-09	9.45E-09	6.67E-09	9.34E-09	1.07E-08	3.15E-08	6.52E-08	5.76E-08
naphthalene	0.3	3.81E-05	9.76E-06	1.22E-05	1.15E-05	1.00E-05	1.48E-05	1.85E-05	3.69E-06	3.74E-06	2.64E-06	3.70E-06	4.22E-06	1.25E-05	2.58E-05	2.28E-05
phenanthrene	0.03	3.15E-06	8.06E-07	1.01E-06	9.49E-07	8.29E-07	1.22E-06	1.53E-06	3.05E-07	3.09E-07	2.18E-07	3.05E-07	3.48E-07	1.03E-06	2.13E-06	1.88E-06
anthracene	0.07	3.51E-07	8.99E-08	1.13E-07	1.06E-07	9.25E-08	1.36E-07	1.71E-07	3.40E-08	3.45E-08	2.43E-08	3.41E-08	3.89E-08	1.15E-07	2.38E-07	2.10E-07
fluorene	0.7	1.53E-06	3.93E-07	4.93E-07	4.63E-07	4.04E-07	5.96E-07	7.46E-07	1.49E-07	1.51E-07	1.06E-07	1.49E-07	1.70E-07	5.03E-07	1.04E-06	9.19E-07
pyrene	0.03	1.15E-06	2.95E-07	3.69E-07	3.47E-07	3.03E-07	4.46E-07	5.59E-07	1.11E-07	1.13E-07	7.96E-08	1.12E-07	1.27E-07	3.77E-07	7.79E-07	6.88E-07
thiophenes	2	1.99E-08	5.11E-09	6.40E-09	6.01E-09	5.26E-09	7.74E-09	9.69E-09	1.93E-09	1.96E-09	1.38E-09	1.94E-09	2.21E-09	6.53E-09	1.35E-08	1.19E-08
benz(a)anthracene	0.0001	4.57E-08	1.17E-08	1.47E-08	1.38E-08	1.20E-08	1.77E-08	2.22E-08	4.43E-09	4.49E-09	3.16E-09	4.43E-09	5.06E-09	1.50E-08	3.09E-08	2.73E-08
acenaphthene	6.67	2.96E-07	7.58E-08	9.50E-08	8.92E-08	7.80E-08	1.15E-07	1.44E-07	2.87E-08	2.90E-08	2.05E-08	2.87E-08	3.27E-08	9.69E-08	2.00E-07	1.77E-07
acenaphthylene	6.67	1.07E-06	2.75E-07	3.45E-07	3.24E-07	2.83E-07	4.17E-07	5.22E-07	1.04E-07	1.06E-07	7.44E-08	1.04E-07	1.19E-07	3.52E-07	7.28E-07	6.43E-07
fluoranthene	0.03	1.14E-06	2.93E-07	3.67E-07	3.45E-07	3.01E-07	4.44E-07	5.56E-07	1.11E-07	1.12E-07	7.92E-08	1.11E-07	1.27E-07	3.75E-07	7.74E-07	6.84E-07
benzo(b)fluoranthene	0.09	2.12E-07	5.44E-08	6.81E-08	6.40E-08	5.59E-08	8.24E-08	1.03E-07	2.06E-08	2.08E-08	1.47E-08	2.06E-08	2.35E-08	6.95E-08	1.44E-07	1.27E-07
benzo(g,h,i)perylene	0.03	4.03E-09	1.03E-09	1.29E-09	1.22E-09	1.06E-09	1.56E-09	1.96E-09	3.91E-10	3.96E-10	2.79E-10	3.91E-10	4.46E-10	1.32E-09	2.73E-09	2.41E-09
benzo(k)fluoranthene	0.09	2.41E-08	6.18E-09	7.75E-09	7.28E-09	6.36E-09	9.37E-09	1.17E-08	2.34E-09	2.37E-09	1.67E-09	2.34E-09	2.67E-09	7.91E-09	1.64E-08	1.45E-08
chrysene	0.9	5.13E-08	1.32E-08	1.65E-08	1.55E-08	1.35E-08	1.99E-08	2.50E-08	4.98E-09	5.04E-09						

Parameter	Air Threshold	Receptor Locations														
		Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	4.84E-04	1.26E-04	1.58E-04	1.47E-04	1.27E-04	1.89E-04	2.37E-04	4.78E-05	4.95E-05	3.52E-05	4.79E-05	5.55E-05	1.62E-04	3.34E-04	2.93E-04
acetaldehyde	4	6.53E-02	1.70E-02	2.13E-02	1.98E-02	1.71E-02	2.54E-02	3.20E-02	6.45E-03	6.67E-03	4.74E-03	6.46E-03	7.49E-03	2.19E-02	4.50E-02	3.96E-02
acetone	6176	3.44E-02	8.92E-03	1.12E-02	1.04E-02	9.02E-03	1.34E-02	1.68E-02	3.40E-03	3.51E-03	2.50E-03	3.40E-03	3.94E-03	1.15E-02	2.37E-02	2.08E-02
acrolein	0.07	1.16E-02	3.00E-03	3.77E-03	3.51E-03	3.03E-03	4.51E-03	5.66E-03	1.14E-03	1.18E-03	8.39E-04	1.14E-03	1.33E-03	3.88E-03	7.97E-03	7.01E-03
aldehyde	0.6	8.73E-02	2.27E-02	2.85E-02	2.65E-02	2.29E-02	3.40E-02	4.28E-02	8.63E-03	8.92E-03	6.34E-03	8.64E-03	1.00E-02	2.93E-02	6.02E-02	5.29E-02
benzene	0.3	4.28E-03	1.11E-03	1.40E-03	1.30E-03	1.12E-03	1.67E-03	2.10E-03	4.23E-04	4.37E-04	3.11E-04	4.23E-04	4.91E-04	1.44E-03	2.95E-03	2.59E-03
C10-C12 aliphatic	233	9.40E-04	2.44E-04	3.07E-04	2.85E-04	2.47E-04	3.66E-04	4.60E-04	9.29E-05	9.60E-05	6.83E-05	9.30E-05	1.08E-04	3.15E-04	6.48E-04	5.70E-04
C12-C16 aliphatic	233	5.44E-03	1.41E-03	1.78E-03	1.65E-03	1.43E-03	2.12E-03	2.67E-03	5.38E-04	5.56E-04	3.95E-04	5.39E-04	6.24E-04	1.83E-03	3.75E-03	3.30E-03
C12-C16 aromatic	83	7.34E-05	1.91E-05	2.40E-05	2.23E-05	1.93E-05	2.86E-05	3.60E-05	7.25E-06	7.50E-06	5.33E-06	7.26E-06	8.42E-06	2.46E-05	5.06E-05	4.45E-05
C16-C21 aliphatic	7	5.45E-03	1.42E-03	1.78E-03	1.65E-03	1.43E-03	2.12E-03	2.67E-03	5.39E-04	5.57E-04	3.96E-04	5.39E-04	6.25E-04	1.83E-03	3.76E-03	3.30E-03
C2-C6 aliphatic	38.5	2.59E-02	6.74E-03	8.47E-03	7.87E-03	6.81E-03	1.01E-02	1.27E-02	2.56E-03	2.65E-03	1.88E-03	2.57E-03	2.98E-03	8.70E-03	1.79E-02	1.57E-02
C6-C8 aliphatic	67	1.77E-02	4.61E-03	5.79E-03	5.38E-03	4.66E-03	6.92E-03	8.69E-03	1.75E-03	1.81E-03	1.29E-03	1.76E-03	2.04E-03	5.95E-03	1.22E-02	1.08E-02
C8-C10 aliphatic	67	2.50E-04	6.49E-05	8.15E-05	7.58E-05	6.56E-05	9.74E-05	1.22E-04	2.47E-05	2.55E-05	1.81E-05	2.47E-05	2.87E-05	8.39E-05	1.72E-04	1.51E-04
C8-C10 aromatic	83	1.40E-03	3.65E-04	4.58E-04	4.26E-04	3.69E-04	5.48E-04	6.88E-04	1.39E-04	1.44E-04	1.02E-04	1.39E-04	1.61E-04	4.71E-04	9.69E-04	8.52E-04
ethylbenzene	4	7.34E-04	1.91E-04	2.40E-04	2.23E-04	1.93E-04	2.86E-04	3.60E-04	7.25E-05	7.50E-05	5.33E-05	7.26E-05	8.42E-05	2.46E-04	5.06E-04	4.45E-04
ethylene	1200	1.34E-02	3.47E-03	4.36E-03	4.06E-03	3.51E-03	5.21E-03	6.55E-03	1.32E-03	1.37E-03	9.71E-04	1.32E-03	1.53E-03	4.49E-03	9.22E-03	8.10E-03
formaldehyde	1.67	3.48E-02	9.04E-03	1.14E-02	1.06E-02	9.14E-03	1.36E-02	1.71E-02	3.44E-03	3.56E-03	2.53E-03	3.45E-03	4.00E-03	1.17E-02	2.40E-02	2.11E-02
ketone	0.4	1.97E-02	5.11E-03	6.42E-03	5.97E-03	5.17E-03	7.67E-03	9.64E-03	1.94E-03	2.01E-03	1.43E-03	1.95E-03	2.26E-03	6.60E-03	1.36E-02	1.19E-02
toluene	52	6.22E-03	1.61E-03	2.03E-03	1.89E-03	1.63E-03	2.42E-03	3.04E-03	6.14E-04	6.35E-04	4.51E-04	6.15E-04	7.13E-04	2.09E-03	4.29E-03	3.77E-03
trimethylbenzene	83	1.78E-03	4.62E-04	5.81E-04	5.40E-04	4.67E-04	6.94E-04	8.72E-04	1.76E-04	1.82E-04	1.29E-04	1.76E-04	2.04E-04	5.97E-04	1.23E-03	1.08E-03
xylenes	44	4.93E-03	1.28E-03	1.61E-03	1.50E-03	1.30E-03	1.92E-03	2.42E-03	4.88E-04	5.04E-04	3.58E-04	4.88E-04	5.66E-04	1.66E-03	3.40E-03	2.99E-03

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Criteria Pollutants</b>																
SPM	12	3.52E-02	2.64E-02	2.53E-02	2.73E-02	3.32E-02	4.04E-02	2.09E-01	7.44E-02	6.17E-02	6.36E-02	6.52E-02	2.37E-01	No	No	
DPM	0.03	1.80E-02	1.38E-02	1.33E-02	1.45E-02	1.73E-02	2.08E-02	<b>1.02E-01</b>	<b>3.46E-02</b>	<b>3.09E-02</b>	<b>3.17E-02</b>	<b>3.24E-02</b>	<b>1.02E-01</b>	<b>Yes</b>	<b>Yes</b>	
PM10	20	3.57E-02	2.68E-02	2.57E-02	2.78E-02	3.37E-02	4.09E-02	2.09E-01	7.49E-02	6.24E-02	6.43E-02	6.58E-02	2.36E-01	No	No	
PM2.5	8.8	3.39E-02	2.55E-02	2.45E-02	2.64E-02	3.20E-02	3.88E-02	1.95E-01	7.04E-02	5.89E-02	6.07E-02	6.22E-02	2.14E-01	No	No	
CO	NV	3.21E-01	2.46E-01	2.37E-01	2.58E-01	3.07E-01	3.69E-01	1.79E+00	6.11E-01	5.48E-01	5.63E-01	5.74E-01	1.79E+00	No	No	
<b>Metals</b>																
Aluminum	3	2.45E-03	1.84E-03	1.76E-03	1.90E-03	2.31E-03	2.81E-03	1.45E-02	5.18E-03	4.29E-03	4.43E-03	4.54E-03	1.65E-02	No	No	
Antimony	0.3	1.38E-07	1.03E-07	9.90E-08	1.07E-07	1.30E-07	1.58E-07	8.16E-07	2.91E-07	2.41E-07	2.49E-07	2.55E-07	9.29E-07	No	No	
Arsenic	0.003	3.91E-06	2.93E-06	2.81E-06	3.03E-06	3.69E-06	4.48E-06	2.32E-05	8.26E-06	6.85E-06	7.06E-06	7.23E-06	2.63E-05	No	No	
Barium	0.3	1.38E-05	1.03E-05	9.89E-06	1.07E-05	1.30E-05	1.58E-05	8.15E-05	2.91E-05	2.41E-05	2.49E-05	2.55E-05	9.28E-05	No	No	
Beryllium	0.0042	2.56E-08	1.92E-08	1.84E-08	1.99E-08	2.42E-08	2.94E-08	1.52E-07	5.42E-08	4.49E-08	4.63E-08	4.74E-08	1.73E-07	No	No	
Bismuth	3	7.04E-09	5.27E-09	5.06E-09	5.46E-09	6.64E-09	8.07E-09	4.17E-08	1.49E-08	1.23E-08	1.27E-08	1.30E-08	4.75E-08	No	No	
Cadmium	0.0024	1.08E-05	8.28E-06	7.99E-06	8.71E-06	1.04E-05	1.25E-05	6.14E-05	2.08E-05	1.85E-05	1.91E-05	1.94E-05	6.14E-05	No	No	
Calcium	NV	1.39E-03	1.04E-03	1.00E-03	1.08E-03	1.31E-03	1.59E-03	8.24E-03	2.94E-03	2.44E-03	2.51E-03	2.58E-03	9.38E-03	No	No	
Chromium	0.03	7.65E-06	5.76E-06	5.54E-06	5.99E-06	7.25E-06	8.79E-06	4.49E-05	1.58E-05	1.33E-05	1.38E-05	1.41E-05	4.82E-05	No	No	
Cobalt	0.1	9.43E-07	7.06E-07	6.78E-07	7.32E-07	8.90E-07	1.08E-06	5.59E-06	1.99E-06	1.65E-06	1.70E-06	1.75E-06	6.36E-06	No	No	
Copper	0.7	2.49E-06	1.87E-06	1.79E-06	1.94E-06	2.35E-06	2.86E-06	1.48E-05	5.27E-06	4.37E-06	4.51E-06	4.62E-06	1.68E-05	No	No	
Gold	1.7	2.73E-09	2.04E-09	1.96E-09	2.12E-09	2.57E-09	3.12E-09	1.61E-08	5.76E-09	4.78E-09	4.92E-09	5.04E-09	1.84E-08	No	No	
Iron	0.7	2.68E-03	2.00E-03	1.92E-03	2.08E-03	2.52E-03	3.07E-03	1.58E-02	5.66E-03	4.69E-03	4.83E-03	4.95E-03	1.80E-02	No	No	
Lead	0.2	2.22E-06	1.69E-06	1.63E-06	1.78E-06	2.12E-06	2.56E-06	1.27E-05	4.35E-06	3.83E-06	3.93E-06	4.01E-06	1.27E-05	No	No	
Lithium	NV	1.14E-06	8.52E-07	8.18E-07	8.83E-07	1.07E-06	1.30E-06	6.74E-06	2.41E-06	1.99E-06	2.06E-06	2.11E-06	7.67E-06	No	No	
Magnesium	3	7.38E-04	5.53E-04	5.30E-04	5.73E-04	6.96E-04	8.46E-04	4.37E-03	1.56E-03	1.29E-03	1.33E-03	1.37E-03	4.97E-03	No	No	
Manganese	0.09	2.77E-05	2.08E-05	1.99E-05	2.15E-05	2.62E-05	3.18E-05	1.64E-04	5.86E-05	4.86E-05	5.01E-05	5.13E-05	1.87E-04	No	No	
Molybdenum	2	4.22E-08	3.16E-08	3.03E-08	3.28E-08	3.98E-08	4.84E-08	2.50E-07	8.93E-08	7.40E-08	7.63E-08	7.82E-08	2.85E-07	No	No	
Nickel	0.014	2.45E-06	1.83E-06	1.76E-06	1.90E-06	2.31E-06	2.81E-06	1.45E-05	5.17E-06	4.29E-06	4.42E-06	4.53E-06	1.65E-05	No	No	
Potassium	1	4.67E-04	3.50E-04	3.36E-04	3.62E-04	4.41E-04	5.35E-04	2.77E-03	9.87E-04	8.18E-04	8.44E-04	8.64E-04	3.15E-03	No	No	
Selenium	4	4.21E-08	3.16E-08	3.03E-08	3.27E-08	3.97E-08	4.83E-08	2.50E-07	8.91E-08	7.38E-08	7.61E-08	7.80E-08	2.84E-07	No	No	
Silver	0.007	1.04E-08	7.76E-09	7.45E-09	8.05E-09	9.78E-09	1.19E-08	6.14E-08	2.19E-08	1.82E-08	1.87E-08	1.92E-08	6.99E-08	No	No	
Sodium	NV	5.58E-04	4.18E-04	4.01E-04	4.33E-04	5.26E-04	6.39E-04	3.30E-03	1.18E-03	9.77E-04	1.01E-03	1.03E-03	3.76E-03	No	No	
Strontium	1	7.45E-06	5.58E-06	5.36E-06	5.78E-06	7.03E-06	8.54E-06	4.41E-05	1.58E-05	1.31E-05	1.35E-05	1.38E-05	5.02E-05	No	No	
Thallium	0.07	1.08E-08	8.06E-09	7.73E-09	8.35E-09	1.02E-08	1.23E-08	6.38E-08	2.28E-08	1.89E-08	1.94E-08	1.99E-08	7.26E-08	No	No	
Tin	1	3.79E-08	2.84E-08	2.73E-08	2.94E-08	3.58E-08	4.35E-08	2.25E-07	8.02E-08	6.65E-08	6.86E-08	7.02E-08	2.56E-07	No	No	
Titanium	3	1.23E-04	9.19E-05	8.82E-05	9.52E-05	1.16E-04	1.41E-04	7.27E-04	2.59E-04	2.15E-04	2.22E-04	2.27E-04	8.27E-04	No	No	
Uranium	0.03	3.42E-08	2.56E-08	2.46E-08	2.66E-08	3.23E-08	3.93E-08	2.03E-07	7.24E-08	6.00E-08	6.19E-08	6.34E-08	2.31E-07	No	No	
Vanadium	0.1	4.51E-06	3.38E-06	3.24E-06	3.50E-06	4.26E-06	5.17E-06	2.67E-05	9.54E-06	7.91E-06	8.15E-06	8.35E-06	3.04E-05	No	No	
Yttrium	0.7	3.33E-07	2.49E-07	2.39E-07	2.58E-07	3.14E-07	3.82E-07	1.97E-06	7.04E-07	5.83E-07	6.02E-07	6.16E-07	2.25E-06	No	No	
Zinc	1	1.61E-05	1.23E-05	1.18E-05	1.29E-05	1.54E-05	1.86E-05	9.25E-05	3.17E-05	2.78E-05	2.86E-05	2.92E-05	9.25E-05	No	No	
<b>Polycyclic Aromatic Hydrocarbons</b>																
benzo(a)pyrene	0.00001	1.98E-08	1.52E-08	1.46E-08	1.60E-08	1.90E-08	2.29E-08	1.13E-07	3.81E-08	3.40E-08	3.49E-08	3.56E-08	1.13E-07	No	No	
naphthalene	0.3	7.84E-06	6.00E-06	5.80E-06	6.31E-06	7.52E-06	9.05E-06	4.45E-05	1.51E-05	1.35E-05	1.38E-05	1.41E-05	4.45E-05	No	No	
phenanthrene	0.03	6.47E-07	4.96E-07	4.79E-07	5.22E-07	6.21E-07	7.47E-07	3.68E-06	1.24E-06	1.11E-06	1.14E-06	1.16E-06	3.68E-06	No	No	
anthracene	0.07	7.22E-08	5.53E-08	5.34E-08	5.82E-08	6.93E-08	8.34E-08	4.10E-07	1.39E-07	1.24E-07	1.27E-07	1.30E-07	4.10E-07	No	No	
fluorene	0.7	3.16E-07	2.42E-07	2.34E-07	2.54E-07	3.03E-07	3.65E-07	1.79E-06	6.07E-07	5.42E-07	5.57E-07	5.68E-07	1.79E-06	No	No	
pyrene	0.03	2.37E-07	1.81E-07	1.75E-07	1.91E-07	2.27E-07	2.73E-07	1.34E-06	4.55E-07	4.06E-07	4.17E-07	4.25E-07	1.34E-06	No	No	
thiophenes	2	4.10E-09	3.14E-09	3.03E-09	3.31E-09	3.94E-09	4.74E-09	2.33E-08	7.89E-09	7.04E-09	7.24E-09	7.38E-09	2.33E-08	No	No	
benz(a)anthracene	0.0001	9.40E-09	7.20E-09	6.95E-09	7.57E-09	9.01E-09	1.08E-08	5.34E-08	1.81E-08	1.61E-08	1.66E-08	1.69E-08	5.34E-08	No	No	
acenaphthene	6.67	6.09E-08	4.66E-08	4.50E-08	4.90E-08	5.84E-08	7.03E-08	3.46E-07	1.17E-07	1.04E-07	1.07E-07	1.09E-07	3.46E-07	No	No	
acenaphthylene	6.67	2.21E-07	1.69E-07	1.63E-07	1.78E-07	2.12E-07	2.55E-07	1.26E-06	4.25E-07	3.79E-07	3.90E-07	3.97E-07	1.26E-06	No	No	
fluoranthene	0.03	2.35E-07	1.80E-07	1.74E-07	1.90E-07	2.26E-07	2.72E-07	1.34E-06	4.52E-07	4.04E-07	4.15E-07	4.23E-07	1.34E-06	No	No	
benzo(b)fluoranthene	0.09	4.37E-08	3.34E-08	3.23E-08	3.52E-08	4.19E-08	5.04E-08	2.48E-07	8.40E-08	7.49E-08	7.70E-08	7.85E-08	2.48E-07	No	No	
benzo(g,h,i)perylene	0.03	8.30E-10	6.35E-10	6.14E-10	6.68E-10	7.96E-10	9.58E-10	4.71E-09	1.60E-09	1.42E-09	1.46E-09	1.49E-09	4.71E-09	No	No	
benzo(k)fluoranthene	0.09	4.97E-09	3.80E-09	3.67E-09	4.00E-09	4.76E-09	5.73E-09	2.82E-08	9.55E-09	8.52E-09	8.76E-09	8.93E-09	2.82E-08	No	No	
chrysene	0.9	1.06E-08	8.09E-09	7.81E-09	8.51E-09	1.01E-08	1.22E-08	6.00E-08	2.03E-08	1.81E-08	1.86E-08	1.90E-08	6.00E-08	No	No	
dibenzo(a,h)anthracene	0.008	1.37E-08	1.05E-08	1.02E-08	1.11E-08	1.32E-08	1.59E-08	7.81E-08	2.64E-08	2.36E-08	2.42E-08	2.47E-08	7.81E-08	No	No	
indeno(1,2,3-cd)pyrene	0.0009	8.74E-09	6.69E-09	6.46E-09	7.04E-09	8.38E-09	1.01E-08	4.97E-08	1.68E-08	1.50E-08	1.54E-08	1.57E-08	4.97E-08	No	No	

Parameter	Air Threshold	Receptor Locations											Maximum Concentration	Maximum Above	Retained as a COPC?	
		Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin2	Rankin 3				
<b>Volatile Organic Compounds</b>																
1,3-butadiene	0.06	1.02E-04	7.77E-05	7.47E-05	8.06E-05	9.64E-05	1.16E-04	5.75E-04	1.90E-04	1.69E-04	1.73E-04	1.77E-04	5.75E-04	No	No	
acetaldehyde	4	1.37E-02	1.05E-02	1.01E-02	1.09E-02	1.30E-02	1.56E-02	7.76E-02	2.56E-02	2.28E-02	2.34E-02	2.39E-02	7.76E-02	No	No	
acetone	6176	7.21E-03	5.51E-03	5.30E-03	5.72E-03	6.84E-03	8.21E-03	4.08E-02	1.35E-02	1.20E-02	1.23E-02	1.26E-02	4.08E-02	No	No	
acrolein	0.07	2.42E-03	1.85E-03	1.78E-03	1.92E-03	2.30E-03	2.76E-03	1.37E-02	4.53E-03	4.04E-03	4.14E-03	4.23E-03	1.37E-02	No	No	
aldehyde	0.6	1.83E-02	1.40E-02	1.35E-02	1.45E-02	1.74E-02	2.09E-02	1.04E-01	3.42E-02	3.05E-02	3.13E-02	3.19E-02	1.04E-01	No	No	
benzene	0.3	8.98E-04	6.86E-04	6.60E-04	7.13E-04	8.52E-04	1.02E-03	5.08E-03	1.68E-03	1.50E-03	1.53E-03	1.56E-03	5.08E-03	No	No	
C10-C12 aliphatic	233	1.97E-04	1.51E-04	1.45E-04	1.56E-04	1.87E-04	2.25E-04	1.12E-03	3.68E-04	3.29E-04	3.37E-04	3.44E-04	1.12E-03	No	No	
C12-C16 aliphatic	233	1.14E-03	8.73E-04	8.40E-04	9.06E-04	1.08E-03	1.30E-03	6.47E-03	2.13E-03	1.90E-03	1.95E-03	1.99E-03	6.47E-03	No	No	
C12-C16 aromatic	83	1.54E-05	1.18E-05	1.13E-05	1.22E-05	1.46E-05	1.75E-05	8.72E-05	2.88E-05	2.57E-05	2.63E-05	2.68E-05	8.72E-05	No	No	
C16-C21 aliphatic	7	1.14E-03	8.74E-04	8.41E-04	9.07E-04	1.09E-03	1.30E-03	6.48E-03	2.14E-03	1.91E-03	1.95E-03	1.99E-03	6.48E-03	No	No	
C2-C6 aliphatic	38.5	5.44E-03	4.16E-03	4.00E-03	4.32E-03	5.17E-03	6.20E-03	3.08E-02	1.02E-02	9.07E-03	9.30E-03	9.49E-03	3.08E-02	No	No	
C6-C8 aliphatic	67	3.72E-03	2.85E-03	2.74E-03	2.95E-03	3.53E-03	4.24E-03	2.11E-02	6.95E-03	6.20E-03	6.36E-03	6.49E-03	2.11E-02	No	No	
C8-C10 aliphatic	67	5.24E-05	4.01E-05	3.86E-05	4.16E-05	4.98E-05	5.97E-05	2.97E-04	9.79E-05	8.74E-05	8.95E-05	9.14E-05	2.97E-04	No	No	
C8-C10 aromatic	83	2.95E-04	2.25E-04	2.17E-04	2.34E-04	2.80E-04	3.36E-04	1.67E-03	5.50E-04	4.91E-04	5.03E-04	5.14E-04	1.67E-03	No	No	
ethylbenzene	4	1.54E-04	1.18E-04	1.13E-04	1.22E-04	1.46E-04	1.75E-04	8.72E-04	2.88E-04	2.57E-04	2.63E-04	2.68E-04	8.72E-04	No	No	
ethylene	1200	2.80E-03	2.14E-03	2.06E-03	2.23E-03	2.66E-03	3.19E-03	1.59E-02	5.24E-03	4.67E-03	4.79E-03	4.89E-03	1.59E-02	No	No	
formaldehyde	1.67	7.31E-03	5.59E-03	5.37E-03	5.80E-03	6.94E-03	8.32E-03	4.14E-02	1.36E-02	1.22E-02	1.25E-02	1.27E-02	4.14E-02	No	No	
ketone	0.4	4.13E-03	3.16E-03	3.04E-03	3.28E-03	3.92E-03	4.70E-03	2.34E-02	7.71E-03	6.88E-03	7.05E-03	7.20E-03	2.34E-02	No	No	
toluene	52	1.30E-03	9.97E-04	9.59E-04	1.03E-03	1.24E-03	1.49E-03	7.39E-03	2.44E-03	2.17E-03	2.23E-03	2.27E-03	7.39E-03	No	No	
trimethylbenzene	83	3.73E-04	2.86E-04	2.75E-04	2.96E-04	3.55E-04	4.25E-04	2.12E-03	6.98E-04	6.23E-04	6.38E-04	6.51E-04	2.12E-03	No	No	
xylenes	44	1.04E-03	7.92E-04	7.61E-04	8.22E-04	9.83E-04	1.18E-03	5.86E-03	1.93E-03	1.73E-03	1.77E-03	1.80E-03	5.86E-03	No	No	

**Notes:**

All air concentrations are in units of µg/m<sup>3</sup>

Carbon monoxide results are based on 8-hour averaging times.

Cabins = Receptor Locations 1 to 22

Rankin Cabins = Rankin 1 to 3

**3.20E+01** = greater than annual air threshold

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	3E-05	1E-05	1E-05	1E-05	7E-06	2E-05	2E-05	4E-06	—	—	4E-06	—	2E-05	2E-05	2E-05	5E-06
PM10	8E-04	3E-04	4E-04	4E-04	4E-04	6E-04	1E-03	9E-05	1E-04	9E-05	9E-05	1E-04	6E-04	4E-04	4E-04	1E-04
PM2.5	4E-04	1E-04	2E-04	2E-04	1E-04	3E-04	2E-04	5E-05	5E-05	5E-05	5E-05	5E-05	2E-04	3E-04	2E-04	7E-05
<b>Recreational User - Adult</b>																
Acrolein	1E-05	5E-06	6E-06	5E-06	3E-06	1E-05	8E-06	2E-06	—	—	2E-06	—	7E-06	9E-06	8E-06	2E-06
PM10	4E-04	1E-04	2E-04	2E-04	2E-04	3E-04	4E-04	4E-05	5E-05	4E-05	4E-05	5E-05	3E-04	2E-04	2E-04	6E-05
PM2.5	2E-04	7E-05	1E-04	8E-05	5E-05	1E-04	1E-04	2E-05	2E-05	2E-05	2E-05	2E-05	1E-04	1E-04	1E-04	3E-05

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	4E-06	—	—	4E-06	5E-06	2E-05	8E-06	—	4E-06	4E-06
PM10	9E-05	8E-05	7E-05	1E-04	1E-04	6E-04	2E-04	9E-05	1E-04	1E-04
PM2.5	5E-05	5E-05	4E-05	6E-05	7E-05	4E-04	1E-04	5E-05	6E-05	6E-05
<b>Recreational User - Adult</b>										
Acrolein	2E-06	—	—	2E-06	2E-06	1E-05	4E-06	—	2E-06	2E-06
PM10	4E-05	4E-05	3E-05	5E-05	6E-05	3E-04	8E-05	4E-05	5E-05	5E-05
PM2.5	2E-05	2E-05	2E-05	3E-05	3E-05	2E-04	5E-05	2E-05	3E-05	3E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	3E-05	9E-06	1E-05	8E-06	7E-06	1E-05	1E-05	—	—	—	—	—	1E-05	2E-05	2E-05	5E-06
PM10	9E-04	3E-04	4E-04	4E-04	4E-04	4E-04	5E-04	1E-04	1E-04	1E-04	1E-04	1E-04	7E-04	6E-04	6E-04	2E-04
PM2.5	4E-04	1E-04	2E-04	2E-04	1E-04	2E-04	2E-04	5E-05	5E-05	5E-05	5E-05	5E-05	2E-04	3E-04	3E-04	8E-05
<b>Recreational User - Adult</b>																
Acrolein	1E-05	4E-06	6E-06	4E-06	3E-06	6E-06	5E-06	—	—	—	—	—	6E-06	9E-06	9E-06	3E-06
PM10	4E-04	1E-04	2E-04	2E-04	2E-04	2E-04	2E-04	5E-05	6E-05	5E-05	5E-05	6E-05	3E-04	3E-04	3E-04	8E-05
PM2.5	2E-04	7E-05	1E-04	7E-05	5E-05	1E-04	8E-05	3E-05	2E-05	2E-05	3E-05	2E-05	9E-05	1E-04	1E-04	4E-05

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	4E-06	4E-06	—	5E-06	5E-06	3E-05	6E-06	4E-06	5E-06	5E-06
PM10	1E-04	1E-04	1E-04	2E-04	2E-04	2E-03	2E-04	2E-04	2E-04	2E-04
PM2.5	6E-05	5E-05	5E-05	7E-05	8E-05	5E-04	8E-05	7E-05	7E-05	7E-05
<b>Recreational User - Adult</b>										
Acrolein	2E-06	2E-06	—	2E-06	2E-06	2E-05	3E-06	2E-06	2E-06	2E-06
PM10	5E-05	5E-05	5E-05	7E-05	9E-05	1E-03	9E-05	8E-05	8E-05	8E-05
PM2.5	3E-05	3E-05	2E-05	3E-05	4E-05	2E-04	4E-05	3E-05	3E-05	3E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	3E-05	9E-06	1E-05	1E-05	1E-05	1E-05	2E-05	—	—	—	—	—	1E-05	2E-05	1E-05	5E-06
PM10	1E-03	3E-04	6E-04	7E-04	8E-04	7E-04	2E-03	1E-04	1E-04	1E-04	1E-04	1E-04	4E-04	3E-04	3E-04	1E-04
PM2.5	4E-04	1E-04	2E-04	2E-04	2E-04	2E-04	4E-04	5E-05	5E-05	5E-05	5E-05	5E-05	1E-04	3E-04	2E-04	7E-05
<b>Recreational User - Adult</b>																
Acrolein	1E-05	4E-06	6E-06	5E-06	5E-06	7E-06	1E-05	—	—	—	—	—	5E-06	7E-06	6E-06	2E-06
PM10	5E-04	1E-04	3E-04	3E-04	4E-04	3E-04	8E-04	5E-05	5E-05	5E-05	5E-05	5E-05	2E-04	2E-04	2E-04	6E-05
PM2.5	2E-04	6E-05	1E-04	8E-05	9E-05	1E-04	2E-04	2E-05	2E-05	2E-05	2E-05	2E-05	6E-05	1E-04	1E-04	3E-05

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	4E-06	—	—	4E-06	5E-06	1E-05	8E-06	—	4E-06	4E-06
PM10	9E-05	9E-05	9E-05	1E-04	2E-04	7E-04	2E-04	1E-04	1E-04	1E-04
PM2.5	5E-05	5E-05	5E-05	6E-05	8E-05	3E-04	1E-04	5E-05	6E-05	6E-05
<b>Recreational User - Adult</b>										
Acrolein	2E-06	—	—	2E-06	2E-06	7E-06	4E-06	—	2E-06	2E-06
PM10	4E-05	4E-05	4E-05	6E-05	8E-05	3E-04	1E-04	5E-05	6E-05	6E-05
PM2.5	3E-05	2E-05	2E-05	3E-05	4E-05	1E-04	5E-05	2E-05	3E-05	3E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	3E-05	7E-06	1E-05	8E-06	6E-06	1E-05	1E-05	—	—	—	—	—	1E-05	1E-05	1E-05	8E-06
PM10	5E-04	2E-04	2E-04	2E-04	2E-04	3E-04	3E-04	8E-05	7E-05	7E-05	8E-05	8E-05	2E-04	4E-04	6E-04	5E-04
PM2.5	4E-04	1E-04	2E-04	1E-04	1E-04	2E-04	1E-04	5E-05	5E-05	4E-05	5E-05	4E-05	1E-04	2E-04	2E-04	1E-04
<b>Recreational User - Adult</b>																
Acrolein	1E-05	3E-06	6E-06	4E-06	3E-06	6E-06	5E-06	—	—	—	—	—	5E-06	7E-06	6E-06	4E-06
PM10	2E-04	9E-05	1E-04	8E-05	9E-05	1E-04	1E-04	4E-05	3E-05	3E-05	4E-05	4E-05	1E-04	2E-04	3E-04	2E-04
PM2.5	2E-04	6E-05	9E-05	7E-05	5E-05	9E-05	7E-05	2E-05	2E-05	2E-05	2E-05	2E-05	6E-05	1E-04	9E-05	5E-05

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	4E-06	—	—	4E-06	5E-06	1E-05	6E-06	—	—	—
PM10	1E-04	1E-04	2E-04	2E-04	3E-04	4E-04	1E-04	8E-05	9E-05	8E-05
PM2.5	6E-05	5E-05	4E-05	6E-05	7E-05	3E-04	8E-05	4E-05	5E-05	5E-05
<b>Recreational User - Adult</b>										
Acrolein	2E-06	—	—	2E-06	2E-06	7E-06	3E-06	—	—	—
PM10	6E-05	6E-05	8E-05	1E-04	1E-04	2E-04	6E-05	4E-05	4E-05	4E-05
PM2.5	3E-05	2E-05	2E-05	3E-05	3E-05	1E-04	4E-05	2E-05	2E-05	2E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	3E-05	9E-06	1E-05	9E-06	7E-06	2E-05	2E-05	—	—	—	—	—	1E-05	2E-05	2E-05	5E-06
PM10	8E-04	3E-04	5E-04	5E-04	5E-04	6E-04	1E-03	9E-05	1E-04	1E-04	9E-05	1E-04	6E-04	4E-04	4E-04	1E-04
PM2.5	4E-04	1E-04	2E-04	2E-04	1E-04	3E-04	3E-04	5E-05	5E-05	5E-05	5E-05	5E-05	2E-04	3E-04	2E-04	7E-05
<b>Recreational User - Adult</b>																
Acrolein	1E-05	4E-06	6E-06	4E-06	3E-06	8E-06	8E-06	—	—	—	—	—	5E-06	8E-06	7E-06	2E-06
PM10	4E-04	1E-04	2E-04	2E-04	2E-04	3E-04	6E-04	4E-05	5E-05	5E-05	4E-05	5E-05	3E-04	2E-04	2E-04	6E-05
PM2.5	2E-04	7E-05	1E-04	7E-05	6E-05	1E-04	1E-04	2E-05	2E-05	2E-05	2E-05	2E-05	9E-05	1E-04	1E-04	3E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	4E-06	—	—	4E-06	5E-06	2E-05	7E-06	—	4E-06	4E-06
PM10	9E-05	8E-05	8E-05	1E-04	1E-04	6E-04	2E-04	1E-04	1E-04	1E-04
PM2.5	5E-05	5E-05	4E-05	6E-05	7E-05	4E-04	1E-04	5E-05	6E-05	6E-05
<b>Recreational User - Adult</b>										
Acrolein	2E-06	—	—	2E-06	2E-06	9E-06	3E-06	—	2E-06	2E-06
PM10	4E-05	4E-05	4E-05	5E-05	6E-05	3E-04	8E-05	5E-05	5E-05	5E-05
PM2.5	2E-05	2E-05	2E-05	3E-05	3E-05	2E-04	5E-05	2E-05	3E-05	3E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	2E-05	6E-06	1E-05	8E-06	6E-06	1E-05	1E-05	—	—	—	—	—	1E-05	1E-05	1E-05	—
PM10	3E-04	1E-04	2E-04	1E-04	1E-04	2E-04	1E-04	4E-05	5E-05	3E-05	4E-05	4E-05	1E-04	2E-04	2E-04	6E-05
PM2.5	3E-04	1E-04	2E-04	1E-04	1E-04	2E-04	1E-04	4E-05	4E-05	3E-05	4E-05	4E-05	1E-04	2E-04	2E-04	5E-05
<b>Recreational User - Adult</b>																
Acrolein	1E-05	3E-06	6E-06	4E-06	3E-06	5E-06	5E-06	—	—	—	—	—	5E-06	7E-06	5E-06	—
PM10	2E-04	5E-05	9E-05	7E-05	5E-05	9E-05	7E-05	2E-05	2E-05	2E-05	2E-05	2E-05	6E-05	1E-04	9E-05	3E-05
PM2.5	2E-04	5E-05	9E-05	7E-05	5E-05	9E-05	7E-05	2E-05	2E-05	1E-05	2E-05	2E-05	6E-05	1E-04	9E-05	3E-05

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	—	—	—	—	—	1E-05	6E-06	—	—	—
PM10	4E-05	4E-05	3E-05	5E-05	5E-05	3E-04	8E-05	4E-05	4E-05	4E-05
PM2.5	4E-05	4E-05	3E-05	5E-05	5E-05	3E-04	8E-05	4E-05	4E-05	4E-05
<b>Recreational User - Adult</b>										
Acrolein	—	—	—	—	—	6E-06	3E-06	—	—	—
PM10	2E-05	2E-05	2E-05	2E-05	2E-05	1E-04	4E-05	2E-05	2E-05	2E-05
PM2.5	2E-05	2E-05	1E-05	2E-05	2E-05	1E-04	4E-05	2E-05	2E-05	2E-05

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	3E-05	7E-06	8E-06	8E-06	9E-06	1E-05	2E-05	2E-06	2E-06	2E-06	2E-06	2E-06	1E-05	1E-05	1E-05	3E-06
PM2.5	3E-05	7E-06	8E-06	8E-06	9E-06	1E-05	2E-05	2E-06	2E-06	2E-06	2E-06	2E-06	1E-05	1E-05	1E-05	3E-06
<b>Recreational User - Adult</b>																
PM10	2E-05	3E-06	4E-06	4E-06	4E-06	6E-06	9E-06	9E-07	1E-06	7E-07	9E-07	1E-06	6E-06	5E-06	5E-06	2E-06
PM2.5	2E-05	3E-06	4E-06	4E-06	4E-06	6E-06	9E-06	9E-07	1E-06	7E-07	9E-07	1E-06	6E-06	5E-06	5E-06	2E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	2E-06	2E-06	2E-06	3E-06	4E-06	2E-05	1E-05	6E-06	7E-06	7E-06
PM2.5	2E-06	2E-06	2E-06	3E-06	4E-06	2E-05	1E-05	6E-06	7E-06	7E-06
<b>Recreational User - Adult</b>										
PM10	1E-06	1E-06	1E-06	1E-06	2E-06	9E-06	5E-06	3E-06	3E-06	3E-06
PM2.5	1E-06	1E-06	1E-06	1E-06	2E-06	9E-06	5E-06	3E-06	3E-06	3E-06

**Notes:**  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	3E-05	7E-06	8E-06	8E-06	8E-06	1E-05	1E-05	2E-06	2E-06	2E-06	2E-06	2E-06	2E-05	2E-05	2E-05	5E-06
PM2.5	3E-05	7E-06	8E-06	8E-06	8E-06	1E-05	1E-05	2E-06	2E-06	2E-06	2E-06	2E-06	2E-05	2E-05	2E-05	5E-06
<b>Recreational User - Adult</b>																
PM10	1E-05	3E-06	4E-06	4E-06	4E-06	5E-06	7E-06	1E-06	1E-06	8E-07	1E-06	1E-06	9E-06	1E-05	9E-06	2E-06
PM2.5	1E-05	3E-06	4E-06	4E-06	4E-06	5E-06	7E-06	1E-06	1E-06	8E-07	1E-06	1E-06	9E-06	1E-05	9E-06	2E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	3E-06	3E-06	3E-06	4E-06	6E-06	5E-05	1E-05	9E-06	9E-06	9E-06
PM2.5	3E-06	3E-06	3E-06	4E-06	6E-06	5E-05	1E-05	9E-06	9E-06	9E-06
<b>Recreational User - Adult</b>										
PM10	2E-06	1E-06	2E-06	2E-06	3E-06	3E-05	5E-06	4E-06	4E-06	4E-06
PM2.5	2E-06	1E-06	2E-06	2E-06	3E-06	3E-05	5E-06	4E-06	4E-06	4E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	4E-05	8E-06	1E-05	1E-05	1E-05	2E-05	3E-05	2E-06	3E-06	2E-06	2E-06	3E-06	1E-05	1E-05	1E-05	4E-06
PM2.5	4E-05	8E-06	1E-05	1E-05	1E-05	2E-05	3E-05	2E-06	3E-06	2E-06	2E-06	3E-06	1E-05	1E-05	1E-05	4E-06
<b>Recreational User - Adult</b>																
PM10	2E-05	4E-06	5E-06	5E-06	6E-06	8E-06	1E-05	1E-06	1E-06	9E-07	1E-06	1E-06	7E-06	6E-06	6E-06	2E-06
PM2.5	2E-05	4E-06	5E-06	5E-06	6E-06	8E-06	1E-05	1E-06	1E-06	9E-07	1E-06	1E-06	7E-06	6E-06	6E-06	2E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	3E-06	3E-06	3E-06	3E-06	4E-06	2E-05	1E-05	8E-06	9E-06	9E-06
PM2.5	3E-06	3E-06	3E-06	3E-06	4E-06	2E-05	1E-05	8E-06	9E-06	9E-06
<b>Recreational User - Adult</b>										
PM10	1E-06	1E-06	1E-06	2E-06	2E-06	1E-05	6E-06	4E-06	4E-06	4E-06
PM2.5	1E-06	1E-06	1E-06	2E-06	2E-06	1E-05	6E-06	4E-06	4E-06	4E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	2E-05	5E-06	5E-06	5E-06	5E-06	7E-06	9E-06	2E-06	2E-06	1E-06	2E-06	2E-06	1E-05	2E-05	3E-05	2E-05
PM2.5	2E-05	5E-06	5E-06	5E-06	5E-06	7E-06	9E-06	2E-06	2E-06	1E-06	2E-06	2E-06	1E-05	2E-05	3E-05	2E-05
<b>Recreational User - Adult</b>																
PM10	8E-06	2E-06	2E-06	2E-06	3E-06	3E-06	4E-06	8E-07	8E-07	6E-07	8E-07	8E-07	5E-06	9E-06	1E-05	8E-06
PM2.5	8E-06	2E-06	2E-06	2E-06	3E-06	3E-06	4E-06	8E-07	8E-07	6E-07	8E-07	8E-07	5E-06	9E-06	1E-05	8E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	9E-06	7E-06	7E-06	1E-05	2E-05	2E-05	8E-06	8E-06	8E-06	8E-06
PM2.5	9E-06	7E-06	7E-06	1E-05	2E-05	2E-05	8E-06	8E-06	8E-06	8E-06
<b>Recreational User - Adult</b>										
PM10	4E-06	3E-06	3E-06	5E-06	9E-06	1E-05	4E-06	4E-06	4E-06	4E-06
PM2.5	4E-06	3E-06	3E-06	5E-06	9E-06	1E-05	4E-06	4E-06	4E-06	4E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	3E-05	9E-06	1E-05	9E-06	7E-06	2E-05	2E-05	—	—	—	—	—	1E-05	2E-05	2E-05	5E-06
PM10	3E-05	7E-06	9E-06	9E-06	1E-05	1E-05	2E-05	2E-06	2E-06	2E-06	2E-06	2E-06	1E-05	1E-05	1E-05	4E-06
PM2.5	3E-05	7E-06	9E-06	9E-06	1E-05	1E-05	2E-05	2E-06	2E-06	2E-06	2E-06	2E-06	1E-05	1E-05	1E-05	4E-06
<b>Recreational User - Adult</b>																
Acrolein	1E-05	4E-06	6E-06	4E-06	3E-06	8E-06	8E-06	—	—	—	—	—	5E-06	8E-06	7E-06	2E-06
PM10	2E-05	3E-06	4E-06	4E-06	5E-06	7E-06	1E-05	9E-07	1E-06	7E-07	9E-07	1E-06	7E-06	6E-06	5E-06	2E-06
PM2.5	2E-05	3E-06	4E-06	4E-06	5E-06	7E-06	1E-05	9E-07	1E-06	7E-07	9E-07	1E-06	7E-06	6E-06	5E-06	2E-06

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	4E-06	—	—	4E-06	5E-06	2E-05	7E-06	—	4E-06	4E-06
PM10	3E-06	2E-06	3E-06	3E-06	4E-06	2E-05	1E-05	7E-06	7E-06	8E-06
PM2.5	3E-06	2E-06	3E-06	3E-06	4E-06	2E-05	1E-05	7E-06	7E-06	8E-06
<b>Recreational User - Adult</b>										
Acrolein	2E-06	—	—	2E-06	2E-06	9E-06	3E-06	—	2E-06	2E-06
PM10	1E-06	1E-06	1E-06	1E-06	2E-06	1E-05	5E-06	3E-06	3E-06	4E-06
PM2.5	1E-06	1E-06	1E-06	1E-06	2E-06	1E-05	5E-06	3E-06	3E-06	4E-06

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	1E-05	2E-06	3E-06	3E-06	2E-06	3E-06	5E-06	7E-07	8E-07	5E-07	7E-07	9E-07	3E-06	5E-06	4E-06	1E-06
PM2.5	1E-05	2E-06	3E-06	3E-06	2E-06	3E-06	5E-06	7E-07	8E-07	5E-07	7E-07	9E-07	3E-06	5E-06	4E-06	1E-06
<b>Recreational User - Adult</b>																
PM10	5E-06	1E-06	1E-06	1E-06	1E-06	2E-06	2E-06	3E-07	4E-07	2E-07	3E-07	4E-07	1E-06	2E-06	2E-06	7E-07
PM2.5	5E-06	1E-06	1E-06	1E-06	1E-06	2E-06	2E-06	3E-07	4E-07	2E-07	3E-07	4E-07	1E-06	2E-06	2E-06	7E-07

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	1E-06	1E-06	1E-06	1E-06	2E-06	9E-06	3E-06	3E-06	3E-06	3E-06
PM2.5	1E-06	1E-06	1E-06	1E-06	2E-06	9E-06	3E-06	3E-06	3E-06	3E-06
<b>Recreational User - Adult</b>										
PM10	5E-07	5E-07	5E-07	7E-07	8E-07	4E-06	1E-06	1E-06	1E-06	1E-06
PM2.5	5E-07	5E-07	5E-07	7E-07	8E-07	4E-06	1E-06	1E-06	1E-06	1E-06

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)													
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14
<b>Recreational User - Infant</b>														
Diesel Particulate Matter	2E-08	6E-09	6E-09	6E-09	7E-09	9E-09	1E-08	—	—	—	—	—	9E-09	1E-08
<b>Recreational User - Child</b>														
Diesel Particulate Matter	4E-07	9E-08	1E-07	1E-07	1E-07	2E-07	2E-07	—	—	—	—	—	2E-07	2E-07
<b>Recreational User - Toddler</b>														
Diesel Particulate Matter	5E-07	1E-07	1E-07	1E-07	2E-07	2E-07	3E-07	—	—	—	—	—	2E-07	3E-07
<b>Recreational User - Teen</b>														
Diesel Particulate Matter	4E-07	9E-08	9E-08	9E-08	1E-07	1E-07	2E-07	—	—	—	—	—	1E-07	2E-07
<b>Recreational User - Adult - First 4 years of adult life</b>														
Diesel Particulate Matter	2E-07	4E-08	4E-08	4E-08	5E-08	6E-08	9E-08	—	—	—	—	—	7E-08	8E-08
<b>Recreational User - Adult - 24 years</b>														
Diesel Particulate Matter	1E-06	2E-07	3E-07	3E-07	3E-07	4E-07	6E-07	—	—	—	—	—	4E-07	5E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)											
	Receptor Location 15	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Infant</b>												
Diesel Particulate Matter	1E-08	—	—	—	—	—	—	2E-08	8E-09	6E-09	7E-09	7E-09
<b>Recreational User - Child</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	—	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Toddler</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	—	4E-07	2E-07	1E-07	2E-07	2E-07
<b>Recreational User - Teen</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	—	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Adult - First 4 years of adult life</b>												
Diesel Particulate Matter	7E-08	—	—	—	—	—	—	1E-07	6E-08	4E-08	5E-08	5E-08
<b>Recreational User - Adult - 24 years</b>												
Diesel Particulate Matter	4E-07	—	—	—	—	—	—	8E-07	3E-07	3E-07	3E-07	3E-07

Notes:

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)													
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14
<b>Recreational User - Infant</b>														
Diesel Particulate Matter	2E-08	5E-09	5E-09	5E-09	5E-09	7E-09	1E-08	—	—	—	—	—	1E-08	1E-08
<b>Recreational User - Toddler</b>														
Diesel Particulate Matter	3E-07	8E-08	9E-08	9E-08	9E-08	1E-07	2E-07	—	—	—	—	—	2E-07	2E-07
<b>Recreational User - Child</b>														
Diesel Particulate Matter	4E-07	1E-07	1E-07	1E-07	1E-07	2E-07	2E-07	—	—	—	—	—	2E-07	3E-07
<b>Recreational User - Teen</b>														
Diesel Particulate Matter	3E-07	8E-08	8E-08	8E-08	8E-08	1E-07	2E-07	—	—	—	—	—	2E-07	2E-07
<b>Recreational User - Adult - First 4 years of adult life</b>														
Diesel Particulate Matter	1E-07	3E-08	4E-08	4E-08	4E-08	5E-08	7E-08	—	—	—	—	—	7E-08	1E-07
<b>Recreational User - Adult - 24 years</b>														
Diesel Particulate Matter	7E-07	2E-07	2E-07	2E-07	2E-07	3E-07	4E-07	—	—	—	—	—	4E-07	6E-07

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)											
	Receptor Location 15	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Infant</b>												
Diesel Particulate Matter	1E-08	—	—	—	—	—	4E-09	3E-08	8E-09	7E-09	7E-09	7E-09
<b>Recreational User - Toddler</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	7E-08	5E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Child</b>												
Diesel Particulate Matter	3E-07	—	—	—	—	—	1E-07	7E-07	2E-07	2E-07	2E-07	2E-07
<b>Recreational User - Teen</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	7E-08	5E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Adult - First 4 years of adult life</b>												
Diesel Particulate Matter	8E-08	—	—	—	—	—	3E-08	2E-07	6E-08	5E-08	5E-08	5E-08
<b>Recreational User - Adult - 24 years</b>												
Diesel Particulate Matter	5E-07	—	—	—	—	—	2E-07	1E-06	3E-07	3E-07	3E-07	3E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - Infant</b>															
Diesel Particulate Matter	2E-08	5E-09	6E-09	6E-09	7E-09	9E-09	1E-08	—	—	—	—	—	8E-09	1E-08	1E-08
<b>Recreational User - Toddler</b>															
Diesel Particulate Matter	4E-07	9E-08	1E-07	1E-07	1E-07	2E-07	2E-07	—	—	—	—	—	1E-07	2E-07	2E-07
<b>Recreational User - Child</b>															
Diesel Particulate Matter	5E-07	1E-07	1E-07	1E-07	2E-07	2E-07	3E-07	—	—	—	—	—	2E-07	3E-07	2E-07
<b>Recreational User - Teen</b>															
Diesel Particulate Matter	3E-07	8E-08	1E-07	1E-07	1E-07	1E-07	2E-07	—	—	—	—	—	1E-07	2E-07	2E-07
<b>Recreational User - Adult - First 4 years of adult life</b>															
Diesel Particulate Matter	2E-07	4E-08	4E-08	4E-08	5E-08	6E-08	1E-07	—	—	—	—	—	6E-08	8E-08	7E-08
<b>Recreational User - Adult - 24 years</b>															
Diesel Particulate Matter	9E-07	2E-07	3E-07	3E-07	3E-07	4E-07	6E-07	—	—	—	—	—	4E-07	5E-07	4E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Infant</b>											
Diesel Particulate Matter	—	—	—	—	—	—	2E-08	9E-09	7E-09	7E-09	7E-09
<b>Recreational User - Toddler</b>											
Diesel Particulate Matter	—	—	—	—	—	—	3E-07	2E-07	1E-07	1E-07	1E-07
<b>Recreational User - Child</b>											
Diesel Particulate Matter	—	—	—	—	—	—	5E-07	2E-07	2E-07	2E-07	2E-07
<b>Recreational User - Teen</b>											
Diesel Particulate Matter	—	—	—	—	—	—	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Adult - First 4 years of adult</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-07	6E-08	5E-08	5E-08	5E-08
<b>Recreational User - Adult - 24 years</b>											
Diesel Particulate Matter	—	—	—	—	—	—	8E-07	4E-07	3E-07	3E-07	3E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)													
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14
<b>Recreational User - Infant</b>														
Diesel Particulate Matter	1E-08	—	4E-09	4E-09	—	6E-09	8E-09	—	—	—	—	—	7E-09	1E-08
<b>Recreational User - Toddler</b>														
Diesel Particulate Matter	2E-07	—	7E-08	7E-08	—	1E-07	1E-07	—	—	—	—	—	1E-07	2E-07
<b>Recreational User - Child</b>														
Diesel Particulate Matter	3E-07	—	1E-07	1E-07	—	1E-07	2E-07	—	—	—	—	—	2E-07	3E-07
<b>Recreational User - Teen</b>														
Diesel Particulate Matter	2E-07	—	7E-08	7E-08	—	9E-08	1E-07	—	—	—	—	—	1E-07	2E-07
<b>Recreational User - Adult - First 4 years of adult life</b>														
Diesel Particulate Matter	1E-07	—	3E-08	3E-08	—	4E-08	5E-08	—	—	—	—	—	5E-08	9E-08
<b>Recreational User - Adult - 24 years</b>														
Diesel Particulate Matter	6E-07	—	2E-07	2E-07	—	2E-07	3E-07	—	—	—	—	—	3E-07	6E-07

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)											
	Receptor Location 15	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Infant</b>												
Diesel Particulate Matter	1E-08	9E-09	5E-09	4E-09	4E-09	6E-09	9E-09	2E-08	7E-09	6E-09	6E-09	6E-09
<b>Recreational User - Toddler</b>												
Diesel Particulate Matter	2E-07	1E-07	8E-08	7E-08	7E-08	1E-07	2E-07	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Child</b>												
Diesel Particulate Matter	3E-07	2E-07	1E-07	1E-07	1E-07	1E-07	2E-07	4E-07	2E-07	1E-07	1E-07	1E-07
<b>Recreational User - Teen</b>												
Diesel Particulate Matter	2E-07	1E-07	7E-08	6E-08	7E-08	9E-08	1E-07	3E-07	1E-07	9E-08	1E-07	1E-07
<b>Recreational User - Adult - First 4 years of adult life</b>												
Diesel Particulate Matter	1E-07	6E-08	3E-08	3E-08	3E-08	4E-08	7E-08	1E-07	5E-08	4E-08	4E-08	4E-08
<b>Recreational User - Adult - 24 years</b>												
Diesel Particulate Matter	6E-07	4E-07	2E-07	2E-07	2E-07	2E-07	4E-07	8E-07	3E-07	3E-07	3E-07	3E-07

**Notes:**

— = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)													
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14
<b>Recreational User - Infant</b>														
Diesel Particulate Matter	2E-08	5E-09	5E-09	5E-09	6E-09	8E-09	1E-08	—	—	—	—	—	9E-09	1E-08
<b>Recreational User - Toddler</b>														
Diesel Particulate Matter	3E-07	8E-08	9E-08	9E-08	1E-07	1E-07	2E-07	—	—	—	—	—	1E-07	2E-07
<b>Recreational User - Child</b>														
Diesel Particulate Matter	5E-07	1E-07	1E-07	1E-07	1E-07	2E-07	3E-07	—	—	—	—	—	2E-07	2E-07
<b>Recreational User - Teen</b>														
Diesel Particulate Matter	3E-07	8E-08	9E-08	9E-08	9E-08	1E-07	2E-07	—	—	—	—	—	1E-07	2E-07
<b>Recreational User - Adult - First 4 years of adult life</b>														
Diesel Particulate Matter	1E-07	3E-08	4E-08	4E-08	4E-08	6E-08	8E-08	—	—	—	—	—	6E-08	7E-08
<b>Recreational User - Adult - 24 years</b>														
Diesel Particulate Matter	8E-07	2E-07	2E-07	2E-07	2E-07	3E-07	5E-07	—	—	—	—	—	4E-07	4E-07

**Notes:**  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)											
	Receptor Location 15	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Infant</b>												
Diesel Particulate Matter	1E-08	—	—	—	—	—	—	2E-08	8E-09	6E-09	6E-09	6E-09
<b>Recreational User - Toddler</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	—	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Child</b>												
Diesel Particulate Matter	2E-07	—	—	—	—	—	—	4E-07	2E-07	1E-07	1E-07	1E-07
<b>Recreational User - Teen</b>												
Diesel Particulate Matter	1E-07	—	—	—	—	—	—	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Adult - First 4 years of adult life</b>												
Diesel Particulate Matter	7E-08	—	—	—	—	—	—	1E-07	5E-08	4E-08	4E-08	5E-08
<b>Recreational User - Adult - 24 years</b>												
Diesel Particulate Matter	4E-07	—	—	—	—	—	—	8E-07	3E-07	3E-07	3E-07	3E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - Infant</b>															
Diesel Particulate Matter	1E-08	—	—	—	—	5E-09	6E-09	—	—	—	—	—	—	8E-09	7E-09
<b>Recreational User - Toddler</b>															
Diesel Particulate Matter	2E-07	—	—	—	—	8E-08	1E-07	—	—	—	—	—	—	1E-07	1E-07
<b>Recreational User - Child</b>															
Diesel Particulate Matter	3E-07	—	—	—	—	1E-07	1E-07	—	—	—	—	—	—	2E-07	2E-07
<b>Recreational User - Teen</b>															
Diesel Particulate Matter	2E-07	—	—	—	—	7E-08	9E-08	—	—	—	—	—	—	1E-07	1E-07
<b>Recreational User - Adult - First 4 years of adult life</b>															
Diesel Particulate Matter	8E-08	—	—	—	—	3E-08	4E-08	—	—	—	—	—	—	6E-08	5E-08
<b>Recreational User - Adult - 24 years</b>															
Diesel Particulate Matter	5E-07	—	—	—	—	2E-07	2E-07	—	—	—	—	—	—	3E-07	3E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Exposure Doses (mg/kg-day)										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Infant</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-08	5E-09	4E-09	4E-09	4E-09
<b>Recreational User - Toddler</b>											
Diesel Particulate Matter	—	—	—	—	—	—	2E-07	8E-08	7E-08	7E-08	8E-08
<b>Recreational User - Child</b>											
Diesel Particulate Matter	—	—	—	—	—	—	3E-07	1E-07	1E-07	1E-07	1E-07
<b>Recreational User - Teen</b>											
Diesel Particulate Matter	—	—	—	—	—	—	2E-07	7E-08	7E-08	7E-08	7E-08
<b>Recreational User - Adult - First 4 years of adult li</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-07	3E-08	3E-08	3E-08	3E-08
<b>Recreational User - Adult - 24 years</b>											
Diesel Particulate Matter	—	—	—	—	—	—	6E-07	2E-07	2E-07	2E-07	2E-07

Notes:  
 — = not calculated

Chemical of Potential Concern	Hazard Quotients																Hazard Quotients									
	SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014	SR_015	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025	
<b>Recreational User - Toddler</b>																										
NO2	3E-03	4E-03	5E-03	4E-03	7E-03	1E-02	5E-03	1E-02	3E-03	8E-03	4E-03	5E-03	4E-03	5E-03	5E-03	4E-03	4E-03	4E-03	4E-03	3E-03	3E-03	3E-03	3E-03	3E-03	3E-03	
<b>Recreational User - Adult</b>																										
NO2	3E-03	4E-03	5E-03	4E-03	7E-03	1E-02	5E-03	1E-02	3E-03	8E-03	4E-03	5E-03	4E-03	5E-03	5E-03	4E-03	4E-03	4E-03	4E-03	3E-03	3E-03	3E-03	3E-03	3E-03	3E-03	

**Notes:** NO2 = nitrogen dioxide  
a - 17 hunter/trapper cabins around the mine site or AWAR (SR\_001 to SR\_014, SR\_017 to SR\_019)  
b - Two locations at the territorial park (SR\_015 and SR\_016)  
c - Two hunter/trapper cabins close to Rankin Inlet (SR\_020 and SR\_021)  
d - Four locations in Rankin Inlet (SR\_022 to SR\_025)  
**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients																Hazard Quotients									
	SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014	SR_015	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025	
<b>Recreational User - Toddler</b>																										
NO2	2E-03	3E-03	3E-03	2E-03	4E-03	8E-03	3E-03	6E-03	2E-03	5E-03	3E-03	3E-03	3E-03	3E-03	4E-03	3E-03	3E-03	3E-03	3E-03	2E-03	2E-03	3E-03	3E-03	2E-03	3E-03	
<b>Recreational User - Adult</b>																										
NO2	2E-03	3E-03	3E-03	2E-03	4E-03	8E-03	3E-03	6E-03	2E-03	5E-03	3E-03	3E-03	3E-03	3E-03	4E-03	3E-03	3E-03	3E-03	3E-03	2E-03	2E-03	3E-03	3E-03	2E-03	3E-03	

**Notes:**  
 NO2 = nitroogen dioxide  
 a - 17 hunter/trapper cabins around the mine site or AWAR (SR\_001 to SR\_014, SR\_017 to SR\_019)  
 b - Two locations at the territorial park (SR\_015 and SR\_016)  
 c - Two hunter/trapper cabins close to Rankin Inlet (SR\_020 and SR\_021)  
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**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients																Hazard Quotients									
	SR_001	SR_002	SR_003	SR_004	SR_005	SR_006	SR_007	SR_008	SR_009	SR_010	SR_011	SR_012	SR_013	SR_014	SR_015	SR_016	SR_017	SR_018	SR_019	SR_020	SR_021	SR_022	SR_023	SR_024	SR_025	
<b>Recreational User - Toddler</b>																										
NO2	2E-03	3E-03	2E-03	2E-03	3E-03	6E-03	2E-03	5E-03	2E-03	3E-03	2E-03	3E-03	2E-03	3E-03	3E-03	3E-03	3E-03	2E-03	2E-03							
<b>Recreational User - Adult</b>																										
NO2	2E-03	3E-03	2E-03	2E-03	3E-03	6E-03	2E-03	5E-03	2E-03	3E-03	2E-03	3E-03	2E-03	3E-03	3E-03	3E-03	3E-03	2E-03	2E-03							

**Notes:**  
 NO2 = nitrogen dioxide  
 a - 17 hunter/trapper cabins around the mine site or AWAR (SR\_001 to SR\_014, SR\_017 to SR\_019)  
 b - Two locations at the territorial park (SR\_015 and SR\_016)  
 c - Two hunter/trapper cabins close to Rankin Inlet (SR\_020 and SR\_021)  
 d - Four locations in Rankin Inlet (SR\_022 to SR\_025)  
**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	2E-01	6E-02	8E-02	6E-02	4E-02	1E-01	1E-01	2E-02	—	—	2E-02	—	9E-02	1E-01	9E-02	3E-02
PM10	4E-02	1E-02	2E-02	2E-02	2E-02	3E-02	4E-02	4E-03	5E-03	4E-03	4E-03	4E-03	3E-02	2E-02	2E-02	5E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	9E-03	2E-02	2E-02	4E-03	4E-03	3E-03	4E-03	4E-03	2E-02	2E-02	2E-02	5E-03
<b>Recreational User - Adult</b>																
Acrolein	2E-01	6E-02	8E-02	6E-02	4E-02	1E-01	1E-01	2E-02	—	—	2E-02	—	9E-02	1E-01	9E-02	3E-02
PM10	4E-02	1E-02	2E-02	2E-02	2E-02	3E-02	4E-02	4E-03	5E-03	4E-03	4E-03	4E-03	3E-02	2E-02	2E-02	5E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	9E-03	2E-02	2E-02	4E-03	4E-03	3E-03	4E-03	4E-03	2E-02	2E-02	2E-02	5E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	2E-02	—	—	2E-02	3E-02	1E-01	4E-02	—	2E-02	2E-02
PM10	4E-03	3E-03	3E-03	5E-03	6E-03	3E-02	7E-03	4E-03	5E-03	4E-03
PM2.5	4E-03	4E-03	3E-03	5E-03	5E-03	3E-02	7E-03	4E-03	4E-03	4E-03
<b>Recreational User - Adult</b>										
Acrolein	2E-02	—	—	2E-02	3E-02	1E-01	4E-02	—	2E-02	2E-02
PM10	4E-03	3E-03	3E-03	5E-03	6E-03	3E-02	7E-03	4E-03	5E-03	4E-03
PM2.5	4E-03	4E-03	3E-03	5E-03	5E-03	3E-02	7E-03	4E-03	4E-03	4E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	1E-01	5E-02	7E-02	5E-02	4E-02	8E-02	7E-02	—	—	—	—	—	7E-02	1E-01	1E-01	3E-02
PM10	4E-02	1E-02	2E-02	2E-02	2E-02	2E-02	2E-02	4E-03	5E-03	4E-03	4E-03	5E-03	3E-02	2E-02	3E-02	8E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	8E-03	2E-02	1E-02	4E-03	4E-03	3E-03	4E-03	4E-03	1E-02	2E-02	2E-02	6E-03
<b>Recreational User - Adult</b>																
Acrolein	1E-01	5E-02	7E-02	5E-02	4E-02	8E-02	7E-02	—	—	—	—	—	7E-02	1E-01	1E-01	3E-02
PM10	4E-02	1E-02	2E-02	2E-02	2E-02	2E-02	2E-02	4E-03	5E-03	4E-03	4E-03	5E-03	3E-02	2E-02	3E-02	8E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	8E-03	2E-02	1E-02	4E-03	4E-03	3E-03	4E-03	4E-03	1E-02	2E-02	2E-02	6E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	2E-02	2E-02	—	3E-02	3E-02	2E-01	3E-02	2E-02	3E-02	3E-02
PM10	5E-03	5E-03	4E-03	7E-03	9E-03	1E-01	9E-03	7E-03	8E-03	8E-03
PM2.5	4E-03	4E-03	4E-03	5E-03	6E-03	4E-02	6E-03	5E-03	5E-03	5E-03
<b>Recreational User - Adult</b>										
Acrolein	2E-02	2E-02	—	3E-02	3E-02	2E-01	3E-02	2E-02	3E-02	3E-02
PM10	5E-03	5E-03	4E-03	7E-03	9E-03	1E-01	9E-03	7E-03	8E-03	8E-03
PM2.5	4E-03	4E-03	4E-03	5E-03	6E-03	4E-02	6E-03	5E-03	5E-03	5E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	2E-01	5E-02	7E-02	6E-02	6E-02	8E-02	1E-01	—	—	—	—	—	6E-02	9E-02	8E-02	3E-02
PM10	5E-02	1E-02	3E-02	3E-02	4E-02	3E-02	8E-02	4E-03	5E-03	5E-03	4E-03	5E-03	2E-02	2E-02	2E-02	6E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	1E-02	2E-02	3E-02	4E-03	3E-03	4E-03	4E-03	3E-03	1E-02	2E-02	2E-02	5E-03
<b>Recreational User - Adult</b>																
Acrolein	2E-01	5E-02	7E-02	6E-02	6E-02	8E-02	1E-01	—	—	—	—	—	6E-02	9E-02	8E-02	3E-02
PM10	5E-02	1E-02	3E-02	3E-02	4E-02	3E-02	8E-02	4E-03	5E-03	5E-03	4E-03	5E-03	2E-02	2E-02	2E-02	6E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	1E-02	2E-02	3E-02	4E-03	3E-03	4E-03	4E-03	3E-03	1E-02	2E-02	2E-02	5E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1



Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	2E-02	—	—	3E-02	3E-02	8E-02	5E-02	—	2E-02	2E-02
PM10	4E-03	4E-03	4E-03	6E-03	7E-03	3E-02	1E-02	5E-03	6E-03	6E-03
PM2.5	4E-03	4E-03	3E-03	5E-03	6E-03	2E-02	8E-03	4E-03	5E-03	4E-03
<b>Recreational User - Adult</b>										
Acrolein	2E-02	—	—	3E-02	3E-02	8E-02	5E-02	—	2E-02	2E-02
PM10	4E-03	4E-03	4E-03	6E-03	7E-03	3E-02	1E-02	5E-03	6E-03	6E-03
PM2.5	4E-03	4E-03	3E-03	5E-03	6E-03	2E-02	8E-03	4E-03	5E-03	4E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients																				
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21
<b>Recreational User - Toddler</b>																					
Acrolein	1E-01	4E-02	7E-02	4E-02	3E-02	7E-02	5E-02	—	—	—	—	—	6E-02	8E-02	7E-02	4E-02	2E-02	—	—	2E-02	3E-02
PM10	2E-02	9E-03	1E-02	8E-03	8E-03	1E-02	1E-02	3E-03	3E-03	3E-03	3E-03	3E-03	9E-03	2E-02	3E-02	2E-02	6E-03	6E-03	7E-03	1E-02	1E-02
PM2.5	3E-02	9E-03	1E-02	1E-02	8E-03	1E-02	1E-02	4E-03	3E-03	3E-03	4E-03	3E-03	1E-02	2E-02	1E-02	8E-03	4E-03	4E-03	3E-03	4E-03	5E-03
<b>Recreational User - Adult</b>																					
Acrolein	1E-01	4E-02	7E-02	4E-02	3E-02	7E-02	5E-02	—	—	—	—	—	6E-02	8E-02	7E-02	4E-02	2E-02	—	—	2E-02	3E-02
PM10	2E-02	9E-03	1E-02	8E-03	8E-03	1E-02	1E-02	3E-03	3E-03	3E-03	3E-03	3E-03	9E-03	2E-02	3E-02	2E-02	6E-03	6E-03	7E-03	1E-02	1E-02
PM2.5	3E-02	9E-03	1E-02	1E-02	8E-03	1E-02	1E-02	4E-03	3E-03	3E-03	4E-03	3E-03	1E-02	2E-02	1E-02	8E-03	4E-03	4E-03	3E-03	4E-03	5E-03

**Notes:**

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients				
	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>					
Acrolein	8E-02	3E-02	—	—	—
PM10	2E-02	6E-03	4E-03	4E-03	4E-03
PM2.5	2E-02	6E-03	3E-03	4E-03	3E-03
<b>Recreational User - Adult</b>					
Acrolein	8E-02	3E-02	—	—	—
PM10	2E-02	6E-03	4E-03	4E-03	4E-03
PM2.5	2E-02	6E-03	3E-03	4E-03	3E-03

**Notes:**

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	2E-01	5E-02	7E-02	5E-02	4E-02	1E-01	1E-01	—	—	—	—	—	7E-02	1E-01	9E-02	3E-02
PM10	4E-02	1E-02	2E-02	2E-02	2E-02	2E-02	6E-02	4E-03	5E-03	4E-03	4E-03	4E-03	3E-02	2E-02	2E-02	6E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	9E-03	2E-02	2E-02	4E-03	4E-03	3E-03	4E-03	4E-03	1E-02	2E-02	2E-02	5E-03
<b>Recreational User - Adult</b>																
Acrolein	2E-01	5E-02	7E-02	5E-02	4E-02	1E-01	1E-01	—	—	—	—	—	7E-02	1E-01	9E-02	3E-02
PM10	4E-02	1E-02	2E-02	2E-02	2E-02	2E-02	6E-02	4E-03	5E-03	4E-03	4E-03	4E-03	3E-02	2E-02	2E-02	6E-03
PM2.5	3E-02	1E-02	2E-02	1E-02	9E-03	2E-02	2E-02	4E-03	4E-03	3E-03	4E-03	4E-03	1E-02	2E-02	2E-02	5E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	2E-02	—	—	2E-02	3E-02	1E-01	4E-02	—	2E-02	2E-02
PM10	4E-03	4E-03	3E-03	5E-03	6E-03	3E-02	8E-03	4E-03	5E-03	5E-03
PM2.5	4E-03	4E-03	3E-03	5E-03	5E-03	3E-02	7E-03	4E-03	4E-03	4E-03
<b>Recreational User - Adult</b>										
Acrolein	2E-02	—	—	2E-02	3E-02	1E-01	4E-02	—	2E-02	2E-02
PM10	4E-03	4E-03	3E-03	5E-03	6E-03	3E-02	8E-03	4E-03	5E-03	5E-03
PM2.5	4E-03	4E-03	3E-03	5E-03	5E-03	3E-02	7E-03	4E-03	4E-03	4E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	1E-01	3E-02	7E-02	4E-02	3E-02	7E-02	5E-02	—	—	—	—	—	6E-02	8E-02	6E-02	—
PM10	2E-02	5E-03	9E-03	6E-03	5E-03	9E-03	7E-03	2E-03	2E-03	1E-03	2E-03	2E-03	6E-03	1E-02	9E-03	3E-03
PM2.5	2E-02	8E-03	1E-02	1E-02	7E-03	1E-02	1E-02	3E-03	3E-03	2E-03	3E-03	3E-03	1E-02	2E-02	1E-02	4E-03
<b>Recreational User - Adult</b>																
Acrolein	1E-01	3E-02	7E-02	4E-02	3E-02	7E-02	5E-02	—	—	—	—	—	6E-02	8E-02	6E-02	—
PM10	2E-02	5E-03	9E-03	6E-03	5E-03	9E-03	7E-03	2E-03	2E-03	1E-03	2E-03	2E-03	6E-03	1E-02	9E-03	3E-03
PM2.5	2E-02	8E-03	1E-02	1E-02	7E-03	1E-02	1E-02	3E-03	3E-03	2E-03	3E-03	3E-03	1E-02	2E-02	1E-02	4E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	—	—	—	—	—	8E-02	3E-02	—	—	—
PM10	2E-03	2E-03	1E-03	2E-03	2E-03	1E-02	4E-03	2E-03	2E-03	2E-03
PM2.5	3E-03	3E-03	2E-03	3E-03	4E-03	2E-02	6E-03	3E-03	3E-03	3E-03
<b>Recreational User - Adult</b>										
Acrolein	—	—	—	—	—	8E-02	3E-02	—	—	—
PM10	2E-03	2E-03	1E-03	2E-03	2E-03	1E-02	4E-03	2E-03	2E-03	2E-03
PM2.5	3E-03	3E-03	2E-03	3E-03	4E-03	2E-02	6E-03	3E-03	3E-03	3E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	4E-03	9E-04	1E-03	1E-03	1E-03	2E-03	3E-03	3E-04	3E-04	2E-04	3E-04	3E-04	2E-03	1E-03	1E-03	4E-04
PM2.5	7E-03	2E-03	2E-03	2E-03	2E-03	3E-03	5E-03	4E-04	5E-04	3E-04	4E-04	5E-04	3E-03	3E-03	2E-03	8E-04
<b>Recreational User - Adult</b>																
PM10	4E-03	9E-04	1E-03	1E-03	1E-03	2E-03	3E-03	3E-04	3E-04	2E-04	3E-04	3E-04	2E-03	1E-03	1E-03	4E-04
PM2.5	7E-03	2E-03	2E-03	2E-03	2E-03	3E-03	5E-03	4E-04	5E-04	3E-04	4E-04	5E-04	3E-03	3E-03	2E-03	8E-04

**Notes:**

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	3E-04	3E-04	3E-04	4E-04	5E-04	3E-03	1E-03	9E-04	9E-04	9E-04
PM2.5	5E-04	5E-04	5E-04	7E-04	8E-04	5E-03	2E-03	1E-03	2E-03	2E-03
<b>Recreational User - Adult</b>										
PM10	3E-04	3E-04	3E-04	4E-04	5E-04	3E-03	1E-03	9E-04	9E-04	9E-04
PM2.5	5E-04	5E-04	5E-04	7E-04	8E-04	5E-03	2E-03	1E-03	2E-03	2E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	4E-03	9E-04	1E-03	1E-03	1E-03	1E-03	2E-03	3E-04	3E-04	2E-04	3E-04	3E-04	3E-03	3E-03	2E-03	7E-04
PM2.5	6E-03	2E-03	2E-03	2E-03	2E-03	2E-03	3E-03	5E-04	5E-04	4E-04	5E-04	5E-04	4E-03	5E-03	4E-03	1E-03
<b>Recreational User - Adult</b>																
PM10	4E-03	9E-04	1E-03	1E-03	1E-03	1E-03	2E-03	3E-04	3E-04	2E-04	3E-04	3E-04	3E-03	3E-03	2E-03	7E-04
PM2.5	6E-03	2E-03	2E-03	2E-03	2E-03	2E-03	3E-03	5E-04	5E-04	4E-04	5E-04	5E-04	4E-03	5E-03	4E-03	1E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	5E-04	4E-04	5E-04	6E-04	7E-04	7E-03	1E-03	1E-03	1E-03	1E-03
PM2.5	8E-04	7E-04	8E-04	1E-03	1E-03	1E-02	3E-03	2E-03	2E-03	2E-03
<b>Recreational User - Adult</b>										
PM10	5E-04	4E-04	5E-04	6E-04	7E-04	7E-03	1E-03	1E-03	1E-03	1E-03
PM2.5	8E-04	7E-04	8E-04	1E-03	1E-03	1E-02	3E-03	2E-03	2E-03	2E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	5E-03	1E-03	1E-03	2E-03	2E-03	2E-03	4E-03	3E-04	3E-04	2E-04	3E-04	4E-04	2E-03	2E-03	2E-03	5E-04
PM2.5	8E-03	2E-03	3E-03	3E-03	3E-03	4E-03	7E-03	5E-04	6E-04	4E-04	5E-04	7E-04	3E-03	3E-03	3E-03	9E-04
<b>Recreational User - Adult</b>																
PM10	5E-03	1E-03	1E-03	2E-03	2E-03	2E-03	4E-03	3E-04	3E-04	2E-04	3E-04	4E-04	2E-03	2E-03	2E-03	5E-04
PM2.5	8E-03	2E-03	3E-03	3E-03	3E-03	4E-03	7E-03	5E-04	6E-04	4E-04	5E-04	7E-04	3E-03	3E-03	3E-03	9E-04

**Notes:**

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	4E-04	3E-04	4E-04	5E-04	6E-04	3E-03	2E-03	1E-03	1E-03	1E-03
PM2.5	6E-04	6E-04	6E-04	8E-04	1E-03	5E-03	3E-03	2E-03	2E-03	2E-03
<b>Recreational User - Adult</b>										
PM10	4E-04	3E-04	4E-04	5E-04	6E-04	3E-03	2E-03	1E-03	1E-03	1E-03
PM2.5	6E-04	6E-04	6E-04	8E-04	1E-03	5E-03	3E-03	2E-03	2E-03	2E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients																				
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21
<b>Recreational User - Toddler</b>																					
PM10	2E-03	6E-04	7E-04	7E-04	7E-04	9E-04	1E-03	2E-04	2E-04	2E-04	2E-04	2E-04	1E-03	3E-03	3E-03	2E-03	1E-03	1E-03	1E-03	1E-03	3E-03
PM2.5	4E-03	1E-03	1E-03	1E-03	1E-03	2E-03	2E-03	4E-04	4E-04	3E-04	4E-04	4E-04	2E-03	4E-03	6E-03	4E-03	2E-03	2E-03	2E-03	3E-03	4E-03
<b>Recreational User - Adult</b>																					
PM10	2E-03	6E-04	7E-04	7E-04	7E-04	9E-04	1E-03	2E-04	2E-04	2E-04	2E-04	2E-04	1E-03	3E-03	3E-03	2E-03	1E-03	1E-03	1E-03	1E-03	3E-03
PM2.5	4E-03	1E-03	1E-03	1E-03	1E-03	2E-03	2E-03	4E-04	4E-04	3E-04	4E-04	4E-04	2E-03	4E-03	6E-03	4E-03	2E-03	2E-03	2E-03	3E-03	4E-03

Notes:

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients				
	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>					
PM10	3E-03	1E-03	1E-03	1E-03	1E-03
PM2.5	5E-03	2E-03	2E-03	2E-03	2E-03
<b>Recreational User - Adult</b>					
PM10	3E-03	1E-03	1E-03	1E-03	1E-03
PM2.5	5E-03	2E-03	2E-03	2E-03	2E-03

**Notes:**

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
Acrolein	2E-01	5E-02	7E-02	5E-02	4E-02	1E-01	1E-01	—	—	—	—	—	7E-02	1E-01	9E-02	3E-02
PM10	4E-03	9E-04	1E-03	1E-03	1E-03	2E-03	3E-03	3E-04	3E-04	2E-04	3E-04	3E-04	2E-03	2E-03	1E-03	5E-04
PM2.5	7E-03	2E-03	2E-03	2E-03	2E-03	3E-03	5E-03	4E-04	5E-04	4E-04	4E-04	5E-04	3E-03	3E-03	2E-03	8E-04
<b>Recreational User - Adult</b>																
Acrolein	2E-01	5E-02	7E-02	5E-02	4E-02	1E-01	1E-01	—	—	—	—	—	7E-02	1E-01	9E-02	3E-02
PM10	4E-03	9E-04	1E-03	1E-03	1E-03	2E-03	3E-03	3E-04	3E-04	2E-04	3E-04	3E-04	2E-03	2E-03	1E-03	5E-04
PM2.5	7E-03	2E-03	2E-03	2E-03	2E-03	3E-03	5E-03	4E-04	5E-04	4E-04	4E-04	5E-04	3E-03	3E-03	2E-03	8E-04

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
Acrolein	2E-02	—	—	2E-02	3E-02	1E-01	4E-02	—	2E-02	2E-02
PM10	3E-04	3E-04	3E-04	4E-04	5E-04	3E-03	1E-03	9E-04	1E-03	1E-03
PM2.5	6E-04	5E-04	6E-04	7E-04	9E-04	5E-03	2E-03	2E-03	2E-03	2E-03
<b>Recreational User - Adult</b>										
Acrolein	2E-02	—	—	2E-02	3E-02	1E-01	4E-02	—	2E-02	2E-02
PM10	3E-04	3E-04	3E-04	4E-04	5E-04	3E-03	1E-03	9E-04	1E-03	1E-03
PM2.5	6E-04	5E-04	6E-04	7E-04	9E-04	5E-03	2E-03	2E-03	2E-03	2E-03

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients															
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15	Receptor Location 16
<b>Recreational User - Toddler</b>																
PM10	1E-03	3E-04	3E-04	3E-04	3E-04	4E-04	6E-04	1E-04	1E-04	7E-05	1E-04	1E-04	4E-04	7E-04	6E-04	2E-04
PM2.5	2E-03	5E-04	6E-04	6E-04	5E-04	7E-04	1E-03	2E-04	2E-04	1E-04	2E-04	2E-04	7E-04	1E-03	1E-03	3E-04
<b>Recreational User - Adult</b>																
PM10	1E-03	3E-04	3E-04	3E-04	3E-04	4E-04	6E-04	1E-04	1E-04	7E-05	1E-04	1E-04	4E-04	7E-04	6E-04	2E-04
PM2.5	2E-03	5E-04	6E-04	6E-04	5E-04	7E-04	1E-03	2E-04	2E-04	1E-04	2E-04	2E-04	7E-04	1E-03	1E-03	3E-04

**Notes:**

- = not calculated
- Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Hazard Quotients									
	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - Toddler</b>										
PM10	1E-04	1E-04	2E-04	2E-04	2E-04	1E-03	4E-04	3E-04	4E-04	4E-04
PM2.5	3E-04	2E-04	3E-04	3E-04	4E-04	2E-03	7E-04	6E-04	6E-04	6E-04
<b>Recreational User - Adult</b>										
PM10	1E-04	1E-04	2E-04	2E-04	2E-04	1E-03	4E-04	3E-04	4E-04	4E-04
PM2.5	3E-04	2E-04	3E-04	3E-04	4E-04	2E-03	7E-04	6E-04	6E-04	6E-04

**Notes:**

— = not calculated

**Bold** = exceeds target HQ of 1

Chemical of Potential Concern	Incremental Lifetime Cancer Risks														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - First 24 years of life</b>															
Diesel Particulate Matter	1E-06	3E-07	3E-07	3E-07	4E-07	5E-07	7E-07	—	—	—	—	—	5E-07	6E-07	5E-07
<b>Recreational User - 24 years in adult life</b>															
Diesel Particulate Matter	1E-06	3E-07	3E-07	3E-07	4E-07	5E-07	7E-07	—	—	—	—	—	5E-07	6E-07	5E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - First 24 years of life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-06	4E-07	3E-07	4E-07	4E-07
<b>Recreational User - 24 years in adult life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-06	4E-07	3E-07	4E-07	4E-07

**Notes:**  
 — = not calculated  
**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - First 24 years of life</b>															
Diesel Particulate Matter	9E-07	3E-07	3E-07	3E-07	3E-07	4E-07	5E-07	—	—	—	—	—	5E-07	7E-07	6E-07
<b>Recreational User - 24 years in adult life</b>															
Diesel Particulate Matter	9E-07	3E-07	3E-07	3E-07	3E-07	4E-07	5E-07	—	—	—	—	—	5E-07	7E-07	6E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - First 24 years of life</b>											
Diesel Particulate Matter	—	—	—	—	—	2E-07	2E-06	4E-07	4E-07	4E-07	4E-07
<b>Recreational User - 24 years in adult life</b>											
Diesel Particulate Matter	—	—	—	—	—	2E-07	2E-06	4E-07	4E-07	4E-07	4E-07

Notes:  
 — = not calculated  
**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - First 24 years of life</b>															
Diesel Particulate Matter	1E-06	3E-07	3E-07	3E-07	4E-07	5E-07	7E-07	—	—	—	—	—	5E-07	6E-07	5E-07
<b>Recreational User - 24 years in adult life</b>															
Diesel Particulate Matter	1E-06	3E-07	3E-07	3E-07	4E-07	5E-07	7E-07	—	—	—	—	—	5E-07	6E-07	5E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - First 24 years of life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-06	5E-07	4E-07	4E-07	4E-07
<b>Recreational User - 24 years in adult life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-06	5E-07	4E-07	4E-07	4E-07

Notes:  
 — = not calculated  
**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - First 24 years of life</b>															
Diesel Particulate Matter	7E-07	—	2E-07	2E-07	—	3E-07	4E-07	—	—	—	—	—	4E-07	7E-07	8E-07
<b>Recreational User - 24 years in adult life</b>															
Diesel Particulate Matter	7E-07	—	2E-07	2E-07	—	3E-07	4E-07	—	—	—	—	—	4E-07	7E-07	8E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - First 24 years of life</b>											
Diesel Particulate Matter	5E-07	2E-07	2E-07	2E-07	3E-07	5E-07	1E-06	4E-07	3E-07	3E-07	3E-07
<b>Recreational User - 24 years in adult life</b>											
Diesel Particulate Matter	5E-07	2E-07	2E-07	2E-07	3E-07	5E-07	1E-06	4E-07	3E-07	3E-07	3E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - First 24 years of life</b>															
Diesel Particulate Matter	1E-06	3E-07	3E-07	3E-07	3E-07	4E-07	6E-07	—	—	—	—	—	5E-07	6E-07	5E-07
<b>Recreational User - 24 years in adult life</b>															
Diesel Particulate Matter	1E-06	3E-07	3E-07	3E-07	3E-07	4E-07	6E-07	—	—	—	—	—	5E-07	6E-07	5E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - First 24 years of life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-06	4E-07	3E-07	3E-07	3E-07
<b>Recreational User - 24 years in adult life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	1E-06	4E-07	3E-07	3E-07	3E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks														
	Receptor Location 1	Receptor Location 2	Receptor Location 3	Receptor Location 4	Receptor Location 5	Receptor Location 6	Receptor Location 7	Receptor Location 8	Receptor Location 9	Receptor Location 10	Receptor Location 11	Receptor Location 12	Receptor Location 13	Receptor Location 14	Receptor Location 15
<b>Recreational User - First 24 years of life</b>															
Diesel Particulate Matter	6E-07	—	—	—	—	3E-07	3E-07	—	—	—	—	—	—	4E-07	4E-07
<b>Recreational User - 24 years in adult life</b>															
Diesel Particulate Matter	6E-07	—	—	—	—	3E-07	3E-07	—	—	—	—	—	—	4E-07	4E-07

**Notes:**

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

Chemical of Potential Concern	Incremental Lifetime Cancer Risks										
	Receptor Location 16	Receptor Location 17	Receptor Location 18	Receptor Location 19	Receptor Location 20	Receptor Location 21	Receptor Location 22	Park	Rankin 1	Rankin 2	Rankin 3
<b>Recreational User - First 24 years of life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	8E-07	3E-07	2E-07	2E-07	2E-07
<b>Recreational User - 24 years in adult life</b>											
Diesel Particulate Matter	—	—	—	—	—	—	8E-07	3E-07	2E-07	2E-07	2E-07

Notes:

— = not calculated

**Bold** = exceeds target ILCR of 1E-05

**APPENDIX H-12-E**

**Air Quality Chemical Groupings**

## APPENDIX H-12-E AIR QUALITY CHEMICAL GROUPINGS

### *Chemical Groupings*

Many of the chemicals had sufficient toxicity information and screening standards available, which allowed them to be assessed as individual chemicals (specifically, metals and metallic combustion by-products, such as lead). However, other chemicals were assessed as groups because insufficient toxicity information was available for the individual chemicals. In these cases, the individual chemicals were grouped based upon their physical/chemical properties and mixture-specific toxicity data. These chemical groups were represented by a surrogate chemical for which toxicity information was available. This approach was applied to individual chemicals within PAHs and VOCs. The groupings are shown below:

#### **Polycyclic Aromatic Hydrocarbons**

- Acenaphthenes were evaluated as a group, which includes acenaphthene and methyl acenaphthene. Acenaphthene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.
- Anthracenes were evaluated as a group, which includes the following:
  - 2-methylantracene;
  - anthracene;
  - C2-substituted phenanthrene/ anthracene;
  - C3-substituted phenanthrene/anthracene;
  - C4-substituted phenanthrene/anthracene; and
  - methyl phenanthrene/anthracene.

Anthracene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.

- Benzo(a)pyrenes were evaluated as a group, which includes the following:
  - 1-nitropyrene;
  - 1,6-dinitropyrene;
  - 1,8-dinitropyrene;
  - 3-methylcholanthrene;
  - 7H-dibenzo(c,g)carbazole;
  - benzo(a)pyrene, benzo(b)fluorine;

- benzo(e)pyrene;
- cyclopenta(c,d)pyrene;
- nitro-pyrene; and
- nitrobenzanthrone.

3-Methylcholanthrene was selected as the surrogate for this group in the acute chemical screening. Benzo(a)pyrene was selected as the surrogate in the chronic chemical screening. Given that benzo(a)pyrene is classified as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.

- Benzo(a)anthracenes were evaluated as a group, which includes 7,12-dimethylbenz(a)anthracene and benz(a)anthracene. Benzo(a)anthracene was selected as a surrogate for this group in the acute chemical screening. 7,12-Dimethylbenz(a)anthracene was selected as the surrogate for this group in the chronic chemical screening. Given that 7,12-dimethylbenz(a)anthracene is classified as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.
- Benzo(b)fluoranthenes were evaluated as a group, which includes benzo(b)fluoranthene, benzo(j)fluoranthene, C2-substituted benzo(b&k)fluoranthene/benzo(a)pyrene, and methyl benzo(b&k)fluoranthene/benzo(a)pyrene. Benzo(b)fluoranthene was selected as a surrogate for this group in the acute and chronic chemical screening. Given that benzo(b)fluoranthene is classified as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.
- Benzo(g,h,i)perylene were evaluated as a group, which includes benzo(g,h,i)perylene, coronene, and perylene. Benzo(g,h,i)perylene was selected as a surrogate for this group in the acute and chronic chemical screening. Given that benzo(g,h,i)perylene is considered a weak carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.
- Chrysenes were evaluated as a group, which includes C2-substituted benzo(a)anthracene/chrysene, chrysene, and methyl benzo(a)anthracene/chrysene. Chrysene was selected as a surrogate for this group in the acute and chronic chemical screening. Given that chrysene is classified as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.
- Dibenzo(a,h)anthracenes were evaluated as a group, which includes dibenz(a,h)acridine, dibenz(a,j)acridine, dibenzo(a,h)anthracene, and picene. Dibenzo(a,h)anthracene was selected as a surrogate for this group in the acute and chronic chemical screening. Given that dibenzo(a,h)anthracene is classified as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.
- Fluoranthenes were evaluated as a group, which includes acephenanthrylene, benzo(g,h,i)fluoranthene, benzo(a)fluorene, and fluoranthene. Fluoranthene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.
- Fluorenes were evaluated as a group, which includes 2-methylfluorene, C2-substituted fluorene, carbazole,

fluorene, and methyl fluorene. Fluorene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.

- Indeno(1,2,3-c,d)pyrenes were evaluated as a group, which includes dibenzo(a,i)pyrene, indeno(1,2,3-cd)fluoranthene, indeno(1,2,3-cd)pyrene, and indeno(1,2,3-W)pyrene. Indeno(1,2,3-cd)pyrene was selected as the surrogate for this group in the acute chemical screening. Dibenzo(a,i)pyrene was selected as the surrogate for this group in the chronic chemical screening. Given that dibenzo(a,i)pyrene is considered as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.
- Naphthalenes were evaluated as a group, which includes the following:
  - 1-methylnaphthalene;
  - 2-methylnaphthalene;
  - C2-substituted naphthalene;
  - C3-substituted naphthalene;
  - C4-substituted naphthalene;
  - indole;
  - methyl naphthalene; and
  - naphthalene.

Naphthalene was selected as the surrogate for this group in the acute and chronic chemical screening. Both carcinogenic and non-carcinogenic health effects associated with naphthalene were evaluated by comparison against chronic thresholds based on 24-hour and annual averaging periods.

- Phenanthrenes were evaluated as a group, which includes the following:
  - 1-methylphenanthrene;
  - 2-methylphenanthrene;
  - 3-methylphenanthrene;
  - 4-+9-methylphenanthrene;
  - phenanthrene; and
  - retene.

Phenanthrene was selected as the surrogate for this group in the acute and chronic chemical screening.

Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.

- Pyrenes were evaluated as a group, which includes 2-methylpyrene, methyl fluoranthene/pyrene, and pyrene. Pyrene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.
- Thiophenes were evaluated as a group, which includes the following:
  - 2,5-dimethylthiophene;
  - 3-methyldibenzothiophene;
  - 4-methyldibenzothiophene;
  - C2-substituted dibenzothiophene;
  - C3-substituted dibenzothiophene;
  - C4-substituted dibenzothiophene;
  - dibenzothiophene; and
  - methyl dibenzothiophene.

Dibenzothiophene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging periods were not available for this group.

### **Volatile Organic Compounds**

- 1,3-Butadienes were evaluated as a group, which includes the following:
  - 1,2-butadiene;
  - 1,2-pentadiene;
  - 1,3-butadiene;
  - 1,4-pentadiene;
  - 2-methyl-1,3-butadiene;
  - 2-methyl-4,5-nonadiene;
  - 2,3-pentadiene;
  - 2,5-dimethyl-1,3-hexadiene;
  - 2,5,5-trimethyl-1,6-heptadiene;

- 2,5,5-trimethyl-1,6-heptadiene (B);
- 3-ethyl-2-methyl-1,3hexadiene;
- 3-methyl-1,2-butadiene;
- 4,8-dimethyl-1,7-nonadiene;
- 4-methyl-2,7-octadiene;
- 5-methyl-1,4-hexadiene;
- cis-1,3-pentadiene;
- cyclopentadiene; and
- trans-1,3-pentadiene.

1,3-Butadiene was selected as the surrogate for this group. Given that 1,3-Butadiene is considered as a carcinogen, jurisdictional chronic thresholds based on an annual averaging period were applied.

- Acrolein was evaluated as a group, which includes acrolein and methacrolein. Given that toxicity information was not available for methacrolein, the sum of both chemicals was assessed using acrolein as its surrogate in the HHRA.
- Aldehydes were evaluated as a group, which includes the following:
  - 2,5-dimethylbenzaldehyde;
  - 3-methylbutanal;
  - benzaldehyde;
  - butanal;
  - crotonaldehyde;
  - decanal;
  - dodecanal;
  - heptanal;
  - isobutyraldehyde;
  - nonanal;
  - octanal;

- propanal;
- tridecanal; and
- undecanal.

Propanal was used as the surrogate for this group in the acute screening and crotonaldehyde was used as the surrogate in the chronic chemical screening.

■ C2-C6 aliphatics were evaluated as a group, which includes the following:

- 1-methyl-1-(2-methylene)cyclopentane;
- 1-methyl-1-cyclopentene;
- 1-methyl-4-(1-methylene)cyclohexane;
- 1-methyl-4-(methylene)cyclohexene;
- 1-butene;
- 1-pentene;
- 1-pentyne;
- 1-propyne;
- 1,2-butane;
- 2-butanol;
- 2-butyne;
- 2-methylbicyclo[4.4.0]heptane;
- 2-ethyl-2-hexene;
- 2-methyl-1-butene;
- 2-methyl-1-pentene + 1-hexene;
- 2-methyl-2-butene;
- 2-methyl-4-pentene;
- 2-methyl pentane, 2,3-dimethylbutane;
- 2,2-dimethylpropane;

- 3-methyl-1-butene;
- 3-methyl-2-butene;
- 4-methyl-1-cyclopentene;
- 4-methyl-1-(1-methylene)cyclohexene;
- acetylene + ethane;
- butane;
- C6-olefin;
- cis-2-butene;
- cis-2-pentene;
- cyclopentane;
- cyclopentene;
- ethane;
- ethyne;
- i-butane;
- isobutene;
- isopentane;
- pentane;
- pentene;
- propane;
- propene;
- trans-2-butene;
- trans-2-pentene;
- isobutene;
- isobutanol;
- methyl-tert-butyl ether;

- n-butane;
- n-butanol;
- n-pentane;
- n-propanol; and
- naphthene.

Methyl-tert-butyl ether was selected as the surrogate for this group to evaluate potential carcinogenic health effects; as such, the chronic threshold based on annual averaging period was applied. n-Butanol was selected as the surrogate for this group to evaluate potential non-carcinogenic health effects; as such, the acute and chronic thresholds based on 1-hour and 24-hour averaging periods, respectively, were applied.

- C6-C8 aliphatics were evaluated as a group, which includes the following:
  - 1-ethyl-1-methylcyclopropane;
  - 1-heptene;
  - 1-hexene;
  - 1-methyl-1-ethylcyclopentane;
  - 1-methyl-2-ethylcyclopentane;
  - 1-methyl-2-methylene cyclopentane;
  - 1-methyl-trans-3-ethylcyclopentane;
  - 1-octene;
  - 1,1-dimethylcyclohexane;
  - 1,1-dimethylcyclopentane;
  - 1,1,3-trimethylcyclopentane;
  - 1,2-dimethylcyclohexane;
  - 1,2-dimethylcyclopentane;
  - 1,2,3-trimethylcyclopentene;
  - 1,2,4-trimethylcyclopentane;
  - 1,3-dimethylcyclopentane;

- 1,4-dimethylcyclohexane;
- 1,5-dimethylcyclopentene;
- 2-ethyl-3-methylcyclopentene;
- 2-hexene;
- 2-methyl-1-pentene;
- 2-methyl-2-pentene;
- 2-methyl-3-ethylpentane;
- 2-methyl-3-pentene;
- 2-methylheptane;
- 2-methylhexane;
- 2-methylpentane;
- 2-octene;
- 2,2-dimethylbutane;
- 2,2-dimethylhexane;
- 2,2-dimethylpentane;
- 2,3-dimethylbutane;
- 2,3-dimethylhexane;
- 2,3-dimethylpentane;
- 2,3,4-trimethylpentane;
- 2,4-dimethyl-1-pentene;
- 2,4-dimethylhexane;
- 2,4-dimethylpentane;
- 2,2,3-trimethylbutane;
- 2,2,3-trimethylpentane;
- 2,2,4-trimethylpentane;

- 2,3,3-trimethylpentane;
- 2,5-dimethylhexane;
- 3-ethylhexane;
- 3-ethylpentane;
- 3-methyl-1,3-pentadiene;
- 3-methyl-1-hexene;
- 3-methyl-2-hexene;
- 3-methyl-2-hexene (B);
- 3-methyl-2-pentene;
- 3-methylcyclopentene;
- 3-methylheptane;
- 3-methylhexane;
- 3-methylpentane;
- 3,3-dimethyl-1-butene;
- 3,3-dimethylpentane;
- 3,4-dimethyl-1-pentene;
- 3,4-dimethylhexane;
- 4-methyl-3-heptene;
- 4-methylcyclohexene;
- 4-methylheptane;
- 4,4-dimethylcyclopentene;
- C7-olefin;
- C8-olefin;
- C8-paraffin;
- cis-1,2-dimethylcyclohexane;

- cis-1,3-dimethylcyclopentane;
- cis-2-heptene;
- cis-2-hexene;
- cis-2-octene;
- cis-3-heptene;
- cis,cis-1,2,3-trimethylcyclopentane;
- cis,trans-1,2,4-trimethylcyclopentane;
- cyclohexane;
- cyclohexene;
- cyclooctane;
- ethylcyclohexane;
- ethylcyclopentane;
- heptanes;
- hexanal;
- isopropylcyclopentane;
- methylcyclohexane;
- methylcyclopentane;
- methylethylcyclopentene;
- n-heptane;
- n-octane;
- octane;
- octahydropentalene;
- octyne;
- propane + propylene;
- propylcyclopentane;

- t-1,3-dimethylcyclohexane;
- t-1,3-dimethylcyclopentane;
- trans-1,2-dimethylcyclohexane;
- trans-1,2-dimethylcyclopentane;
- trans-1,3-dimethylcyclopentane;
- trans-1,4-dimethylcyclohexane;
- trans-2-heptene;
- trans-2-hexene;
- trans-2-octene;
- trans,cis-1,2,3-trimethylcyclopentane;
- trans,cis-1,2,4-trimethylcyclopentane; and
- trans-3-heptene.

To evaluate the non-carcinogenic health effects, octane and cyclohexane are applied as surrogates for this group by applying their acute and chronic thresholds based on 1-hour and 24-hour averaging periods, respectively. To evaluate potential carcinogenic health effects, 2-methyl-1-pentene was selected as the surrogate for this group by applying their chronic threshold based on the annual averaging period.

- C8-C10 aliphatics were evaluated as a group, which includes the following:
  - 1-decene;
  - 1-ethyl-2,3-dimethylcyclohexane;
  - 1-ethyl-2,4-dimethylcyclohexane;
  - 1-ethyl-2-propyl cyclohexane;
  - 1-methyl-1-ethylcyclohexane;
  - 1-methyl-1-propylcyclopentane;
  - 1-methyl-2-ethylcyclohexane;
  - 1-methyl-2-propylcyclopentane;
  - 1-methyl-4-(1-methylethyl) cyclohexane;

- 1-methyl-4-isopropylcyclohexane;
- 1-nonene;
- 1,3-dimethyl2-(1-methylene)cyclopentene;
- 1,1,3-trimethylcyclohexane;
- 1,1,4-trimethylcyclohexane;
- 1,1,2,3-tetramethylcyclopentane;
- 1,1,3,4-tetramethylcyclopentane;
- 1,1,3,5-tetramethylcyclohexane;
- 2+4-methyloctane;
- 2-methyloctyne;
- 2-methylnonane;
- 2-methyloctane;
- 2-methylpropylcyclopentane;
- 2,2-dimethyl-3-octyne;
- 2,2-dimethylheptane;
- 2,2-dimethyloctane;
- 2,2,3,4-tetramethylpentane;
- 2,2,4-trimethylhexane;
- 2,2,5-trimethylhexane;
- 2,3-dimethyloctane;
- 2,3,3-trimethylheptane;
- 2,3,4-trimethylhexane;
- 2,3,5-trimethylhexane;
- 2,4-dimethylheptane;
- 2,4-dimethyloctane;

- 2,4,4-trimethylhexane;
- 2,5-dimethyloctane;
- 2,5,5-trimethyl-1-hexene;
- 2,6-dimethyl-2-octene;
- 2,5-dimethylheptane;
- 2,6-dimethyl-4-octene;
- 2,6-dimethylheptane;
- 2,6-dimethyloctane;
- 3-ethyl-2-methyl-2-heptene;
- 3-ethyl-3-octene;
- 3-ethyloctane;
- 3-methyloctane;
- 3-methyl-5-ethylheptane;
- 3-methylethylhexane;
- 3-methylnonane;
- 3,3-diethylpentane;
- 3,3-dimethylheptane;
- 3,3-dimethyloctane;
- 3,3,4-trimethylhexane + benzene;
- 3,3,4-trimethylheptane;
- 3,3,4-trimethylhexane;
- 3,3,5-trimethylheptane;
- 3,4-dimethylheptane;
- 3,4,4-trimethylcyclohexene;
- 3,5-dimethylheptane;

- 3,6-dimethyloctane;
- 3,7-dimethyl-1-octene;
- 3,7,7-trimethyl bicyclo[4.1.0]heptane;
- 4-ethylheptane;
- 4-ethyloctane;
- 4-methyloctane;
- 5-methylnonane;
- bicyclo[3.3.1]nonane;
- bicyclo[3.3.1]nonane;
- butylcyclopentane;
- butylidenecyclohexane;
- C9-olefin;
- C9-paraffin;
- C10-olefin;
- C10-paraffin;
- c-1-butyl-2-methylcyclopropane;
- c-1,3-dimethylcyclopentane;
- cis-1-ethyl-methylcyclohexane;
- cis-1-ethyl-2-methylcyclohexane;
- cis-1-ethyl-4-methylcyclohexane;
- cis,1,2,4-trimethylcyclohexane;
- cis-1,3,5-trimethylcyclohexane;
- cis-2-nonene;
- decane;
- cis-3-nonene;

- ethylidenecycloheptane;
- isobutylcyclohexane;
- isobutylcyclopentane;
- isocamphane;
- isopropylcyclohexane;
- n-decane;
- n-nonane;
- nonane;
- propylcyclohexane;
- q,q,2-trimethylcyclohexane;
- sec-butylcyclohexane;
- sec-butylcyclopentane;
- tert-butylcyclopentane;
- trans-1-ethyl-4-methylcyclohexane;
- trans-1-methyl-2-methyl-4-propylcyclopentane;
- trans-1-methyl-2-propylcyclohexane;
- trans-1,2,4-trimethylcyclohexane;
- trans-2-nonene; and
- trans-3-nonene.

Chemicals in this group are considered to be non-carcinogenic. n-Decane was selected as a surrogate for this group in the acute chemical screening and 1-decene was selected as the surrogate for the chronic chemical screening. To evaluate potential long-term health effects, jurisdictional chronic thresholds based on 24-hour and annual averaging periods were applied.

- C8-C10 aromatics were evaluated as a group, which includes the following:
  - 1-ethyl-2-methylbenzene;
  - 1-ethyl-3-methylbenzene;

- 1-ethyl-4-methylbenzene;
- 1-methyl-2-isopropylbenzene;
- 1-methyl-2-propylbenzene;
- 1-methyl-3-isopropylbenzene;
- 1-methyl-3-propylbenzene;
- 1-methyl-4-isopropylbenzene,
- 1-methyl-4-propylbenzene;
- 1,1,2,3-tetramethylcyclohexane;
- 1,2-diethyl-1-methyl-cyclohexane;
- 1,2,3,4-tetrahydronaphthalene;
- 1,2,3,4-tetramethylbenzene;
- 1,2,3,5-tetramethylbenzene;
- 1,2,4,5-tetramethylbenzene;
- 1,3-diethylbenzene;
- 1,3-dimethyl-2-ethylbenzene;
- 1,3-dimethyl-4-ethylbenzene;
- 1,3-dimethyl-5-ethylbenzene;
- 1,4-diethylbenzene;
- 1,4-dimethyl-2-ethylbenzene;
- 2-ethyl-toluene;
- 2,3-dihydroindene;
- 2,3-dimethylheptane;
- 3-ethyl-toluene;
- 4-ethyl-toluene;
- butylbenzene;

- C10-aromatic;
- indanone;
- isobutylbenzene;
- isopropylbenzene;
- methylpropylbenzene;
- n-butylbenzene;
- p-cymene;
- propylbenzene; and
- sec-butylbenzene.

Chemicals in this group are considered to be non-carcinogenic. Propylbenzene was selected as the surrogate in the acute chemical screening. To evaluate non-carcinogenic health effects, isopropylbenzene was selected as the surrogate by applying its chronic threshold based on 24-hour averaging period. To evaluate carcinogenic health effects, propylbenzene was selected as the surrogate by applying its chronic threshold based on annual averaging period.

- C10-C12 aliphatics were evaluated as a group, which includes the following:
  - 2,2-dimethyl-3-decene;
  - 2,2,7-trimethyl-3-octyne;
  - 2,4-diethyl-1-methylcyclohexane;
  - 3-dodecene;
  - 3-ethylnonane;
  - 4-methyldecane;
  - 5-methyldecane;
  - 7-methyl-5-undecene;
  - C11-paraffin;
  - C12-paraffin;
  - dodecane;

- hexylcyclohexane;
- n-dodecane;
- n-undecane;
- pentylcyclohexane;
- trans-1-methyl-2(4-methylpentyl)-cyclopentane; and
- undecane.

Chemicals in this group are considered to be non-carcinogenic. Dodecane was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging period were not available for this group.

- C12-C16 aliphatics were evaluated as a group, which includes the following:
  - 1-pentyl-2-propylcyclopentane;
  - 2,6,10-trimethyltridecane;
  - 3,3,8-trimethyldecane;
  - amorphane B;
  - decylcyclohexane;
  - farnesane;
  - heptylcyclohexane;
  - Hexadecane;
  - nonylcyclohexane;
  - norfarnesane;
  - n-pentadecane;
  - n-tridecane;
  - octylcyclohexane;
  - tetradecane;
  - tridecane; and
  - valencane.

Chemicals in this group are considered to be non-carcinogenic. Tridecane was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging period were not available for this group.

- C12-C16 aromatics were evaluated as a group, which includes the following:
  - 1,2,4-trimethylbenzene+n-decane;
  - 1,2,3-trimethylbenzene+P-C;
  - decylbenzene;
  - fluorenone;
  - n-octylbenzene; and
  - xanthone.

Chemicals in this group are considered to be non-carcinogenic. n-Octylbenzene was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging period were not available for this group.

- C16-C21 aliphatics were evaluated as a group, which includes the following:
  - 3-eicosyne;
  - 5-eicosyne;
  - 5-eicosyne (B);
  - 8b,13a-dimethyl-14b-[3'-methylbutyl]-podocarpene;
  - 8b,13a-dimethyl-14b-n-butylpodocarpene;
  - dodecylcyclohexane;
  - n-eicosane;
  - n-heneicosane;
  - n-heptadecane;
  - n-nonadecane;
  - n-octadecane;
  - norpristane;

- pentadecylcyclohexane;
- phytane;
- pristine;
- tetradecylcyclohexane;
- tridecylcyclohexane; and
- undecylcyclohexane.

Chemicals in this group are considered to be non-carcinogenic. n-Heptadecane was selected as the surrogate for this group in the acute and chronic chemical screening. Jurisdictional chronic thresholds based on 24-hour averaging period were not available for this group.

- Ketones were evaluated as a group, which includes 3-buten-2-one, acetophenone, camphor, and methyl ethyl ketone. To evaluate non-carcinogenic health effects, acetophenone and methyl ethyl ketone were selected as the surrogates for this group for the acute and chronic chemical screening, respectively. Their respective thresholds based on 1-hour and 24-hour averaging periods were applied to evaluate acute and chronic exposures. To evaluate carcinogenic health effects, 3-buten-2-one was selected as the surrogate for this group by applying its chronic thresholds based on annual averaging period.
- Trimethylbenzenes were evaluated as a group, which includes 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. 1,2,3-Trimethylbenzene was used as a surrogate for this group.
- Xylenes were evaluated as a group, which includes the m-, p-, and o-xylene isomers, and xylene mixture. The xylene mixture was selected as the surrogate for this group.

**APPENDIX H-12-F**

## Soil Screening – Human Health

**Table H-12-F-1a: Screening of Predicted Deposition Concentrations- Scenario 1**

**Table H-12-F-1b: Screening of Predicted Deposition Concentrations- Scenario 2**

**Table H-12-F-1c: Screening of Predicted Deposition Concentrations- Scenario 3**

**Table H-12-F-1d: Screening of Predicted Deposition Concentrations- Scenario 4**

**Table H-12-F-1e: Screening of Predicted Deposition Concentrations- Scenario 5**

**Table H-12-F-1f: Screening of Predicted Deposition Concentrations- Scenario 6**

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Total Metals</b>																		
Aluminum (Al)	NV	15400	10637	9.68E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03								
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01									
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01									
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02									
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00									
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01									
Cadmium (Cd)	14	14.2	0.88	8.10E-01	8.02E-01	8.04E-01	8.04E-01	8.04E-01	8.05E-01	8.06E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04									
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01									
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01									
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01									
Gold*	NV	NV	NV	6.05E-06	1.37E-06	2.60E-06	2.72E-06	3.06E-06	4.25E-06	5.42E-06	4.19E-07	4.99E-07	4.10E-07	4.19E-07	5.11E-07	6.90E-07	2.00E-06	1.44E-06
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04									
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01									
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01									
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03									
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02									
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00									
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01									
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03									
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00									
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Sodium (Na)	NV	NV	352.00	3.21E+02	3.20E+02	3.21E+02	3.21E+02	3.21E+02	3.21E+02	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02									
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00									
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02									
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00									
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01									
Yttrium (Y)*	NV	NV	NV	7.39E-04	1.67E-04	3.17E-04	3.33E-04	3.73E-04	5.20E-04	6.62E-04	5.12E-05	6.10E-05	5.01E-05	5.12E-05	6.24E-05	8.43E-05	2.45E-04	1.76E-04
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01									
<b>Polycyclic Aromatic Hydrocarbons</b>																		
Benzo(a)pyrene*	NV	1.1	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Chlorobenzene*	NV	56	NV	1.63E-06	3.15E-07	5.70E-07	5.92E-07	6.33E-07	8.16E-07	9.82E-07	9.01E-08	1.21E-07	1.11E-07	9.02E-08	1.14E-07	1.28E-07	2.45E-07	2.04E-07
Naphthalene*	NV	20	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Phenanthrene*	NV	NV	NV	5.87E-05	1.13E-05	2.05E-05	2.13E-05	2.28E-05	2.94E-05	3.54E-05	3.25E-06	4.36E-06	4.00E-06	3.25E-06	4.09E-06	4.60E-06	8.84E-06	7.34E-06
Anthracene*	NV	3600	NV	2.03E-05	3.92E-06	7.09E-06	7.37E-06	7.88E-06	1.02E-05	1.22E-05	1.12E-06	1.51E-06	1.38E-06	1.12E-06	1.41E-06	1.59E-06	3.05E-06	2.54E-06
Fluorene*	NV	480	NV	5.18E-06	1.00E-06	1.81E-06	1.88E-06	2.01E-06	2.60E-06	3.12E-06	2.87E-07	3.85E-07	3.53E-07	2.87E-07	3.61E-07	4.06E-07	7.80E-07	6.48E-07
Pyrene*	NV	360	NV	2.95E-06	5.70E-07	1.03E-06	1.07E-06	1.15E-06	1.48E-06	1.78E-06	1.63E-07	2.19E-07	2.01E-07	1.64E-07	2.06E-07	2.32E-07	4.45E-07	3.70E-07
Thiophene*	NV	NV	NV	6.87E-05	1.33E-05	2.40E-05	2.49E-05	2.67E-05	3.44E-05	4.14E-05	3.80E-06	5.10E-06	4.68E-06	3.80E-06	4.79E-06	5.38E-06	1.03E-05	8.59E-06
Benzo(a)anthracene*	NV	11	NV	3.89E-06	7.51E-07	1.36E-06	1.41E-06	1.51E-06	1.95E-06	2.34E-06	2.15E-07	2.89E-07	2.65E-07	2.15E-07	2.71E-07	3.05E-07	5.85E-07	4.86E-07
Acenaphthene*	NV	720	NV	1.00E-06	1.94E-07	3.51E-07	3.64E-07	3.90E-07	5.02E-07	6.04E-07	5.55E-08	7.45E-08	6.84E-08	5.55E-08	6.99E-08	7.86E-08	1.51E-07	1.25E-07
Acenaphthylene*	NV	NV	NV	9.69E-07	1.87E-07	3.39E-07	3.52E-07	3.76E-07	4.86E-07	5.84E-07	5.36E-08	7.20E-08	6.61E-08	5.36E-08	6.75E-08	7.59E-08	1.46E-07	1.21E-07
Fluoranthene*	NV	480	NV	2.09E-04	4.04E-05	7.32E-05	7.61E-05	8.14E-05	1.05E-04	1.26E-04	1.16E-05	1.56E-05	1.43E-05	1.16E-05	1.46E-05	1.64E-05	3.15E-05	2.62E-05
Benzo(b)fluoranthene*	NV	11	NV	1.63E-05	3.15E-06	5.70E-06	5.92E-06	6.33E-06	8.16E-06	9.82E-06	9.01E-07	1.21E-06	1.11E-06	9.02E-07	1.14E-06	1.28E-06	2.45E-06	2.04E-06
Benzo(g,h,i)perylene*	NV	NV	NV	4.20E-06	8.12E-07	1.47E-06	1.53E-06	1.63E-06	2.11E-06	2.53E-06	2.33E-07	3.12E-07	2.87E-07	2.33E-07	2.93E-07	3.30E-07	6.33E-07	5.26E-07
Benzo(k)fluoranthene*	NV	110	NV	7.86E-07	1.52E-07	2.75E-07	2.86E-07	3.05E-07	3.94E-07	4.74E-07	4.35E-08	5.84E-08	5.36E-08	4.35E-08	5.48E-08	6.16E-08	1.18E-07	9.83E-08
Biphenyl*	NV	9.4	NV	1.54E-06	2.98E-07	5.39E-07	5.60E-07	5.99E-07	7.73E-07	9.30E-07	8.53E-08	1.15E-07	1.05E-07	8.54E-08	1.08E-07	1.21E-07	2.32E-07	1.93E-07
Chrysene*	NV	11																

Table H-12-F-1a: Screening of Predicted Deposition Concentrations- Scenario 1

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3	Camp	Chemical of Concern?
<b>Total Metals</b>																
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.71E+03	No						
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.15E-01	No						
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	6.00E+01	No						
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	No						
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	No						
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	No						
Cadmium (Cd)	14	14.2	0.88	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.02E-01	8.02E-01	8.01E-01	8.01E-01	8.01E-01	9.09E-01	No
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	No						
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.14E+01	No						
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	No						
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	No						
Gold*	NV	NV	NV	4.76E-07	3.75E-07	3.78E-07	4.20E-07	3.94E-07	4.46E-07	2.44E-06	1.61E-06	8.71E-07	9.03E-07	1.00E-06	4.09E-05	No
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	No						
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	No						
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	No						
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.09E+03	No						
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	No						
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	No						
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	No						
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.68E+03	No						
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	No						
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No						
Sodium (Na)	NV	NV	352.00	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.28E+02	No						
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	No						
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No						
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	No						
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.47E+02	No						
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	No						
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.91E+01	No						
Yttrium (Y)*	NV	NV	NV	5.82E-05	4.59E-05	4.62E-05	5.13E-05	4.82E-05	5.45E-05	2.98E-04	1.96E-04	1.06E-04	1.10E-04	1.23E-04	5.00E-03	No
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.02E+01	No						
<b>Polycyclic Aromatic Hydrocarbons</b>																
Benzo(a)pyrene*	NV	1.1	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No						
Chlorobenzene*	NV	56	NV	7.27E-08	5.32E-08	4.92E-08	4.80E-08	5.91E-08	6.80E-08	3.72E-07	2.53E-07	1.04E-07	1.16E-07	1.25E-07	1.73E-05	No
Naphthalene*	NV	20	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No						
Phenanthrene*	NV	NV	NV	2.62E-06	1.92E-06	1.77E-06	1.73E-06	2.13E-06	2.45E-06	1.34E-05	9.12E-06	3.75E-06	4.18E-06	4.49E-06	6.25E-04	No
Anthracene*	NV	3600	NV	9.05E-07	6.63E-07	6.13E-07	5.97E-07	7.35E-07	8.47E-07	4.63E-06	3.15E-06	1.29E-06	1.44E-06	1.55E-06	2.16E-04	No
Fluorene*	NV	480	NV	2.31E-07	1.69E-07	1.57E-07	1.53E-07	1.88E-07	2.16E-07	1.18E-06	8.05E-07	3.31E-07	3.69E-07	3.96E-07	5.52E-05	No
Pyrene*	NV	360	NV	1.32E-07	9.65E-08	8.92E-08	8.70E-08	1.07E-07	1.23E-07	6.74E-07	4.59E-07	1.89E-07	2.10E-07	2.26E-07	3.14E-05	No
Thiophene*	NV	NV	NV	3.06E-06	2.24E-06	2.07E-06	2.02E-06	2.49E-06	2.87E-06	1.57E-05	1.07E-05	4.38E-06	4.89E-06	5.25E-06	7.31E-04	No
Benzo(a)anthracene*	NV	11	NV	1.74E-07	1.27E-07	1.17E-07	1.15E-07	1.41E-07	1.62E-07	8.87E-07	6.04E-07	2.48E-07	2.77E-07	2.97E-07	4.14E-05	No
Acenaphthene*	NV	720	NV	4.47E-08	3.28E-08	3.03E-08	2.95E-08	3.64E-08	4.18E-08	2.29E-07	1.56E-07	6.40E-08	7.14E-08	7.67E-08	1.07E-05	No
Acenaphthylene*	NV	NV	NV	4.32E-08	3.17E-08	2.93E-08	2.85E-08	3.51E-08	4.04E-08	2.21E-07	1.50E-07	6.18E-08	6.90E-08	7.41E-08	1.03E-05	No
Fluoranthene*	NV	480	NV	9.35E-06	6.84E-06	6.33E-06	6.17E-06	7.59E-06	8.74E-06	4.78E-05	3.25E-05	1.34E-05	1.49E-05	1.60E-05	2.23E-03	No
Benzo(b)fluoranthene*	NV	11	NV	7.27E-07	5.32E-07	4.92E-07	4.80E-07	5.91E-07	6.80E-07	3.72E-06	2.53E-06	1.04E-06	1.16E-06	1.25E-06	1.73E-04	No
Benzo(g,h,i)perylene*	NV	NV	NV	1.88E-07	1.37E-07	1.27E-07	1.24E-07	1.52E-07	1.76E-07	9.60E-07	6.53E-07	2.68E-07	2.99E-07	3.22E-07	4.47E-05	No
Benzo(k)fluoranthene*	NV	110	NV	3.51E-08	2.57E-08	2.37E-08	2.32E-08	2.85E-08	3.28E-08	1.79E-07	1.22E-07	5.02E-08	5.60E-08	6.01E-08	8.37E-06	No
Biphenyl*	NV	9.4	NV	6.88E-08	5.04E-08	4.66E-08	4.54E-08	5.59E-08	6.44E-08	3.52E-07	2.40E-07	9.85E-08	1.10E-07	1.18E-07	1.64E-05	No
Chrysene*	NV	1100	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No						
Dibenzo(a,h)anthracene*	NV	1.1	NV	7.43E-08	5.44E-08	5.03E-08	4.90E-08	6.03E-08	6.95E-08	3.80E-07	2.58E-07	1.06E-07	1.19E-07	1.27E-07	1.77E-05	No
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	8.96E-08	6.56E-08	6.06E-08	5.91E-08	7.28E-08	8.38E-08	4.58E-07	3.12E-07	1.28E-07	1.43E-07	1.53E-07	2.14E-05	No



Table H-12-F-1b: Screening of Predicted Deposition Concentrations- Scenario 2

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3	Camp	Chemical of Concern?
<b>Total Metals</b>																
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.71E+03	No						
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.15E-01	No						
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	6.00E+01	No						
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	No						
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	No						
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	No						
Cadmium (Cd)	14	14.2	0.88	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.03E-01	8.02E-01	8.01E-01	8.01E-01	8.01E-01	9.08E-01	No
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	No						
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.14E+01	No						
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	No						
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	No						
Gold*	NV	NV	NV	7.28E-07	5.65E-07	5.74E-07	6.42E-07	5.91E-07	6.76E-07	4.87E-06	1.98E-06	1.31E-06	1.41E-06	1.56E-06	3.97E-05	No
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	No						
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	No						
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	No						
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.09E+03	No						
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	No						
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	No						
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	No						
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.68E+03	No						
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	No						
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No						
Sodium (Na)	NV	NV	352.00	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.28E+02	No
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	No						
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No						
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	No						
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.47E+02	No						
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	No						
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.91E+01	No						
Yttrium (Y)*	NV	NV	NV	8.89E-05	6.91E-05	7.01E-05	7.85E-05	7.22E-05	8.26E-05	5.95E-04	2.42E-04	1.60E-04	1.73E-04	1.90E-04	4.86E-03	No
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.02E+01	No						
<b>Polycyclic Aromatic Hydrocarbons</b>																
Benzo(a)pyrene*	NV	1.1	NV	7.66E-08	5.59E-08	5.19E-08	5.08E-08	6.25E-08	7.23E-08	4.23E-07	2.60E-07	1.18E-07	1.33E-07	1.43E-07	1.72E-05	No
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No						
Naphthalene*	NV	20	NV	2.76E-06	2.02E-06	1.87E-06	1.83E-06	2.25E-06	2.61E-06	1.52E-05	9.35E-06	4.25E-06	4.80E-06	5.16E-06	6.20E-04	No
Phenanthrene*	NV	NV	NV	9.53E-07	6.96E-07	6.46E-07	6.33E-07	7.78E-07	9.00E-07	5.27E-06	3.23E-06	1.47E-06	1.66E-06	1.78E-06	2.14E-04	No
Anthracene*	NV	3600	NV	2.44E-07	1.78E-07	1.65E-07	1.62E-07	1.99E-07	2.30E-07	1.35E-06	8.26E-07	3.75E-07	4.23E-07	4.56E-07	5.47E-05	No
Fluorene*	NV	480	NV	1.39E-07	1.01E-07	9.41E-08	9.22E-08	1.13E-07	1.31E-07	7.67E-07	4.71E-07	2.14E-07	2.41E-07	2.60E-07	3.12E-05	No
Pyrene*	NV	360	NV	3.23E-06	2.36E-06	2.19E-06	2.14E-06	2.64E-06	3.05E-06	1.78E-05	1.09E-05	4.97E-06	5.61E-06	6.04E-06	7.25E-04	No
Thiophene*	NV	NV	NV	1.83E-07	1.33E-07	1.24E-07	1.21E-07	1.49E-07	1.73E-07	1.01E-06	6.19E-07	2.81E-07	3.18E-07	3.42E-07	4.10E-05	No
Benzo(a)anthracene*	NV	11	NV	4.71E-08	3.44E-08	3.19E-08	3.13E-08	3.85E-08	4.45E-08	2.60E-07	1.60E-07	7.25E-08	8.19E-08	8.81E-08	1.06E-05	No
Acenaphthene*	NV	720	NV	4.55E-08	3.33E-08	3.09E-08	3.02E-08	3.72E-08	4.30E-08	2.52E-07	1.54E-07	7.01E-08	7.91E-08	8.52E-08	1.02E-05	No
Acenaphthylene*	NV	NV	NV	9.84E-06	7.19E-06	6.67E-06	6.53E-06	8.04E-06	9.30E-06	5.44E-05	3.34E-05	1.52E-05	1.71E-05	1.84E-05	2.21E-03	No
Fluoranthene*	NV	480	NV	7.66E-07	5.59E-07	5.19E-07	5.08E-07	6.25E-07	7.23E-07	4.23E-06	2.60E-06	1.18E-06	1.33E-06	1.43E-06	1.72E-04	No
Benzo(b)fluoranthene*	NV	11	NV	1.98E-07	1.44E-07	1.34E-07	1.31E-07	1.61E-07	1.87E-07	1.09E-06	6.70E-07	3.04E-07	3.43E-07	3.70E-07	4.44E-05	No
Benzo(g,h,i)perylene*	NV	NV	NV	3.70E-08	2.70E-08	2.50E-08	2.45E-08	3.02E-08	3.49E-08	2.04E-07	1.25E-07	5.69E-08	6.42E-08	6.91E-08	8.30E-06	No
Benzo(k)fluoranthene*	NV	110	NV	7.25E-08	5.29E-08	4.91E-08	4.81E-08	5.92E-08	6.85E-08	4.00E-07	2.46E-07	1.12E-07	1.26E-07	1.36E-07	1.63E-05	No
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No						
Chrysene*	NV	1100	NV	7.82E-08	5.71E-08	5.30E-08	5.19E-08	6.39E-08	7.39E-08	4.32E-07	2.65E-07	1.20E-07	1.36E-07	1.46E-07	1.76E-05	No
Dibenzo(a,h)anthracene*	NV	1.1	NV	9.43E-08	6.89E-08	6.39E-08	6.26E-08	7.70E-08	8.91E-08	5.21E-07	3.20E-07	1.45E-07	1.64E-07	1.76E-07	2.12E-05	No
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	4.63E-08	3.38E-08	3.14E-08	3.07E-08	3.78E-08	4.37E-08	2.56E-07	1.57E-07	7.13E-08	8.05E-08	8.66E-08	1.04E-05	No

Table H-12-F-1c: Screening of Predicted Deposition Concentrations- Scenario 3

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14
<b>Total Metals</b>																	
Aluminum (Al)	NV	15400	10637	9.68E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.68E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01									
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01									
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02									
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00									
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01									
Cadmium (Cd)	14	14.2	0.88	8.10E-01	8.02E-01	8.03E-01	8.04E-01	8.04E-01	8.05E-01	8.07E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04									
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01									
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01									
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01									
Gold*	NV	NV	NV	6.08E-06	1.67E-06	2.71E-06	3.02E-06	3.62E-06	5.44E-06	7.71E-06	5.22E-07	5.95E-07	4.46E-07	5.22E-07	6.05E-07	8.10E-07	1.87E-06
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04									
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01									
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01									
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03									
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02									
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00									
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01									
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03									
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00									
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Sodium (Na)	NV	NV	352.00	3.21E+02	3.20E+02	3.21E+02	3.21E+02	3.21E+02	3.21E+02	3.22E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02									
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00									
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02									
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00									
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01									
Yttrium (Y)*	NV	NV	NV	7.43E-04	2.04E-04	3.32E-04	3.69E-04	4.42E-04	6.64E-04	9.42E-04	6.38E-05	7.27E-05	5.44E-05	6.38E-05	7.39E-05	9.90E-05	2.28E-04
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01									
<b>Polycyclic Aromatic Hydrocarbons</b>																	
Benzo(a)pyrene*	NV	1.1	NV	1.53E-06	3.04E-07	5.25E-07	5.58E-07	6.15E-07	8.33E-07	1.05E-06	9.16E-08	1.21E-07	1.06E-07	9.16E-08	1.12E-07	1.30E-07	2.37E-07
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Naphthalene*	NV	20	NV	5.53E-05	1.10E-05	1.89E-05	2.01E-05	2.22E-05	3.00E-05	3.77E-05	3.30E-06	4.36E-06	3.83E-06	3.30E-06	4.03E-06	4.67E-06	8.54E-06
Phenanthrene*	NV	NV	NV	1.91E-05	3.78E-06	6.53E-06	6.95E-06	7.66E-06	1.04E-05	1.30E-05	1.14E-06	1.51E-06	1.32E-06	1.14E-06	1.39E-06	1.61E-06	2.95E-06
Anthracene*	NV	3600	NV	4.88E-06	9.67E-07	1.67E-06	1.78E-06	1.96E-06	2.65E-06	3.33E-06	2.92E-07	3.85E-07	3.38E-07	2.92E-07	3.56E-07	4.13E-07	7.54E-07
Fluorene*	NV	480	NV	2.78E-06	5.51E-07	9.52E-07	1.01E-06	1.12E-06	1.51E-06	1.90E-06	1.66E-07	2.19E-07	1.93E-07	1.66E-07	2.03E-07	2.35E-07	4.30E-07
Pyrene*	NV	360	NV	6.47E-05	1.28E-05	2.21E-05	2.35E-05	2.59E-05	3.51E-05	4.41E-05	3.86E-06	5.10E-06	4.48E-06	3.86E-06	4.71E-06	5.47E-06	9.98E-06
Thiophene*	NV	NV	NV	3.66E-06	7.25E-07	1.25E-06	1.33E-06	1.47E-06	1.99E-06	2.49E-06	2.19E-07	2.89E-07	2.54E-07	2.19E-07	2.67E-07	3.09E-07	5.65E-07
Benzo(a)anthracene*	NV	11	NV	9.45E-07	1.87E-07	3.23E-07	3.43E-07	3.78E-07	5.13E-07	6.43E-07	5.64E-08	7.45E-08	6.54E-08	5.64E-08	6.88E-08	7.98E-08	1.46E-07
Acenaphthene*	NV	720	NV	9.13E-07	1.81E-07	3.12E-07	3.32E-07	3.66E-07	4.96E-07	6.22E-07	5.45E-08	7.20E-08	6.32E-08	5.45E-08	6.65E-08	7.71E-08	1.41E-07
Acenaphthylene*	NV	NV	NV	1.97E-04	3.91E-05	6.75E-05	7.17E-05	7.90E-05	1.07E-04	1.34E-04	1.18E-05	1.56E-05	1.37E-05	1.18E-05	1.44E-05	1.67E-05	3.05E-05
Fluoranthene*	NV	480	NV	1.54E-05	3.04E-06	5.25E-06	5.58E-06	6.15E-06	8.33E-06	1.05E-05	9.16E-07	1.21E-06	1.06E-06	9.16E-07	1.12E-06	1.30E-06	2.37E-06
Benzo(b)fluoranthene*	NV	11	NV	3.96E-06	7.84E-07	1.35E-06	1.44E-06	1.59E-06	2.15E-06	2.70E-06	2.37E-07	3.12E-07	2.74E-07	2.37E-07	2.89E-07	3.35E-07	6.11E-07
Benzo(g,h,i)perylene*	NV	NV	NV	7.41E-07	1.47E-07	2.53E-07	2.69E-07	2.97E-07	4.02E-07	5.04E-07	4.42E-08	5.84E-08	5.13E-08	4.42E-08	5.40E-08	6.26E-08	1.14E-07
Benzo(k)fluoranthene*	NV	110	NV	1.45E-06	2.88E-07	4.97E-07	5.28E-07	5.82E-07	7.89E-07	9.90E-07	8.68E-08	1.15E-07	1.01E-07	8.68E-08	1.06E-07	1.23E-07	2.24E-07
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Chrysene*	NV	1100	NV	1.57E-06	3.10E-07	5.36E-07	5.70E-07	6.28E-07	8.51E-07	1.07E-06	9.36E-08	1.24E-07	1.09E-07	9.36E-08	1.14E-07	1.32E-07	2.42E-07
Dibenzo(a,h)anthracene*	NV	1.1	NV	1.89E-06	3.74E-07	6.46E-07	6.87E-07	7.57E-07	1.03E-06	1.29E-06	1.13E-07	1.49E-07	1.31E-07	1.13E-07	1.38E-07	1.60E-07	2.92E-07
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	9.29E-07	1.84E-07	3.17E-07	3.38E-07	3.72E-07	5.04E-07	6.32E-07	5.54E-08	7.32E-08	6.43E-08	5.54E-08	6.77E-08	7.84	

Table H-12-F-1c: Screening of Predicted Deposition Concentrations- Scenario 3

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3	Camp	Chemical of Concern?
<b>Total Metals</b>																	
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.70E+03	No							
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.15E-01	No							
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	6.00E+01	No							
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	No							
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	No							
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	No							
Cadmium (Cd)	14	14.2	0.88	8.01E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.02E-01	8.02E-01	8.01E-01	8.01E-01	8.01E-01	9.07E-01	No
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	No							
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.14E+01	No							
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	No							
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	No							
Gold*	NV	NV	NV	1.37E-06	4.98E-07	4.01E-07	4.17E-07	4.83E-07	4.48E-07	5.17E-07	2.16E-06	2.13E-06	1.11E-06	1.15E-06	1.28E-06	3.80E-05	No
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	No							
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	No							
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	No							
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.09E+03	No							
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	No							
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	No							
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	No							
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.68E+03	No							
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	No							
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No							
Sodium (Na)	NV	NV	352.00	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.28E+02	No							
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	No							
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No							
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	No							
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.47E+02	No							
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	No							
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.91E+01	No							
Yttrium (Y)*	NV	NV	NV	1.68E-04	6.09E-05	4.91E-05	5.10E-05	5.90E-05	5.47E-05	6.32E-05	2.64E-04	2.61E-04	1.36E-04	1.40E-04	1.57E-04	4.64E-03	No
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.02E+01	No							
<b>Polycyclic Aromatic Hydrocarbons</b>																	
Benzo(a)pyrene*	NV	1.1	NV	1.97E-07	7.14E-08	5.25E-08	4.88E-08	4.82E-08	5.91E-08	6.84E-08	3.51E-07	2.65E-07	1.07E-07	1.19E-07	1.28E-07	1.70E-05	No
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No							
Naphthalene*	NV	20	NV	7.09E-06	2.57E-06	1.89E-06	1.76E-06	1.74E-06	2.13E-06	2.47E-06	1.27E-05	9.55E-06	3.85E-06	4.30E-06	4.63E-06	6.14E-04	No
Phenanthrene*	NV	NV	NV	2.45E-06	8.90E-07	6.54E-07	6.08E-07	6.00E-07	7.35E-07	8.52E-07	4.37E-06	3.30E-06	1.33E-06	1.49E-06	1.60E-06	2.12E-04	No
Anthracene*	NV	3600	NV	6.26E-07	2.27E-07	1.67E-07	1.55E-07	1.53E-07	1.88E-07	2.18E-07	1.12E-06	8.43E-07	3.40E-07	3.80E-07	4.08E-07	5.42E-05	No
Fluorene*	NV	480	NV	3.57E-07	1.30E-07	9.52E-08	8.86E-08	8.74E-08	1.07E-07	1.24E-07	6.37E-07	4.81E-07	1.94E-07	2.16E-07	2.33E-07	3.09E-05	No
Pyrene*	NV	360	NV	8.29E-06	3.01E-06	2.21E-06	2.06E-06	2.03E-06	2.49E-06	2.88E-06	1.48E-05	1.12E-05	4.51E-06	5.03E-06	5.41E-06	7.18E-04	No
Thiophene*	NV	NV	NV	4.69E-07	1.70E-07	1.25E-07	1.17E-07	1.15E-07	1.41E-07	1.63E-07	8.38E-07	6.33E-07	2.55E-07	2.85E-07	3.06E-07	4.07E-05	No
Benzo(a)anthracene*	NV	11	NV	1.21E-07	4.40E-08	3.23E-08	3.00E-08	2.97E-08	3.63E-08	4.21E-08	2.16E-07	1.63E-07	6.58E-08	7.34E-08	7.90E-08	1.05E-05	No
Acenaphthene*	NV	720	NV	1.17E-07	4.25E-08	3.12E-08	2.90E-08	2.87E-08	3.51E-08	4.07E-08	2.09E-07	1.58E-07	6.36E-08	7.10E-08	7.63E-08	1.01E-05	No
Acenaphthylene*	NV	NV	NV	2.53E-05	9.18E-06	6.75E-06	6.28E-06	6.20E-06	7.59E-06	8.80E-06	4.52E-05	3.41E-05	1.37E-05	1.53E-05	1.65E-05	2.19E-03	No
Fluoranthene*	NV	480	NV	1.97E-06	7.14E-07	5.25E-07	4.88E-07	4.82E-07	5.91E-07	6.84E-07	3.51E-06	2.65E-06	1.07E-06	1.19E-06	1.28E-06	1.70E-04	No
Benzo(b)fluoranthene*	NV	11	NV	5.08E-07	1.84E-07	1.35E-07	1.26E-07	1.24E-07	1.52E-07	1.77E-07	9.07E-07	6.84E-07	2.76E-07	3.08E-07	3.31E-07	4.40E-05	No
Benzo(g,h,i)perylene*	NV	NV	NV	9.49E-08	3.45E-08	2.53E-08	2.36E-08	2.33E-08	2.85E-08	3.30E-08	1.70E-07	1.28E-07	5.16E-08	5.76E-08	6.19E-08	8.22E-06	No
Benzo(k)fluoranthene*	NV	110	NV	1.86E-07	6.76E-08	4.97E-08	4.62E-08	4.56E-08	5.59E-08	6.48E-08	3.33E-07	2.51E-07	1.01E-07	1.13E-07	1.22E-07	1.61E-05	No
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No							
Chrysene*	NV	1100	NV	2.01E-07	7.30E-08	5.36E-08	4.99E-08	4.93E-08	6.03E-08	6.99E-08	3.59E-07	2.71E-07	1.09E-07	1.22E-07	1.31E-07	1.74E-05	No
Dibenzo(a,h)anthracene*	NV	1.1	NV	2.42E-07	8.80E-08	6.46E-08	6.01E-08	5.94E-08	7.27E-08	8.43E-08	4.33E-07	3.27E-07	1.32E-07	1.47E-07	1.58E-07	2.10E-05	No
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	1.19E-07	4.32E-08	3.17E-08	2.95E-08	2.92E-08	3.57E-08	4.14E-08	2.12E-07	1.60E-07	6.47E-08	7.22E-08	7.76E-08	1.03E-05	No

Table H-12-F-1d: Screening of Predicted Deposition Concentrations- Scenario 4

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14
<b>Total Metals</b>																	
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03									
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01									
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01									
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02									
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00									
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01									
Cadmium (Cd)	14	14.2	0.88	8.09E-01	8.02E-01	8.03E-01	8.03E-01	8.03E-01	8.04E-01	8.05E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.02E-01
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04									
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01									
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01									
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01									
Gold*	NV	NV	NV	4.53E-06	1.06E-06	1.70E-06	1.77E-06	1.94E-06	2.53E-06	3.26E-06	4.13E-07	4.59E-07	4.32E-07	4.13E-07	4.81E-07	1.64E-06	4.38E-06
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04									
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01									
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01									
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03									
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02									
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00									
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01									
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03									
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00									
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Sodium (Na)	NV	NV	352.00	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.21E+02	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.21E+02
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02									
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00									
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02									
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00									
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01									
Yttrium (Y)*	NV	NV	NV	5.53E-04	1.29E-04	2.07E-04	2.17E-04	2.37E-04	3.09E-04	3.99E-04	5.05E-05	5.61E-05	5.28E-05	5.05E-05	5.88E-05	2.00E-04	5.35E-04
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01									
<b>Polycyclic Aromatic Hydrocarbons</b>																	
Benzo(a)pyrene*	NV	1.1	NV	1.45E-06	2.81E-07	4.53E-07	4.72E-07	5.02E-07	6.47E-07	7.78E-07	8.13E-08	1.05E-07	1.03E-07	8.12E-08	9.64E-08	1.40E-07	3.04E-07
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Naphthalene*	NV	20	NV	5.21E-05	1.01E-05	1.63E-05	1.70E-05	1.81E-05	2.33E-05	2.80E-05	2.93E-06	3.79E-06	3.70E-06	2.93E-06	3.47E-06	5.04E-06	1.10E-05
Phenanthrene*	NV	NV	NV	1.80E-05	3.50E-06	5.63E-06	5.88E-06	6.26E-06	8.06E-06	9.68E-06	1.01E-06	1.31E-06	1.28E-06	1.01E-06	1.20E-06	1.74E-06	3.79E-06
Anthracene*	NV	3600	NV	4.60E-06	8.95E-07	1.44E-06	1.50E-06	1.60E-06	2.06E-06	2.47E-06	2.59E-07	3.35E-07	3.27E-07	2.58E-07	3.07E-07	4.45E-07	9.68E-07
Fluorene*	NV	480	NV	2.62E-06	5.10E-07	8.21E-07	8.56E-07	9.11E-07	1.17E-06	1.41E-06	1.47E-07	1.91E-07	1.86E-07	1.47E-07	1.75E-07	2.53E-07	5.52E-07
Pyrene*	NV	360	NV	6.09E-05	1.19E-05	1.91E-05	1.99E-05	2.12E-05	2.73E-05	3.28E-05	3.42E-06	4.43E-06	4.33E-06	3.42E-06	4.06E-06	5.89E-06	1.28E-05
Thiophene*	NV	NV	NV	3.45E-06	6.71E-07	1.08E-06	1.13E-06	1.20E-06	1.54E-06	1.86E-06	1.94E-07	2.51E-07	2.45E-07	1.94E-07	2.30E-07	3.34E-07	7.26E-07
Benzo(a)anthracene*	NV	11	NV	8.90E-07	1.73E-07	2.78E-07	2.90E-07	3.09E-07	3.98E-07	4.79E-07	5.00E-08	6.47E-08	6.32E-08	5.00E-08	5.93E-08	8.60E-08	1.87E-07
Acenaphthene*	NV	720	NV	8.60E-07	1.67E-07	2.69E-07	2.81E-07	2.99E-07	3.85E-07	4.62E-07	4.83E-08	6.26E-08	6.10E-08	4.83E-08	5.73E-08	8.31E-08	1.81E-07
Acenaphthylene*	NV	NV	NV	1.86E-04	3.62E-05	5.82E-05	6.07E-05	6.46E-05	8.32E-05	1.00E-04	1.04E-05	1.35E-05	1.32E-05	1.04E-05	1.24E-05	1.80E-05	3.91E-05
Fluoranthene*	NV	480	NV	1.45E-05	2.81E-06	4.53E-06	4.72E-06	5.02E-06	6.47E-06	7.78E-06	8.13E-07	1.05E-06	1.03E-06	8.12E-07	9.64E-07	1.40E-06	3.04E-06
Benzo(b)fluoranthene*	NV	11	NV	3.73E-06	7.26E-07	1.17E-06	1.22E-06	1.30E-06	1.67E-06	2.01E-06	2.10E-07	2.71E-07	2.65E-07	2.10E-07	2.49E-07	3.61E-07	7.85E-07
Benzo(g,h,i)perylene*	NV	NV	NV	6.98E-07	1.36E-07	2.18E-07	2.28E-07	2.42E-07	3.12E-07	3.75E-07	3.92E-08	5.08E-08	4.95E-08	3.92E-08	4.65E-08	6.74E-08	1.47E-07
Benzo(k)fluoranthene*	NV	110	NV	1.37E-06	2.66E-07	4.28E-07	4.47E-07	4.76E-07	6.13E-07	7.36E-07	7.69E-08	9.96E-08	9.72E-08	7.69E-08	9.13E-08	1.32E-07	2.88E-07
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Chrysene*	NV	1100	NV	1.48E-06	2.87E-07	4.62E-07	4.82E-07	5.13E-07	6.61E-07	7.94E-07	8.30E-08	1.07E-07	1.05E-07	8.30E-08	9.85E-08	1.43E-07	3.11E-07
Dibenzo(a,h)anthracene*	NV	1.1	NV	1.78E-06	3.47E-07	5.57E-07	5.81E-07	6.19E-07	7.97E-07	9.58E-07	1.00E-07	1.30E-07	1.26E-07	1.00E-07	1.19E-07	1.72E-07	3.75E-07
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	8.75E-07	1.70E-07	2.74E-07	2.85E-07	3.04E-07	3.91E-07	4.70E-07	4.92E-08	6.36E-08	6.21E-08	4.91E-08	5.83E-08	8.45	

Table H-12-F-1d: Screening of Predicted Deposition Concentrations- Scenario 4

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3	Camp	Chemical of Concern?	
<b>Total Metals</b>																		
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.70E+03	No								
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.15E-01	No								
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	6.00E+01	No								
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	No								
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	No								
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	No								
Cadmium (Cd)	14	14.2	0.88	8.02E-01	8.01E-01	8.00E-01	8.00E-01	8.00E-01	8.01E-01	8.01E-01	8.03E-01	8.02E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	9.07E-01	No
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	No								
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.14E+01	No								
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	No								
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	No								
Gold*	NV	NV	NV	4.88E-06	3.47E-06	1.51E-06	1.40E-06	1.55E-06	1.27E-06	1.67E-06	3.95E-06	2.25E-06	1.64E-06	1.66E-06	1.83E-06	3.61E-05	No	
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	No								
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	No								
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	No								
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.09E+03	No								
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	No								
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	No								
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	No								
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.68E+03	No								
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	No								
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No								
Sodium (Na)	NV	NV	352.00	3.21E+02	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.27E+02	No	
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	No								
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No								
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	No								
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.47E+02	No								
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	No								
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.91E+01	No								
Yttrium (Y)*	NV	NV	NV	5.96E-04	4.24E-04	1.85E-04	1.71E-04	1.90E-04	1.55E-04	2.04E-04	4.82E-04	2.75E-04	2.00E-04	2.03E-04	2.24E-04	4.41E-03	No	
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.02E+01	No								
<b>Polycyclic Aromatic Hydrocarbons</b>																		
Benzo(a)pyrene*	NV	1.1	NV	2.97E-07	1.24E-07	7.69E-08	6.84E-08	6.50E-08	8.25E-08	1.05E-07	4.08E-07	2.43E-07	1.24E-07	1.34E-07	1.45E-07	1.69E-05	No	
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No								
Naphthalene*	NV	20	NV	1.07E-05	4.47E-06	2.77E-06	2.47E-06	2.34E-06	2.97E-06	3.78E-06	1.47E-05	8.77E-06	4.47E-06	4.83E-06	5.22E-06	6.11E-04	No	
Phenanthrene*	NV	NV	NV	3.69E-06	1.54E-06	9.58E-07	8.52E-07	8.09E-07	1.03E-06	1.31E-06	5.07E-06	3.03E-06	1.54E-06	1.67E-06	1.80E-06	2.11E-04	No	
Anthracene*	NV	3600	NV	9.44E-07	3.94E-07	2.45E-07	2.18E-07	2.07E-07	2.62E-07	3.34E-07	1.30E-06	7.74E-07	3.94E-07	4.26E-07	4.61E-07	5.39E-05	No	
Fluorene*	NV	480	NV	5.38E-07	2.25E-07	1.40E-07	1.24E-07	1.18E-07	1.50E-07	1.90E-07	7.39E-07	4.41E-07	2.25E-07	2.43E-07	2.63E-07	3.07E-05	No	
Pyrene*	NV	360	NV	1.25E-05	5.22E-06	3.24E-06	2.88E-06	2.74E-06	3.48E-06	4.43E-06	1.72E-05	1.03E-05	5.22E-06	5.64E-06	6.10E-06	7.14E-04	No	
Thiophene*	NV	NV	NV	7.08E-07	2.96E-07	1.84E-07	1.63E-07	1.55E-07	1.97E-07	2.51E-07	9.73E-07	5.81E-07	2.96E-07	3.20E-07	3.46E-07	4.04E-05	No	
Benzo(a)anthracene*	NV	11	NV	1.83E-07	7.63E-08	4.73E-08	4.21E-08	4.00E-08	5.07E-08	6.46E-08	2.51E-07	1.50E-07	7.63E-08	8.24E-08	8.91E-08	1.04E-05	No	
Acenaphthene*	NV	720	NV	1.76E-07	7.37E-08	4.58E-08	4.07E-08	3.86E-08	4.90E-08	6.24E-08	2.42E-07	1.45E-07	7.37E-08	7.96E-08	8.61E-08	1.01E-05	No	
Acenaphthylene*	NV	NV	NV	3.81E-05	1.59E-05	9.89E-06	8.80E-06	8.35E-06	1.06E-05	1.35E-05	5.24E-05	3.13E-05	1.59E-05	1.72E-05	1.86E-05	2.18E-03	No	
Fluoranthene*	NV	480	NV	2.97E-06	1.24E-06	7.69E-07	6.84E-07	6.50E-07	8.25E-07	1.05E-06	4.08E-06	2.43E-06	1.24E-06	1.34E-06	1.45E-06	1.69E-04	No	
Benzo(b)fluoranthene*	NV	11	NV	7.66E-07	3.20E-07	1.99E-07	1.77E-07	1.68E-07	2.13E-07	2.71E-07	1.05E-06	6.28E-07	3.20E-07	3.46E-07	3.74E-07	4.37E-05	No	
Benzo(g,h,i)perylene*	NV	NV	NV	1.43E-07	5.98E-08	3.71E-08	3.30E-08	3.14E-08	3.98E-08	5.07E-08	1.97E-07	1.17E-07	5.98E-08	6.46E-08	6.99E-08	8.18E-06	No	
Benzo(k)fluoranthene*	NV	110	NV	2.81E-07	1.17E-07	7.28E-08	6.48E-08	6.15E-08	7.81E-08	9.94E-08	3.86E-07	2.30E-07	1.17E-07	1.27E-07	1.37E-07	1.60E-05	No	
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No								
Chrysene*	NV	1100	NV	3.03E-07	1.27E-07	7.86E-08	6.99E-08	6.64E-08	8.42E-08	1.07E-07	4.16E-07	2.48E-07	1.27E-07	1.37E-07	1.48E-07	1.73E-05	No	
Dibenzo(a,h)anthracene*	NV	1.1	NV	3.65E-07	1.53E-07	9.48E-08	8.43E-08	8.00E-08	1.02E-07	1.29E-07	5.02E-07	3.00E-07	1.53E-07	1.65E-07	1.78E-07	2.09E-05	No	
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	1.79E-07	7.50E-08	4.65E-08	4.14E-08	3.93E-08	4.99E-08	6.35E-08	2.47E-07	1.47E-07	7.50E-08	8.10E-08	8.76E-08	1.03E-05	No	

Table H-12-F-1e: Screening of Predicted Deposition Concentrations- Scenario 5

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14
<b>Total Metals</b>																	
Aluminum (Al)	NV	15400	10637	9.68E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.68E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01									
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01									
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02									
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00									
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01									
Cadmium (Cd)	14	14.2	0.88	8.10E-01	8.02E-01	8.03E-01	8.04E-01	8.04E-01	8.05E-01	8.06E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04									
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01									
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01									
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01									
Gold*	NV	NV	NV	5.67E-06	1.41E-06	2.61E-06	2.79E-06	3.14E-06	4.41E-06	5.88E-06	4.31E-07	5.02E-07	4.06E-07	4.31E-07	5.16E-07	7.04E-07	1.92E-06
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04									
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01									
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01									
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03									
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02									
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00									
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01									
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03									
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00									
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Sodium (Na)	NV	NV	352.00	3.21E+02	3.20E+02	3.21E+02	3.21E+02	3.21E+02	3.21E+02	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02									
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00									
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02									
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00									
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01									
Yttrium (Y)*	NV	NV	NV	6.93E-04	1.72E-04	3.19E-04	3.41E-04	3.84E-04	5.39E-04	7.18E-04	5.26E-05	6.14E-05	4.96E-05	5.26E-05	6.31E-05	8.60E-05	2.34E-04
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01									
<b>Polycyclic Aromatic Hydrocarbons</b>																	
Benzo(a)pyrene*	NV	1.1	NV	1.56E-06	3.01E-07	5.40E-07	5.64E-07	6.00E-07	7.70E-07	9.31E-07	8.57E-08	1.15E-07	1.06E-07	8.57E-08	1.08E-07	1.24E-07	2.38E-07
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Naphthalene*	NV	20	NV	5.62E-05	1.08E-05	1.95E-05	2.03E-05	2.16E-05	2.77E-05	3.36E-05	3.09E-06	4.15E-06	3.83E-06	3.09E-06	3.88E-06	4.47E-06	8.57E-06
Phenanthrene*	NV	NV	NV	1.94E-05	3.75E-06	6.73E-06	7.02E-06	7.47E-06	9.58E-06	1.16E-05	1.07E-06	1.43E-06	1.32E-06	1.07E-06	1.34E-06	1.54E-06	2.96E-06
Anthracene*	NV	3600	NV	4.96E-06	9.58E-07	1.72E-06	1.79E-06	1.91E-06	2.45E-06	2.96E-06	2.73E-07	3.66E-07	3.38E-07	2.73E-07	3.43E-07	3.95E-07	7.57E-07
Fluorene*	NV	480	NV	2.83E-06	5.46E-07	9.80E-07	1.02E-06	1.09E-06	1.40E-06	1.69E-06	1.55E-07	2.09E-07	1.93E-07	1.56E-07	1.95E-07	2.25E-07	4.31E-07
Pyrene*	NV	360	NV	6.58E-05	1.27E-05	2.28E-05	2.38E-05	2.53E-05	3.24E-05	3.92E-05	3.61E-06	4.85E-06	4.48E-06	3.61E-06	4.54E-06	5.23E-06	1.00E-05
Thiophene*	NV	NV	NV	3.72E-06	7.18E-07	1.29E-06	1.35E-06	1.43E-06	1.84E-06	2.22E-06	2.05E-07	2.75E-07	2.54E-07	2.05E-07	2.57E-07	2.96E-07	5.67E-07
Benzo(a)anthracene*	NV	11	NV	9.60E-07	1.85E-07	3.33E-07	3.47E-07	3.69E-07	4.74E-07	5.73E-07	5.28E-08	7.08E-08	6.55E-08	5.28E-08	6.63E-08	7.63E-08	1.46E-07
Acenaphthene*	NV	720	NV	9.28E-07	1.79E-07	3.21E-07	3.35E-07	3.57E-07	4.58E-07	5.54E-07	5.10E-08	6.84E-08	6.33E-08	5.10E-08	6.40E-08	7.38E-08	1.41E-07
Acenaphthylene*	NV	NV	NV	2.01E-04	3.87E-05	6.95E-05	7.25E-05	7.71E-05	9.89E-05	1.20E-04	1.10E-05	1.48E-05	1.37E-05	1.10E-05	1.38E-05	1.59E-05	3.06E-05
Fluoranthene*	NV	480	NV	1.56E-05	3.01E-06	5.40E-06	5.64E-06	6.00E-06	7.70E-06	9.31E-06	8.57E-07	1.15E-06	1.06E-06	8.58E-07	1.08E-06	1.24E-06	2.38E-06
Benzo(b)fluoranthene*	NV	11	NV	4.03E-06	7.77E-07	1.39E-06	1.45E-06	1.55E-06	1.99E-06	2.40E-06	2.21E-07	2.97E-07	2.75E-07	2.21E-07	2.78E-07	3.20E-07	6.14E-07
Benzo(g,h,i)perylene*	NV	NV	NV	7.53E-07	1.45E-07	2.61E-07	2.72E-07	2.89E-07	3.71E-07	4.49E-07	4.14E-08	5.55E-08	5.13E-08	4.14E-08	5.20E-08	5.99E-08	1.15E-07
Benzo(k)fluoranthene*	NV	110	NV	1.48E-06	2.85E-07	5.12E-07	5.34E-07	5.68E-07	7.29E-07	8.81E-07	8.12E-08	1.09E-07	1.01E-07	8.12E-08	1.02E-07	1.17E-07	2.25E-07
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Chrysene*	NV	1100	NV	1.59E-06	3.07E-07	5.52E-07	5.76E-07	6.13E-07	7.86E-07	9.51E-07	8.76E-08	1.18E-07	1.09E-07	8.76E-08	1.10E-07	1.27E-07	2.43E-07
Dibenzo(a,h)anthracene*	NV	1.1	NV	1.92E-06	3.71E-07	6.66E-07	6.94E-07	7.39E-07	9.48E-07	1.15E-06	1.06E-07	1.42E-07	1.31E-07	1.06E-07	1.33E-07	1.53E-07	2.93E-07
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	9.44E-07	1.82E-07	3.27E-07	3.41E-07	3.63E-07	4.66E-07	5.63E-07	5.19E-08	6.96E-08	6.43E-08	5.19E-08	6.51E-08	7.50E-	

Table H-12-F-1e: Screening of Predicted Deposition Concentrations- Scenario 5

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA- Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3	Camp	Chemical of Concern?	
<b>Total Metals</b>																		
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.71E+03	No							
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.15E-01	No							
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	6.00E+01	No							
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	No							
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	No							
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	No							
Cadmium (Cd)	14	14.2	0.88	8.01E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.02E-01	8.02E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01	9.08E-01	No
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	No							
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.14E+01	No							
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	No							
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	No							
Gold*	NV	NV	NV	1.41E-06	4.71E-07	3.73E-07	3.79E-07	4.25E-07	3.98E-07	4.53E-07	2.25E-06	1.69E-06	9.05E-07	9.40E-07	1.04E-06	3.92E-05	No	
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	No							
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	No							
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	No							
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.09E+03	No							
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	No							
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	No							
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	No							
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.68E+03	No							
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	No							
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No							
Sodium (Na)	NV	NV	352.00	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.28E+02	No							
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	No							
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No							
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	No							
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.47E+02	No							
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	No							
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.91E+01	No							
Yttrium (Y)*	NV	NV	NV	1.72E-04	5.75E-05	4.56E-05	4.63E-05	5.20E-05	4.87E-05	5.53E-05	2.75E-04	2.06E-04	1.11E-04	1.15E-04	1.28E-04	4.79E-03	No	
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.02E+01	No								
<b>Polycyclic Aromatic Hydrocarbons</b>																		
Benzo(a)pyrene*	NV	1.1	NV	1.98E-07	7.02E-08	5.14E-08	4.76E-08	4.64E-08	5.71E-08	6.57E-08	3.60E-07	2.42E-07	1.01E-07	1.13E-07	1.21E-07	1.71E-05	No	
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No								
Naphthalene*	NV	20	NV	7.13E-06	2.53E-06	1.85E-06	1.71E-06	1.67E-06	2.06E-06	2.37E-06	1.30E-05	8.71E-06	3.64E-06	4.06E-06	4.37E-06	6.18E-04	No	
Phenanthrene*	NV	NV	NV	2.46E-06	8.74E-07	6.40E-07	5.92E-07	5.78E-07	7.11E-07	8.18E-07	4.48E-06	3.01E-06	1.26E-06	1.40E-06	1.51E-06	2.13E-04	No	
Anthracene*	NV	3600	NV	6.29E-07	2.23E-07	1.64E-07	1.51E-07	1.48E-07	1.82E-07	2.09E-07	1.15E-06	7.69E-07	3.21E-07	3.59E-07	3.86E-07	5.45E-05	No	
Fluorene*	NV	480	NV	3.59E-07	1.27E-07	9.32E-08	8.62E-08	8.41E-08	1.04E-07	1.19E-07	6.53E-07	4.38E-07	1.83E-07	2.05E-07	2.20E-07	3.11E-05	No	
Pyrene*	NV	360	NV	8.34E-06	2.96E-06	2.17E-06	2.00E-06	1.96E-06	2.41E-06	2.77E-06	1.52E-05	1.02E-05	4.25E-06	4.75E-06	5.11E-06	7.22E-04	No	
Thiophene*	NV	NV	NV	4.72E-07	1.68E-07	1.23E-07	1.13E-07	1.11E-07	1.36E-07	1.57E-07	8.59E-07	5.77E-07	2.41E-07	2.69E-07	2.89E-07	4.09E-05	No	
Benzo(a)anthracene*	NV	11	NV	1.22E-07	4.32E-08	3.16E-08	2.93E-08	2.86E-08	3.51E-08	4.04E-08	2.21E-07	1.49E-07	6.21E-08	6.94E-08	7.46E-08	1.05E-05	No	
Acenaphthene*	NV	720	NV	1.18E-07	4.18E-08	3.06E-08	2.83E-08	2.76E-08	3.39E-08	3.91E-08	2.14E-07	1.44E-07	6.00E-08	6.71E-08	7.21E-08	1.02E-05	No	
Acenaphthylene*	NV	NV	NV	2.54E-05	9.03E-06	6.61E-06	6.11E-06	5.96E-06	7.34E-06	8.45E-06	4.63E-05	3.11E-05	1.30E-05	1.45E-05	1.56E-05	2.20E-03	No	
Fluoranthene*	NV	480	NV	1.98E-06	7.02E-07	5.14E-07	4.76E-07	4.64E-07	5.71E-07	6.57E-07	3.60E-06	2.42E-06	1.01E-06	1.13E-06	1.21E-06	1.71E-04	No	
Benzo(b)fluoranthene*	NV	11	NV	5.11E-07	1.81E-07	1.33E-07	1.23E-07	1.20E-07	1.47E-07	1.70E-07	9.29E-07	6.24E-07	2.61E-07	2.91E-07	3.13E-07	4.42E-05	No	
Benzo(g,h,i)perylene*	NV	NV	NV	9.55E-08	3.39E-08	2.48E-08	2.29E-08	2.24E-08	2.75E-08	3.17E-08	1.74E-07	1.17E-07	4.87E-08	5.44E-08	5.85E-08	8.27E-06	No	
Benzo(k)fluoranthene*	NV	110	NV	1.87E-07	6.65E-08	4.87E-08	4.50E-08	4.39E-08	5.40E-08	6.22E-08	3.41E-07	2.29E-07	9.56E-08	1.07E-07	1.15E-07	1.62E-05	No	
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No								
Chrysene*	NV	1100	NV	2.02E-07	7.17E-08	5.25E-08	4.86E-08	4.74E-08	5.83E-08	6.71E-08	3.68E-07	2.47E-07	1.03E-07	1.15E-07	1.24E-07	1.75E-05	No	
Dibenzo(a,h)anthracene*	NV	1.1	NV	2.44E-07	8.65E-08	6.33E-08	5.86E-08	5.71E-08	7.03E-08	8.10E-08	4.43E-07	2.98E-07	1.24E-07	1.39E-07	1.49E-07	2.11E-05	No	
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	1.20E-07	4.25E-08	3.11E-08	2.88E-08	2.81E-08	3.45E-08	3.98E-08	2.18E-07	1.46E-07	6.11E-08	6.82E-08	7.33E-08	1.04E-05</		

Table H-12-F-1f: Screening of Predicted Deposition Concentrations- Scenario 6

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA-Regional Screening Levels (mg/kg) <sup>(b)</sup>	Background + 10%	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15
<b>Total Metals</b>																		
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03									
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01									
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01									
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02									
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00									
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01									
Cadmium (Cd)	14	14.2	0.88	8.09E-01	8.02E-01	8.03E-01	8.03E-01	8.03E-01	8.04E-01	8.04E-01	8.00E-01	8.01E-01	8.01E-01	8.00E-01	8.01E-01	8.01E-01	8.01E-01	8.01E-01
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04									
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01									
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01									
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01									
Gold*	NV	NV	NV	2.80E-06	4.02E-07	7.85E-07	8.12E-07	8.88E-07	1.15E-06	1.30E-06	1.21E-07	1.67E-07	1.53E-07	1.21E-07	1.57E-07	2.20E-07	8.63E-07	5.52E-07
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04									
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01									
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01									
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03									
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02									
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00									
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01									
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03									
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00									
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Sodium (Na)	NV	NV	352.00	3.21E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02								
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02									
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01									
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00									
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02									
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00									
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01									
Yttrium (Y)*	NV	NV	NV	3.42E-04	4.91E-05	9.59E-05	9.92E-05	1.08E-04	1.40E-04	1.59E-04	1.47E-05	2.04E-05	1.87E-05	1.47E-05	1.92E-05	2.68E-05	1.05E-04	6.75E-05
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01									
<b>Polycyclic Aromatic Hydrocarbons</b>																		
Benzo(a)pyrene*	NV	1.1	NV	1.39E-06	2.53E-07	4.20E-07	4.38E-07	4.65E-07	5.99E-07	7.07E-07	6.86E-08	9.36E-08	9.00E-08	6.85E-08	8.36E-08	9.75E-08	1.96E-07	1.59E-07
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Naphthalene*	NV	20	NV	5.01E-05	9.11E-06	1.52E-05	1.58E-05	1.67E-05	2.16E-05	2.55E-05	2.47E-06	3.37E-06	3.25E-06	2.47E-06	3.01E-06	3.51E-06	7.06E-06	5.72E-06
Phenanthrene*	NV	NV	NV	1.73E-05	3.15E-06	5.23E-06	5.45E-06	5.79E-06	7.46E-06	8.80E-06	8.54E-07	1.17E-06	1.12E-06	8.54E-07	1.04E-06	1.21E-06	2.44E-06	1.98E-06
Anthracene*	NV	3600	NV	4.42E-06	8.05E-07	1.34E-06	1.39E-06	1.48E-06	1.91E-06	2.25E-06	2.18E-07	2.98E-07	2.86E-07	2.18E-07	2.66E-07	3.10E-07	6.23E-07	5.05E-07
Fluorene*	NV	480	NV	2.52E-06	4.59E-07	7.62E-07	7.94E-07	8.43E-07	1.09E-06	1.28E-06	1.24E-07	1.70E-07	1.63E-07	1.24E-07	1.52E-07	1.77E-07	3.55E-07	2.88E-07
Pyrene*	NV	360	NV	5.86E-05	1.07E-05	1.77E-05	1.85E-05	1.96E-05	2.52E-05	2.98E-05	2.89E-06	3.95E-06	3.80E-06	2.89E-06	3.52E-06	4.11E-06	8.26E-06	6.69E-06
Thiophene*	NV	NV	NV	3.32E-06	6.04E-07	1.00E-06	1.05E-06	1.11E-06	1.43E-06	1.69E-06	1.64E-07	2.23E-07	2.15E-07	1.64E-07	1.99E-07	2.33E-07	4.68E-07	3.79E-07
Benzo(a)anthracene*	NV	11	NV	8.55E-07	1.56E-07	2.59E-07	2.70E-07	2.86E-07	3.68E-07	4.35E-07	4.22E-08	5.76E-08	5.54E-08	4.22E-08	5.14E-08	6.00E-08	1.21E-07	9.76E-08
Acenaphthene*	NV	720	NV	8.27E-07	1.50E-07	2.50E-07	2.61E-07	2.76E-07	3.56E-07	4.20E-07	4.08E-08	5.57E-08	5.35E-08	4.08E-08	4.97E-08	5.80E-08	1.17E-07	9.43E-08
Acenaphthylene*	NV	NV	NV	1.79E-04	3.25E-05	5.41E-05	5.63E-05	5.97E-05	7.70E-05	9.09E-05	8.82E-06	1.20E-05	1.16E-05	8.81E-06	1.07E-05	1.25E-05	2.52E-05	2.04E-05
Fluoranthene*	NV	480	NV	1.39E-05	2.53E-06	4.20E-06	4.38E-06	4.65E-06	5.99E-06	7.07E-06	6.86E-07	9.36E-07	9.00E-07	6.86E-07	8.36E-07	9.75E-07	1.96E-06	1.59E-06
Benzo(b)fluoranthene*	NV	11	NV	3.59E-06	6.53E-07	1.09E-06	1.13E-06	1.20E-06	1.55E-06	1.82E-06	1.77E-07	2.42E-07	2.32E-07	1.77E-07	2.16E-07	2.52E-07	5.06E-07	4.09E-07
Benzo(g,h,i)perylene*	NV	NV	NV	6.71E-07	1.22E-07	2.03E-07	2.11E-07	2.24E-07	2.89E-07	3.41E-07	3.31E-08	4.52E-08	4.35E-08	3.31E-08	4.03E-08	4.70E-08	9.45E-08	7.66E-08
Benzo(k)fluoranthene*	NV	110	NV	1.32E-06	2.39E-07	3.98E-07	4.15E-07	4.40E-07	5.67E-07	6.69E-07	6.49E-08	8.87E-08	8.52E-08	6.49E-08	7.91E-08	9.23E-08	1.85E-07	1.50E-07
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00									
Chrysene*	NV	1100																

Table H-12-F-1f: Screening of Predicted Deposition Concentrations- Scenario 6

Parameter	CCME Soil Guidelines (mg/kg) <sup>(a)</sup>	EPA-Regional Screening Levels <sup>(b)</sup> (mg/kg)	Background + 10%	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20	Receptor 21	Receptor 22	Park	Rankin 1	Rankin 2	Rankin 3	Camp	Chemical of Concern?	
<b>Total Metals</b>																	
Aluminum (Al)	NV	15400	10637	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.67E+03	9.70E+03	No						
Antimony (Sb)	20	6.2	0.12	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.13E-01	1.15E-01	No						
Arsenic (As)	12	6.8	65.89	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	5.99E+01	No						
Barium (Ba)	6800	3000	130.90	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	1.19E+02	No						
Beryllium (Be)	75	32	4.08	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	3.71E+00	No						
Bismuth (Bi)	NV	NV	0.17	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	No						
Cadmium (Cd)	14	14.2	0.88	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.02E-01	8.01E-01	8.00E-01	8.01E-01	8.01E-01	8.01E-01	9.06E-01	No
Calcium (Ca)	NV	NV	29370	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	2.67E+04	No						
Chromium (Cr)	220	NV	56.43	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.13E+01	5.14E+01	No						
Cobalt (Co)	50	4.6	49.50	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	No						
Copper (Cu)	1100	620	79.20	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	7.20E+01	No						
Gold*	NV	NV	NV	1.74E-07	1.33E-07	1.31E-07	1.40E-07	1.29E-07	1.40E-07	1.03E-06	4.13E-07	2.49E-07	2.54E-07	2.83E-07	2.83E-07	3.25E-05	No
Iron (Fe)	NV	11000	23430.00	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	2.13E+04	No						
Lead (Pb)	140	80	11.00	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	1.00E+01	No						
Lithium (Li)	NV	32	14.41	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	No						
Magnesium (Mg)	NV	NV	7788.00	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.08E+03	7.09E+03	No						
Manganese (Mn)	NV	360	467.50	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	4.25E+02	No						
Molybdenum (Mo)	10	78	7.70	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	7.00E+00	No						
Nickel (Ni)	200	300	52.80	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	4.80E+01	No						
Potassium (K)	NV	NV	2937.00	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.67E+03	2.68E+03	No						
Selenium (Se)	1	78	1.32	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	1.20E+00	No						
Silver (Ag)	80	78	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No						
Sodium (Na)	NV	NV	352.00	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.27E+02	No						
Strontium (Sr)	NV	9400	214.50	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	1.95E+02	No						
Thallium (Tl)	1	0.156	0.55	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	5.00E-01	No						
Tin (Sn)	50	9400	2.75	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	2.50E+00	No						
Titanium (Ti)	NV	NV	1039.50	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.45E+02	9.46E+02	No						
Uranium (U)	23	3.2	2.17	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	1.97E+00	No						
Vanadium (V) <sup>(c)</sup>	130	78	42.90	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.90E+01	3.91E+01	No						
Yttrium (Y)*	NV	NV	NV	2.13E-05	1.63E-05	1.60E-05	1.71E-05	1.58E-05	1.72E-05	1.26E-04	5.05E-05	3.04E-05	3.11E-05	3.45E-05	3.45E-05	3.97E-03	No
Zinc (Zn)	10000	4600	77.00	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.00E+01	7.02E+01	No						
<b>Polycyclic Aromatic Hydrocarbons</b>																	
Benzo(a)pyrene*	NV	1.1	NV	5.58E-08	4.07E-08	3.75E-08	3.64E-08	4.45E-08	5.07E-08	3.03E-07	1.83E-07	7.68E-08	8.59E-08	9.22E-08	1.68E-05	No	
Chlorobenzene*	NV	56	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No						
Naphthalene*	NV	20	NV	2.01E-06	1.47E-06	1.35E-06	1.31E-06	1.60E-06	1.83E-06	1.09E-05	6.60E-06	2.77E-06	3.10E-06	3.32E-06	6.07E-04	No	
Phenanthrene*	NV	NV	NV	6.95E-07	5.07E-07	4.67E-07	4.53E-07	5.54E-07	6.32E-07	3.77E-06	2.28E-06	9.57E-07	1.07E-06	1.15E-06	2.10E-04	No	
Anthracene*	NV	3600	NV	1.78E-07	1.30E-07	1.19E-07	1.16E-07	1.42E-07	1.61E-07	9.64E-07	5.82E-07	2.44E-07	2.73E-07	2.93E-07	5.36E-05	No	
Fluorene*	NV	480	NV	1.01E-07	7.39E-08	6.81E-08	6.59E-08	8.08E-08	9.20E-08	5.49E-07	3.32E-07	1.39E-07	1.56E-07	1.67E-07	3.06E-05	No	
Pyrene*	NV	360	NV	2.35E-06	1.72E-06	1.58E-06	1.53E-06	1.88E-06	2.14E-06	1.28E-05	7.71E-06	3.24E-06	3.62E-06	3.89E-06	7.10E-04	No	
Thiophene*	NV	NV	NV	1.33E-07	9.72E-08	8.96E-08	8.68E-08	1.06E-07	1.21E-07	7.23E-07	4.37E-07	1.83E-07	2.05E-07	2.20E-07	4.02E-05	No	
Benzo(a)anthracene*	NV	11	NV	3.43E-08	2.51E-08	2.31E-08	2.24E-08	2.74E-08	3.12E-08	1.86E-07	1.13E-07	4.73E-08	5.29E-08	5.67E-08	1.04E-05	No	
Acenaphthene*	NV	720	NV	3.32E-08	2.42E-08	2.23E-08	2.16E-08	2.65E-08	3.02E-08	1.80E-07	1.09E-07	4.57E-08	5.11E-08	5.48E-08	1.00E-05	No	
Acenaphthylene*	NV	NV	NV	7.17E-06	5.24E-06	4.83E-06	4.67E-06	5.72E-06	6.52E-06	3.89E-05	2.35E-05	9.88E-06	1.10E-05	1.19E-05	2.17E-03	No	
Fluoranthene*	NV	480	NV	5.58E-07	4.08E-07	3.75E-07	3.64E-07	4.45E-07	5.07E-07	3.03E-06	1.83E-06	7.68E-07	8.59E-07	9.22E-07	1.68E-04	No	
Benzo(b)fluoranthene*	NV	11	NV	1.44E-07	1.05E-07	9.69E-08	9.38E-08	1.15E-07	1.31E-07	7.82E-07	4.72E-07	1.98E-07	2.22E-07	2.38E-07	4.35E-05	No	
Benzo(g,h,i)perylene*	NV	NV	NV	2.69E-08	1.97E-08	1.81E-08	1.75E-08	2.15E-08	2.45E-08	1.46E-07	8.83E-08	3.71E-08	4.15E-08	4.45E-08	8.13E-06	No	
Benzo(k)fluoranthene*	NV	110	NV	5.28E-08	3.86E-08	3.55E-08	3.44E-08	4.22E-08	4.80E-08	2.87E-07	1.73E-07	7.27E-08	8.13E-08	8.73E-08	1.60E-05	No	
Biphenyl*	NV	9.4	NV	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	No							
Chrysene*	NV	1100	NV	5.70E-08	4.16E-08	3.83E-08	3.71E-08	4.55E-08	5.18E-08	3.09E-07	1.87E-07	7.85E-08	8.78E-08	9.42E-08	1.72E-05	No	
Dibenzo(a,h)anthracene*	NV	1.1	NV	6.87E-08	5.02E-08	4.62E-08	4.48E-08	5.48E-08	6.25E-08	3.73E-07	2.25E-07	9.46E-08	1.06E-07	1.14E-07	2.08E-05	No	
Indeno(1,2,3-c,d)pyrene*	NV	11	NV	3.37E-08	2.46E-08	2.27E-08	2.20E-08	2.69E-08	3.07E-08	1.83E-07	1.11E-07	4.65E-08	5.20E-08	5.58E-08	1.02E-05	No	

**APPENDIX H-12-G**

## Water Quality Screening – Human Health

**Table H-12-G-1: Water Quality for Human Health for Meliadine Lake - Edge of Mixing Zone**

**Table H-12-G-2a: Water Quality Screening for Human Health for Small Waterbodies - Lake CP1**

**Table H-12-G-2b: Water Quality Screening for Human Health for Small Waterbodies - Saline Pond B7**

**Table H-12-G-2c: Water Quality Screening for Human Health for Small Waterbodies - Lake B45**

**Table H-12-G-2d: Water Quality Screening for Human Health for Small Waterbodies - Contact Pond B4**

**Table H-12-G-2e: Water Quality Screening for Human Health for Small Waterbodies - Lake B2**

**Table H-12-G-2f: Water Quality Screening for Human Health for Small Waterbodies - Lake A8 West**

**Table H-12-G-2g: Water Quality Screening for Human Health for Small Waterbodies - Lake A1**

**Table H-12-G-2h: Water Quality Screening for Human Health for Small Waterbodies - Lake CH6**

**Table H-12-G-3a: Water Quality for Pit Lakes - NORWES Pit Lake**

**Table H-12-G-3b: Water Quality for Pit Lake - TIRI Pit Lake**

**Table H-12-G-3c: Water Quality for Pit Lakes - Pump Pit Lake**

**Table H-12-G-3d: Water Quality for Pit Lakes - F-Zone**

**Table H-12-G-3e: Water Quality for Pit Lakes - Discovery**

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Existing Concentration <sup>d</sup>	Predicted Concentration <sup>e</sup>	COPC <sup>f</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	41	68	No	< G
Calcium	mg/L	NV	6.7	7.8	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	9.2	21	No	< G
Fluoride	mg/L	1.5	0.020	0.024	No	< G
Sodium	mg/L	200 <sup>b</sup>	4.7	11	No	< G
Sulphate	mg/L	500 <sup>b</sup>	3.8	7.2	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.0061	0.16	No	Less than concentrations expected to have adverse effects in humans <sup>h</sup>
Nitrate as Nitrogen	mg/L	10	0.022	0.29	No	< G
Nitrite as Nitrogen	mg/L	1	0.0033	0.0074	No	< G
Phosphorus (total)	mg/L	NV	0.018	0.032	No	No direct impact on human health
Potassium	mg/L	NV	0.85	1.2	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	2.0	2.0	No	< G
Free cyanide	µg/L	200 <sup>g</sup>	2.0	2.0	No	< G
Aluminum	µg/L	100 <sup>b</sup>	1.1	41	No	< G
Antimony	µg/L	6	0.020	0.044	No	< G
Arsenic	µg/L	10	0.34	0.61	No	< G
Barium	µg/L	2000	7.0	7.9	No	< G
Beryllium	µg/L	5 <sup>c</sup>	0.010	0.010	No	< G
Boron	µg/L	5000	6.1	11	No	< G
Cadmium	µg/L	7	0.0050	0.0065	No	< G
Chromium	µg/L	50	0.060	0.16	No	< G
Cobalt	µg/L	1.2 <sup>c</sup>	0.010	0.091	No	< G
Copper	µg/L	2000	0.70	0.77	No	< G
Iron	µg/L	300 <sup>b</sup>	5.8	54	No	< G
Lead	µg/L	5	0.010	0.020	No	< G
Magnesium	µg/L	NV	1200	1626	No	Essential nutrient/non-toxic
Manganese	µg/L	120	0.95	11	No	< G
Mercury	µg/L	1	0.00050	0.00095	No	< G
Molybdenum	µg/L	20 <sup>c</sup>	0.064	0.12	No	< G
Nickel	µg/L	78 <sup>c</sup>	0.00055	0.87	No	< G
Selenium	µg/L	50	0.040	0.049	No	< G
Silver	µg/L	18.8 <sup>c</sup>	0.0050	0.0051	No	< G
Strontium	µg/L	7000	31	77	No	< G
Thallium	µg/L	0.04 <sup>c</sup>	0.0050	0.0074	No	< G
Uranium	µg/L	20	0.013	0.065	No	< G
Vanadium	µg/L	17.2 <sup>c</sup>	0.050	0.16	No	< G
Zinc	µg/L	5000 <sup>b</sup>	0.80	0.91	No	< G
Radium-226	Bq/L	0.5	0	0.000071	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> US EPA Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Maximum predicted existing surface water concentration. Existing concentrations were provided for context and were not used for screening COPCs.

<sup>e</sup> Predicted maximum surface water concentration.

<sup>f</sup> Yes = the predicted surface water concentration is greater than the guideline and the maximum predicted background surface water concentration and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and/or maximum predicted background surface water concentration and therefore the chemical was not identified as a COPC.

<sup>g</sup> Guideline for Total Cyanide.

<sup>h</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; B = maximum measured baseline surface water concentration; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>f</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	161	No	< G
Calcium	mg/L	NV	26	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	19	No	< G
Fluoride	mg/L	1.5	0.046	No	< G
Sodium	mg/L	200 <sup>b</sup>	17	No	< G
Sulphate	mg/L	500 <sup>b</sup>	77	No	< G
Total Ammonia as Nitrogen	mg/L	NV	1.0	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	1.2	No	< G
Nitrite as Nitrogen	mg/L	1	0.014	No	< G
Phosphorus (total)	mg/L	NV	0.13	No	No direct impact on human health
Potassium	mg/L	NV	5.7	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	2.2	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.1	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	7.5	No	< G
Antimony (total)	µg/L	6	0.58	No	< G
Arsenic (total)	µg/L	10	8.7	No	< G
Barium (total)	µg/L	2000	22	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0070	No	< G
Boron (total)	µg/L	5000	62	No	< G
Cadmium (total)	µg/L	7	0.026	No	< G
Chromium (total)	µg/L	50	0.32	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.73	No	< G
Copper (total)	µg/L	2000	0.99	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	112	No	< G
Lead (total)	µg/L	5	0.38	No	< G
Magnesium (total)	µg/L	NV	4605	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	61	No	< G
Mercury (total)	µg/L	1	0.012	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	1.1	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	3.7	No	< G
Selenium (total)	µg/L	50	0.34	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0049	No	< G
Strontium (total)	µg/L	7000	191	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.014	No	< G
Uranium (total)	µg/L	20	0.78	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.71	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	1.9	No	< G
Radium-226	Bq/L	0.5	0.00042	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	<b>733</b>	No	No direct impact on human health
Calcium	mg/L	NV	104	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	61	No	< G
Fluoride	mg/L	1.5	0.29	No	< G
Sodium	mg/L	200 <sup>b</sup>	63	No	< G
Sulphate	mg/L	500 <sup>b</sup>	432	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.39	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.85	No	< G
Nitrite as Nitrogen	mg/L	1	0.057	No	< G
Phosphorus (total)	mg/L	NV	0.012	No	No direct impact on human health
Potassium	mg/L	NV	40	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	7.8	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	2.0	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	19	No	< G
Antimony (total)	µg/L	6	4.0	No	< G
Arsenic (total)	µg/L	10	<b>45</b>	<b>Yes</b>	<b>&gt; G</b>
Barium (total)	µg/L	2000	72	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.023	No	< G
Boron (total)	µg/L	5000	525	No	< G
Cadmium (total)	µg/L	7	0.10	No	< G
Chromium (total)	µg/L	50	0.90	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	<b>4.1</b>	<b>Yes</b>	<b>&gt; G</b>
Copper (total)	µg/L	2000	3.8	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	125	No	< G
Lead (total)	µg/L	5	0.41	No	< G
Magnesium (total)	µg/L	NV	29739	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	<b>285</b>	<b>Yes</b>	<b>&gt; G</b>
Mercury (total)	µg/L	1	0.042	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	7.7	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	19	No	< G
Selenium (total)	µg/L	50	2.0	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0087	No	< G
Strontium (total)	µg/L	7000	1519	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	<b>0.063</b>	<b>Yes</b>	<b>&gt; G</b>
Uranium (total)	µg/L	20	8.0	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	1.8	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	3.7	No	< G
Radium-226	Bq/L	0.5	0.0039	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC;

No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

**Bold + shaded** = exceeds screening value for protection of human health

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	93	No	< G
Calcium	mg/L	NV	34	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	22	No	< G
Fluoride	mg/L	1.5	0.042	No	< G
Sodium	mg/L	200 <sup>b</sup>	8.0	No	< G
Sulphate	mg/L	500 <sup>b</sup>	15	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.097	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.023	No	< G
Nitrite as Nitrogen	mg/L	1	0.0013	No	< G
Phosphorus (total)	mg/L	NV	0.012	No	No direct impact on human health
Potassium	mg/L	NV	2.1	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.2	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.2	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	8.3	No	< G
Antimony (total)	µg/L	6	0.28	No	< G
Arsenic (total)	µg/L	10	1.8	No	< G
Barium (total)	µg/L	2000	41	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0061	No	< G
Boron (total)	µg/L	5000	15	No	< G
Cadmium (total)	µg/L	7	0.023	No	< G
Chromium (total)	µg/L	50	0.63	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.47	No	< G
Copper (total)	µg/L	2000	1.3	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	223	No	< G
Lead (total)	µg/L	5	0.75	No	< G
Magnesium (total)	µg/L	NV	4694	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	105	No	< G
Mercury (total)	µg/L	1	0.012	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	0.61	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	2.5	No	< G
Selenium (total)	µg/L	50	0.12	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0060	No	< G
Strontium (total)	µg/L	7000	178	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0024	No	< G
Uranium (total)	µg/L	20	0.12	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	1.2	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.2	No	< G
Radium-226	Bq/L	0.5	0.000054	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC;

No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

**Bold + shaded** = exceeds screening value for protection of human health

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	102	No	< G
Calcium	mg/L	NV	30	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	23	No	< G
Fluoride	mg/L	1.5	0.040	No	< G
Sodium	mg/L	200 <sup>b</sup>	9.9	No	< G
Sulphate	mg/L	500 <sup>b</sup>	16	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.079	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.071	No	< G
Nitrite as Nitrogen	mg/L	1	0.0023	No	< G
Phosphorus (total)	mg/L	NV	0.014	No	No direct impact on human health
Potassium	mg/L	NV	2.1	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.3	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.3	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	9.6	No	< G
Antimony (total)	µg/L	6	0.42	No	< G
Arsenic (total)	µg/L	10	2.0	No	< G
Barium (total)	µg/L	2000	33	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0074	No	< G
Boron (total)	µg/L	5000	21	No	< G
Cadmium (total)	µg/L	7	0.024	No	< G
Chromium (total)	µg/L	50	0.52	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.64	No	< G
Copper (total)	µg/L	2000	1.5	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	190	No	< G
Lead (total)	µg/L	5	0.58	No	< G
Magnesium (total)	µg/L	NV	4412	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	81	No	< G
Mercury (total)	µg/L	1	0.013	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	0.57	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	5.6	No	< G
Selenium (total)	µg/L	50	0.15	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0070	No	< G
Strontium (total)	µg/L	7000	160	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0027	No	< G
Uranium (total)	µg/L	20	0.19	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	1.2	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.4	No	< G
Radium-226	Bq/L	0.5	0.00012	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC;

No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	89	No	< G
Calcium	mg/L	NV	31	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	21	No	< G
Fluoride	mg/L	1.5	0.039	No	< G
Sodium	mg/L	200 <sup>b</sup>	7.5	No	< G
Sulphate	mg/L	500 <sup>b</sup>	11	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.085	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.023	No	< G
Nitrite as Nitrogen	mg/L	1	0.0013	No	< G
Phosphorus (total)	mg/L	NV	0.013	No	No direct impact on human health
Potassium	mg/L	NV	2.0	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.1	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.1	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	8.2	No	< G
Antimony (total)	µg/L	6	0.25	No	< G
Arsenic (total)	µg/L	10	1.8	No	< G
Barium (total)	µg/L	2000	38	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0058	No	< G
Boron (total)	µg/L	5000	13	No	< G
Cadmium (total)	µg/L	7	0.022	No	< G
Chromium (total)	µg/L	50	0.56	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.45	No	< G
Copper (total)	µg/L	2000	1.3	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	210	No	< G
Lead (total)	µg/L	5	0.76	No	< G
Magnesium (total)	µg/L	NV	4323	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	93	No	< G
Mercury (total)	µg/L	1	0.011	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	0.49	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	2.3	No	< G
Selenium (total)	µg/L	50	0.12	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0057	No	< G
Strontium (total)	µg/L	7000	165	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0023	No	< G
Uranium (total)	µg/L	20	0.10	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	1.1	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.1	No	< G
Radium-226	Bq/L	0.5	0.00003	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

**Bold + shaded** = exceeds screening value for protection of human health

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	170	No	< G
Calcium	mg/L	NV	34	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	24	No	< G
Fluoride	mg/L	1.5	0.066	No	< G
Sodium	mg/L	200 <sup>b</sup>	16	No	< G
Sulphate	mg/L	500 <sup>b</sup>	72	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.13	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.12	No	< G
Nitrite as Nitrogen	mg/L	1	0.0087	No	< G
Phosphorus (total)	mg/L	NV	0.013	No	No direct impact on human health
Potassium	mg/L	NV	7.0	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	2.0	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.3	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	9.3	No	< G
Antimony (total)	µg/L	6	0.78	No	< G
Arsenic (total)	µg/L	10	7.4	No	< G
Barium (total)	µg/L	2000	30	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0087	No	< G
Boron (total)	µg/L	5000	83	No	< G
Cadmium (total)	µg/L	7	0.027	No	< G
Chromium (total)	µg/L	50	0.43	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.92	No	< G
Copper (total)	µg/L	2000	1.5	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	128	No	< G
Lead (total)	µg/L	5	0.39	No	< G
Magnesium (total)	µg/L	NV	6684	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	84	No	< G
Mercury (total)	µg/L	1	0.014	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	1.39	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	6.6	No	< G
Selenium (total)	µg/L	50	0.39	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0072	No	< G
Strontium (total)	µg/L	7000	295	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.011	No	< G
Uranium (total)	µg/L	20	1.2	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.9	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.1	No	< G
Radium-226	Bq/L	0.5	0.00061	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

**Bold + shaded** = exceeds screening value for protection of human health

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	121	No	< G
Calcium	mg/L	NV	32	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	22	No	< G
Fluoride	mg/L	1.5	0.048	No	< G
Sodium	mg/L	200 <sup>b</sup>	11	No	< G
Sulphate	mg/L	500 <sup>b</sup>	35	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.082	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.046	No	< G
Nitrite as Nitrogen	mg/L	1	0.0036	No	< G
Phosphorus (total)	mg/L	NV	0.011	No	No direct impact on human health
Potassium	mg/L	NV	3.6	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.3	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.2	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	8.0	No	< G
Antimony (total)	µg/L	6	0.46	No	< G
Arsenic (total)	µg/L	10	3.6	No	< G
Barium (total)	µg/L	2000	33	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0067	No	< G
Boron (total)	µg/L	5000	39	No	< G
Cadmium (total)	µg/L	7	0.023	No	< G
Chromium (total)	µg/L	50	0.51	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.64	No	< G
Copper (total)	µg/L	2000	1.4	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	169	No	< G
Lead (total)	µg/L	5	0.58	No	< G
Magnesium (total)	µg/L	NV	5425	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	89	No	< G
Mercury (total)	µg/L	1	0.012	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	0.87	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	3.9	No	< G
Selenium (total)	µg/L	50	0.21	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0060	No	< G
Strontium (total)	µg/L	7000	204	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0049	No	< G
Uranium (total)	µg/L	20	0.49	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	1.1	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.1	No	< G
Radium-226	Bq/L	0.5	0.00028	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration (Post-Closure) <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	76	No	< G
Calcium	mg/L	NV	27	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	18	No	< G
Fluoride	mg/L	1.5	0.034	No	< G
Sodium	mg/L	200 <sup>b</sup>	6.5	No	< G
Sulphate	mg/L	500 <sup>b</sup>	6.7	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.075	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.017	No	< G
Nitrite as Nitrogen	mg/L	1	0.0012	No	< G
Phosphorus (total)	mg/L	NV	0.012	No	No direct impact on human health
Potassium	mg/L	NV	1.8	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.2	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.2	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	8.1	No	< G
Antimony (total)	µg/L	6	0.22	No	< G
Arsenic (total)	µg/L	10	1.6	No	< G
Barium (total)	µg/L	2000	32	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0059	No	< G
Boron (total)	µg/L	5000	12	No	< G
Cadmium (total)	µg/L	7	0.022	No	< G
Chromium (total)	µg/L	50	0.45	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.37	No	< G
Copper (total)	µg/L	2000	1.2	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	180	No	< G
Lead (total)	µg/L	5	0.59	No	< G
Magnesium (total)	µg/L	NV	3567	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	72	No	< G
Mercury (total)	µg/L	1	0.012	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	0.39	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	1.6	No	< G
Selenium (total)	µg/L	50	0.10	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0059	No	< G
Strontium (total)	µg/L	7000	141	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0024	No	< G
Uranium (total)	µg/L	20	0.13	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.92	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.0	No	< G
Radium-226	Bq/L	0.5	0.000015	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	84	No	< G
Calcium	mg/L	NV	22	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	20	No	< G
Fluoride	mg/L	1.5	0.034	No	< G
Sodium	mg/L	200 <sup>b</sup>	9.1	No	< G
Sulphate	mg/L	500 <sup>b</sup>	17	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.053	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.020	No	< G
Nitrite as Nitrogen	mg/L	1	0.0013	No	< G
Phosphorus (total)	mg/L	NV	0.010	No	No direct impact on human health
Potassium	mg/L	NV	1.8	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.0	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.0	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	6.9	No	< G
Antimony (total)	µg/L	6	0.38	No	< G
Arsenic (total)	µg/L	10	1.5	No	< G
Barium (total)	µg/L	2000	24	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0061	No	< G
Boron (total)	µg/L	5000	22	No	< G
Cadmium (total)	µg/L	7	0.017	No	< G
Chromium (total)	µg/L	50	0.38	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.54	No	< G
Copper (total)	µg/L	2000	1.3	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	127	No	< G
Lead (total)	µg/L	5	0.38	No	< G
Magnesium (total)	µg/L	NV	3577	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	58	No	< G
Mercury (total)	µg/L	1	0.0093	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	0.51	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	5.3	No	< G
Selenium (total)	µg/L	50	0.13	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0056	No	< G
Strontium (total)	µg/L	7000	128	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0022	No	< G
Uranium (total)	µg/L	20	0.21	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.92	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	1.7	No	< G
Radium-226	Bq/L	0.5	0.00019	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

**Bold + shaded** = exceeds screening value for protection of human health

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	248	No	< G
Calcium	mg/L	NV	41	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	25	No	< G
Fluoride	mg/L	1.5	0.093	No	< G
Sodium	mg/L	200 <sup>b</sup>	22	No	< G
Sulphate	mg/L	500 <sup>b</sup>	128	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.043	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.17	No	< G
Nitrite as Nitrogen	mg/L	1	0.016	No	< G
Phosphorus (total)	mg/L	NV	0.0089	No	No direct impact on human health
Potassium	mg/L	NV	12	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	2.8	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.2	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	8.5	No	< G
Antimony (total)	µg/L	6	1.2	No	< G
Arsenic (total)	µg/L	10	13	No	< G
Barium (total)	µg/L	2000	31	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.011	No	< G
Boron (total)	µg/L	5000	145	No	< G
Cadmium (total)	µg/L	7	0.033	No	< G
Chromium (total)	µg/L	50	0.44	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	1.4	No	< G
Copper (total)	µg/L	2000	1.7	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	97	No	< G
Lead (total)	µg/L	5	0.30	No	< G
Magnesium (total)	µg/L	NV	9396	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	104	No	< G
Mercury (total)	µg/L	1	0.015	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	2.3	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	7.5	No	< G
Selenium (total)	µg/L	50	0.63	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0060	No	< G
Strontium (total)	µg/L	7000	443	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.018	No	< G
Uranium (total)	µg/L	20	2.2	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.95	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	1.9	No	< G
Radium-226	Bq/L	0.5	0.0011	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	193	No	< G
Calcium	mg/L	NV	39	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	35	No	< G
Fluoride	mg/L	1.5	0.046	No	< G
Sodium	mg/L	200 <sup>b</sup>	15	No	< G
Sulphate	mg/L	500 <sup>b</sup>	80	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.064	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.054	No	< G
Nitrite as Nitrogen	mg/L	1	0.0020	No	< G
Phosphorus (total)	mg/L	NV	0.011	No	No direct impact on human health
Potassium	mg/L	NV	2.1	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	0.98	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	0.98	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	8.1	No	< G
Antimony (total)	µg/L	6	0.93	No	< G
Arsenic (total)	µg/L	10	2.0	No	< G
Barium (total)	µg/L	2000	24	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0072	No	< G
Boron (total)	µg/L	5000	47	No	< G
Cadmium (total)	µg/L	7	0.023	No	< G
Chromium (total)	µg/L	50	0.53	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.92	No	< G
Copper (total)	µg/L	2000	2.1	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	134	No	< G
Lead (total)	µg/L	5	0.39	No	< G
Magnesium (total)	µg/L	NV	9712	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	90	No	< G
Mercury (total)	µg/L	1	0.012	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	1.2	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	10	No	< G
Selenium (total)	µg/L	50	0.26	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0056	No	< G
Strontium (total)	µg/L	7000	170	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0023	No	< G
Uranium (total)	µg/L	20	0.39	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	1.5	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	2.5	No	< G
Radium-226	Bq/L	0.5	0.00076	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	133	No	< G
Calcium	mg/L	NV	30	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	21	No	< G
Fluoride	mg/L	1.5	0.050	No	< G
Sodium	mg/L	200 <sup>b</sup>	12	No	< G
Sulphate	mg/L	500 <sup>b</sup>	49	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.058	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.056	No	< G
Nitrite as Nitrogen	mg/L	1	0.0049	No	< G
Phosphorus (total)	mg/L	NV	0.010	No	No direct impact on human health
Potassium	mg/L	NV	4.3	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	1.5	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	1.1	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	7.6	No	< G
Antimony (total)	µg/L	6	0.58	No	< G
Arsenic (total)	µg/L	10	4.5	No	< G
Barium (total)	µg/L	2000	27	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.0071	No	< G
Boron (total)	µg/L	5000	52	No	< G
Cadmium (total)	µg/L	7	0.022	No	< G
Chromium (total)	µg/L	50	0.41	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.72	No	< G
Copper (total)	µg/L	2000	1.4	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	131	No	< G
Lead (total)	µg/L	5	0.39	No	< G
Magnesium (total)	µg/L	NV	5638	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	74	No	< G
Mercury (total)	µg/L	1	0.011	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	1.0	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	4.9	No	< G
Selenium (total)	µg/L	50	0.26	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0056	No	< G
Strontium (total)	µg/L	7000	210	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0063	No	< G
Uranium (total)	µg/L	20	0.69	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.94	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	1.9	No	< G
Radium-226	Bq/L	0.5	0.00041	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

Chemical	Unit	Canadian Drinking Water Quality Guidelines <sup>a</sup>	Predicted Concentration <sup>d</sup>	COPC <sup>e</sup>	Rationale
Total Dissolved Solids	mg/L	500 <sup>b</sup>	69	No	< G
Calcium	mg/L	NV	11	No	Essential nutrient/non-toxic
Chloride	mg/L	250 <sup>b</sup>	19	No	< G
Fluoride	mg/L	1.5	0.035	No	< G
Sodium	mg/L	200 <sup>b</sup>	9.9	No	< G
Sulphate	mg/L	500 <sup>b</sup>	20	No	< G
Total Ammonia as Nitrogen	mg/L	NV	0.020	No	Less than concentrations expected to have adverse effects in humans <sup>g</sup>
Nitrate as Nitrogen	mg/L	10	0.026	No	< G
Nitrite as Nitrogen	mg/L	1	0.0015	No	< G
Phosphorus (total)	mg/L	NV	0.0053	No	No direct impact on human health
Potassium	mg/L	NV	3.5	No	Essential nutrient/non-toxic
Total cyanide	µg/L	200	0.98	No	< G
Free cyanide	µg/L	200 <sup>f</sup>	0.98	No	< G
Aluminum (total)	µg/L	100 <sup>b</sup>	4.4	No	< G
Antimony (total)	µg/L	6	0.58	No	< G
Arsenic (total)	µg/L	10	0.82	No	< G
Barium (total)	µg/L	2000	11	No	< G
Beryllium (total)	µg/L	5 <sup>c</sup>	0.010	No	< G
Boron (total)	µg/L	5000	29	No	< G
Cadmium (total)	µg/L	7	0.0081	No	< G
Chromium (total)	µg/L	50	0.20	No	< G
Cobalt (total)	µg/L	1.2 <sup>c</sup>	0.35	No	< G
Copper (total)	µg/L	2000	0.97	No	< G
Iron (total)	µg/L	300 <sup>b</sup>	19	No	< G
Lead (total)	µg/L	5	0.062	No	< G
Magnesium (total)	µg/L	NV	2521	No	Essential nutrient/non-toxic
Manganese (total)	µg/L	120	16	No	< G
Mercury (total)	µg/L	1	0.0027	No	< G
Molybdenum (total)	µg/L	20 <sup>c</sup>	1.7	No	< G
Nickel (total)	µg/L	78 <sup>c</sup>	4.3	No	< G
Selenium (total)	µg/L	50	0.14	No	< G
Silver (total)	µg/L	18.8 <sup>c</sup>	0.0049	No	< G
Strontium (total)	µg/L	7000	124	No	< G
Thallium (total)	µg/L	0.04 <sup>c</sup>	0.0027	No	< G
Uranium (total)	µg/L	20	1.6	No	< G
Vanadium (total)	µg/L	17.2 <sup>c</sup>	0.46	No	< G
Zinc (total)	µg/L	5000 <sup>b</sup>	1.2	No	< G
Radium-226	Bq/L	0.5	0.00037	No	< G

<sup>a</sup> Canadian Drinking Water Quality Guidelines (Health Canada 2020)

<sup>b</sup> Operational or Aesthetic guideline

<sup>c</sup> United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSL) - Tapwater, 2021

<sup>d</sup> Predicted maximum surface water for post closure phase (2051-2119).

<sup>e</sup> Yes = the predicted surface water concentration is greater than the guideline and therefore the chemical was identified as a COPC; No = the predicted surface water concentration is less than the guideline and therefore the chemical was not identified as a COPC.

<sup>f</sup> Guideline for Total Cyanide.

<sup>g</sup> Ammonia is not considered to be an aesthetic or human health concern at concentrations typically found in water supplies. Levels in water supplies tend to be in the range of <0.001 to 0.65 mg/L. See text for further discussion.

NV = no value; Bq/L = becquerel per litre; COPC = chemical of potential concern; mg/L = milligram per litre; µg/L = microgram per litre; < = less than; G = guideline.

Prepared by: BP

Checked by: SG

**APPENDIX H-12-H**

# Noise Predictions

**Table H-12-H-1: Summary of Predicted Noise Level and Percent Highly Annoyed at Noise Receptors**

Noise Receptor	Description	Quiet Rural Adjustment (dBA)	Pre-Meliadine Noise Level (dBA)		Adj. Pre-Meliadine Noise Level (dBA)		Adj. Pre-Meliadine Ldn (dBA)	Pre-Meliadine %HA
			Daytime	Nighttime	Daytime	Nighttime		
NPOR006	Present Day Cabin	10	35	35	45	45	51.4	2.6
NPOR007	Present Day Cabin Tatty's	10	35	35	45	45	51.4	2.6
NPOR010	Present Day Cabin Peter's	10	35	35	45	45	51.4	2.6
NPOR012	Present Day Cabin Barney Tootoo's	10	35	35	45	45	51.4	2.6
NPOR014	Present Day Cabin	10	35	35	45	45	51.4	2.6
NPOR015	Iqalugaarjuup Nunanga Territorial Park	10	35	35	45	45	51.4	2.6
NPOR016	Iqalugaarjuup Nunanga Territorial Park	10	35	35	45	45	51.4	2.6
NPOR017	Present Day Cabin Tommy's	10	35	35	45	45	51.4	2.6
NPOR018	Present Day Cabin Ugjuk's	10	35	35	45	45	51.4	2.6
NPOR019	Present Day Cabin Angutetuark's	10	35	35	45	45	51.4	2.6
NPOR020	Present Day Cabin Ollie's	10	35	35	45	45	51.4	2.6
NPOR021	Present Day Cabin Nattar's	10	35	35	45	45	51.4	2.6
NPOR022	Rankin Inlet Receptor	0	48	48	48	48	54.4	3.8
NPOR023	Rankin Inlet Receptor	0	45	45	45	45	51.4	2.6
NPOR024	Rankin Inlet Receptor	0	52	52	52	52	58.4	6.3
NPOR025	Rankin Inlet Receptor	0	46	46	46	46	52.4	3.0
NPOR026	New Receptor Not Included in 2014 FEIS	10	35	35	45	45	51.4	2.6
NPOR027	New Receptor Not Included in 2014 FEIS	10	35	35	45	45	51.4	2.6
NPOR028	New Receptor Not Included in 2014 FEIS	10	35	35	45	45	51.4	2.6
NPOR029	New Receptor Not Included in 2014 FEIS	10	35	35	45	45	51.4	2.6

Notes: "Pre-Meliadine" refers to %HA values calculated using baseline data. "Approved Meliadine" refers to the %HA values calculated for the 2014 FEIS. ""Meliadine Extension" refers to %HA values calculated using the Meliadine Extension noise level.

%HA = percent highly annoyed.

Ln = nighttime equivalent noise level.

dBA = A-weighted decibels.

Noise Receptor	Description	Cumulative Noise Level w/ Approved Meliadine (dBA)		Adj. Cumulative Noise Level w/ Approved Meliadine (dBA)		Adj. Cumulative Ldn w/ Approved Meliadine (dBA)	Approved Meliadine %HA
		Daytime	Nighttime	Daytime	Nighttime		
NPOR006	Present Day Cabin	39.8	39.8	49.8	49.8	56.2	4.8
NPOR007	Present Day Cabin Tatty's	35.5	35.5	45.5	45.5	51.9	2.8
NPOR010	Present Day Cabin Peter's	37.7	37.7	47.7	47.7	54.1	3.7
NPOR012	Present Day Cabin Barney Tootoo's	35.7	35.7	45.7	45.7	52.1	2.9
NPOR014	Present Day Cabin	44.7	44.7	54.7	54.7	61.1	8.8
NPOR015	Iqalugaarjuup Nunanga Territorial Park	35.4	35.4	45.4	45.4	51.8	2.8
NPOR016	Iqalugaarjuup Nunanga Territorial Park	36.6	36.6	46.6	46.6	53.0	3.2
NPOR017	Present Day Cabin Tommy's	43.4	43.4	53.4	53.4	59.8	7.5
NPOR018	Present Day Cabin Ugjuk's	35.4	35.4	45.4	45.4	51.8	2.8
NPOR019	Present Day Cabin Angutetuark's	35.3	35.3	45.3	45.3	51.7	2.7
NPOR020	Present Day Cabin Ollie's	35.1	35.1	45.1	45.1	51.5	2.7
NPOR021	Present Day Cabin Nattar's	35.1	35.1	45.1	45.1	51.5	2.7
NPOR022	Rankin Inlet Receptor	48.0	48.0	48.0	48.0	54.4	3.8
NPOR023	Rankin Inlet Receptor	45.2	45.2	45.2	45.2	51.6	2.7
NPOR024	Rankin Inlet Receptor	52.0	52.0	52.0	52.0	58.4	6.3
NPOR025	Rankin Inlet Receptor	46.9	46.9	46.9	46.9	53.3	3.3
NPOR026	New Receptor Not Included in 2014 FEIS	36.2	36.2	46.2	46.2	52.6	3.1
NPOR027	New Receptor Not Included in 2014 FEIS	38.2	38.2	48.2	48.2	54.6	3.9
NPOR028	New Receptor Not Included in 2014 FEIS	35.4	35.4	45.4	45.4	51.8	2.8
NPOR029	New Receptor Not Included in 2014 FEIS	35.6	35.6	45.6	45.6	52.0	2.8

Notes: "Pre-Meliadine" refers to %HA values calculated using baselined for the complete Meliadine Extension, including the on-site wind turbines and airstrip. Shaded and bolded values are greater than

%HA = percent highly annoyed.

Ln = nighttime equivalent noise level.

dBA = A-weighted decibels.

Noise Receptor	Description	Cumulative Noise Level w/ Meliadine Extension (dBA)		Adj. Cumulative Noise Level w/ Meliadine Extension(dBA)		Adj. Cumulative Ldn w/ Meliadine Extension (dBA)	Meliadine Extension %HA
		Daytime	Nighttime	Daytime	Nighttime		
NPOR006	Present Day Cabin	43.3	43.3	53.3	53.3	59.7	7.4
NPOR007	Present Day Cabin Tatty's	40.5	40.5	50.5	50.5	56.9	5.3
NPOR010	Present Day Cabin Peter's	40.5	40.5	50.5	50.5	56.9	5.3
NPOR012	Present Day Cabin Barney Tootoo's	36.1	36.1	46.1	46.1	52.5	3.0
NPOR014	Present Day Cabin	40.3	40.3	50.3	50.3	56.7	5.1
NPOR015	Iqalugaarjuup Nunanga Territorial Park	35.6	35.6	45.6	45.6	52.0	2.8
NPOR016	Iqalugaarjuup Nunanga Territorial Park	36.5	36.5	46.5	46.5	52.9	3.2
NPOR017	Present Day Cabin Tommy's	44.1	44.1	54.1	54.1	60.5	8.2
NPOR018	Present Day Cabin Ugjuk's	35.4	35.4	45.4	45.4	51.8	2.8
NPOR019	Present Day Cabin Angutetuark's	35.2	35.2	45.2	45.2	51.6	2.7
NPOR020	Present Day Cabin Ollie's	35.1	35.1	45.1	45.1	51.5	2.7
NPOR021	Present Day Cabin Nattar's	35.1	35.1	45.1	45.1	51.5	2.7
NPOR022	Rankin Inlet Receptor	48.0	48.0	48.0	48.0	54.4	3.8
NPOR023	Rankin Inlet Receptor	45.2	45.2	45.2	45.2	51.6	2.7
NPOR024	Rankin Inlet Receptor	52.0	52.0	52.0	52.0	58.4	6.3
NPOR025	Rankin Inlet Receptor	47.1	47.1	47.1	47.1	53.5	3.4
NPOR026	New Receptor Not Included in 2014 FEIS	40.8	40.8	50.8	50.8	57.2	5.5
NPOR027	New Receptor Not Included in 2014 FEIS	38.2	38.2	48.2	48.2	54.6	3.9
NPOR028	New Receptor Not Included in 2014 FEIS	36.0	36.0	46.0	46.0	52.4	3.0
NPOR029	New Receptor Not Included in 2014 FEIS	36.2	36.2	46.2	46.2	52.6	3.1

Notes: "Pre-Meliadine" refers to %HA values calculated using baselinen 6.5%.

%HA = percent highly annoyed.

Ln = nighttime equivalent noise level.

dBA = A-weighted decibels.