

**ATTACHMENTS**

**to**

**MIDLOTHIAN CUMULATIVE RISK ASSESSMENT**

**VOLUME II**

Multimedia Planning and Permitting Division  
U.S. Environmental Protection Agency  
Region 6  
1445 Ross Avenue  
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## **ATTACHMENT A: RESULTS**

presents Results of Direct and Indirect Risk Assessment

**Table 1 Indirect Exposure Results for the Adult Resident<sup>1,2,3</sup> Point A1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	7E-8
Arsenic	7E-8
Benzo(a)pyrene - TEQ	1E-7
Bis(2-ethylhexyl)phthalate	2E-9
Beryllium	9E-9
Hexachlorobenzene	9E-12
Pentachloronitrobenzene	6E-15
Pentachlorophenol	1E-11
Total PCBs	8E-10
Total Cancer Risk	3E-7
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.03
Arsenic	HQ = 0
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.01
Chromium VI	HQ = 0.001
Nickel	HQ = 0.001
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0
Zinc	HQ = 0.005
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0
Di-n-octyl phthalate	HQ = 0
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
Hazard Index	HI = 0

Chemical	Representative Estimated Emissions
Noncarcinogen; Neurotoxic Effects	
Dinitrotoluene, 2,4-	HQ = 0
Dinitrotoluene, 2,6-	HQ = 0
Hazard Index	HI = 0

- <sup>1</sup> HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- <sup>2</sup> Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- <sup>3</sup> Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 2 Indirect Exposure Results for the Adult Resident<sup>1, 2, 3</sup>  
Point B1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	2E-8
Arsenic	2E-8
Benzo(a)pyrene - TEQ	2E-8
Bis(2-ethylhexyl)phthalate	8E-10
Beryllium	2E-9
Hexachlorobenzene	3E-12
Pentachloronitrobenzene	3E-15
Pentachlorophenol	5E-12
Total PCBs	8E-10
<b>Total Cancer Risk</b>	<b>6E-8</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.006
Arsenic	HQ = 0
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.004
Chromium VI	HQ = 0
Nickel	HQ = 0
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0
Zinc	HQ = 0.001
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0
Di-n-octyl phthalate	HQ = 0
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

Chemical	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>	
Dialkyltoluene, 2,4-	HQ = 0
Dialkyltoluene, 2,6-	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 3 Indirect Exposure Results for the Adult Resident<sup>1, 2, 3</sup>  
Point C1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	2E-8
Arsenic	9E-7
Benzo(a)pyrene - TEQ	5E-8
Bis(2-ethylhexyl)phthalate	2E-10
Beryllium	2E-9
Hexachlorobenzene	2E-12
Pentachloronitrobenzene	1E-15
Pentachlorophenol	2E-12
Total PCBs	2E-10
<b>Total Cancer Risk</b>	<b>1E-6</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.4
Arsenic	HQ = 0.005
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.3
Chromium VI	HQ = 0.02
Nickel	HQ = 0.006
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0
Zinc	HQ = 0.07
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0
Di-n-octyl phthalate	HQ = 0
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

Chemical	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>	
Dinitrotoluene, 2,4-	HQ = 0
Dinitrotoluene, 2,6-	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 4 Indirect Exposure Results for the Child Resident<sup>1, 2, 3</sup>  
Point A1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	2E-7
Arsenic	9E-8
Benzo(a)pyrene - TEQ	4E-7
Bis(2-ethylhexyl)phthalate	1E-9
Beryllium	2E-8
Hexachlorobenzene	1E-11
Pentachloronitrobenzene	5E-15
Pentachlorophenol	1E-11
Total PCBs	6E-10
<b>Total Cancer Risk</b>	<b>7E-7</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.1
Arsenic	HQ = 0.002
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.08
Chromium VI	HQ = 0.009
Nickel	HQ = 0.004
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0.001
Zinc	HQ = 0.02
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0
Di-n-octyl phthalate	HQ = 0
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

Chemical	Representative Estimated Emissions
Noncarcinogens: Neurotoxic Effects	
Dinitrotoluene, 2,4-	HQ = 0
Dinitrotoluene, 2,6-	HQ = 0
Hazard Index	HI = 0

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 5 Indirect Exposure Results for the Child Resident<sup>1, 2, 3</sup>  
Point B1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	5E-8
Arsenic	2E-8
Benzo(a)pyrene - TEQ	6E-8
Bis(2-ethylhexyl)phthalate	6E-10
Beryllium	4E-9
Hexachlorobenzene	4E-12
Pentachloronitrobenzene	3E-15
Pentachlorophenol	5E-12
Total PCBs	5E-10
<b>Total Cancer Risk</b>	<b>1E-7</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.02
Arsenic	HQ = 0.001
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.02
Chromium VI	HQ = 0.002
Nickel	HQ = 0.001
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0
Zinc	HQ = 0.005
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0
Di-n-octyl phthalate	HQ = 0
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

Chemical	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>	
Dinitrobenzene, 2,4-	HQ = 0
Dinitrobenzene, 2,6-	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 6 Indirect Exposure Results for the Child Resident<sup>1, 2, 3</sup>  
Point C1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	5E-8
Arsenic	1E-6
Benzo(a)pyrene - TEQ	1E-7
Bis(2-ethylhexyl)phthalate	2E-10
Beryllium	3E-9
Hexachlorobenzene	2E-12
Pentachloronitrobenzene	9E-16
Pentachlorophenol	2E-12
Total PCBs	1E-10
<b>Total Cancer Risk</b>	<b>1E-6</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 1
Arsenic	HQ = 0.03
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 1
Chromium VI	HQ = 0.1
Nickel	HQ = 0.04
Nitrobenzene	HQ = 0
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0
Zinc	HQ = 0.3
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0
D-n-octyl phthalate	HQ = 0
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

Chemical	Representative Estimated Emissions
<b>Nearcarcinogens; Neurotoxic Effects</b>	
Dibromobenzene, 2,4-	HQ = 0
Dibromobenzene, 2,6-	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

HQ = 0 means that the hazard quotient is less than 0.001.

Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.

Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.

Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 7 Indirect Exposure Results for the Subsistence Fisher <sup>1, 2, 3</sup>  
Point A1**

Chemical	SCS Lakes 9& 10 Watershed	Joe Pool Lake Watershed
	Representative Estimated Emissions	Representative Estimated Emissions
<b>Carcinogens</b>		
2,3,7,8-TCDD-TEQ	2E-6	2E-6
Arsenic	7E-5	4E-6
Benzo(a)pyrene - TEQ	4E-6	6E-6
Bis(2-ethylhexyl)phthalate	2E-9	2E-9
Beryllium	6E-6	8E-7
Hexachlorobenzene	2E-7	7E-7
Pentachloronitrobenzene	1E-9	3E-10
Pentachlorophenol	5E-9	9E-9
Total PCBs	4E-7	3E-6
<b>Total Cancer Risk</b>	<b>8E-5</b>	<b>2E-5</b>
<b>Noncarcinogens: Other</b>		
1,3-Dinitrobenzene	HQ = 0	HQ = 0
Antimony	HQ = 0.03	HQ = 0.003
Arsenic	HQ = 0.4	HQ = 0.02
Barium	HQ = 0	HQ = 0
Beryllium	HQ = 0.001	HQ = 0
Cadmium	HQ = 1	HQ = 0.2
Chromium VI	HQ = 0.5	HQ = 0.02
Nickel	HQ = 0.03	HQ = 0.005
Nitrobenzene	HQ = 0	HQ = 0
Silver	HQ = 0	HQ = 0
Thallium	HQ = 0.07	HQ = 0.001
Zinc	HQ = 0.3	HQ = 0.02
<b>Noncarcinogens: Liver Effects</b>		
Bis(2-ethylhexyl)phthalate	HQ = 0	HQ = 0
Di-n-octyl phthalate	HQ = 0	HQ = 0
Hexachlorobenzene	HQ = 0	HQ = 0.001
Pentachloronitrobenzene	HQ = 0	HQ = 0
Pentachlorophenol	HQ = 0	HQ = 0
	HI = 0	HI = 0

Chemical	SCS Lakes 9& 10 Watershed	Joe Pool Lake Watershed
	Representative Estimated Emissions	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>		
Dinitrotoluene, 2,4-	HQ = 0	HQ = 0
Dinitrotoluene, 2,6-	HQ = 0	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>	<b>HI = 0</b>

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 8 Indirect Exposure Results for the Subsistence Fisher<sup>1, 2, 3</sup>  
Point B1**

Chemical	SCS Lakes 9 & 10 Watershed	Joe Pool Lake Watershed
	Representative Estimated Emissions	Representative Estimated Emissions
<b>Carcinogens</b>		
2,3,7,8-TCDD-TEQ	2E-6	2E-6
Arsenic	7E-5	4E-6
Benzo(a)pyrene - TEQ	4E-6	6E-6
Bis(2-ethylhexyl)phthalate	8E-10	8E-10
Beryllium	6E-6	8E-7
Hexachlorobenzene	2E-7	7E-7
Pentachloronitrobenzene	1E-9	3E-10
Pentachlorophenol	5E-9	9E-9
Total PCBs	4E-7	3E-6
<b>Total Cancer Risk</b>	<b>8E-5</b>	<b>2E-5</b>
<b>Noncarcinogens: Other</b>		
1,3-Dinitrobenzene	HQ = 0	HQ = 0
Antimony	HQ = 0.006	HQ = 0.006
Arsenic	HQ = 0.4	HQ = 0.02
Barium	HQ = 0	HQ = 0
Beryllium	HQ = 0.001	HQ = 0
Cadmium	HQ = 1	HQ = 0.2
Chromium VI	HQ = 0.5	HQ = 0.02
Nickel	HQ = 0.03	HQ = 0.004
Nitrobenzene	HQ = 0	HQ = 0
Silver	HQ = 0	HQ = 0
Thallium	HQ = 0.07	HQ = 0.01
Zinc	HQ = 0.3	HQ = 0.02
<b>Noncarcinogens: Liver Effects</b>		
Bis(2-ethylhexyl)phthalate	HQ = 0	HQ = 0
Di-n-octyl phthalate	HQ = 0	HQ = 0
Hexachlorobenzene	HQ = 0	HQ = 0.001
Pentachloronitrobenzene	HQ = 0	HQ = 0
Pentachlorophenol	HQ = 0	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>	<b>HI = 0</b>

Chemical	SCS Lakes 9 & 10 Watershed	Joe Pool Lake Watershed
	Representative Estimated Emissions	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>		
Dinitrobenzene, 2,4-	HQ = 0	HQ = 0
Dinitrobenzene, 2,6-	HQ = 0	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>	<b>HI = 0</b>

HQ = 0 means that the hazard quotient is less than 0.001.

Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.

Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.

Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 9 Indirect Exposure Results for the Subsistence Fisher<sup>1, 2, 3</sup>  
Point C1**

Chemical	SCS Lakes 9 & 10 Watershed	Joe Pool Lake Watershed
	Representative Estimated Emissions	Representative Estimated Emissions
<b>Carcinogens</b>		
2,3,7,8-TCDD-TEQ	8E-7	8E-7
Arsenic	8E-5	5E-6
Benzo(a)pyrene - TEQ	4E-6	6E-6
Bis(2-ethylhexyl)phthalate	3E-10	3E-10
Beryllium	6E-6	8E-7
Hexachlorobenzene	2E-7	7E-7
Pentachloronitrobenzene	1E-9	3E-10
Pentachlorophenol	5E-9	9E-9
Total PCBs	4E-7	3E-6
<b>Total Cancer Risk</b>	<b>9E-5</b>	<b>2E-5</b>
<b>Noncarcinogens: Other</b>		
1,3-Dinitrobenzene	HQ = 0	HQ = 0
Antimony	HQ = 0.4	HQ = 0.4
Arsenic	HQ = 0.4	HQ = 0.03
Barium	HQ = 0	HQ = 0
Beryllium	HQ = 0.001	HQ = 0
Cadmium	HQ = 1	HQ = 0.5
Chromium VI	HQ = 0.5	HQ = 0.04
Nickel	HQ = 0.04	HQ = 0.001
Nitrobenzene	HQ = 0	HQ = 0
Silver	HQ = 0	HQ = 0
Thallium	HQ = 0.07	HQ = 0.01
Zinc	HQ = 0.4	HQ = 0.09
<b>Noncarcinogens: Liver Effects</b>		
Bis(2-ethylhexyl)phthalate	HQ = 0	HQ = 0
Di-n-octyl phthalate	HQ = 0	HQ = 0
Hexachlorobenzene	HQ = 0	HQ = 0.001
Pentachloronitrobenzene	HQ = 0	HQ = 0
Pentachlorophenol	HQ = 0	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>	<b>HI = 0.001</b>

Chemical	SCS Lakes 9 & 10 Watershed	Joe Pool Lake Watershed
	Representative Estimated Emissions	Representative Estimated Emissions
Noncarcinogens: Neurotoxic Effects		
Dibromobenzene, 2,4	HQ = 0	HQ = 0
Dibromobenzene, 2,6	HQ = 0	HQ = 0
Hazard Index	HI = 0	HI = 0

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 10 Indirect Exposure Results for the Subsistence Farmer<sup>1, 2, 3</sup>  
Point A1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	8E-6
Arsenic	5E-6
Benzo(a)pyrene - TEQ	8E-6
Bi(2-ethylhexyl)phthalate	2E-5
Beryllium	4E-8
Hexachlorobenzene	4E-10
Pentachloronitrobenzene	9E-13
Pentachlorophenol	6E-10
Total PCBs	6E-7
<b>Total Cancer Risk</b>	<b>4E-5</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.2
Arsenic	HQ = 0
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.5
Chromium VI	HQ = 0.4
Nickel	HQ = 0.006
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0.01
Zinc	HQ = 0.02
<b>Noncarcinogens: Liver Effects</b>	
Bi(2-ethylhexyl)phthalate	HQ = 0.1
Di-n-octyl phthalate	HQ = 0.009
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HQ = 0</b>

Chemical	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>	
Dichlorobenzene, 2,4	HQ = 0
Dichlorobenzene, 2,6	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

HQ = 0 means that the hazard quotient is less than 0.001.

Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.

Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.

Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 11 Indirect Exposure Results for the Subsistence Farmer<sup>1, 2, 3</sup>  
Point B1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	2E-6
Arsenic	1E-6
Benzo(a)pyrene - TEQ	1E-6
Bis(2-ethylhexyl)phthalate	9E-6
Beryllium	8E-9
Hexachlorobenzene	1E-10
Pentachloronitrobenzene	5E-13
Pentachlorophenol	2E-10
Total PCBs	6E-7
<b>Total Cancer Risk</b>	<b>1E-5</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 0.04
Arsenic	HQ = 0
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.01
Chromium VI	HQ = 0.1
Nickel	HQ = 0.002
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0.02
Zinc	HQ = 0.005
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0.06
Di-n-octyl phthalate	HQ = 0.004
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0.06</b>

Chemical	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>	
Dinitrotoluene, 2,4-	HQ = 0
Dinitrotoluene, 2,6-	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

- <sup>1</sup> HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- <sup>2</sup> Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- <sup>3</sup> Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 12 Indirect Exposure Results for the Subsistence Farmer<sup>1, 2, 3</sup>  
Point C1**

Chemical	Representative Estimated Emissions
<b>Carcinogens</b>	
2,3,7,8-TCDD-TEQ	1E-6
Arsenic	3E-5
Benzo(a)pyrene - TEQ	2E-6
Bis(2-ethylhexyl)phthalate	5E-6
Beryllium	1E-8
Hexachlorobenzene	9E-11
Pentachloronitrobenzene	2E-13
Pentachlorophenol	2E-10
Total PCBs	2E-7
<b>Total Cancer Risk</b>	<b>5E-5</b>
<b>Noncarcinogens: Other</b>	
1,3-Dinitrobenzene	HQ = 0
Antimony	HQ = 1
Arsenic	HQ = 0.1
Barium	HQ = 0
Beryllium	HQ = 0
Cadmium	HQ = 0.2
Chromium VI	HQ = 0.2
Nickel	HQ = 0.04
Nitrobenzene	HQ = 0
Silver	HQ = 0
Thallium	HQ = 0.002
Zinc	HQ = 0.1
<b>Noncarcinogens: Liver Effects</b>	
Bis(2-ethylhexyl)phthalate	HQ = 0.03
Di-n-octyl phthalate	HQ = 0.002
Hexachlorobenzene	HQ = 0
Pentachloronitrobenzene	HQ = 0
Pentachlorophenol	HQ = 0
<b>Hazard Index</b>	<b>HI = 0.03</b>

Chemical	Representative Estimated Emissions
<b>Noncarcinogens: Neurotoxic Effects</b>	
Dinitrotoluene, 2,4-	HQ = 0
Dinitrotoluene, 2,6-	HQ = 0
<b>Hazard Index</b>	<b>HI = 0</b>

- 1 HQ = 0 means that the hazard quotient is less than 0.001. Indirect exposure results exclude exposure through direct inhalation and drinking water ingestion.
- 2 Because health benchmarks for lead were not available, risk estimates are not presented for this metal. Instead, lead concentrations in the air and soil were determined and are presented in Table 3.15.
- 3 Since release of the *Screening Guidance*, the RfD for mercury is three times lower and is based on developmental effects. Therefore, the hazard quotient for mercury was not added to the hazard index for neurotoxic effects.

**Table 13 Risks Associated with Direct Inhalation for the Adult Resident and Fisher: Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	4E-08
Carbon tetrachloride	4E-12
Aniline	HQ=0
Chloroform	7E-12
Hexachloroethane	7E-12
Benzene	8E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	2E-11
Chloroethane	HQ=0
Vinyl chloride	3E-10
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	3E-13
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	1E-11
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	5E-12
Tetrachloroethane, 1,1,2,2-	2E-11
Hexachloro-1,3-butadiene	5E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	8E-12
Acrylonitrile	1E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Cyclohexane	0E+00
Bis(2-chlorethyl)ether	5E-10
Hexachlorobenzene	9E-10
Trichlorobenzene, 1,2,4-	HQ=0

Dinitromethylphenol, 4,6,2-	0E+00
Xylenes (total)	HQ=0
TCDD, 2,3,7,8-	2E-08
Arsenic	2E-09
Barium	HQ=0.001
Beryllium	1E-08
Cadmium	1E-06
Chromium VI	1E-06
Dichloropropene, cis-1,3-	1E-11
Dichloropropene, trans-1,3-	1E-11

**Table 14 Risks Associated with Direct Inhalation for the Adult Resident and Fisher: Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	3E-09
Carbon tetrachloride	2E-12
Aniline	HQ=0
Chloroform	3E-12
Hexachloroethane	2E-12
Benzene	5E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	2E-11
Chloroethane	HQ=0
Vinyl chloride	3E-10
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-13
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	7E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	2E-12
Tetrachloroethane, 1,1,2,2-	8E-12
Hexachloro-1,3-butadiene	2E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	4E-12
Acrylonitrile	7E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Cyclohexane	0E+00
Bis(2-chloroethyl)ether	1E-10
Hexachlorobenzene	3E-10
Trichlorobenzene, 1,2,4-	HQ=0

Dinitromethylphenol, 4,6,2-	0E+00
Xylenes (total)	HQ=0
TCDD, 2,3,7,8-	5E-09
Arsenic	8E-10
Barium	HQ=0
Beryllium	3E-09
Cadmium	4E-07
Chromium VI	2E-05
Dichloropropene, cis-1,3-	5E-12
Dichloropropene, trans-1,3-	5E-12

**Table 15 Risks Associated with Direct Inhalation for the Adult Resident and Fisher: Point C1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	1E-08
Carbon tetrachloride	6E-13
Aniline	HQ=0
Chloroform	8E-13
Hexachloroethane	4E-13
Benzene	2E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	6E-12
Chloroethane	HQ=0
Vinyl chloride	1E-10
Acetonitrile	HQ=0
Methylene chloride	7E-11
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	4E-14
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	2E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	6E-13
Tetrachloroethane, 1,1,2,2-	2E-12
Hexachloro-1,3-butadiene	6E-12
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	1E-12
Acrylonitrile	2E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Cyclohexane	0E+00
Bis(2-chloroethyl)ether	3E-11
Hexachlorobenzene	7E-11
Trichlorobenzene, 1,2,4-	HQ=0

Dinitromethylphenol, 4,6-,2-	0E+00
Xylenes (total)	HQ=0
TCDD, 2,3,7,8-	1E-09
Arsenic	3E-08
Barium	HQ=0
Beryllium	8E-10
Cadmium	2E-05
Chromium VI	1E-05
Dichloropropene, cis-1,3-	1E-12
Dichloropropene, trans-1,3-	1E-12

**Table 16 Risks Associated with Direct Inhalation for the Child: Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	2E-08
Carbon tetrachloride	3E-12
Aniline	HQ=0
Chloroform	4E-12
Hexachloroethane	4E-12
Benzene	4E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	1E-11
Chloroethane	HQ=0
Vinyl chloride	2E-10
Acetonitrile	HQ=0
Methylene chloride	1E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-13
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	8E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	3E-12
Tetrachloroethane, 1,1,2,2-	1E-11
Hexachloro-1,3-butadiene	3E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	4E-12
Acrylonitrile	8E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Bis(2-chlorethyl)ether	3E-10
Hexachlorobenzene	5E-10
Trichlorobenzene, 1,2,4-	HQ=0
Xylenes (total)	HQ=0

TCDD, 2,3,7,8-	1E-08
Arsenic	1E-09
Barium	HQ=0.001
Beryllium	8E-09
Cadmium	7E-07
Chromium VI	6E-07
Zinc	NA
Dichloropropene, cis-1,3-	6E-12
Dichloropropene, trans-1,3-	6E-12

**Table 17 Risks Associated with Direct Inhalation for the Child: Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	2E-09
Carbon tetrachloride	1E-12
Aniline	HQ=0
Chloroform	2E-12
Hexachloroethane	1E-12
Benzene	3E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	1E-11
Chloroethane	HQ=0
Vinyl chloride	2E-10
Acetonitrile	HQ=0
Methylene chloride	1E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	8E-14
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	4E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	1E-12
Tetrachloroethane, 1,1,2,2-	4E-12
Hexachloro-1,3-butadiene	1E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	2E-12
Acrylonitrile	4E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Bis(2-chlorethyl)ether	8E-11
Hexachlorobenzene	1E-10
Trichlorobenzene, 1,2,4-	HQ=0
Xylenes (total)	HQ=0

TCDD, 2,3,7,8-	3E-09
Arsenic	4E-10
Barium	HQ=0
Beryllium	2E-09
Cadmium	2E-07
Chromium VI	9E-06
Dichloropropene, cis-1,3-	3E-12
Dichloropropene, trans-1,3-	3E-12

**Table 18 Risks Associated with Direct Inhalation for the Child: Point C1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	5E-09
Carbon tetrachloride	3E-13
Aniline	HQ=0
Chloroform	5E-13
Hexachloroethane	2E-13
Benzene	1E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	3E-12
Chloroethane	HQ=0
Vinyl chloride	5E-11
Acetonitrile	HQ=0
Methylene chloride	4E-11
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-14
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	1E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	3E-13
Tetrachloroethane, 1,1,2,2-	1E-12
Hexachloro-1,3-butadiene	3E-12
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	5E-13
Acrylonitrile	1E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Bis(2-chlorethyl)ether	2E-11
Hexachlorobenzene	4E-11
Trichlorobenzene, 1,2,4-	HQ=0
Xylenes (total)	HQ=0

TCDD, 2,3,7,8-	7E-10
Arsenic	2E-08
Barium	HQ=0
Beryllium	4E-10
Cadmium	9E-06
Chromium VI	8E-06
Dichloropropene, cis-1,3-	8E-13
Dichloropropene, trans-1,3-	8E-13

**Table 19 Risks Associated with Direct Inhalation for the Subsistence Farmer:  
Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	4E-08
Carbon tetrachloride	4E-12
Aniline	HQ=0
Chloroform	7E-12
Hexachloroethane	7E-12
Benzene	8E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	2E-11
Chloroethane	HQ=0
Vinyl chloride	3E-10
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	3E-13
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	1E-11
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	5E-12
Tetrachloroethane, 1,1,2,2-	2E-11
Hexachloro-1,3-butadiene	5E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	8E-12
Acrylonitrile	1E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Cyclohexane	0E+00
Bis(2-chlorethyl)ether	5E-10
Hexachlorobenzene	9E-10

Trichlorobenzene, 1,2,4-	HQ=0
Dinitromethylphenol, 4,6-,2-	0E+00
Xylenes (total)	HQ=0
TCDD, 2,3,7,8-	2E-08
Arsenic	2E-09
Barium	HQ=0.001
Beryllium	1E-08
Cadmium	1E-06
Chromium VI	1E-06
Dichloropropene, cis-1,3-	1E-11
Dichloropropene, trans-1,3-	1E-11

**Table 20 Risks Associated with Direct Inhalation for the Subsistence Farmer:  
Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	3E-09
Carbon tetrachloride	2E-12
Aniline	HQ=0
Chloroform	3E-12
Hexachloroethane	2E-12
Benzene	5E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	2E-11
Chloroethane	HQ=0
Vinyl chloride	3E-10
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-13
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	7E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	2E-12
Tetrachloroethane, 1,1,2,2-	8E-12
Hexachloro-1,3-butadiene	2E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	4E-12
Acrylonitrile	7E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Cyclohexane	0E+00
Bis(2-chlorethyl)ether	1E-10
Hexachlorobenzene	3E-10

Trichlorobenzene, 1,2,4-	HQ=0
Dinitromethylphenol, 4,6-,2-	0E+00
Xylenes (total)	HQ=0
TCDD, 2,3,7,8-	5E-09
Arsenic	8E-10
Barium	HQ=0
Beryllium	3E-09
Cadmium	4E-07
Chromium VI	2E-05
Dichloropropene, cis-1,3-	5E-12
Dichloropropene, trans-1,3-	5E-12

**Table 21 Risks Associated with Direct Inhalation for the Subsistence Farmer:  
Point C3**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	1E-08
Carbon tetrachloride	1E-12
Aniline	HQ=0
Chloroform	2E-12
Hexachloroethane	2E-12
Benzene	2E-09
Methyl bromide (Bromomethane)	HQ=0
Methyl chloride (Chloromomethane)	5E-12
Chloroethane	HQ=0
Vinyl chloride	9E-11
Acetonitrile	HQ=0
Methylene chloride	6E-11
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	8E-14
Dichloroethane, 1,1-	HQ=0
Dichloroethylene, 1,1-	4E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	1E-12
Tetrachloroethane, 1,1,2,2-	4E-12
Hexachloro-1,3-butadiene	1E-11
Nitroaniline, 2-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Nitrobenzene	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Dichlorobenzene, 1,4-	HQ=0
Dichloroethane, 1,2-	2E-12
Acrylonitrile	4E-11
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Cyclohexane	0E+00
Bis(2-chlorethyl)ether	1E-10
Hexachlorobenzene	2E-10

Trichlorobenzene, 1,2,4-	HQ=0
Dinitromethylphenol, 4,6,2-	0E+00
Xylenes (total)	HQ=0
TCDD, 2,3,7,8-	5E-09
Arsenic	1E-08
Barium	HQ=0
Beryllium	3E-09
Cadmium	6E-06
Chromium VI	6E-06
Dichloropropene, cis-1,3-	3E-12
Dichloropropene, trans-1,3-	3E-12

**Table 22 Risks Associated with Ingestion of Drinking Water for the Adult Resident and Fisher: Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	8E-08
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	5E-13
Aniline	8E-12
Methanol	HQ=0
Acetone	HQ=0
Chloroform	1E-13
Hexachloroethane	4E-12
Benzene	5E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	7E-11
Acetonitrile	HQ=0
Methylene chloride	6E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	6E-13
Bromodichloromethane	1E-12
Dichloroethane, 1,1-	1E-12
Dichloroethylene, 1,1-	2E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	1E-12
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	3E-12
Trichloroethylene	9E-14
Tetrachloroethane, 1,1,2,2-	2E-11
Pentachloronitrobenzene (PCNB) - Carcinogenic	1E-11
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	2E-12
Hexachloro-1,3-butadiene	3E-12
Pentachlorophenol - Carcinogenic	2E-11
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	6E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	2E-12
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	4E-12

**Table 23 Risks Associated with Ingestion of Drinking Water for the Adult Resident and Fisher: Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	5E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	7E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	7E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	5E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	2E-12
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	4E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	1E-09
TCDD, 2,3,7,8-	8E-10
Mercury	HQ=0
Nickel	HQ=0.02
Silver	HQ=0
Thallium (I)	HQ=0.003
Antimony	HQ=3
Arsenic - Carcinogenic	6E-06
Arsenic - Noncarcinogenic	HQ=0.03
Barium	HQ=0
Beryllium - Carcinogenic	2E-07
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.3
Chromium Total	HQ=0.2

Chromium VI	HQ=0.004
Zinc	HQ=0.1
Dichloropropene, cis-1,3-	6E-12
Dichloropropene, trans-1,3-	2E-13
Bis (2-chloropropyl) ether	4E-11

**Table 24 Risks Associated with Ingestion of Drinking Water for the Adult Resident and Fisher: Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	8E-08
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	5E-13
Aniline	8E-12
Methanol	HQ=0
Acetone	HQ=0
Chloroform	1E-13
Hexachloroethane	4E-12
Benzene	5E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	7E-11
Acetonitrile	HQ=0
Methylene chloride	6E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	6E-13
Bromodichloromethane	1E-12
Dichloroethane, 1,1-	1E-12
Dichloroethylene, 1,1-	2E-12
Trichloro fluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	1E-12
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	3E-12
Trichloroethylene	9E-14
Tetrachloroethane, 1,1,2,2-	2E-11
Pentachloronitrobenzene (PCNB) - Carcinogenic	1E-11
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	2E-12
Hexachloro-1,3-butadiene	3E-12
Pentachlorophenol - Carcinogenic	2E-11
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	6E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	2E-12
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	4E-12

**Table 25 Risks Associated with Ingestion of Drinking Water for the Adult Resident and Fisher: Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	5E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	7E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	7E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	5E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	2E-12
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	4E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	1E-09
TCDD, 2,3,7,8-	8E-10
Mercury Organic	HQ=0
Mercury	HQ=0
Nickel	HQ=0.02
Silver	HQ=0
Thallium (I)	HQ=0.003
Antimony	HQ=3
Arsenic - Carcinogenic	6E-06
Arsenic - Noncarcinogenic	HQ=0.03
Barium	HQ=0
Beryllium - Carcinogenic	2E-07
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.3

Chromium Total	HQ=0.2
Chromium VI	HQ=0.004
Zinc	HQ=0.1
Dichloropropene, cis-1,3-	6E-12
Dichloropropene, trans-1,3-	2E-13
Bis (2-chloropropyl) ether	4E-11

**Table 26 Risks Associated with Ingestion of Drinking Water for the Adult Resident and Fisher: Point C1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	8E-08
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	5E-13
Aniline	8E-12
Methanol	HQ=0
Acetone	HQ=0
Chloroform	1E-13
Hexachloroethane	4E-12
Benzene	5E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	7E-11
Acetonitrile	HQ=0
Methylene chloride	6E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	6E-13
Bromodichloromethane	1E-12
Dichloroethane, 1,1-	1E-12
Dichloroethylene, 1,1-	2E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	1E-12
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	3E-12
Trichloroethylene	9E-14
Tetrachloroethane, 1,1,2,2-	2E-11
Pentachloronitrobenzene (PCNB) - Carcinogenic	1E-11
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	2E-12
Hexachloro-1,3-butadiene	3E-12
Pentachlorophenol - Carcinogenic	2E-11
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	6E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	2E-12
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	4E-12

**Table 27 Risks Associated with Ingestion of Drinking Water for the Adult Resident and Fisher: Point C1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	5E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	7E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	7E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	5E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	2E-12
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	4E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	1E-09
TCDD, 2,3,7,8-	8E-10
Mercury Organic	HQ=0
Mercury	HQ=0
Nickel	HQ=0.02
Silver	HQ=0
Thallium (I)	HQ=0.003
Antimony	HQ=3
Arsenic - Carcinogenic	6E-06
Arsenic - Noncarcinogenic	HQ=0.03
Barium	HQ=0
Beryllium - Carcinogenic	2E-07
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.3

Chromium Total	HQ=0.2
Chromium VI	HQ=0.004
Zinc	HQ=0.1
Dichloropropene, cis-1,3-	6E-12
Dichloropropene, trans-1,3-	2E-13
Bis (2-chloropropyl) ether	4E-11

**Table 28 Risks Associated with Ingestion of Drinking Water for the Child:  
Point A1**

<b>CONSTITUENT</b>	<b>LIFETIME INDIVIDUAL RISK</b>
Benzo(a)pyrene	3E-08
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	2E-13
Aniline	3E-12
Methanol	HQ=0
Acetone	HQ=0
Chloroform	3E-14
Hexachloroethane	1E-12
Benzene	2E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	2E-11
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-13
Bromodichloromethane	5E-13
Dichloroethane, 1,1-	4E-13
Dichloroethylene, 1,1-	8E-13
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	4E-13
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	1E-12
Trichloroethylene	3E-14
Tetrachloroethane, 1,1,2,2-	7E-12
Pentachloronitrobenzene (PCNB) - Carcinogenic	3E-12
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	8E-13
Hexachloro-1,3-butadiene	9E-13
Pentachlorophenol - Carcinogenic	8E-12
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	2E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	8E-13
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	1E-12

**Table 29 Risks Associated with Ingestion of Drinking Water for the Child:  
Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	2E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chloroethyl)ether	2E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	2E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	2E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	8E-13
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	1E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	4E-10
TCDD, 2,3,7,8-	3E-10
Mercury Organic	HQ=0
Nickel	HQ=0.03
Silver	HQ=0
Thallium (I)	HQ=0.006
Antimony	HQ=6
Arsenic - Carcinogenic	2E-06
Arsenic - Noncarcinogenic	HQ=0.05
Barium	HQ=0
Beryllium - Carcinogenic	6E-08
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.6
Chromium Total	HQ=0.3

Chromium VI	HQ=0.006
Zinc	HQ=0.2
Dichloropropene, cis-1,3-	2E-12
Dichloropropene, trans-1,3-	6E-14
Bis (2-chloropropyl) ether	1E-11

**Table 30 Risks Associated with Ingestion of Drinking Water for the Child:  
Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	3E-08
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	2E-13
Aniline	3E-12
Methanol	HQ=0
Acetone	HQ=0
Chloroform	3E-14
Hexachloroethane	1E-12
Benzene	2E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	2E-11
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-13
Bromodichloromethane	5E-13
Dichloroethane, 1,1-	4E-13
Dichloroethylene, 1,1-	8E-13
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	4E-13
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	1E-12
Trichloroethylene	3E-14
Tetrachloroethane, 1,1,2,2-	7E-12
Pentachloronitrobenzene (PCNB) - Carcinogenic	3E-12
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	8E-13
Hexachloro-1,3-butadiene	9E-13
Pentachlorophenol - Carcinogenic	8E-12
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	2E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	8E-13
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	1E-12

**Table 31 Risks Associated with Ingestion of Drinking Water for the Child:  
Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	2E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	2E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	2E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	2E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	8E-13
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	1E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	4E-10
TCDD, 2,3,7,8-	3E-10
Mercury	HQ=0
Mercury Organic	HQ=0
Nickel	HQ=0.03
Silver	HQ=0
Thallium (I)	HQ=0.006
Antimony	HQ=6
Arsenic - Carcinogenic	2E-06
Arsenic - Noncarcinogenic	HQ=0.05
Barium	HQ=0
Beryllium - Carcinogenic	6E-08
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.6

Chromium Total	HQ=0.3
Chromium VI	HQ=0.006
Zinc	HQ=0.2
Dichloropropene, cis-1,3-	2E-12
Dichloropropene, trans-1,3-	6E-14
Bis (2-chloropropyl) ether	1E-11

**Table 32 Risks Associated with Ingestion of Drinking Water for the Child:  
Point C1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	3E-08
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	2E-13
Aniline	3E-12
Methanol	HQ=0
Acetone	HQ=0
Chloroform	3E-14
Hexachloroethane	1E-12
Benzene	2E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	2E-11
Acetonitrile	HQ=0
Methylene chloride	2E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	2E-13
Bromodichloromethane	5E-13
Dichloroethane, 1,1-	4E-13
Dichloroethylene, 1,1-	8E-13
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	4E-13
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	1E-12
Trichloroethylene	3E-14
Tetrachloroethane, 1,1,2,2-	7E-12
Pentachloronitrobenzene (PCNB) - Carcinogenic	3E-12
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	8E-13
Hexachloro-1,3-butadiene	9E-13
Pentachlorophenol - Carcinogenic	8E-12
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	2E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	8E-13
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	1E-12

**Table 33 Risks Associated with Ingestion of Drinking Water for the Child:  
Point C1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	2E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	2E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	2E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	2E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	8E-13
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	1E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	4E-10
TCDD, 2,3,7,8-	3E-10
Mercury	HQ=0
Mercury Organic	HQ=0
Nickel	HQ=0.03
Silver	HQ=0
Thallium (I)	HQ=0.006
Antimony	HQ=6
Arsenic - Carcinogenic	2E-06
Arsenic - Noncarcinogenic	HQ=0.05
Barium	HQ=0
Beryllium - Carcinogenic	6E-08
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.6

Chromium Total	HQ=0.3
Chromium VI	HQ=0.006
Zinc	HQ=0.2
Dichloropropene, cis-1,3-	2E-12
Dichloropropene, trans-1,3-	6E-14
Bis (2-chloropropyl) ether	1E-11

**Table 34 Risks Associated with Ingestion of Drinking Water for the Subsistence Farmer: Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	1E-07
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	7E-13
Aniline	1E-11
Methanol	HQ=0
Acetone	HQ=0
Chloroform	1E-13
Hexachloroethane	5E-12
Benzene	7E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	9E-11
Acetonitrile	HQ=0
Methylene chloride	8E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	8E-13
Bromodichloromethane	2E-12
Dichloroethane, 1,1-	2E-12
Dichloroethylene, 1,1-	3E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	2E-12
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	4E-12
Trichloroethylene	1E-13
Tetrachloroethane, 1,1,2,2-	3E-11
Pentachloronitrobenzene (PCNB) - Carcinogenic	1E-11
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	3E-12
Hexachloro-1,3-butadiene	4E-12
Pentachlorophenol - Carcinogenic	3E-11
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	8E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	3E-12
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	5E-12

**Table 35 Risks Associated with Ingestion of Drinking Water for the Subsistence Farmer: Point A1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	7E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	9E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	9E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	7E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	3E-12
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	5E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	2E-09
TCDD, 2,3,7,8-	1E-09
Mercury Organic	HQ=0
Mercury	HQ=0
Nickel	HQ=0.02
Silver	HQ=0
Thallium (I)	HQ=0.003
Antimony	HQ=3
Arsenic - Carcinogenic	7E-06
Arsenic - Noncarcinogenic	HQ=0.03
Barium	HQ=0
Beryllium - Carcinogenic	2E-07
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.3

Chromium VI	HQ=0.004
Zinc	HQ=0.1
Dichloropropene, cis-1,3-	8E-12
Dichloropropene, trans-1,3-	2E-13
Bis (2-chloropropyl) ether	5E-11

**Table 36 Risks Associated with Ingestion of Drinking Water for the Subsistence Farmer: Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	1E-07
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	7E-13
Aniline	1E-11
Methanol	HQ=0
Acetone	HQ=0
Chloroform	1E-13
Hexachloroethane	5E-12
Benzene	7E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	9E-11
Acetonitrile	HQ=0
Methylene chloride	8E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	8E-13
Bromodichloromethane	2E-12
Dichloroethane, 1,1-	2E-12
Dichloroethylene, 1,1-	3E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	2E-12
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	4E-12
Trichloroethylene	1E-13
Tetrachloroethane, 1,1,2,2-	3E-11
Pentachloronitrobenzene (PCNB) - Carcinogenic	1E-11
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	3E-12
Hexachloro-1,3-butadiene	4E-12
Pentachlorophenol - Carcinogenic	3E-11
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	8E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	3E-12
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	5E-12

**Table 37 Risks Associated with Ingestion of Drinking Water for the Subsistence Farmer: Point B1**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	7E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	9E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	9E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	7E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	3E-12
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	5E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	2E-09
TCDD, 2,3,7,8-	1E-09
Mercury Organic	HQ=0
Mercury	HQ=0
Nickel	HQ=0.02
Silver	HQ=0
Thallium (I)	HQ=0.003
Antimony	HQ=3
Arsenic - Carcinogenic	7E-06
Arsenic - Noncarcinogenic	HQ=0.03
Barium	HQ=0
Beryllium - Carcinogenic	2E-07
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.3

Chromium VI	HQ=0.004
Zinc	HQ=0.1
Dichloropropene, cis-1,3-	8E-12
Dichloropropene, trans-1,3-	2E-13
Bis (2-chloropropyl) ether	5E-11

**Table 38 Risks Associated with Ingestion of Drinking Water for the Subsistence Farmer: Point C3**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Benzo(a)pyrene	1E-07
Dinitrophenol, 2,4-	HQ=0
Carbon tetrachloride	7E-13
Aniline	1E-11
Methanol	HQ=0
Acetone	HQ=0
Chloroform	1E-13
Hexachloroethane	5E-12
Benzene	7E-09
Methyl bromide (Bromomethane)	HQ=0
Vinyl chloride	9E-11
Acetonitrile	HQ=0
Methylene chloride	8E-10
Carbon disulfide	HQ=0
Bromoform (Tribromomethane)	8E-13
Bromodichloromethane	2E-12
Dichloroethane, 1,1-	2E-12
Dichloroethylene, 1,1-	3E-12
Trichlorofluoromethane	HQ=0
Hexachlorocyclopentadiene	HQ=0
Isophorone	2E-12
Methyl ethyl ketone	HQ=0
Trichloroethane, 1,1,2-	4E-12
Trichloroethylene	1E-13
Tetrachloroethane, 1,1,2,2-	3E-11
Pentachloronitrobenzene (PCNB) - Carcinogenic	1E-11
Pentachloronitrobenzene (PCNB) - Noncarcinogenic	HQ=0
Diethyl phthalate	HQ=0
Di-n-butyl phthalate	HQ=0
Butylbenzylphthalate	HQ=0
N-Nitrosodiphenylamine	3E-12
Hexachloro-1,3-butadiene	4E-12
Pentachlorophenol - Carcinogenic	3E-11
Pentachlorophenol - Noncarcinogenic	HQ=0
Chloronaphthalene, 2-	HQ=0
Dichlorobenzidine, 3,3-	8E-09

Cresol, o-	HQ=0
Dichlorobenzene, 1,2-	HQ=0
Chlorophenol, 2-	HQ=0
Nitrobenzene	HQ=0
Dinitrobenzene, 1,3-	HQ=0
Ethylbenzene	HQ=0
Styrene	HQ=0
Benzyl alcohol	HQ=0
Dimethylphenol, 2,4-	HQ=0
Cresol, p-	HQ=0
Dichlorobenzene, 1,4-	3E-12
Chloroaniline, p-	HQ=0
Dichloroethane, 1,2-	5E-12

**Table 39 Risks Associated with Ingestion of Drinking Water for the Subsistence Farmer: Point C3**

CONSTITUENT	LIFETIME INDIVIDUAL RISK
Acrylonitrile	7E-10
Vinyl acetate	HQ=0
Methyl isobutyl ketone	HQ=0
Toluene	HQ=0
Chlorobenzene	HQ=0
Phenol	HQ=0
Bis(2-chlorethyl)ether	9E-10
Bis(2-ethylhexyl)phthalate - Carcinogenic	9E-13
Bis(2-ethylhexyl)phthalate - Noncarcinogenic	HQ=0
Di-n-octyl phthalate	HQ=0
Hexachlorobenzene - Carcinogenic	7E-11
Hexachlorobenzene - Noncarcinogenic	HQ=0
Trichlorobenzene, 1,2,4-	HQ=0
Dichlorophenol, 2,4-	HQ=0
Dinitrotoluene, 2,4-	HQ=0
Chlorodibromomethane	3E-12
Tetrachloroethylene	HQ=0
Dimethyl phthalate	HQ=0
Dichloroethylene, trans-1,2-	HQ=0
Dinitrotoluene, 2,6-	HQ=0
N-Nitrosodi-n-propylamine	5E-09
Xylenes (total)	HQ=0
Polychlorinated biphenyls	2E-09
TCDD, 2,3,7,8-	1E-09
Mercury Organic	HQ=0
Mercury	HQ=0
Nickel	HQ=0.02
Silver	HQ=0
Thallium (I)	HQ=0.003
Antimony	HQ=3
Arsenic - Carcinogenic	7E-06
Arsenic - Noncarcinogenic	HQ=0.03
Barium	HQ=0
Beryllium - Carcinogenic	2E-07
Beryllium - Noncarcinogenic	HQ=0
Cadmium	HQ=0.3

Chromium VI	HQ=0.004
Zinc	HQ=0.1
Dichloropropene, cis-1,3-	8E-12
Dichloropropene, trans-1,3-	2E-13
Bis (2-chloropropyl) ether	5E-11

**ATTACHMENT B: CHAPARRAL STEEL COMPANY EMISSIONS**

Presents Data Used to Estimate Emissions from Chaparral Steel Company



## Emission Rates for Chaparral Steel

### FURNACE "A" FUGITIVES

Emission Point Name: Melt Shop Fugitives

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported ** (Tons/yr)
Total Particulates	105.6	3.2E+01	NA	1E+02	3E+01
Arsenic	NA	NA	0.0033	3E-03	1E-03
Antimony	NA	NA	0.52	5E-01	2E-01
Cadmium	NA	NA	0.054	6E-02	2E-02
Chromium	NA	NA	0.33	3E-01	1E-01
Lead	NA	0.37 (PbO2)	1***	1E+00	3E-01
Mercury	NA	NA	0.00019	2E-04	6E-05
Nickel	NA	NA	0.14	1E-01	4E-02
Zinc	NA	4.51 (ZnO)	11.25***	1E+01	4E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates ( permit no. 8097 and PSD-TX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

FURNACE "B" FUGITIVES

Emission Point Name: Melt Shop Fugitives

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported ** (Tons/yr)
Total Particulates	42	3.2E+01	NA	4E+01	3E+01
Arsenic	NA	NA	0.0033	1E-03	1E-03
Antimony	NA	NA	0.52	2E-01	2E-01
Cadmium	NA	NA	0.054	2E-02	2E-02
Chromium	NA	NA	0.33	1E-01	1E-01
Lead	NA	0.37 (PbO2)	1***	4E-01	3E-01
Mercury	NA	NA	0.00019	8E-05	6E-05
Nickel	NA	NA	0.14	6E-02	4E-02
Zinc	NA	4.51 (ZnO)	11.25***	1.2E+01	4E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates ( permit no. 8097 and PSD-DX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

ARC FURNACE "A"

Emission Point Name: Baghouse "A"

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported ** (Tons/yr)
Total Particulates	67.34	2.2E+01	NA	7E+01	2E+01
Arsenic	NA	NA	0.0033	2E-03	7E-04
Antimony	NA	NA	0.52	4E-01	1E-01
Cadmium	NA	NA	0.054	4E-02	1E-02
Chromium	NA	NA	0.33	2E-01	7E-02
Lead	NA	0.22 (PbO <sub>2</sub> )	.86***	5E-01	2E-01
Mercury	NA	NA	0.00019	1E-04	4E-05
Nickel	NA	NA	0.14	9E-02	3E-02
Zinc	NA	2.94 (ZnO)	10.9***	7E+00	2E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates (permit no. 8097 and PSD-TX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

FURNACE "B" FUGITIVES

Emission Point Name: Melt Shop Fugitives

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported ** (Tons/yr)
Total Particulates	42	3.2E+01	NA	4E+01	3E+01
Arsenic	NA	NA	0.0033	1E-03	1E-03
Antimony	NA	NA	0.52	2E-01	2E-01
Cadmium	NA	NA	0.054	2E-02	2E-02
Chromium	NA	NA	0.33	1E-01	1E-01
Lead	NA	0.37 (PbO2)	1***	4E-01	3E-01
Mercury	NA	NA	0.00019	8E-05	6E-05
Nickel	NA	NA	0.14	6E-02	4E-02
Zinc	NA	4.51 (ZnO)	11.25***	1.2E+01	4E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates ( permit no. 8097 and PSD-DX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

ARC FURNACE "A"

Emission Point Name: Baghouse "A"

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported ** (Tons/yr)
Total Particulates	67.34	2.2E+01	NA	7E+01	2E+01
Arsenic	NA	NA	0.0033	2E-03	7E-04
Antimony	NA	NA	0.52	4E-01	1E-01
Cadmium	NA	NA	0.054	4E-02	1E-02
Chromium	NA	NA	0.33	2E-01	7E-02
Lead	NA	0.22 (PbO <sub>2</sub> )	.86***	5E-01	2E-01
Mercury	NA	NA	0.00019	1E-04	4E-05
Nickel	NA	NA	0.14	9E-02	3E-02
Zinc	NA	2.94 (ZnO)	10.9***	7E+00	2E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates (permit no. 8097 and PSD-TX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

ARC FURNACE "A"

Emission Point Name: Baghouse "C"

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported ** (Tons/yr)
Total Particulates	1105.1	2.8E+01	NA	1E+03	3E+01
Arsenic	NA	NA	0.0033	4E-02	9E-04
Antimony	NA	NA	0.52	6E+00	1E-01
Cadmium	NA	NA	0.054	6E-01	2E-02
Chromium	NA	NA	0.33	4E+00	9E-02
Lead	NA	0.48 (PbO2)	1.5***	2E+01	4E-01
Mercury	NA	NA	0.00019	2E-03	5E-05
Nickel	NA	NA	0.14	2E+00	4E-02
Zinc	NA	3.77 (ZnO)	10.7***	1E+02	3E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates ( permit no. 8097 and PSD-TX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

ARC FURNACE "B"

Emission Point Name: Baghouse "B"

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported** (Tons/yr)
Total Particulates	76.45	5.3E+01	NA	8E+01	5E+01
Arsenic	NA	NA	0.0033	3E-03	2E-03
Antimony	NA	NA	0.52	4E-01	3E-01
Cadmium	NA	NA	0.054	4E-02	3E-02
Chromium	NA	NA	0.33	3E-01	2E-01
Lead	NA	0.53 (PbO <sub>2</sub> )	.86***	6E-01	5E-01
Mercury	NA	NA	0.00019	1E-04	1E-04
Nickel	NA	NA	0.14	1E-01	7E-02
Zinc	NA	7.17 (ZnO)	10.9***	8E+00	6E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates ( permit no. 8097 and PSD-TX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.

## Emission Rates for Chaparral Steel

ARC FURNACE \*B\*

Emission Point Name: Baghouse \*C\*

Constituents	Allowable * (Tons/yr)	Reported (Tons/yr)	Emissions Profile (%)	Estimated based on allowable PM (Tons/yr)	Estimated based on actual PM reported** (Tons/yr)
Total Particulates	59.5	2.8E+01	NA	6E+01	3E+01
Arsenic	NA	NA	0.0033	2E-03	9E-04
Antimony	NA	NA	0.52	3E-01	1E-01
Cadmium	NA	NA	0.054	3E-02	2E-02
Chromium	NA	NA	0.33	2E-01	9E-02
Lead	NA	0.37 (PbO <sub>2</sub> )	1***	6E-01	3E-01
Mercury	NA	NA	0.00019	1E-04	5E-05
Nickel	NA	NA	0.14	8E-02	4E-02
Zinc	NA	2.87 (ZnO)	8.2****	5E+00	2E+00

\* Allowable emission rates for fugitive emissions are based on TSP maximum allowable emission rates ( permit no. 8097 and PSD-TX-138M4) and baghouse are based on an adjusted PM10 PartU MAER (PM10 data from Mini Emission Inventory).

\*\* Percent zinc and lead estimated based on actual amounts of PM, zinc, and lead reported.



## **ATTACHMENT C: CHEMICAL AND MODEL INPUTS**

Presents Chemical and Model Inputs Used to Calculate Risks and Potential Exposures



Physical and Chemical Properties of Constituents

CAS	Name	Koc (mL/g)	Kd (mL/g)	Kow	Henry's Law constant (atm m <sup>3</sup> /mol)	Diffusion coefficient in water (cm <sup>2</sup> /s)	Diffusion coeff in air (cm <sup>2</sup> /s)	soil half-life due to deg (yr)	plant-soil rd-root veg (ug/g WW plant)/(ug/mL soil water)*	plant-soil bcf-veg (ug/g DW plant)/(ug/g soil)	plant-soil bcf-beery veg (ug/g DW plant)/(ug/g soil)	plant-soil bcf-forest (ug/g DW plant)/(ug/g soil)
50328	Benzo(a)pyrene	1.0E+06	varies	1.3E+06	9.6E-07	9.0E-06	4.3E-02	0.0E+00	1.5E+03	1.1E+02	1.1E+02	1.1E+02
51285	Dibutyltinyltin, 2,4-	3.1E+01	varies	3.3E+01	4.8E-09	8.0E-06	8.0E-02	0.0E+00	1.3E+00	5.1E+00	5.1E+00	5.1E+00
56235	Carbon tetrachloride	4.8E+02	varies	5.4E+02	2.9E-02	8.8E-06	7.6E-02	0.0E+00	4.6E+00	1.0E+00	1.0E+00	1.0E+00
62533	Aniline	9.2E+00	varies	9.5E+00	2.3E-06	8.3E-06	7.0E-02	0.0E+00	9.9E-01	1.1E+01	1.1E+01	1.1E+01
67561	Methanol	1.8E-01	varies	1.7E-01	1.7E-04	1.6E-05	1.5E-01	0.0E+00	8.3E-01	1.1E+02	1.1E+02	1.1E+02
67641	Acetone	5.8E-01	varies	5.8E-01	2.9E-05	1.1E-05	1.2E-01	0.0E+00	8.4E-01	5.3E+01	5.3E+01	5.3E+01
67663	Chloroform	7.7E+01	varies	8.3E+01	4.0E-03	1.0E-05	1.0E-01	0.0E+00	1.7E+00	3.0E+00	3.0E+00	3.0E+00
67721	Hexachloroethane	8.6E+03	varies	1.0E+04	3.6E-03	6.8E-06	2.5E-03	0.0E+00	3.7E-01	1.9E-01	1.9E-01	1.9E-01
71432	Benzene	1.2E+02	varies	1.3E+02	5.5E-03	9.8E-06	8.8E-02	0.0E+00	2.1E+00	2.3E+00	2.3E+00	2.3E+00
74839	Methyl bromide (Bromomethane)	1.5E+01	varies	1.5E+01	1.4E-02	8.0E-06	8.0E-02	0.0E+00	1.1E+00	7.9E+00	7.9E+00	7.9E+00
74873	Methyl chloride (Chloromethane)	7.8E+00	varies	8.1E+00	4.5E-02	6.5E-06	1.3E-01	0.0E+00	9.7E-01	1.2E+01	1.2E+01	1.2E+01
75003	Chloroethane	2.5E+01	varies	2.89E+01	1.1E-02	8.00E-06	8.00E-02	0.0E+00	1.2E+00	5.8E+00	5.8E+00	5.8E+00
75014	Vinyl chloride	2.9E+01	varies	3.0E+01	8.4E-02	1.2E-05	1.1E-01	0.0E+00	1.2E+00	5.4E+00	5.4E+00	5.4E+00
75058	Acetonitrile	4.2E-01	varies	4.2E-01	2.4E-06	1.7E-05	1.3E-01	0.0E+00	8.4E-01	6.4E+01	6.4E+01	6.4E+01
75092	Methylene chloride	1.7E+01	varies	1.8E+01	2.4E-03	1.2E-05	1.0E-01	0.0E+00	1.1E+00	7.3E+00	7.3E+00	7.3E+00
75150	Carbon disulfide	1.3E+02	varies	1.4E+02	1.3E-04	1.0E-05	1.0E-01	0.0E+00	2.2E+00	2.2E+00	2.2E+00	2.2E+00
75252	Bromoform (Tribromomethane)	1.8E+02	varies	2.0E+02	6.1E-04	8.0E-06	8.0E-02	0.0E+00	2.6E+00	1.8E+00	1.8E+00	1.8E+00
75274	Bromodichloromethane	1.3E+02	varies	1.4E+02	3.2E-03	8.0E-06	8.0E-02	0.0E+00	2.2E+00	2.2E+00	2.2E+00	2.2E+00
75343	Dichloroethane, 1,1-	5.8E+01	varies	6.2E+01	5.8E-03	8.0E-06	8.0E-02	0.0E+00	1.5E+00	3.6E+00	3.6E+00	3.6E+00
75364	Dichloroethylene, 1,1-	1.2E+02	varies	1.3E+02	2.5E-02	8.0E-06	8.0E-02	0.0E+00	2.1E+00	2.3E+00	2.3E+00	2.3E+00
75694	Trichlorofluoromethane	3.1E+02	varies	3.4E+02	1.3E-01	9.7E-06	8.7E-02	0.0E+00	3.5E+00	1.3E+00	1.3E+00	1.3E+00
77474	Hexachlorocyclopentadiene	2.0E+05	varies	2.5E+05	1.7E-02	6.2E-06	5.6E-02	0.0E+00	4.3E+02	3.0E-02	3.0E-02	3.0E-02
78591	Isophorone	4.7E+01	varies	5.0E+01	6.2E-06	6.9E-06	6.2E-02	0.0E+00	1.4E+00	4.0E+00	4.0E+00	4.0E+00
78833	Methyl ethyl ketone	1.9E+00	varies	1.8E+00	3.6E-05	8.9E-06	8.1E-02	0.0E+00	8.7E-01	2.7E+01	2.7E+01	2.7E+01
79005	Trichloroethane, 1,1,2-	8.6E+01	varies	9.3E+01	1.0E-03	8.8E-06	7.8E-02	0.0E+00	1.8E+00	2.8E+00	2.8E+00	2.8E+00
79016	Trichloroethylene	2.5E+02	varies	2.7E+02	1.1E-02	9.1E-06	7.9E-02	0.0E+00	3.1E+00	1.5E+00	1.5E+00	1.5E+00
79345	Tetrachloroethane, 1,1,2,2-	2.2E+02	varies	2.5E+02	3.7E-04	7.9E-06	7.1E-02	0.0E+00	2.9E+00	1.6E+00	1.6E+00	1.6E+00
82688	Pentachloronitrobenzene (PCNB)	1.3E+04	varies	1.5E+04	2.9E-02	8.0E-06	8.0E-02	0.0E+00	5.1E+01	1.5E-01	1.5E-01	1.5E-01
84662	Diethyl phthalate	2.9E+02	varies	3.2E+02	5.5E-07	8.0E-06	8.0E-02	0.0E+00	3.4E+00	1.4E+00	1.4E+00	1.4E+00
84742	Di-n-butyl phthalate	3.8E+04	varies	4.4E+04	1.4E-06	7.9E-06	4.4E-02	0.0E+00	1.1E+02	8.1E-02	8.1E-02	8.1E-02
85887	Butylbenzylphthalate	5.7E+04	varies	6.9E+04	1.9E-06	8.0E-06	8.0E-02	0.0E+00	1.8E+02	6.2E-02	6.2E-02	6.2E-02
86306	N-Nitrosodiphenylamine	1.3E+03	varies	1.4E+03	7.0E-04	8.0E-06	8.0E-02	0.0E+00	9.0E+00	5.8E-01	5.8E-01	5.8E-01
87683	Hexachloro-1,3-butadiene	4.5E+04	varies	5.4E+04	2.4E-02	6.2E-06	5.6E-02	0.0E+00	1.3E+02	7.1E-02	7.1E-02	7.1E-02
87865	Pentachlorophenol	1.0E+05	varies	1.2E+05	1.4E-05	6.1E-06	5.6E-02	0.0E+00	2.5E+02	4.4E-02	4.4E-02	4.4E-02
88744	2-nitroaniline	4.7E+01	varies	5.01E+01	2.0E-08	8.00E-06	7.30E-02	0.0E+00	1.4E+00	4.0E+00	4.0E+00	4.0E+00
91587	2-chloronaphthalene	1.1E+04	varies	1.29E+04	1.4E-04	8.00E-06	8.00E-02	0.0E+00	4.4E+01	1.7E-01	1.7E-01	1.7E-01
91941	Dichlorobenzidine, 3,3'	7.8E+03	varies	8.9E+03	2.1E-08	8.0E-06	8.0E-02	0.0E+00	3.4E+01	2.0E-01	2.0E-01	2.0E-01
95487	Cresol, o-	9.0E+01	varies	9.8E+01	1.6E-06	8.3E-06	7.4E-02	0.0E+00	1.8E+00	2.7E+00	2.7E+00	2.7E+00

Physical and Chemical Properties of Constituents

CAS	Name	Koc (mL/g)	Kd (mL/g)	Kow	Henry's Law constant (atm-m <sup>3</sup> /mol)	Diffusion coefficient in water (cm <sup>2</sup> /s)	Diffusion coeff in air (cm <sup>2</sup> /s)	soil half-life due to deg (yr)	plant-soil rd-root veg (ug/g WW plant)/(ug/mL soil water)*	plant-soil bod-leafy veg (ug/g DW plant)/(ug/g soil)	plant-soil bod-terrage (ug/g DW plant)/(ug/g soil)
95501	Dichlorobenzene, 1,2-	2.4E+03	varies	2.7E+03	2.1E-03	7.9E-06	6.9E-02	0.0E+00	1.4E+01	4.0E-01	4.0E-01
95578	Chlorophenol, 2-	1.3E+02	varies	1.4E+02	1.7E-05	8.0E-06	8.0E-02	0.0E+00	2.2E+00	2.2E+00	2.2E+00
99953	Nitrobenzene	6.4E+01	varies	6.9E+01	2.1E-05	8.0E-06	7.6E-02	0.0E+00	1.9E+00	3.9E+00	3.9E+00
99650	Dinitrobenzene, 1,3-	3.0E+01	varies	3.1E+01	1.2E-07	7.8E-06	2.8E-01	0.0E+00	1.2E+00	5.3E+00	5.3E+00
100414	Ethylbenzene	1.2E+03	varies	1.4E+03	7.7E-03	7.8E-06	7.5E-02	0.0E+00	8.7E+00	5.9E-01	5.9E-01
100425	Styrene	7.8E+02	varies	8.7E+02	3.3E-03	8.0E-06	7.1E-02	0.0E+00	6.4E+00	7.7E-01	7.7E-01
100516	Benzyl alcohol	1.2E+01	varies	1.3E+01	3.9E-07	8.0E-06	8.0E-02	0.0E+00	1.0E+00	8.8E+00	8.8E+00
105679	Dimethylphenol, 2,4-	2.1E+02	varies	2.3E+02	3.3E-06	8.0E-06	6.0E-02	0.0E+00	2.9E+00	1.7E+00	1.7E+00
106445	Cresol, p-	8.3E+01	varies	8.9E+01	8.2E-07	1.0E-05	7.4E-02	0.0E+00	1.8E+00	2.9E+00	2.9E+00
106467	Dichlorobenzene, 1,4-	2.3E+03	varies	2.8E+03	2.8E-03	7.9E-06	8.9E-02	0.0E+00	1.4E+00	4.1E-01	4.1E-01
106478	Chloroaniline, p-	6.6E+01	varies	7.1E+01	1.1E-04	8.0E-06	8.0E-02	0.0E+00	1.6E+00	3.3E+00	3.3E+00
107082	Dichloroethane, 1,2-	2.8E+01	varies	3.0E+01	1.3E-03	9.9E-06	1.0E-01	0.0E+00	1.2E+00	5.5E+00	5.5E+00
107131	Acrylonitrile	1.8E+00	varies	1.9E+00	1.0E-04	1.3E-05	1.2E-01	0.0E+00	8.7E-01	2.7E+01	2.7E+01
108054	vinyl acetate	5.2E+00	varies	5.37E+00	5.09E-04	6.50E-02	9.20E-06	0.0E+00	9.3E-01	1.5E+01	1.5E+01
108101	Methyl isobutyl ketone	1.5E+01	varies	1.5E+01	1.2E-04	7.8E-06	7.5E-02	0.0E+00	1.1E+00	7.9E+00	7.9E+00
108883	Toluene	5.1E+02	varies	5.9E+02	6.1E-03	8.6E-06	6.7E-02	0.0E+00	4.8E+00	1.0E+00	1.0E+00
109907	Chlorobenzene	6.5E+02	varies	7.2E+02	4.4E-03	8.7E-06	7.3E-02	0.0E+00	5.6E+00	8.6E-01	8.6E-01
109952	Phenol	2.9E+01	varies	3.0E+01	6.0E-07	9.1E-06	8.2E-02	0.0E+00	1.2E+00	5.4E+00	5.4E+00
110829	Cyclohexane	1.5E+01	varies	1.6E+01	2.1E-05	7.5E-06	8.9E-02	0.0E+00	1.1E+00	7.7E+00	7.7E+00
111444	Bis(2-chloroethyl)ether	1.5E+07	varies	2.0E+07	8.7E-08	3.7E-06	3.5E-02	0.0E+00	1.3E+04	2.3E-03	2.3E-03
117817	Bis(2-ethylhexyl)phthalate	8.4E+07	varies	1.1E+08	5.7E-05	8.0E-06	8.0E-02	0.0E+00	4.9E+04	8.5E-04	8.5E-04
117840	Di-n-octyl phthalate	6.2E+05	varies	7.8E+05	7.5E-04	5.9E-06	6.4E-02	0.0E+00	1.0E+03	1.5E-02	1.5E-02
118741	Hexachlorobenzene	6.8E+03	varies	1.0E+04	2.6E-03	8.0E-06	8.0E-02	0.0E+00	3.6E+01	1.9E-01	1.9E-01
120621	Trichlorobenzene, 1,2,4-	1.1E+03	varies	1.2E+03	2.4E-07	8.0E-06	8.0E-02	0.0E+00	7.9E+00	6.4E-01	6.4E-01
120832	Dichlorophenol, 2,4-	9.5E+01	varies	1.0E+02	1.5E-07	7.1E-06	2.0E-01	0.0E+00	1.9E+00	2.7E+00	2.7E+00
121142	Dinitrotoluene, 2,4-	1.2E+02	varies	1.3E+02	2.5E-03	9.0E-06	8.0E-02	0.0E+00	2.1E+00	2.3E+00	2.3E+00
124481	Chlorodibromomethane	4.1E+01	varies	4.7E+02	1.7E-02	8.2E-06	7.2E-02	0.0E+00	4.3E+00	1.1E+00	1.1E+00
127184	Tetrachloroethylene	1.1E+02	varies	4.4E+01	5.8E-07	6.3E-06	6.7E-02	0.0E+00	1.4E+00	4.4E+00	4.4E+00
131113	Dimethyl phthalate	1.1E+02	varies	1.2E+02	5.9E-03	8.0E-06	8.0E-02	0.0E+00	2.0E+00	2.5E+00	2.5E+00
156605	Dichloroethylene, trans-1,2-	6.9E+01	varies	7.4E+01	1.3E-07	8.0E-06	8.0E-02	0.0E+00	1.7E+00	3.2E+00	3.2E+00
594521	Dinitromethylphenol, 4,6-,2-	2.3E+01	varies	2.4E+01	4.1E-06	8.0E-06	8.0E-02	0.0E+00	1.2E+00	6.1E+00	6.1E+00
606202	Dinitrotoluene, 2,6-	4.3E+05	varies	1.5E+03	6.0E-03	8.0E-06	8.0E-02	0.0E+00	9.2E+00	5.7E-01	5.7E-01
621947	N-Nitrosod-n-propylamine	4.3E+05	varies	2.0E+06	4.2E-04	1.0E-05	8.0E-02	0.0E+00	2.1E+03	8.9E-03	8.9E-03
1330207	Xylenes (total)	1.4E+07	varies	1.1E+07	9.2E-06	8.0E-06	4.7E-02	0.0E+00	1.2E+04	3.3E-03	3.3E-03
1336363	Polychlorinated biphenyls	NA	2.6E+05	NA	NA	NA	NA	0	9.00E-03	1.30E-05	1.30E-05
1746016	TCDD, 2,3,7,8-	NA	9.5E+04	NA	7.1E-10	8.0E-06	8.0E-02	0.0E+00	1.4E-02	2.0E-03	2.0E-03
7439921	Lead*	NA	NA	NA	NA	NA	NA	0	9.00E-03	1.30E-05	1.30E-05
7439976	Mercury Organic	NA	9.5E+04	NA	7.1E-10	8.0E-06	8.0E-02	0.0E+00	1.4E-02	2.0E-03	2.0E-03

Physical and Chemical Properties of Constituents

CAS	Name	Koc (mL/g)	Kd (mL/g)	Kow	Henry's Law constant (atm m <sup>3</sup> /mol)	Diffusion coefficient in water (cm <sup>2</sup> /s)	Diffusion coeff in air (cm <sup>2</sup> /s)	soil half-life due to deg (yr)	plant-soil rd-root veg (ug/g WW plant)/(ug/ml soil water)	plant-soil bcf-veg plant/(ug/g DW plant)/(ug/g soil)	plant-soil bcf-veg plant/(ug/g DW plant)/(ug/g soil)
7439877	Inorganic Mercury	NA	9.5E+04	NA	7.1E-10	8.0E-06	8.0E-02	0.0E+00	1.4E-02	8.0E-03	2.0E-03
7440020	Nickel	NA	8.2E+01	NA	NA	NA	NA	0.0E+00	8.0E-03	3.2E-02	1.1E-01
7440224	Silver	NA	4.0E-01	NA	NA	NA	NA	0.0E+00	1.0E-01	4.0E-01	4.0E-01
7440280	Thallium (I)	NA	7.4E+01	NA	NA	NA	NA	0.0E+00	4.0E-04	4.0E-03	4.0E-03
7440360	Antimony	NA	2.0E+00	NA	NA	NA	NA	0.0E+00	3.0E-02	2.0E-01	2.0E-01
7440382	Arsenic	NA	2.8E+01	NA	NA	NA	NA	0.0E+00	8.0E-03	3.6E-02	6.0E-02
7440393	Barium	NA	5.3E+02	NA	NA	NA	NA	0.0E+00	1.5E-02	1.5E-01	1.5E-01
7440417	Beryllium	NA	7.0E+01	NA	NA	NA	NA	0.0E+00	1.5E-03	1.0E-02	1.0E-02
7440439	Cadmium	NA	1.6E+02	NA	NA	NA	NA	0.0E+00	8.4E-02	3.6E-01	1.4E-01
7440472	Chromium Total	NA	1.8E+01	NA	NA	NA	NA	0.0E+00	4.5E-03	7.5E-03	7.5E-03
7440473	Chromium VI	NA	1.8E+01	NA	NA	NA	NA	0.0E+00	4.5E-03	7.5E-03	7.5E-03
7440666	Zinc	NA	4.0E+01	NA	NA	NA	NA	0.0E+00	4.4E-02	2.5E-01	8.6E-02
10061015	Dichloropropene, cis-1,3-	4.2E+01	varies	4.5E+01	2.0E-03	8.0E-06	8.0E-02	0.0E+00	1.4E+00	4.3E+00	4.3E+00
10061026	Dichloropropene, trans-1,3-	4.2E+01	varies	4.5E+01	1.0E+03	8.0E-06	8.0E-02	0.0E+00	1.4E+00	4.3E+00	4.3E+00
39639329	Bis (2-chloropropyl) ether	1.5E+02	varies	1.6E+02	1.0E-04	6.4E-06	6.0E-02	0.0E+00	2.3E+00	2.1E+00	2.1E+00

Physical and Chemical Properties of Constituents

CAS	Name	air-plant biotran factor-leafy veg (ug/g DW plant)/(ug/g air)	air-plant biotran factor-orage (ug/g DW plant)/(ug/g air)	biotransfer factor-beef (day/kg)**	biotransfer factor-dairy (day/kg)**	BAF <sub>fish</sub> (L/kg body weight)**	BCF <sub>fish</sub> (L/kg)	RfD (mg/kg/day)	Oral CSF (mg/kg/day) <sup>-1</sup>	RfC (mg/m <sup>3</sup> )
50328	Benzo(a)pyrene	4.7E+04	4.7E+04	3.2E-02	1.0E-02	1,000	NA	NA	7.9E+00	NA
51285	Dinitrophenol, 2,4-	4.8E+04	4.8E+04	8.3E-07	2.6E-07	NA	4	2.0E-03	NA	NA
56235	Carbon tetrachloride	1.8E-01	1.8E-01	1.3E-05	4.3E-06	NA	17	7.0E-04	1.9E-01	NA
62533	Aniline	2.7E+01	2.7E+01	2.4E-07	7.8E-08	NA	2	NA	5.7E-03	1.0E-03
67581	Methanol	4.8E-03	4.8E-03	4.3E-09	1.3E-09	NA	0.06	5.0E-01	NA	NA
67641	Acetone	1.1E-01	1.1E-01	1.4E-08	4.6E-09	NA	0.17	1.0E-01	NA	NA
67663	Chloroform	1.5E-01	1.5E-01	2.1E-06	6.6E-07	NA	3	1.0E-02	6.1E-03	NA
67721	Hexachloroethane	2.8E+01	2.8E+01	2.5E-04	7.9E-05	950	NA	1.0E-03	1.4E-02	NA
71432	Benzene	1.9E-01	1.9E-01	3.3E-06	1.0E-06	NA	4	NA	2.9E-02	NA
74839	Methyl bromide (Bromomethane)	7.3E-03	7.3E-03	3.9E-07	1.2E-07	NA	2	1.4E-03	NA	5.0E-03
74873	Methyl chloride (Chloromethane)	1.2E-03	1.2E-03	2.0E-07	6.5E-08	NA	1	NA	NA	NA
75003	Chloroethane	1.6E-02	1.6E-02	6.9E-07	2.1E-07	NA	7.2	NA	NA	1.0E+1
75014	Vinyl chloride	2.5E-03	2.5E-03	7.6E-07	2.4E-07	NA	2	NA	1.9E+00	NA
75058	Acetonitrile	9.0E-02	9.0E-02	1.0E-08	3.3E-09	NA	0.14	6.0E-03	NA	5.0E-02
75092	Methylene chloride	5.1E-02	5.1E-02	4.5E-07	1.4E-07	NA	3	6.0E-02	7.5E-03	3.0E+00
75150	Carbon disulfide	8.8E-02	8.8E-02	3.6E-06	1.1E-06	NA	10	1.0E-01	NA	1.0E-02
75252	Bromolom (Tribromomethane)	2.6E+00	2.6E+00	5.0E-06	1.8E-06	NA	19	2.0E-02	7.9E-03	NA
75274	Bromochloromethane	3.4E-01	3.4E-01	3.5E-06	1.1E-06	NA	10	2.0E-02	8.2E-02	NA
75343	Dichloroethane, 1,1-	7.8E-02	7.8E-02	1.5E-06	4.9E-07	NA	7	NA	9.1E-02	5.0E-01
75354	Dichloroethylene, 1,1-	4.0E-02	4.0E-02	3.3E-06	1.0E-06	NA	12	9.0E-03	6.0E-01	NA
75694	Trichlorofluoromethane	2.1E-02	2.1E-02	8.5E-06	2.7E-06	NA	26	3.0E-01	NA	7.0E-01
77474	Hexachlorocyclopentadiene	1.8E-02	1.8E+02	6.2E-03	1.9E-03	NA	5,787	7.0E-03	NA	7.0E-05
78591	Isophorone	5.8E+01	5.8E+01	1.3E-06	4.0E-07	NA	8	2.0E-01	9.5E-04	NA
78933	Methyl ethyl ketone	3.1E-01	3.1E-01	4.8E-08	1.5E-08	NA	0.44	6.0E-01	NA	1.0E+00
79005	Trichloroethane, 1,1,2-	7.0E-01	7.0E-01	2.3E-06	7.4E-07	NA	12	4.0E-03	5.7E-02	NA
79016	Trichloroethylene	2.1E-01	2.1E-01	6.8E-06	2.2E-06	NA	22	NA	1.1E-02	NA
79345	Tetrachloroethane, 1,1,2,2-	5.3E+00	5.3E+00	6.2E-06	1.9E-06	NA	8	NA	2.0E-01	NA
82688	Pentachloronitrobenzene (PCN)	5.5E+00	5.5E+00	3.8E-04	1.2E-04	NA	802	3.0E-03	2.8E-01	NA
84662	Diethyl phthalate	4.7E+03	4.7E+03	7.9E-08	2.9E-08	NA	23	8.0E-01	NA	NA
84742	Di-n-butyl phthalate	3.4E+05	3.4E+05	1.1E-03	3.5E-04	NA	1,585	1.0E-01	NA	NA
85687	Butylbenzylphthalate	4.2E+05	4.2E+05	1.7E-03	5.5E-04	NA	1,422	2.0E-01	NA	NA
86306	N-Nitrosodiphenylamine	1.8E+01	1.8E+01	3.6E-05	1.1E-05	NA	78	NA	4.9E-03	NA
87683	Hexachloro-1,3-butadiene	2.6E+01	2.6E+01	1.4E-03	4.3E-04	2,552	NA	2.0E-04	7.8E-02	NA
87865	Pentachloronol*	1.0E+05	1.0E+05	3.1E-03	9.8E-04	7,868	NA	3.0E-02	1.2E-01	NA
88744	2-nitroaniline	1.8E+04	1.8E+04	1.3E-06	4.0E-07	NA	11.7	NA	NA	2.0E-4
91587	2-chloronaphthalene	9.3E+02	9.3E+02	3.2E-04	1.0E-04	NA	460	8.0E-2	NA	NA
91941	Dichlorobenzidine, 3,3'	4.3E+06	4.3E+06	2.2E-04	7.1E-05	NA	173	NA	4.5E-01	NA
95487	Cresol, o-	4.5E+02	4.5E+02	2.5E-06	7.8E-07	NA	10	5.0E-02	NA	NA

Physical and Chemical Properties of Constituents

CAS	Name	air-plant biotran factor-leafy veg plant/(ug/g DW plant)/(ug/g air)	air-plant biotran factor-terrage plant/(ug/g DW plant)/(ug/g air)	biotranster factor-beef (day/kg)**	biotranster factor-dairy (day/kg)**	BAFish (Lag body weight)**	BCFish (Lag)	RfD (mg/kg/day)	Oral CSF (mg/kg/day)-1	RfC (mg/m3)
95501	Dichlorobenzene, 1,2-	1.2E+01	1.2E+01	6.8E-05	2.1E-05	NA	245	9.0E-02	NA	2.0E-01
95578	Chlorophenol, 2-	6.6E+01	6.6E+01	3.5E-06	1.1E-06	NA	13	5.0E-03	NA	NA
98953	Nitrobenzene	2.5E+01	2.5E+01	1.7E-06	5.5E-07	NA	2	5.0E-04	NA	2.0E-03
99650	Dinitrobenzene, 1,3-	1.8E+03	1.8E+03	7.9E-07	2.5E-07	NA	4	1.0E-04	NA	NA
100414	Ethylbenzene	1.6E+00	1.6E+00	3.5E-05	1.1E-05	NA	76	1.0E-01	NA	1.0E+00
100425	Styrene	2.3E+00	2.3E+00	2.2E-05	8.9E-06	NA	54	2.0E-01	NA	1.0E+00
100516	Benzyl alcohol	2.2E+02	2.2E+02	3.2E-07	1.0E-07	NA	2	3.0E-01	NA	NA
105679	Dimethylphenol, 2,4-	5.6E+02	5.6E+02	5.8E-06	1.8E-06	NA	31	2.0E-02	NA	NA
106445	Cresol, p	8.2E+02	8.2E+02	2.2E-06	7.1E-07	NA	9	5.0E-03	NA	NA
106467	Dichlorobenzene, 1,4-	8.7E+00	8.7E+00	6.6E-05	2.1E-05	NA	223	NA	2.4E-02	8.0E-01
106478	Chloroaniline, p	4.9E+00	4.9E+00	1.8E-06	5.6E-07	NA	8	4.0E-03	NA	NA
107062	Dichloroethane, 1,2-	1.6E-01	1.6E-01	7.4E-07	2.3E-07	NA	5	NA	9.1E-02	NA
107131	Acrylonitrile	1.1E-01	1.1E-01	4.7E-08	1.5E-08	NA	1	NA	5.4E-01	2.0E-03
108054	vinyl acetate	6.6E-02	6.6E-02	1.3E-07	4.3E-08	NA	2.1	1.0E+0	NA	2.0E-1
108101	Methyl isobutyl ketone	8.5E-01	8.5E-01	3.9E-07	1.2E-07	NA	2	5.0E-02	NA	8.0E-02
108893	Toluene	7.7E-01	7.7E-01	1.4E-05	4.5E-06	NA	41	2.0E-01	NA	4.0E-01
108907	Chlorobenzene	1.4E+00	1.4E+00	1.8E-05	5.8E-06	NA	19	2.0E-02	NA	2.0E-02
108952	Phenol	3.5E+02	3.5E+02	7.6E-07	2.4E-07	NA	4	6.0E-01	NA	NA
110829	Cyclohexane	5.1E+00	5.1E+00	4.1E-07	1.3E-07	NA	4	NA	1.1E+00	NA
111444	Bis(2-chloroethyl)ether	9.6E+07	9.6E+07	5.0E-01	1.6E-01	119	NA	2.0E-02	1.4E-02	NA
117817	Bis(2-ethylhexyl)phthalate	9.3E+05	9.3E+05	2.9E+00	9.1E-01	119	NA	2.0E-02	NA	NA
117840	Di-n-octyl phthalate	3.5E+02	3.5E+02	1.9E-02	6.2E-03	208,590	NA	8.0E-04	1.6E+00	NA
118741	Hexachlorobenzene	4.0E+01	4.0E+01	2.6E-04	8.1E-05	NA	848	1.0E-02	NA	9.0E-03
120821	Trichlorobenzene, 1,2,4-	4.5E+04	4.5E+04	3.0E-05	9.5E-06	NA	66	3.0E-03	NA	NA
120832	Dichlorophenol, 2,4-	5.3E+03	5.3E+03	2.6E-06	8.1E-07	NA	10	2.0E-03	NA	NA
121142	Dinitrotoluene, 2,4-	4.2E-01	4.2E-01	3.4E-06	1.1E-06	NA	14	2.0E-02	8.4E-02	NA
124481	Chlorodibromomethane	2.3E-01	2.3E-01	1.2E-05	3.7E-06	NA	34	1.0E-02	NA	NA
127184	Tetrachloroethylene	5.4E+02	5.4E+02	1.1E-06	3.5E-07	NA	7	1.0E+01	NA	NA
131113	Dimethyl phthalate	1.6E-01	1.6E-01	3.0E-06	9.3E-07	NA	10	2.0E-02	NA	NA
156605	Dichloroethylene, trans-1,2-	4.2E+03	4.2E+03	1.9E-06	5.9E-07	NA	8	1.0E-03	NA	NA
534521	Dinitrotoluene, 4,6-,2-	4.0E+00	4.0E+00	6.1E-07	1.9E-07	NA	3	NA	7.0E+00	NA
606202	Dinitrotoluene, 2,6-	2.2E+00	2.2E+00	3.7E-05	1.2E-05	NA	75	2.0E+00	NA	3.0E-01
621847	N-Nitrosod-n-propylamine	4.2E+03	4.2E+03	5.0E-02	1.6E-02	1.8E+00	NA	NA	7.7E+00	NA
1330207	Xylenes (total)	4.6E+06	4.6E+06	4.0E-02	7.0E-03	0.067	NA	NA	1.6E+06	NA
1336363	Polychlorinated biphenyls	0.00E+00	0.00E+00	3.00E-04	2.50E-04	8	NA	NA	NA	NA
1746016	TCDD, 2,3,7,8-	2.3E-04	2.3E-04	2.0E-04	1.0E-04	130,440	NA	1.0E-04	NA	NA
7439921	Lead *									
7439976	Mercury Organic									

Physical and Chemical Properties of Constituents

CAS	Name	air-plant biotran factor-leafy veg (ug/g DW plant)/(ug/g air)	air-plant biotran factor-herb (ug/g DW plant)/(ug/g air)	biotransfer factor-beef (day/kg)**	biotransfer factor-dairy (day/kg)**	BAFfish (L/kg body weight)**	BCFfish (L/kg)	RfD (mg/kg/day)	Oral CSF (mg/kg/day)-1	RfC (mg/ms)
7439977	Inorganic Mercury	2.3E-04	2.3E-04	2.0E-04	1.0E-04	130,440	NA	3.0E-04	NA	NA
7440020	Nickel	0.0E+00	0.0E+00	6.0E-03	1.0E-03	NA	4	2.0E-02	NA	NA
7440224	Silver	0.0E+00	0.0E+00	3.0E-03	2.0E-02	NA	0	5.0E-03	NA	NA
7440280	Thallium (I)	0.0E+00	0.0E+00	4.0E-02	2.0E-03	NA	67	8.0E-05	NA	NA
7440360	Antimony	0.0E+00	0.0E+00	1.0E-03	1.0E-04	NA	0	4.0E-04	NA	NA
7440382	Arsenic	0.0E+00	0.0E+00	2.0E-03	6.0E-03	NA	18	3.0E-04	1.5E+00	NA
7440393	Barium	0.0E+00	0.0E+00	1.5E-04	3.5E-04	NA	NA	7.0E-02	NA	5.0E-04
7440417	Beryllium	0.0E+00	0.0E+00	1.0E-03	9.0E-07	NA	95	5.0E-03	4.3E+00	NA
7440439	Cadmium	0.0E+00	0.0E+00	4.0E-04	1.0E-04	NA	32	1.0E-03	NA	NA
7440472	Chromium Total	0.0E+00	0.0E+00	5.5E-03	1.5E-03	NA	3	5.0E-03	NA	NA
7440473	Chromium VI	0.0E+00	0.0E+00	5.5E-03	1.5E-03	NA	3	5.0E-03	NA	NA
7440666	Zinc	0.0E+00	0.0E+00	3.0E-04	3.0E-04	4	NA	3.0E-01	NA	NA
10061015	Dichloropropene, cis-1,2	1.8E-01	1.8E-01	1.1E-06	3.8E-07	NA	5	3.0E-04	1.8E-01	2.0E-02
10061026	Dichloropropene, trans-1,3	2.0E-07	2.0E-07	1.1E-06	3.8E-07	NA	5	3.0E-04	1.8E-01	2.0E-02
39638329	Bis (2-chloropropyl) ether	1.2E+01	1.2E+01	4.0E-06	1.3E-06	NA	29	4.0E-02	7.0E-02	NA

Physical and Chemical Properties of Constituents

CAS	Name	Inhal URf (ug/m <sup>3</sup> )-1	Inhal CSF (mg/kg/day)-1	melting point (deg K)	solid-phase vapor pressure (atm)	liquid-phase vapor pressure (atm)	plant-soil bcf-grains (ug/g DW plant)/(ug/g soil)	plant-soil bcf. Sludge (ug/gi DW plant)/(ug/g soil)	Fv	Fw	solubility (mg/L)	Molecular weight
50328	Benzo(a)pyrene	1.7E-03	6.0E+00	452	7.4E-12	7.1E-10	1.1E-02	1.1E-02	0.55	0.60	1.94E-03	252.00
51285	Dinitrophenol, 2,4-	NA	NA	386	1.5E-07	1.8E-06	5.1E+00	4.8E+06	1.00	0.60	5.80E+03	184.11
56235	Carbon tetrachloride	1.5E-05	5.3E-02	346	1.5E-01	1.0E+00	1.0E+00	1.0E+00	1.00	0.60	7.92E+02	154.00
62533	Aniline	NA	NA	257	8.8E-04	GAS	1.1E+01	1.1E+01	1.00	0.60	3.8E+04	93.10
67581	Methanol	NA	NA	175	1.6E-01	GAS	1.1E+02	6.1E+24	1.00	0.60	2.9E+04	32.04
67641	Acetone	NA	NA	179	3.0E-01	GAS	5.3E+01	5.3E+01	1.00	0.60	6.04E+05	58.08
67663	Chloroform	2.3E-05	8.1E-02	460	2.7E-01	GAS	3.0E+00	3.0E+00	1.00	0.60	7.98E+03	119.00
67721	Hexachloroethane	4.0E-06	1.4E-02	460	6.2E-04	GAS	1.9E-01	1.9E-01	1.00	0.60	4.08E+01	286.74
71432	Benzene	8.3E-06	2.9E-02	279	1.2E-01	GAS	2.3E+00	2.3E+00	1.00	0.60	1.78E+03	78.00
74839	Methyl bromide (Bromomethane)	1.8E-06	NA	179	2.2E+00	GAS	7.9E+00	7.9E+00	1.00	0.60	1.45E+04	94.95
74873	Methyl chloride (Chloromethane)	NA	6.3E-03	176	5.7E+00	GAS	1.2E+01	1.2E+01	1.00	0.60	6.34E+03	50.48
75003	Chloroethane	NA	NA	134.45	1.00E+00	GAS	5.8E+00	5.8E+00	1.00	0.60	5.710	65.9E+01
75014	Vinyl chloride	NA	3.0E-01	228	3.7E+00	GAS	5.4E+00	5.4E+00	1.00	0.60	2.79E+03	62.50
75058	Acetonitrile	NA	NA	228	1.2E-01	GAS	6.4E+01	2.0E+22	1.00	0.60	2.0E+05	41.05
75092	Methylene chloride	4.7E-07	1.6E-03	162	4.9E-01	GAS	7.3E+00	7.3E+00	1.00	0.60	1.74E+04	84.83
75150	Carbon disulfide	NA	NA	281	4.5E-01	GAS	2.2E+00	2.2E+00	1.00	0.60	2.67E+03	76.14
75252	Bromoform (Tribromomethane)	1.1E-06	3.9E-03	218	7.7E-02	GAS	1.8E+00	1.8E+00	1.00	0.60	3.21E+03	252.77
75274	Bromochloromethane	NA	NA	218	7.7E-02	GAS	2.2E+00	2.2E+01	1.00	0.60	3.97E+03	163.80
75343	Dichloroethane, 1,1-	5.0E-05	1.8E-01	182	3.0E-01	GAS	3.6E+00	2.2E+00	1.00	0.60	5.16E+03	98.96
75354	Dichloroethylene, 1,1-	NA	NA	182	7.9E-01	GAS	2.3E+00	2.2E+00	1.00	0.60	3.00E+03	96.94
75684	Trichlorofluoromethane	NA	NA	283	1.1E+00	GAS	1.3E+00	1.2E+00	1.00	0.60	1.1E+03	137.36
77474	Hexachlorocyclopentadiene	NA	NA	283	9.6E-05	9.6E-05	3.0E-02	3.0E-02	1.00	0.60	1.53E+00	273.00
78591	Isophorone	NA	NA	285	5.4E-04	GAS	4.0E+00	4.0E+00	1.00	0.60	1.20E+04	138.20
78933	Methyl ethyl ketone	NA	NA	187	1.2E-01	GAS	2.7E+01	2.7E+01	1.00	0.60	2.4E+06	72.10
79005	Trichloroethane, 1,1,2-	1.6E-05	5.6E-02	238	3.3E-02	GAS	2.8E+00	2.8E+00	1.00	0.60	4.40E+03	133.42
79016	Trichloroethylene	1.7E-06	NA	188	9.5E-02	GAS	1.5E+00	1.5E+00	1.00	0.60	1.18E+03	167.86
79345	Tetrachloroethane, 1,1,2,2-	5.8E-05	2.0E-01	229	6.8E-03	GAS	1.6E+00	1.6E+00	1.00	0.60	3.07E+03	295.36
82688	Pentachloronitrobenzene (PCN)	NA	NA	419	3.1E-06	7.9E-06	1.5E-01	1.1E+03	1.00	0.60	3.2E+02	222.20
84662	Diethyl phthalate	NA	NA	233	2.2E-06	2.2E-06	1.4E+00	1.4E+00	1.00	0.60	8.83E+02	222.20
84742	Di-n-butyl phthalate	NA	NA	238	5.6E-06	5.6E-06	8.1E-02	8.1E-02	0.96	0.60	1.08E+01	278.34
85687	Butylbenzylphthalate	NA	NA	238	1.6E-06	1.6E-06	6.2E-02	6.2E-02	0.96	0.60	2.58E+00	312.40
86306	N-Nitrosodiphenylamine	NA	NA	340	1.3E-04	GAS	5.8E-01	5.8E-01	1.00	0.60	3.74E+01	198.23
87683	Hexachloro-1,3-butadiene	2.2E-05	7.7E-02	253	2.3E-04	GAS	7.1E-02	2.3E+03	1.00	0.60	2.94E+00	260.76
87685	Pentachlorophenol	NA	NA	447	7.1E-07	3.5E-05	4.5E-02	4.4E-02	1.00	0.60	1.34E+01	266.00
88744	2-nitroaniline	NA	NA	344.35	1.94E-07	7.8E-07	4.0E+00	4.0E+00	1.00	0.60	1.260	1.4E+02
91587	2-chloronaphthalene	NA	NA	334.15	1.05E-05	3.5E-05	1.7E-01	1.7E-01	1.00	0.60	1.20E+01	1.6E+02
91941	Dichlorobenzidine, 3,3'	NA	NA	405	2.9E-10	5.2E-09	2.0E-01	1.8E+06	0.90	0.60	3.52E+00	253.13
95487	Cresol, o-	NA	NA	304	4.2E-04	GAS	2.7E+00	2.7E+00	1.00	0.60	2.77E+04	108.15

Physical and Chemical Properties of Constituents

CAS	Name	Inhal URf (ug/m <sup>3</sup> )-1	Inhal CSF (mg/kg/day)-1	melting point (deg K)	solid-phase vapor pressure (atm)	liquid-phase vapor pressure (atm)	plant-acid bcI-grains (ug/g DW plant)/(ug/g acid)	plant-acid bcI- Stilage (ug/g DW plant)/(ug/g acid)	Fv	Fw	solubility (mg/L)	Molecular weight
95501	Dichlorobenzene, 1,2-	NA	NA	256	1.8E-03	GAS	4.0E-01	4.0E-01	1.00	0.60	1.25E+02	147.01
95578	Chlorophenol, 2-	NA	NA	282	2.8E-03	GAS	2.2E+00	2.2E+00	1.00	0.60	2.15E+04	128.56
98953	Nitrobenzene	NA	NA	279	3.2E-04	GAS	3.3E+00	3.3E+00	1.00	0.60	1.82E+03	123.11
98650	Dinitrobenzene, 1,3-	NA	NA	363	4.0E-07	2.7E-06	5.3E+00	6.8E+00	1.00	0.60	5.4E+02	168.10
100414	Ethylbenzene	NA	NA	243	1.3E-02	GAS	5.9E-01	7.7E-01	1.00	0.60	1.73E+02	106.17
100516	Benzyl alcohol	NA	NA	258	8.2E-03	GAS	7.7E-01	8.8E+00	1.00	0.60	4.0E+04	108.14
100425	Styrene	NA	NA	298	1.4E-04	GAS	1.7E+00	1.7E+00	1.00	0.60	6.25E+03	122.16
105679	Dimethylphenol, 2,4,*	NA	NA	308	1.7E-04	GAS	2.9E+00	2.9E+00	1.00	0.60	2.3E+04	108.13
106445	Cresol, p-	NA	NA	346	1.4E-03	GAS	4.1E-01	4.1E-01	1.00	0.60	2.3E+04	108.13
106467	Dichlorobenzene, 1,4-	NA	NA	346	2.8E-03	GAS	3.3E+00	3.3E+00	1.00	0.60	3.38E+03	127.57
106478	Chloroaniline, p-	NA	NA	238	1.1E-01	GAS	5.5E+00	1.1E+01	1.00	0.60	8.31E+03	98.96
107062	Dichloroethane, 1,2-	2.6E-05	9.1E-02	238	1.1E-01	GAS	5.5E+00	1.1E+01	1.00	0.60	7.5E+04	59.06
107131	Acrylonitrile	6.8E-05	2.4E-01	191	1.4E-01	GAS	2.7E+01	1.5E+01	1.00	0.60	2.0E+04	100.16
108054	vinyl acetate	NA	NA	179.85	1.8E-01	GAS	1.5E+01	1.5E+01	1.00	0.60	20000	86.06
108101	Methyl isobutyl ketone	NA	NA	188	2.5E-02	GAS	7.9E+00	7.9E+00	1.00	0.60	5.98E+02	92.15
108863	Toluene	NA	NA	188	3.7E-02	GAS	1.0E+00	1.0E+00	1.00	0.60	4.08E+02	112.56
108907	Chlorobenzene	NA	NA	316	1.8E-02	GAS	8.6E-01	8.6E-01	1.00	0.60	9.08E+04	94.11
108952	Phenol	NA	NA	316	5.7E-04	GAS	5.4E+00	5.4E+00	1.00	0.60	1.18E+04	143.02
110829	Cyclohexane	NA	NA	223	1.8E-03	GAS	7.7E+00	7.7E+00	1.00	0.60	4.00E-01	98.04
111444	Bis(2-chloroethyl)ether	3.3E-04	1.2E+00	223	8.9E-09	6.7E-09	2.3E-03	2.3E-03	0.92	0.60	4.00E-02	390.54
117817	Bis(2-ethylhexyl)phthalate	NA	NA	223	5.9E-09	5.9E-09	8.5E-04	8.5E-04	0.91	0.60	8.62E-03	284.80
117840	Di-n-octyl phthalate	NA	NA	248	2.3E-08	4.4E-06	1.5E-02	1.5E-02	1.00	0.60	3.07E+01	181.46
118741	Hexachlorobenzene	4.6E-04	1.6E+00	504	4.4E-04	GAS	1.9E-01	1.9E-01	1.00	0.60	4.93E+03	163.01
120821	Trichlorobenzene, 1,2,4-	NA	NA	318	7.2E-06	1.6E-05	6.4E-01	3.2E+06	1.00	0.60	2.85E+02	182.13
120832	Dichlorophenol, 2,4-	NA	NA	343	2.3E-07	9.4E-07	2.7E+00	1.9E+05	1.00	0.60	3.44E+03	208.30
121142	Dinitrotoluene, 2,4-	NA	NA	283	4.1E-02	GAS	2.3E+00	4.2E+01	1.00	0.60	2.32E+02	165.85
124481	Chlorobromomethane	NA	NA	279	2.4E-02	GAS	1.1E+00	1.5E+01	1.00	0.60	4.19E+03	194.19
131113	Tetrachloroethylene	NA	NA	223	1.2E-05	1.2E-05	4.4E+00	6.4E+04	1.00	0.60	8.03E+03	96.95
156605	Dichloroethylene, trans-1,2-	NA	NA	338	7.5E-07	2.7E-06	3.2E+00	4.2E+06	1.00	0.60	1.05E+03	182.14
534521	Dinitromethylphenol, 4,6,2-	NA	NA	338	4.6E-03	GAS	6.1E+00	6.1E+00	1.00	0.60	1.49E+04	130.19
606202	Dinitrotoluene, 2,6-	NA	NA	338	1.1E-02	GAS	5.7E-01	1.5E+02	1.00	0.60	1.86E+02	168.17
621647	N-Nitrosodi-n-propylamine	NA	NA	338	1.0E-07	1.1E-10	9.0E-03	9.0E-03	0.17	0.60	9.0E-02	328.00
1330207	Xylenes (total)	NA	NA	579	9.7E-13	SOLID	3.3E-03	3.3E-03	0.27	0.60	1.9E+05	322.00
1336363	Polychlorinated biphenyls	NA	1.6E+06	601	0	SOLID	1.30E-05	1.30E-05	0.00	0.60	0.00E+00	207.2
1746016	TCDD, 2,3,7,8-	NA	NA	601	1.9E-07	1.9E-07	6.8E-02	6.8E-02	0.85	0.60	7.4E+04	271.51
7439921	Lead*	NA	NA									
7439976	Mercury Organic	NA	NA									

Physical and Chemical Properties of Constituents

CAS	Name	Inhal URIF (ug/m3)-1	Inhal CSF (mg/kg/day)-1	melting point (deg K)	solid-phase vapor pressure (atm)	liquid-phase vapor pressure (atm)	plant-soil bcd-grains (ug/g DW plant)/(ug/g soil)	plant-soil bcd- Sludge (ug/g DW plant)/(ug/g soil)	Fv	Fw	solubility (mg/L)	Molecular weight
7439877	Inorganic Mercury	NA	NA		1.9E-07	1.9E-07	8.8E-02	8.8E-02	0.85	0.60	7.4E+04	271.51
7440020	Nickel	NA	NA		0.0E+00	SOLID	3.2E-02	3.2E-02	0.00	0.60	0.0E+00	
7440224	Silver	NA	NA	NA	0.0E+00	SOLID	4.0E-01	4.0E-01	0.00	0.60		NA
7440280	Thallium (I)	NA	NA	NA	0.0E+00	SOLID	4.0E-03	4.0E-03	0.00	0.60	0.0E+00	
7440380	Antimony	NA	NA	NA	0.0E+00	SOLID	2.0E-01	2.0E-01	0.00	0.20	0.0E+00	NA
7440382	Arsenic	5.0E-05	1.8E-01		0.0E+00	SOLID	3.8E-02	3.8E-02	0.00	0.20	0.0E+00	
7440393	Barium	NA	NA	NA	0.0E+00	SOLID	1.5E-01	1.5E-01	0.00	0.60		NA
7440417	Beryllium	2.4E-03	8.4E+00	NA	0.0E+00	SOLID	1.0E-02	1.0E-02	0.00	0.60		NA
7440439	Cadmium	1.8E-03	6.3E+00		0.0E+00	SOLID	3.8E-01	3.8E-01	0.00	0.60	0.0E+00	
7440472	Chromium Total	1.2E-02	4.2E+01		0.0E+00	SOLID	7.5E-03	7.5E-03	0.00	0.60	0.0E+00	
7440473	Chromium VI	1.2E-02	4.2E+01		0.0E+00	SOLID	7.5E-03	7.5E-03	0.00	0.80	0.0E+00	
7440686	Zinc	NA	NA		0.0E+00	SOLID	2.5E-01	2.5E-01	0.00	0.60	0.0E+00	
10061015	Dichloropropene, cis-1,3-	3.7E-05	1.3E-01	300	4.9E-02	GAS	4.3E+00	4.3E+00	1.00	0.60	2.7E+03	110.97
10061026	Dichloropropene, trans-1,3-	3.7E-05	1.3E-01	300	4.0E-02	GAS	4.3E+00	4.3E+00	1.00	0.60	2.8E+03	110.97
39638329	Bis (2-chloropropyl) ether	NA	NA	178	1.0E-03	GAS	2.1E+00	2.1E+00	1.00	0.60	1.7E+03	171.07

MODEL INPUT PARAMETERS-MIDLOTHIAN CUMULATIVE RISK ASSESSMENT

Parameter Name	Units	Values	Symbol
<i>Meteorological Data - Combustors</i>			
ave. annual precipitation- combustors	cm/yr	84.33	
ave. annual irrigation - combustors	cm/yr	0	
ave. annual evapotranspiration - combustors	cm/yr	59.031	
ave. annual runoff - combustors	cm/yr	6.35	
temperature - combustors	K	293	
mean annual wind speed - combustors	m/s	5.14	
<i>Soil Concentration</i>			
Time period of deposition	year	30	
dry deposition velocity	cm/s	3	
Mixing depth of soil tilled - agricultural field, home garden	cm	20	
Mixing depth of soil untilled	cm	1	
Bulk density of soil at deposition location	g/cm3	1.5	
saturated volumetric water content of soil	mL/cm3	0.2	
saturated hydraulic conductivity	cm/yr	9.11E+03	
soil-specific exponent representing moisture retention	unitless	2.99	
fraction of organic carbon in soil at dep. location	unitless	0.01	
area of field for human exposure - home garden	m2	2,024	
area of agricultural field	m2	300,000	
<i>Terrestrial Food Chain</i>			
Above ground fruits and vegetables correction factor,	unitless	0.01	VGag
Above ground fruits and vegetable correction factor, Organics wit	unitless	1	VGag
Above ground fruits and vegetable correction factor, Metals	unitless	1	VGag
Forage correction Factor: All chemicals	unitless	1	VGag
Forage correction Factor: Organics with	unitless	1	VGag
plant surface loss coefficient	1/yr	18	kp
length of plant exposure to deposition - grain	yr	0.16	Tp
length of plant exposure to deposition - market basket produce	yr	0.16	Tp
length of plant exposure to deposition - forage	yr	0.12	Tp
length of plant exposure to deposition - silage	yr	0.16	Tp
crop yield - grain	kg DW/m2	0.3	Yp
crop yield - market basket produce	kg DW/m2	1.6	Yp
crop yield - forage	kg DW/m2	0.24	Yp
crop yield - silage	kg DW/m2	0.78	Yp
interception fraction - grain	unitless	0.58	Rp
interception fraction - market basket produce	unitless	0.05	Rp
interception fraction - forage	unitless	0.5	Rp
interception fraction - silage	unitless	0.46	Rp
Beef Cattle - consumption rate of grain	kg DW/day	0.47	Qp
Beef Cattle - consumption rate of forage	kg DW/day	8.8	Qp
Beef Cattle - consumption rate of silage	kg DW/day	2.5	Qp
Beef Cattle - consumption rate of soil	kg/day	0.5	Qs
Beef Cattle - fraction of grain grown in contaminated soil	unitless	1	F
Beef Cattle - fraction of forage grown in contaminated soil	unitless	1	F

MODEL INPUT PARAMETERS-MIDLOTHIAN CUMULATIVE RISK ASSESSMENT

Parameter Name	Units	Values	Symbol
<i>Meteorological Data - Combustors</i>			
Beef Cattle - fraction of silage grown in contaminated soil	unitless	1	F
Dairy Cattle - consumption rate of grain	kg DW/day	3	Qp
Dairy Cattle - consumption rate of forage	kg DW/day	13.2	Qp
Dairy Cattle - consumption rate of silage	kg DW/day	4.1	Qp
Dairy Cattle - consumption rate of soil	kg/day	0.4	Os
Dairy Cattle - fraction of grain grown in contaminated soil	unitless	1	F
Dairy Cattle - fraction of forage grown in contaminated soil	unitless	1	F
Dairy Cattle - fraction of silage grown in contaminated soil	unitless	1	F
<i>Non Site-Specific Surface Water Concentration (Site Specific Param)</i>			
USLE soil erodibility factor	tons/acre	0.36	K
USLE length-slope factor	unitless	1.5	LS
USLE cover management factor	unitless	0.1	C
USLE supporting practice factor	unitless	1	P
Soil enrichment ratio	unitless	3	ER
total suspended solids in water column	mg/L	10	TSS
water body temperature	deg K	298	Tw
viscosity of air	g/cm-s	1.81E-04	$\mu_a$
density of air	g/cm3	1.20E-03	$\rho_a$
viscosity of water	g/cm-s	1.69E-02	$\mu_w$
density of water	g/cm3	1	$\rho_w$
drag coefficient	unitless	0.0011	Cd
von Karman's constant	unitless	0.4	k
dimensionless viscous sublayer thickness	unitless	4	
gas phase transfer coefficient -Rivers	m/yr	36500	
correction term to estimate whole fish conc	unitless	0.07	flipid
bed sediment porosity	Lwater/L	0.6	
bed sediments concentration	kg/L	1.00E+00	BS
depth of upper benthic layer	m	0.03	db
water column degradation rate constant	1/yr	0	
benthic layer degradation rate constant	1/yr	0	
volumetric soil water content	cm3/cm3	0.2	
<i>Ingestion of Crops</i>			
intake of market basket produce - adult	g DW/day	19.7	
intake of market basket produce - child	g DW/day	14	
exposure duration for crops ingestion	yr	30	
exposure frequency for crops ingestion	days/yr	350	
<i>Ingestion of Animal Products</i>			
intake of beef	g DW/day	57	
intake of dairy	g DW/day	181	
exposure duration for ingestion of animal products	yr	30	
exposure frequency for ingestion of animal products	days/yr	350	
<i>Ingestion of Soil</i>			
intake of soil - adult	g/day	0.1	
intake of soil - child	g/day	0.2	

MODEL INPUT PARAMETERS-MIDLOTHIAN CUMULATIVE RISK ASSESSMENT

Parameter Name	Units	Values	Symbol
<i>Meteorological Data - Combustors</i>			
fraction of soil contaminated	unitless	1	
exposure duration for soil ingestion - adult	yr	24	
exposure duration for soil ingestion - child	yr	6	
exposure frequency for soil ingestion - adult	days/yr	350	
exposure frequency for soil ingestion - child	days/yr	350	
<i>Ingestion of Drinking Water</i>			
consumption of drinking water - adult	L/day	1.4	
consumption rate of drinking water-child	L/day	0.5	
<i>Ingestion of Fish</i>			
intake of fish subsistence fisher	g/day	60	
<i>Inhalation of Air</i>			
inhalation rate - adult	m3/hr	0.8333	
inhalation rate - child	m3/hr	0.5	
<i>Contaminated Fractions</i>			
fraction beef contaminated - subsistence farmer	unitless	1	
fraction dairy contaminated - subsistence farmer	unitless	1	
fraction above-ground produce contaminated - subsistence farmer	unitless	1	
fraction above-ground produce contaminated - other	unitless	0.25	
fraction fish contaminated - subsistence fisher	unitless	1	
<i>Scenario Exposure Parameters</i>			
average body weight - adult	kg	70	
average body weight - child	kg	15	
averaging time for carcinogens	yr	70	
exposure duration for subsistence farmer	yr	40	
exposure duration for subsistence fisher, adult resident	yr	30	
exposure duration for child resident	yr	6	
exposure frequency	days/yr	350	
<i>Miscellaneous Constants</i>			
universal (ideal) gas constant	atm-m3/mol-	8.10E-05	
viscosity of air	g/cm-s	1.81E-04	
density of air	g/cm3	1.20E-03	