

APPENDIX E

Exposure Point Concentrations

Table E.1

- Calculated Exposure Point Concentrations for Scenario 1: 3 Process Units

Analyte	CAS-RN	Soil		Water		Air				Aboveground Garden Produce		Gardern Plant/Fruit
		Surface Soil Conc. (mg/Kg) C _s	Subsurface Soil Conc. (mg/Kg) C _{ss}	Groundwater Conc. (mg/L) C _{gw}	Surface Water Conc. (mg/L) C _{sw}	Air Conc. - Indoor (mg/m ³) C _{iair}	Air Conc. - Outdoor (mg/m ³) C _a	Air Conc. - below slab (mg/m ³) C _{abs}	Vapour Conc. Outdoor Air - Subsurface Soil (mg/m ³) C _v	Plant (above ground produce) concentration due to direct (wet and dry) deposition P _d	(above ground) Concentration of COPC in produce due to root uptake P _{rag}	Concentration of COPC in the plant/fruit resulting from air-to-plant transfer P _v
BTEX												
Benzene	71432	2.36E-07	--	--	2.32E-06	--	7.10E-07	--	--	--	5.59E-07	1.02E-09
PAHs												
Anthracene	120127	2.58E-06	--	--	4.89E-09	--	3.67E-07	--	--	1.06E-10	2.50E-07	1.63E-10
Benzo(a)anthracene	56553		--	--		--		--	--			
Benzo(a)pyrene	50328	1.95E-06	--	--	3.09E-09	--	8.90E-10	--	--	9.97E-08	2.35E-08	6.02E-05
Benzo(b)fluoranthene	205992		--	--		--		--	--			
Benzo(g,h,i)perylene	191242		--	--		--		--	--			
Benzo(k)fluoranthene	207089		--	--		--		--	--			
Chrysene	218019		--	--		--		--	--			
Dibenz(a,h)anthracene	53703		--	--		--		--	--			
Indeno(1,2,3-cd)pyrene	193395		--	--		--		--	--			
Naphthalene	91203	9.89E-07	--	--	1.74E-08	--	2.25E-09	--	--	--	4.74E-07	7.14E-10
Phenanthrene	85018	3.43E-06	--	--	3.65E-08	--	1.13E-09	--	--	1.62E-10	3.51E-07	1.28E-09
PCBs												
Aroclor 1254 (Total PCBs)	11097691	6.35E-05	--	--	3.97E-09	--	9.90E-10	--	--	6.40E-10	4.30E-07	1.36E-08
Dioxins and Furans												
2,3,7,8-TCDD Equivalent	1746016	4.76E-08	--	--	2.69E-12	--	1.10E-12	--	--	5.30E-11	2.17E-10	3.98E-10
2,3,7,8-TCDD Equivalent (PI)	1746016	6.01E-09	--	--	3.39E-13	--	1.39E-13	--	--	6.69E-12	2.73E-11	5.02E-11
VOCs												
Chloroform	67-66-3	2.11E-09	--	--	2.46E-08	--	6.99E-09	--	--	--	5.71E-09	1.19E-11
Dichloromethane	75-09-2	3.78E-07	--	--	7.59E-06	--	2.41E-06	--	--	--	2.59E-06	1.24E-09
Formaldehyde	50-00-0	9.55E-05	--	--	5.85E-04	--	6.51E-07	--	--	--	8.01E-04	2.13E-07
Tetrachloroethylene	127-18-4	2.70E-08	--	--	2.97E-07	--	7.77E-08	--	--	--	1.13E-08	8.42E-10
Vinyl Chloride	75-01-4	1.53E-10	--	--	2.41E-08	--	8.16E-09	--	--	--	9.21E-10	4.36E-13
Chlorinated Monocyclic Aromatics												
1,2-Dichlorobenzene	95-50-1	2.67E-08	--	--	3.32E-09	--	7.06E-10	--	--	--	1.15E-08	6.89E-11
1,2,4-Trichlorobenzene	120-82-1	7.56E-08	--	--	4.71E-09	--	7.06E-10	--	--	--	1.43E-08	4.28E-10
1,2,4,5-Tetrachlorobenzene	95-94-3	1.00E-06	--	--	1.14E-08	--	7.06E-10	--	--	--	6.53E-08	1.64E-11
Pentachlorobenzene	608-93-5	2.61E-06	--	--	3.22E-09	--	7.06E-10	--	--	--	1.04E-07	1.48E-10
Hexachlorobenzene	118-74-1	1.32E-06	--	--	4.62E-09	--	7.06E-10	--	--	--	4.43E-08	1.12E-10
2,4-Dichlorophenol	120-83-2	5.34E-07	--	--	1.88E-06	--	1.41E-09	--	--	--	4.36E-07	2.52E-08
2,4,6-Trichlorophenol	88-06-2	3.71E-07	--	--	4.53E-07	--	7.06E-10	--	--	--	1.04E-07	3.68E-08
2,3,4,6-Tetrachlorophenol	58-90-2	1.04E-06	--	--	4.92E-07	--	7.06E-10	--	--	--	1.08E-07	4.11E-09
Pentachlorophenol	87-86-5	8.98E-07	--	--	1.38E-06	--	8.45E-10	--	--	1.21E-10	3.92E-08	4.42E-06
Inorganics												
Antimony	7440360	7.51E-05	--	--	1.67E-07	--	3.76E-08	--	--	5.40E-06	3.87E-06	--
Arsenic	7440382	1.12E-05	--	--	3.89E-08	--	8.29E-09	--	--	1.18E-06	7.11E-08	--
Barium	7440393	1.86E-04	--	--	4.53E-07	--	6.51E-08	--	--	9.26E-06	5.98E-06	--
Beryllium	7440417	2.39E-06	--	--	4.57E-10	--	8.79E-10	--	--	1.25E-07	6.17E-09	--
Boron	7440428	3.87E-04	--	--	4.50E-06	--	2.10E-06	--	--	3.01E-04	8.72E-04	--
Cadmium	7440439	4.14E-04	--	--	5.71E-07	--	1.92E-07	--	--	2.73E-05	5.17E-05	--
Chromium (Total)	7440473	2.09E-05	--	--	8.57E-08	--	1.74E-08	--	--	2.48E-06	1.02E-07	--
Cobalt	7440484	3.23E-06	--	--	7.19E-09	--	1.62E-09	--	--	2.33E-07	2.80E-08	--
Lead	7439921	9.73E-03	--	--	1.41E-06	--	1.95E-06	--	--	2.78E-04	1.32E-04	--
Mercury - Elemental	7439976	--	--	--	--	--	5.49E-10	--	--	--	--	--
Mercury - Inorganic	7487947	1.56E-04	--	--	1.23E-07	--	1.32E-07	--	--	2.22E-06	1.91E-05	1.31E-04
Methyl Mercury	22967-92-6	3.16E-06	--	--	6.05E-10	--	--	--	--	6.27E-07	4.14E-07	3.71E-05
Nickel	7440020	1.65E-04	--	--	2.56E-07	--	4.61E-08	--	--	6.56E-06	1.54E-06	--
Phosphorous	7723140	6.78E-05	--	--	1.86E-06	--	3.17E-07	--	--	4.55E-05	2.37E-04	--
Silver	7440224	4.83E-06	--	--	5.69E-08	--	6.45E-09	--	--	9.18E-07	6.67E-07	--
Vanadium	7440622	3.30E-05	--	--	8.23E-08	--	9.20E-09	--	--	1.32E-06	1.09E-07	--
Zinc	7440666	2.31E-03	--	--	3.75E-06	--	6.82E-07	--	--	9.71E-05	2.24E-04	--

Table E.1 - Calculated Exposure Point Concentrations for Scenario 1: 3 Process Units

Analyte	Garden Fruit		Belowground Produce	Tradional Plant		Traditional Plant/Fruit	Traditional Fruit	
	Fruit (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in fruit due to root uptake	(belowground) Concentration of COPC in produce due to root uptake	Trad. Plant (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in Trad. Plant due to root uptake	Concentration of COPC in Trad. plant resulting from air-to-plant transfer	Wild Fruit (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in Wild Fruit due to root uptake
	P _{d-fruit}	P _{rag-fruit}	P _{fbg}	P _{d-trad}	P _{rag-trad}	P _{v-trad}	P _{d-wf}	P _{rag-wf}
BTEX								
Benzene	--	5.60E-07	1.89E-05	--	5.59E-07	1.02E-09	--	5.60E-07
PAHs								
Anthracene	1.28E-10	2.50E-07	3.88E-09	1.06E-10	2.50E-07	1.63E-10	1.28E-10	2.50E-07
Benzo(a)anthracene								
Benzo(a)pyrene	1.21E-07	2.36E-08	4.61E-09	9.97E-08	2.35E-08	6.02E-05	1.21E-07	2.36E-08
Benzo(b)fluoranthene								
Benzo(g,h,i)perylene								
Benzo(k)fluoranthene								
Chrysene								
Dibenz(a,h)anthracene								
Indeno(1,2,3-cd)pyrene								
Naphthalene	--	4.74E-07	4.35E-06	--	4.74E-07	7.14E-10	--	4.74E-07
Phenanthrene	1.96E-10	3.51E-07	1.04E-07	1.62E-10	3.51E-07	1.28E-09	1.96E-10	3.51E-07
PCBs								
Aroclor 1254 (Total PCBs)	7.76E-10	4.30E-07	6.08E-07	6.40E-10	4.30E-07	1.36E-08	7.76E-10	4.30E-07
Dioxins and Furans								
2,3,7,8-TCDD Equivalent	6.42E-11	2.17E-10	4.90E-10	5.30E-11	2.17E-10	3.98E-10	6.42E-11	2.17E-10
2,3,7,8-TCDD Equivalent (P)	8.11E-12	2.73E-11	6.18E-11	6.69E-12	2.73E-11	5.02E-11	8.11E-12	2.73E-11
VOCs								
Chloroform	--	5.70E-09	2.12E-07	--	5.71E-09	1.19E-11	--	5.70E-09
Dichloromethane	--	2.59E-06	1.36E-04	--	2.59E-06	1.24E-09	--	2.59E-06
Formaldehyde	--	8.01E-04	3.22E-02	--	8.01E-04	2.13E-07	--	8.01E-04
Tetrachloroethylene	--	1.13E-08	8.40E-06	--	1.13E-08	8.42E-10	--	1.13E-08
Vinyl Chloride	--	9.21E-10	3.76E-08	--	9.21E-10	4.36E-13	--	9.21E-10
Chlorinated Monocyclic A								
1,2-Dichlorobenzene	--	1.15E-08	6.56E-07	--	1.15E-08	6.89E-11	--	1.15E-08
1,2,4-Trichlorobenzene	--	1.43E-08	5.87E-06	--	1.43E-08	4.28E-10	--	1.43E-08
1,2,4,5-Tetrachlorobenzene	--	6.53E-08	1.05E-06	--	6.53E-08	1.64E-11	--	6.53E-08
Pentachlorobenzene	--	1.04E-07	4.80E-08	--	1.04E-07	1.48E-10	--	1.04E-07
Hexachlorobenzene	--	4.43E-08	3.37E-07	--	4.43E-08	1.12E-10	--	4.43E-08
2,4-Dichlorophenol	--	4.36E-07	7.31E-05	--	4.36E-07	2.52E-08	--	4.36E-07
2,4,6-Trichlorophenol	--	1.04E-07	8.01E-05	--	1.04E-07	3.68E-08	--	1.04E-07
2,3,4,6-Tetrachlorophenol	--	1.08E-07	2.30E-06	--	1.08E-07	4.11E-09	--	1.08E-07
Pentachlorophenol	1.47E-10	3.92E-08	1.47E-05	1.21E-10	3.92E-08	4.42E-06	1.47E-10	3.92E-08
Inorganics								
Antimony	6.54E-06	2.25E-06	2.25E-06	5.40E-06	3.87E-06	--	6.54E-06	2.25E-06
Arsenic	1.43E-06	4.49E-08	8.99E-08	1.18E-06	7.11E-08	--	1.43E-06	4.49E-08
Barium	1.12E-05	2.79E-06	2.79E-06	9.26E-06	5.98E-06	--	1.12E-05	2.79E-06
Beryllium	1.51E-07	3.59E-09	3.59E-09	1.25E-07	6.17E-09	--	1.51E-07	3.59E-09
Boron	3.65E-04	7.74E-04	7.74E-04	3.01E-04	8.72E-04	--	3.65E-04	7.74E-04
Cadmium	3.31E-05	2.57E-05	2.65E-05	2.73E-05	5.17E-05	--	3.31E-05	2.57E-05
Chromium (Total)	3.01E-06	9.42E-08	9.42E-08	2.48E-06	1.02E-07	--	3.01E-06	9.42E-08
Cobalt	2.82E-07	2.26E-08	2.26E-08	2.33E-07	2.80E-08	--	2.82E-07	2.26E-08
Lead	3.37E-04	8.76E-05	8.76E-05	2.78E-04	1.32E-04	--	3.37E-04	8.76E-05
Mercury - Elemental	--	--	--	--	--	--	--	--
Mercury - Inorganic	2.69E-06	1.45E-06	5.60E-06	2.22E-06	1.91E-05	1.31E-04	2.69E-06	1.45E-06
Methyl Mercury	7.60E-07	6.01E-08	3.13E-07	6.27E-07	4.14E-07	3.71E-05	7.60E-07	6.01E-08
Nickel	7.95E-06	9.91E-07	1.32E-06	6.56E-06	1.54E-06	--	7.95E-06	9.91E-07
Phosphorous	5.52E-05	2.37E-04	2.37E-04	4.55E-05	2.37E-04	--	5.52E-05	2.37E-04
Silver	1.11E-06	4.83E-07	4.83E-07	9.18E-07	6.67E-07	--	1.11E-06	4.83E-07
Vanadium	1.60E-06	9.90E-08	9.90E-08	1.32E-06	1.09E-07	--	1.60E-06	9.90E-08
Zinc	1.18E-04	1.25E-04	2.08E-03	9.71E-05	2.24E-04	--	1.18E-04	1.25E-04

Table E.1 - Calculated Exposure Point Concentrations for Scenario 1: 3 Process Units

Analyte	Belowground Traditional Plant	Food Ingestion								
	(belowground) Concentration of COPC in Trad. Plant due to root uptake $P_{fbg-trad}$	Wild Game Conc. (mg/Kg) A_{wg}	Fish Tissue Conc. - Lake (mg/kg) $C_{fish-lake}$	Fish Tissue Conc. - River (mg/kg) $C_{fish-river}$	Beef Conc. (mg/Kg) A_{beef}	Milk Conc. (mg/L) A_{milk}	Pork Conc. (mg/Kg) A_{pork}	Poultry Conc. (mg/Kg) $A_{poultry}$	Egg Conc. (mg/Kg) A_{egg}	Grouse Conc. (mg/Kg) A_{grouse}
BTEX										
Benzene	1.89E-05	3.38E-08	1.91E-05	--	3.25E-07	7.17E-08	5.93E-08	1.11E-09	6.35E-10	--
PAHs										
Anthracene	3.88E-09	4.96E-10	5.02E-08	--	1.55E-09	4.67E-10	8.87E-10	2.68E-09	1.53E-09	--
Benzo(a)anthracene										
Benzo(a)pyrene	4.61E-09	7.83E-06	5.04E-06	--	1.70E-05	5.43E-06	1.43E-06	1.32E-09	7.56E-10	--
Benzo(b)fluoranthene										
Benzo(g,h,i)perylene										
Benzo(k)fluoranthene										
Chrysene										
Dibenz(a,h)anthracene										
Indeno(1,2,3-cd)pyrene										
Naphthalene	4.35E-06	3.47E-10	1.20E-08	--	1.00E-09	3.35E-10	4.82E-10	1.30E-09	7.44E-10	--
Phenanthrene	1.04E-07	8.73E-10	3.74E-07	--	2.84E-09	8.31E-10	1.29E-09	3.70E-09	2.11E-09	--
PCBs										
Aroclor 1254 (Total PCBs)	6.08E-07	4.17E-07	1.01E-03	--	1.57E-06	3.59E-07	9.93E-07	3.38E-08	1.93E-08	--
Dioxins and Furans										
2,3,7,8-TCDD Equivalent	4.90E-10	5.05E-09	4.69E-08	--	1.12E-08	3.50E-09	1.48E-09	2.10E-11	1.20E-11	--
2,3,7,8-TCDD Equivalent (P)	6.18E-11	6.38E-10	5.92E-09	--	1.42E-09	4.42E-10	1.87E-10	2.65E-12	1.52E-12	--
VOCs										
Chloroform	2.12E-07	3.04E-10	1.70E-07	--	2.95E-09	6.50E-10	5.35E-10	1.00E-11	5.71E-12	--
Dichloromethane	1.36E-04	3.17E-08	1.52E-05	--	2.83E-07	6.37E-08	5.39E-08	1.04E-09	5.92E-10	--
Formaldehyde	3.22E-02	6.72E-07	1.85E-03	--	3.86E-06	9.85E-07	9.87E-07	2.18E-08	1.24E-08	--
Tetrachloroethylene	8.40E-06	1.64E-08	2.46E-05	--	1.89E-07	4.01E-08	3.10E-08	5.41E-10	3.09E-10	--
Vinyl Chloride	3.76E-08	8.55E-11	5.77E-08	--	9.92E-10	2.11E-10	1.62E-10	2.81E-12	1.60E-12	--
Chlorinated Monocyclic A										
1,2-Dichlorobenzene	6.56E-07	1.06E-09	2.65E-07	--	4.44E-09	1.26E-09	1.57E-09	3.96E-11	2.27E-11	--
1,2,4-Trichlorobenzene	5.87E-06	2.32E-09	1.13E-06	--	1.02E-08	2.78E-09	3.75E-09	9.93E-11	5.68E-11	--
1,2,4,5-Tetrachlorobenzene	1.05E-06	1.60E-08	2.76E-05	--	6.47E-08	1.73E-08	3.35E-08	1.02E-09	5.80E-10	--
Pentachlorobenzene	4.80E-08	3.10E-08	2.57E-05	--	1.13E-07	2.97E-08	7.21E-08	2.33E-09	1.33E-09	--
Hexachlorobenzene	3.37E-07	1.54E-08	5.32E-05	--	5.99E-08	1.52E-08	3.59E-08	1.16E-09	6.61E-10	--
2,4-Dichlorophenol	7.31E-05	7.96E-08	2.56E-05	--	7.62E-07	1.68E-07	1.39E-07	2.63E-09	1.50E-09	--
2,4,6-Trichlorophenol	8.01E-05	4.47E-08	2.54E-05	--	4.04E-07	8.97E-08	7.51E-08	1.45E-09	8.26E-10	--
2,3,4,6-Tetrachlorophenol	2.30E-06	1.34E-07	1.84E-04	--	8.24E-07	1.94E-07	1.47E-07	2.79E-09	1.59E-09	--
Pentachlorophenol	1.47E-05	8.19E-05	3.38E-03	--	1.79E-04	5.71E-05	1.53E-05	6.58E-09	3.76E-09	--
Inorganics										
Antimony	2.25E-06	5.25E-07	6.67E-06	--	6.52E-07	2.03E-07	9.93E-08	1.57E-09	8.95E-10	--
Arsenic	8.99E-08	2.02E-07	4.43E-06	--	2.15E-07	6.67E-08	2.55E-08	3.86E-10	2.20E-10	--
Barium	2.79E-06	1.37E-07	2.86E-04	--	1.77E-07	5.43E-08	2.95E-08	5.21E-10	2.98E-10	--
Beryllium	3.59E-09	1.07E-08	2.83E-08	--	1.16E-08	3.53E-09	1.83E-09	3.93E-11	2.25E-11	--
Boron	7.74E-04	1.94E-05	1.42E-05	--	2.56E-05	8.39E-06	4.56E-06	7.25E-08	4.14E-08	--
Cadmium	2.65E-05	3.60E-07	5.18E-04	--	4.99E-07	1.57E-07	8.39E-08	1.27E-09	7.23E-10	--
Chromium (Total)	9.42E-08	1.15E-06	1.63E-06	--	1.19E-06	3.70E-07	1.34E-07	1.99E-09	1.14E-09	--
Cobalt	2.26E-08	3.98E-07	2.27E-08	--	4.30E-07	1.32E-07	5.99E-08	1.13E-09	6.46E-10	--
Lead	8.76E-05	7.77E-06	1.27E-07	--	9.73E-06	2.90E-06	2.10E-06	5.12E-08	2.93E-08	--
Mercury - Elemental	--	--	--	--	--	--	--	--	--	--
Mercury - Inorganic	5.60E-06	7.60E-06	--	--	1.65E-05	5.24E-06	2.28E-06	1.44E-08	8.20E-09	--
Methyl Mercury	3.13E-07	1.85E-07	2.63E-02	--	3.57E-07	1.14E-07	3.23E-08	4.70E-11	2.68E-11	--
Nickel	1.32E-06	3.50E-06	1.99E-05	--	4.11E-06	1.23E-06	7.51E-07	1.71E-08	9.77E-09	--
Phosphorous	2.37E-04	2.69E-03	5.87E-06	--	3.62E-03	1.22E-03	9.05E-04	1.99E-05	1.14E-05	--
Silver	4.83E-07	2.57E-07	4.99E-06	--	3.03E-07	9.58E-08	3.85E-08	4.66E-10	2.66E-10	--
Vanadium	9.90E-08	2.84E-07	2.60E-07	--	3.22E-07	9.57E-08	5.84E-08	1.40E-09	7.97E-10	--
Zinc	2.08E-03	9.84E-07	7.71E-03	--	1.42E-06	4.42E-07	2.77E-07	5.05E-09	2.89E-09	--

Table E.2

- Calculated Exposure Point Concentrations for Scenario 2: 2 Process Units

Analyte	CAS-RN	Soil		Water		Air				Aboveground Garden Produce		Gardern Plant/Fruit
		Surface Soil Conc. (mg/Kg)	Subsurface Soil Conc. (mg/Kg)	Groundwater Conc. (mg/L)	Surface Water Conc. (mg/L)	Air Conc. - Indoor (mg/m ³)	Air Conc. - Outdoor (mg/m ³)	Air Conc. - below slab (mg/m ³)	Vapour Conc. Outdoor Air - Subsurface Soil (mg/m ³)	Plant (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in produce due to root uptake	Concentration of COPC in the plant/fruit resulting from air-to-plant transfer
		C _s	C _{ss}	C _{gw}	C _{sw}	C _{iair}	C _a	C _{abs}	C _v	P _d	P _{rag}	P _v
BTEX												
Benzene	71432	1.97E-07	--	--	1.93E-06	--	6.10E-07	--	--	--	4.66E-07	8.74E-10
PAHs												
Anthracene	120127	2.09E-06	--	--	3.97E-09	--	3.12E-07	--	--	7.66E-11	2.03E-07	1.38E-10
Benzo(a)anthracene	56553		--	--		--		--	--			
Benzo(a)pyrene	50328	1.57E-06	--	--	2.51E-09	--	7.56E-10	--	--	7.23E-08	1.89E-08	5.12E-05
Benzo(b)fluoranthene	205992		--	--		--		--	--			
Benzo(g,h,i)perylene	191242		--	--		--		--	--			
Benzo(k)fluoranthene	207089		--	--		--		--	--			
Chrysene	218019		--	--		--		--	--			
Dibenz(a,h)anthracene	53703		--	--		--		--	--			
Indeno(1,2,3-cd)pyrene	193395		--	--		--		--	--			
Naphthalene	91203	8.02E-07	--	--	1.41E-08	--	1.91E-09	--	--	--	3.84E-07	6.06E-10
Phenanthrene	85018	2.78E-06	--	--	2.96E-08	--	9.56E-10	--	--	1.17E-10	2.85E-07	1.09E-09
PCBs												
Aroclor 1254 (Total PCBs)	11097691	5.15E-05	--	--	3.23E-09	--	8.41E-10	--	--	4.64E-10	3.49E-07	1.15E-08
Dioxins and Furans												
2,3,7,8-TCDD Equivalent	1746016	3.86E-08	--	--	2.19E-12	--	9.32E-13	--	--	3.84E-11	1.76E-10	3.38E-10
2,3,7,8-TCDD Equivalent (PI)	1746016	4.87E-09	--	--	2.76E-13	--	1.18E-13	--	--	4.85E-12	2.22E-11	4.26E-11
VOCs												
Chloroform	67-66-3	1.74E-09	--	--	2.02E-08	--	5.94E-09	--	--	--	4.70E-09	1.01E-11
Dichloromethane	75-09-2	3.11E-07	--	--	6.25E-06	--	2.05E-06	--	--	--	2.13E-06	1.05E-09
Formaldehyde	50-00-0	7.87E-05	--	--	4.82E-04	--	5.53E-07	--	--	--	6.59E-04	1.81E-07
Tetrachloroethylene	127-18-4	2.22E-08	--	--	2.45E-07	--	6.60E-08	--	--	--	9.33E-09	7.15E-10
Vinyl Chloride	75-01-4	1.26E-10	--	--	1.99E-08	--	6.93E-09	--	--	--	7.58E-10	3.70E-13
Chlorinated Monocyclic Aromatics												
1,2-Dichlorobenzene	95-50-1	2.17E-08	--	--	2.70E-09	--	6.00E-10	--	--	--	9.35E-09	5.85E-11
1,2,4-Trichlorobenzene	120-82-1	6.14E-08	--	--	3.83E-09	--	6.00E-10	--	--	--	1.16E-08	3.63E-10
1,2,4,5-Tetrachlorobenzene	95-94-3	8.15E-07	--	--	9.24E-09	--	6.00E-10	--	--	--	5.31E-08	1.39E-11
Pentachlorobenzene	608-93-5	2.12E-06	--	--	2.62E-09	--	6.00E-10	--	--	--	8.44E-08	1.26E-10
Hexachlorobenzene	118-74-1	1.08E-06	--	--	3.75E-09	--	6.00E-10	--	--	--	3.60E-08	9.50E-11
2,4-Dichlorophenol	120-83-2	4.34E-07	--	--	1.53E-06	--	1.20E-09	--	--	--	3.54E-07	2.14E-08
2,4,6-Trichlorophenol	88-06-2	3.01E-07	--	--	3.68E-07	--	6.00E-10	--	--	--	8.48E-08	3.12E-08
2,3,4,6-Tetrachlorophenol	58-90-2	8.44E-07	--	--	4.00E-07	--	6.00E-10	--	--	--	8.75E-08	3.49E-09
2,3,4,6-Tetrachlorophenol	87-86-5	7.29E-07	--	--	1.12E-06	--	7.17E-10	--	--	8.80E-11	3.19E-08	3.76E-06
Inorganics												
Antimony	7440360	5.44E-05	--	--	1.21E-07	--	3.20E-08	--	--	3.92E-06	2.81E-06	--
Arsenic	7440382	8.36E-06	--	--	2.89E-08	--	7.04E-09	--	--	8.58E-07	5.29E-08	--
Barium	7440393	1.40E-04	--	--	3.40E-07	--	5.53E-08	--	--	6.71E-06	4.49E-06	--
Beryllium	7440417	1.79E-06	--	--	3.43E-10	--	7.46E-10	--	--	9.07E-08	4.63E-09	--
Boron	7440428	2.81E-04	--	--	3.26E-06	--	1.78E-06	--	--	2.19E-04	6.32E-04	--
Cadmium	7440439	3.11E-04	--	--	4.29E-07	--	1.63E-07	--	--	1.98E-05	3.88E-05	--
Chromium (Total)	7440473	1.57E-05	--	--	6.44E-08	--	1.48E-08	--	--	1.80E-06	7.67E-08	--
Cobalt	7440484	2.34E-06	--	--	5.21E-09	--	1.38E-09	--	--	1.69E-07	2.03E-08	--
Lead	7439921	7.26E-03	--	--	1.05E-06	--	1.66E-06	--	--	2.02E-04	9.86E-05	--
Mercury - Elemental	7439976	--	--	--	--	--	4.66E-10	--	--	--	--	--
Mercury - Inorganic	7487947	1.21E-04	--	--	1.04E-07	--	1.12E-07	--	--	1.61E-06	1.48E-05	1.12E-04
Methyl Mercury	22967-92-6	2.45E-06	--	--	4.69E-10	--	--	--	--	4.55E-07	3.21E-07	3.15E-05
Nickel	7440020	1.24E-04	--	--	1.92E-07	--	3.92E-08	--	--	4.76E-06	1.15E-06	--
Phosphorous	7723140	4.91E-05	--	--	1.35E-06	--	2.69E-07	--	--	3.30E-05	1.72E-04	--
Silver	7440224	3.62E-06	--	--	4.27E-08	--	5.48E-09	--	--	6.66E-07	5.00E-07	--
Vanadium	7440622	2.39E-05	--	--	5.96E-08	--	7.81E-09	--	--	9.58E-07	7.94E-08	--
Zinc	7440666	1.73E-03	--	--	2.80E-06	--	5.80E-07	--	--	7.05E-05	1.67E-04	--

Table E.2 - Calculated Exposure Point Concentrations for Scenario 2: 2 Process Units

Analyte	Garden Fruit		Belowground Produce	Tradional Plant		Traditional Plant/Fruit	Traditional Fruit	
	Fruit (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in fruit due to root uptake	(belowground) Concentration of COPC in produce due to root uptake	Trad. Plant (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in Trad. Plant due to root uptake	Concentration of COPC in Trad. plant resulting from air-to-plant transfer	Wild Fruit (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in Wild Fruit due to root uptake
	P _{d-fruit}	P _{rag-fruit}	P _{fbg}	P _{d-trad}	P _{rag-trad}	P _{v-trad}	P _{d-wf}	P _{rag-wf}
BTEX								
Benzene	--	4.67E-07	1.58E-05	--	4.66E-07	8.74E-10	--	4.67E-07
PAHs								
Anthracene	9.29E-11	2.03E-07	3.15E-09	7.66E-11	2.03E-07	1.38E-10	9.29E-11	2.03E-07
Benzo(a)anthracene								
Benzo(a)pyrene	8.77E-08	1.89E-08	3.73E-09	7.23E-08	1.89E-08	5.12E-05	8.77E-08	1.89E-08
Benzo(b)fluoranthene								
Benzo(g,h,i)perylene								
Benzo(k)fluoranthene								
Chrysene								
Dibenz(a,h)anthracene								
Indeno(1,2,3-cd)pyrene								
Naphthalene	--	3.84E-07	3.52E-06	--	3.84E-07	6.06E-10	--	3.84E-07
Phenanthrene	1.42E-10	2.85E-07	8.42E-08	1.17E-10	2.85E-07	1.09E-09	1.42E-10	2.85E-07
PCBs								
Aroclor 1254 (Total PCBs)	5.63E-10	3.49E-07	4.94E-07	4.64E-10	3.49E-07	1.15E-08	5.63E-10	3.49E-07
Dioxins and Furans								
2,3,7,8-TCDD Equivalent	4.66E-11	1.76E-10	3.97E-10	3.84E-11	1.76E-10	3.38E-10	4.66E-11	1.76E-10
2,3,7,8-TCDD Equivalent (P)	5.88E-12	2.22E-11	5.01E-11	4.85E-12	2.22E-11	4.26E-11	5.88E-12	2.22E-11
VOCs								
Chloroform	--	4.69E-09	1.75E-07	--	4.70E-09	1.01E-11	--	4.69E-09
Dichloromethane	--	2.13E-06	1.12E-04	--	2.13E-06	1.05E-09	--	2.13E-06
Formaldehyde	--	6.59E-04	2.65E-02	--	6.59E-04	1.81E-07	--	6.59E-04
Tetrachloroethylene	--	9.34E-09	6.92E-06	--	9.33E-09	7.15E-10	--	9.34E-09
Vinyl Chloride	--	7.58E-10	3.10E-08	--	7.58E-10	3.70E-13	--	7.58E-10
Chlorinated Monocyclic A								
1,2-Dichlorobenzene	--	9.35E-09	5.33E-07	--	9.35E-09	5.85E-11	--	9.35E-09
1,2,4-Trichlorobenzene	--	1.16E-08	4.76E-06	--	1.16E-08	3.63E-10	--	1.16E-08
1,2,4,5-Tetrachlorobenzene	--	5.31E-08	8.55E-07	--	5.31E-08	1.39E-11	--	5.31E-08
Pentachlorobenzene	--	8.44E-08	3.90E-08	--	8.44E-08	1.26E-10	--	8.44E-08
Hexachlorobenzene	--	3.60E-08	2.74E-07	--	3.60E-08	9.50E-11	--	3.60E-08
2,4-Dichlorophenol	--	3.54E-07	5.94E-05	--	3.54E-07	2.14E-08	--	3.54E-07
2,4,6-Trichlorophenol	--	8.48E-08	6.50E-05	--	8.48E-08	3.12E-08	--	8.48E-08
2,3,4,6-Tetrachlorophenol	--	8.75E-08	1.87E-06	--	8.75E-08	3.49E-09	--	8.75E-08
Pentachlorophenol	1.07E-10	3.19E-08	1.19E-05	8.80E-11	3.19E-08	3.76E-06	1.07E-10	3.19E-08
Inorganics								
Antimony	4.75E-06	1.63E-06	1.63E-06	3.92E-06	2.81E-06	--	4.75E-06	1.63E-06
Arsenic	1.04E-06	3.34E-08	6.69E-08	8.58E-07	5.29E-08	--	1.04E-06	3.34E-08
Barium	8.14E-06	2.09E-06	2.09E-06	6.71E-06	4.49E-06	--	8.14E-06	2.09E-06
Beryllium	1.10E-07	2.69E-09	2.69E-09	9.07E-08	4.63E-09	--	1.10E-07	2.69E-09
Boron	2.65E-04	5.61E-04	5.61E-04	2.19E-04	6.32E-04	--	2.65E-04	5.61E-04
Cadmium	2.40E-05	1.93E-05	1.99E-05	1.98E-05	3.88E-05	--	2.40E-05	1.93E-05
Chromium (Total)	2.18E-06	7.07E-08	7.07E-08	1.80E-06	7.67E-08	--	2.18E-06	7.07E-08
Cobalt	2.04E-07	1.64E-08	1.64E-08	1.69E-07	2.03E-08	--	2.04E-07	1.64E-08
Lead	2.44E-04	6.54E-05	6.54E-05	2.02E-04	9.86E-05	--	2.44E-04	6.54E-05
Mercury - Elemental	--	--	--	--	--	--	--	--
Mercury - Inorganic	1.95E-06	1.12E-06	4.35E-06	1.61E-06	1.48E-05	1.12E-04	1.95E-06	1.12E-06
Methyl Mercury	5.51E-07	4.66E-08	2.43E-07	4.55E-07	3.21E-07	3.15E-05	5.51E-07	4.66E-08
Nickel	5.77E-06	7.44E-07	9.92E-07	4.76E-06	1.15E-06	--	5.77E-06	7.44E-07
Phosphorous	4.00E-05	1.72E-04	1.72E-04	3.30E-05	1.72E-04	--	4.00E-05	1.72E-04
Silver	8.07E-07	3.62E-07	3.62E-07	6.66E-07	5.00E-07	--	8.07E-07	3.62E-07
Vanadium	1.16E-06	7.18E-08	7.18E-08	9.58E-07	7.94E-08	--	1.16E-06	7.18E-08
Zinc	8.54E-05	9.32E-05	1.55E-03	7.05E-05	1.67E-04	--	8.54E-05	9.32E-05

Table E.2 - Calculated Exposure Point Concentrations for Scenario 2: 2 Process Units

Analyte	Belowground Traditional Plant	Food Ingestion								
	(belowground) Concentration of COPC in Trad. Plant due to root uptake $P_{fbg-trad}$	Wild Game Conc. (mg/Kg) A_{wg}	Fish Tissue Conc. - Lake (mg/kg) $C_{fish-lake}$	Fish Tissue Conc. - River (mg/kg) $C_{fish-river}$	Beef Conc. (mg/Kg) A_{beef}	Milk Conc. (mg/L) A_{milk}	Pork Conc. (mg/Kg) A_{pork}	Poultry Conc. (mg/Kg) $A_{poultry}$	Egg Conc. (mg/Kg) A_{egg}	Grouse Conc. (mg/Kg) A_{grouse}
BTEX										
Benzene	1.58E-05	2.82E-08	1.60E-05	--	2.71E-07	5.99E-08	4.95E-08	9.28E-10	5.30E-10	--
PAHs										
Anthracene	3.15E-09	4.03E-10	4.08E-08	--	1.26E-09	3.79E-10	7.19E-10	2.17E-09	1.24E-09	--
Benzo(a)anthracene										
Benzo(a)pyrene	3.73E-09	6.65E-06	4.07E-06	--	1.44E-05	4.61E-06	1.22E-06	1.06E-09	6.07E-10	--
Benzo(b)fluoranthene										
Benzo(g,h,i)perylene										
Benzo(k)fluoranthene										
Chrysene										
Dibenz(a,h)anthracene										
Indeno(1,2,3-cd)pyrene										
Naphthalene	3.52E-06	2.81E-10	9.76E-09	--	8.12E-10	2.71E-10	3.91E-10	1.06E-09	6.03E-10	--
Phenanthrene	8.42E-08	7.14E-10	3.04E-07	--	2.32E-09	6.79E-10	1.04E-09	2.99E-09	1.71E-09	--
PCBs										
Aroclor 1254 (Total PCBs)	4.94E-07	3.45E-07	8.22E-04	--	1.29E-06	2.96E-07	8.07E-07	2.75E-08	1.57E-08	--
Dioxins and Furans										
2,3,7,8-TCDD Equivalent	3.97E-10	4.27E-09	3.81E-08	--	9.51E-09	2.96E-09	1.23E-09	1.70E-11	9.73E-12	--
2,3,7,8-TCDD Equivalent (P)	5.01E-11	5.39E-10	4.81E-09	--	1.20E-09	3.74E-10	1.55E-10	2.15E-12	1.23E-12	--
VOCs										
Chloroform	1.75E-07	2.51E-10	1.40E-07	--	2.43E-09	5.35E-10	4.41E-10	8.23E-12	4.71E-12	--
Dichloromethane	1.12E-04	2.61E-08	1.25E-05	--	2.33E-07	5.24E-08	4.44E-08	8.53E-10	4.87E-10	--
Formaldehyde	2.65E-02	5.54E-07	1.52E-03	--	3.18E-06	8.12E-07	8.14E-07	1.80E-08	1.03E-08	--
Tetrachloroethylene	6.92E-06	1.35E-08	2.02E-05	--	1.56E-07	3.31E-08	2.55E-08	4.46E-10	2.55E-10	--
Vinyl Chloride	3.10E-08	7.04E-11	4.75E-08	--	8.17E-10	1.73E-10	1.33E-10	2.31E-12	1.32E-12	--
Chlorinated Monocyclic A										
1,2-Dichlorobenzene	5.33E-07	8.63E-10	2.15E-07	--	3.61E-09	1.02E-09	1.27E-09	3.22E-11	1.84E-11	--
1,2,4-Trichlorobenzene	4.76E-06	1.88E-09	9.19E-07	--	8.27E-09	2.26E-09	3.05E-09	8.07E-11	4.61E-11	--
1,2,4,5-Tetrachlorobenzene	8.55E-07	1.30E-08	2.24E-05	--	5.26E-08	1.41E-08	2.72E-08	8.25E-10	4.71E-10	--
Pentachlorobenzene	3.90E-08	2.53E-08	2.09E-05	--	9.18E-08	2.42E-08	5.86E-08	1.89E-09	1.08E-09	--
Hexachlorobenzene	2.74E-07	1.26E-08	4.32E-05	--	4.88E-08	1.24E-08	2.91E-08	9.39E-10	5.37E-10	--
2,4-Dichlorophenol	5.94E-05	6.47E-08	2.08E-05	--	6.19E-07	1.37E-07	1.13E-07	2.14E-09	1.22E-09	--
2,4,6-Trichlorophenol	6.50E-05	3.64E-08	2.06E-05	--	3.29E-07	7.30E-08	6.10E-08	1.17E-09	6.71E-10	--
2,3,4,6-Tetrachlorophenol	1.87E-06	1.11E-07	1.50E-04	--	6.74E-07	1.59E-07	1.20E-07	2.26E-09	1.29E-09	--
Pentachlorophenol	1.19E-05	6.95E-05	2.75E-03	--	1.52E-04	4.85E-05	1.30E-05	5.35E-09	3.06E-09	--
Inorganics										
Antimony	1.63E-06	3.80E-07	4.83E-06	--	4.73E-07	1.47E-07	7.20E-08	1.14E-09	6.49E-10	--
Arsenic	6.69E-08	1.47E-07	3.30E-06	--	1.57E-07	4.85E-08	1.87E-08	2.87E-10	1.64E-10	--
Barium	2.09E-06	1.00E-07	2.15E-04	--	1.30E-07	3.99E-08	2.19E-08	3.91E-10	2.24E-10	--
Beryllium	2.69E-09	7.76E-09	2.13E-08	--	8.47E-09	2.56E-09	1.35E-09	2.95E-11	1.69E-11	--
Boron	5.61E-04	1.40E-05	1.03E-05	--	1.86E-05	6.09E-06	3.31E-06	5.25E-08	3.00E-08	--
Cadmium	1.99E-05	2.64E-07	3.89E-04	--	3.68E-07	1.16E-07	6.25E-08	9.50E-10	5.43E-10	--
Chromium (Total)	7.07E-08	8.33E-07	1.22E-06	--	8.67E-07	2.69E-07	9.89E-08	1.50E-09	8.55E-10	--
Cobalt	1.64E-08	2.89E-07	1.65E-08	--	3.12E-07	9.56E-08	4.34E-08	8.19E-10	4.68E-10	--
Lead	6.54E-05	5.65E-06	9.46E-08	--	7.12E-06	2.12E-06	1.56E-06	3.82E-08	2.19E-08	--
Mercury - Elemental	--	--	--	--	--	--	--	--	--	--
Mercury - Inorganic	4.35E-06	6.08E-06	--	--	1.33E-05	4.22E-06	1.81E-06	1.11E-08	6.36E-09	--
Methyl Mercury	2.43E-07	1.51E-07	2.22E-02	--	2.96E-07	9.45E-08	2.67E-08	3.64E-11	2.08E-11	--
Nickel	9.92E-07	2.55E-06	1.50E-05	--	3.00E-06	9.00E-07	5.58E-07	1.28E-08	7.33E-09	--
Phosphorous	1.72E-04	1.95E-03	4.26E-06	--	2.63E-03	8.82E-04	6.56E-04	1.44E-05	8.26E-06	--
Silver	3.62E-07	1.87E-07	3.74E-06	--	2.22E-07	7.01E-08	2.85E-08	3.50E-10	2.00E-10	--
Vanadium	7.18E-08	2.06E-07	1.88E-07	--	2.34E-07	6.94E-08	4.24E-08	1.01E-09	5.78E-10	--
Zinc	1.55E-03	7.20E-07	5.78E-03	--	1.04E-06	3.26E-07	2.06E-07	3.78E-09	2.16E-09	--

Table E.3

- Calculated Exposure Point Concentrations for Scenario 3: 1 Process Unit

Analyte	CAS-RN	Soil		Water		Air			Aboveground Garden Produce		Gardern Plant/Fruit	
		Surface Soil Conc. (mg/Kg) C_s	Subsurface Soil Conc. (mg/Kg) C_{ss}	Groundwater Conc. (mg/L) C_{gw}	Surface Water Conc. (mg/L) C_{sw}	Air Conc. - Indoor (mg/m ³) C_{iair}	Air Conc. - Outdoor (mg/m ³) C_a	Air Conc. - below slab (mg/m ³) C_{abs}	Vapour Conc. Outdoor Air - Subsurface Soil (mg/m ³) C_v	Plant (above ground produce) concentration due to direct (wet and dry) deposition P_d	(above ground) Concentration of COPC in produce due to root uptake P_{rag}	Concentration of COPC in the plant/fruit resulting from air-to-plant transfer P_v
BTEX												
Benzene	71432	1.41E-07	--	--	1.38E-06	--	5.30E-07	--	--	--	3.33E-07	7.60E-10
PAHs												
Anthracene	120127	1.44E-06	--	--	2.74E-09	--	2.29E-07	--	--	1.50E-12	1.40E-07	1.02E-10
Benzo(a)anthracene	56553		--	--		--		--	--			
Benzo(a)pyrene	50328	9.81E-07	--	--	1.65E-09	--	5.55E-10	--	--	1.42E-09	1.22E-08	3.75E-05
Benzo(b)fluoranthene	205992		--	--		--		--	--			
Benzo(g,h,i)perylene	191242		--	--		--		--	--			
Benzo(k)fluoranthene	207089		--	--		--		--	--			
Chrysene	218019		--	--		--		--	--			
Dibenz(a,h)anthracene	53703		--	--		--		--	--			
Indeno(1,2,3-cd)pyrene	193395		--	--		--		--	--			
Naphthalene	91203	5.52E-07	--	--	9.71E-09	--	1.40E-09	--	--	--	2.65E-07	4.45E-10
Phenanthrene	85018	1.91E-06	--	--	2.04E-08	--	7.02E-10	--	--	2.31E-12	1.96E-07	7.99E-10
PCBs												
Aroclor 1254 (Total PCBs)	11097691	3.60E-05	--	--	2.26E-09	--	6.17E-10	--	--	9.12E-12	2.44E-07	8.46E-09
Dioxins and Furans												
2,3,7,8-TCDD Equivalent	1746016	2.66E-08	--	--	1.51E-12	--	6.84E-13	--	--	7.55E-13	1.21E-10	2.48E-10
2,3,7,8-TCDD Equivalent (PI)	1746016	3.36E-09	--	--	1.91E-13	--	8.64E-14	--	--	9.53E-14	1.53E-11	3.13E-11
VOCs												
Chloroform	67-66-3	1.22E-09	--	--	1.42E-08	--	4.36E-09	--	--	--	3.31E-09	7.41E-12
Dichloromethane	75-09-2	2.19E-07	--	--	4.40E-06	--	1.50E-06	--	--	--	1.50E-06	7.71E-10
Formaldehyde	50-00-0	5.53E-05	--	--	3.40E-04	--	4.06E-07	--	--	--	4.64E-04	1.33E-07
Tetrachloroethylene	127-18-4	1.56E-08	--	--	1.72E-07	--	4.85E-08	--	--	--	6.56E-09	5.25E-10
Vinyl Chloride	75-01-4	8.88E-11	--	--	1.40E-08	--	5.09E-09	--	--	--	5.33E-10	2.72E-13
Chlorinated Monocyclic Aromatics												
1,2-Dichlorobenzene	95-50-1	1.52E-08	--	--	1.89E-09	--	4.40E-10	--	--	--	6.54E-09	4.29E-11
1,2,4-Trichlorobenzene	120-82-1	4.29E-08	--	--	2.68E-09	--	4.40E-10	--	--	--	8.11E-09	2.67E-10
1,2,4,5-Tetrachlorobenzene	95-94-3	5.70E-07	--	--	6.46E-09	--	4.40E-10	--	--	--	3.71E-08	1.02E-11
Pentachlorobenzene	608-93-5	1.48E-06	--	--	1.83E-09	--	4.40E-10	--	--	--	5.90E-08	9.25E-11
Hexachlorobenzene	118-74-1	7.52E-07	--	--	2.62E-09	--	4.40E-10	--	--	--	2.52E-08	6.97E-11
2,4-Dichlorophenol	120-83-2	3.03E-07	--	--	1.07E-06	--	8.81E-10	--	--	--	2.47E-07	1.57E-08
2,4,6-Trichlorophenol	88-06-2	2.11E-07	--	--	2.57E-07	--	4.40E-10	--	--	--	5.93E-08	2.29E-08
2,3,4,6-Tetrachlorophenol	58-90-2	5.90E-07	--	--	2.80E-07	--	4.40E-10	--	--	--	6.12E-08	2.56E-09
Pentachlorophenol	87-86-5	5.10E-07	--	--	7.86E-07	--	5.27E-10	--	--	1.73E-12	2.23E-08	2.76E-06
Inorganics												
Antimony	7440360	1.32E-06	--	--	2.94E-09	--	2.35E-08	--	--	7.69E-08	6.83E-08	--
Arsenic	7440382	1.71E-06	--	--	5.93E-09	--	5.17E-09	--	--	1.69E-08	1.08E-08	--
Barium	7440393	3.67E-05	--	--	8.92E-08	--	4.06E-08	--	--	1.32E-07	1.18E-06	--
Beryllium	7440417	4.71E-07	--	--	9.01E-11	--	5.48E-10	--	--	1.78E-09	1.22E-09	--
Boron	7440428	6.82E-06	--	--	7.93E-08	--	1.31E-06	--	--	4.30E-06	1.54E-05	--
Cadmium	7440439	8.15E-05	--	--	1.13E-07	--	1.20E-07	--	--	3.90E-07	1.02E-05	--
Chromium (Total)	7440473	4.13E-06	--	--	1.69E-08	--	1.09E-08	--	--	3.53E-08	2.01E-08	--
Cobalt	7440484	5.70E-08	--	--	1.27E-10	--	1.01E-09	--	--	3.31E-09	4.93E-10	--
Lead	7439921	1.64E-03	--	--	2.37E-07	--	1.22E-06	--	--	3.96E-06	2.23E-05	--
Mercury - Elemental	7439976	--	--	--	--	--	3.42E-10	--	--	--	--	--
Mercury - Inorganic	7487947	4.89E-05	--	--	7.43E-08	--	8.24E-08	--	--	3.17E-08	5.99E-06	8.20E-05
Methyl Mercury	22967-92-6	9.93E-07	--	--	1.90E-10	--	--	--	--	8.93E-09	1.30E-07	2.31E-05
Nickel	7440020	3.25E-05	--	--	5.04E-08	--	2.88E-08	--	--	9.35E-08	3.03E-07	--
Phosphorous	7723140	1.19E-06	--	--	3.27E-08	--	1.98E-07	--	--	6.49E-07	4.18E-06	--
Silver	7440224	9.51E-07	--	--	1.12E-08	--	4.02E-09	--	--	1.31E-08	1.31E-07	--
Vanadium	7440622	5.82E-07	--	--	1.45E-09	--	5.73E-09	--	--	1.88E-08	1.93E-09	--
Zinc	7440666	4.23E-04	--	--	6.87E-07	--	4.25E-07	--	--	1.38E-06	4.10E-05	--

Table E.3 - Calculated Exposure Point Concentrations for Scenario 3: 1 Process Unit

Analyte	Garden Fruit		Belowground Produce	Tradional Plant		Traditional Plant/Fruit	Traditional Fruit	
	Fruit (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in fruit due to root uptake	(belowground) Concentration of COPC in produce due to root uptake	Trad. Plant (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in Trad. Plant due to root uptake	Concentration of COPC in Trad. plant resulting from air-to-plant transfer	Wild Fruit (above ground produce) concentration due to direct (wet and dry) deposition	(above ground) Concentration of COPC in Wild Fruit due to root uptake
	P _{d-fruit}	P _{rag-fruit}	P _{fbg}	P _{d-trad}	P _{rag-trad}	P _{v-trad}	P _{d-wf}	P _{rag-wf}
BTEX								
Benzene	--	3.33E-07	1.13E-05	--	3.33E-07	7.60E-10	--	3.33E-07
PAHs								
Anthracene	1.82E-12	1.40E-07	2.17E-09	1.50E-12	1.40E-07	1.02E-10	1.82E-12	1.40E-07
Benzo(a)anthracene								
Benzo(a)pyrene	1.72E-09	1.22E-08	2.52E-09	1.42E-09	1.22E-08	3.75E-05	1.72E-09	1.22E-08
Benzo(b)fluoranthene								
Benzo(g,h,i)perylene								
Benzo(k)fluoranthene								
Chrysene								
Dibenz(a,h)anthracene								
Indeno(1,2,3-cd)pyrene								
Naphthalene	--	2.65E-07	2.43E-06	--	2.65E-07	4.45E-10	--	2.65E-07
Phenanthrene	2.79E-12	1.96E-07	5.80E-08	2.31E-12	1.96E-07	7.99E-10	2.79E-12	1.96E-07
PCBs								
Aroclor 1254 (Total PCBs)	1.11E-11	2.44E-07	3.45E-07	9.12E-12	2.44E-07	8.46E-09	1.11E-11	2.44E-07
Dioxins and Furans								
2,3,7,8-TCDD Equivalent	9.15E-13	1.21E-10	2.73E-10	7.55E-13	1.21E-10	2.48E-10	9.15E-13	1.21E-10
2,3,7,8-TCDD Equivalent (P)	1.15E-13	1.53E-11	3.45E-11	9.53E-14	1.53E-11	3.13E-11	1.15E-13	1.53E-11
VOCs								
Chloroform	--	3.30E-09	1.23E-07	--	3.31E-09	7.41E-12	--	3.30E-09
Dichloromethane	--	1.50E-06	7.87E-05	--	1.50E-06	7.71E-10	--	1.50E-06
Formaldehyde	--	4.64E-04	1.87E-02	--	4.64E-04	1.33E-07	--	4.64E-04
Tetrachloroethylene	--	6.57E-09	4.86E-06	--	6.56E-09	5.25E-10	--	6.57E-09
Vinyl Chloride	--	5.34E-10	2.18E-08	--	5.33E-10	2.72E-13	--	5.34E-10
Chlorinated Monocyclic A								
1,2-Dichlorobenzene	--	6.54E-09	3.72E-07	--	6.54E-09	4.29E-11	--	6.54E-09
1,2,4-Trichlorobenzene	--	8.11E-09	3.33E-06	--	8.11E-09	2.67E-10	--	8.11E-09
1,2,4,5-Tetrachlorobenzene	--	3.71E-08	5.98E-07	--	3.71E-08	1.02E-11	--	3.71E-08
Pentachlorobenzene	--	5.90E-08	2.73E-08	--	5.90E-08	9.25E-11	--	5.90E-08
Hexachlorobenzene	--	2.52E-08	1.91E-07	--	2.52E-08	6.97E-11	--	2.52E-08
2,4-Dichlorophenol	--	2.47E-07	4.15E-05	--	2.47E-07	1.57E-08	--	2.47E-07
2,4,6-Trichlorophenol	--	5.93E-08	4.55E-05	--	5.93E-08	2.29E-08	--	5.93E-08
2,3,4,6-Tetrachlorophenol	--	6.12E-08	1.31E-06	--	6.12E-08	2.56E-09	--	6.12E-08
Pentachlorophenol	2.10E-12	2.23E-08	8.34E-06	1.73E-12	2.23E-08	2.76E-06	2.10E-12	2.23E-08
Inorganics								
Antimony	9.33E-08	3.97E-08	3.97E-08	7.69E-08	6.83E-08	--	9.33E-08	3.97E-08
Arsenic	2.04E-08	6.85E-09	1.37E-08	1.69E-08	1.08E-08	--	2.04E-08	6.85E-09
Barium	1.60E-07	5.50E-07	5.50E-07	1.32E-07	1.18E-06	--	1.60E-07	5.50E-07
Beryllium	2.16E-09	7.07E-10	7.07E-10	1.78E-09	1.22E-09	--	2.16E-09	7.07E-10
Boron	5.21E-06	1.36E-05	1.36E-05	4.30E-06	1.54E-05	--	5.21E-06	1.36E-05
Cadmium	4.72E-07	5.06E-06	5.22E-06	3.90E-07	1.02E-05	--	4.72E-07	5.06E-06
Chromium (Total)	4.28E-08	1.86E-08	1.86E-08	3.53E-08	2.01E-08	--	4.28E-08	1.86E-08
Cobalt	4.02E-09	3.99E-10	3.99E-10	3.31E-09	4.93E-10	--	4.02E-09	3.99E-10
Lead	4.80E-06	1.48E-05	1.48E-05	3.96E-06	2.23E-05	--	4.80E-06	1.48E-05
Mercury - Elemental	--	--	--	--	--	--	--	--
Mercury - Inorganic	3.84E-08	4.54E-07	1.76E-06	3.17E-08	5.99E-06	8.20E-05	3.84E-08	4.54E-07
Methyl Mercury	1.08E-08	1.89E-08	9.83E-08	8.93E-09	1.30E-07	2.31E-05	1.08E-08	1.89E-08
Nickel	1.13E-07	1.95E-07	2.60E-07	9.35E-08	3.03E-07	--	1.13E-07	1.95E-07
Phosphorous	7.86E-07	4.18E-06	4.18E-06	6.49E-07	4.18E-06	--	7.86E-07	4.18E-06
Silver	1.59E-08	9.51E-08	9.51E-08	1.31E-08	1.31E-07	--	1.59E-08	9.51E-08
Vanadium	2.28E-08	1.74E-09	1.74E-09	1.88E-08	1.93E-09	--	2.28E-08	1.74E-09
Zinc	1.68E-06	2.28E-05	3.80E-04	1.38E-06	4.10E-05	--	1.68E-06	2.28E-05

Table E.3 - Calculated Exposure Point Concentrations for Scenario 3: 1 Process Unit

Analyte	Belowground Traditional Plant	Food Ingestion								
	(belowground) Concentration of COPC in Trad. Plant due to root uptake $P_{fbg-trad}$	Wild Game Conc. (mg/Kg) A_{wg}	Fish Tissue Conc. - Lake (mg/kg) $C_{fish-lake}$	Fish Tissue Conc. - River (mg/kg) $C_{fish-river}$	Beef Conc. (mg/Kg) A_{beef}	Milk Conc. (mg/L) A_{milk}	Pork Conc. (mg/Kg) A_{pork}	Poultry Conc. (mg/Kg) $A_{poultry}$	Egg Conc. (mg/Kg) A_{egg}	Grouse Conc. (mg/Kg) A_{grouse}
BTEX										
Benzene	1.13E-05	2.01E-08	1.14E-05	--	1.93E-07	4.27E-08	3.53E-08	6.62E-10	3.78E-10	--
PAHs										
Anthracene	2.17E-09	2.77E-10	2.81E-08	--	8.70E-10	2.61E-10	4.95E-10	1.49E-09	8.54E-10	--
Benzo(a)anthracene										
Benzo(a)pyrene	2.52E-09	4.88E-06	2.54E-06	--	1.06E-05	3.38E-06	8.93E-07	6.74E-10	3.85E-10	--
Benzo(b)fluoranthene										
Benzo(g,h,i)perylene										
Benzo(k)fluoranthene										
Chrysene										
Dibenz(a,h)anthracene										
Indeno(1,2,3-cd)pyrene										
Naphthalene	2.43E-06	1.94E-10	6.73E-09	--	5.60E-10	1.87E-10	2.69E-10	7.27E-10	4.16E-10	--
Phenanthrene	5.80E-08	4.98E-10	2.10E-07	--	1.61E-09	4.72E-10	7.20E-10	2.06E-09	1.18E-09	--
PCBs										
Aroclor 1254 (Total PCBs)	3.45E-07	2.46E-07	5.75E-04	--	9.13E-07	2.11E-07	5.65E-07	1.92E-08	1.10E-08	--
Dioxins and Furans										
2,3,7,8-TCDD Equivalent	2.73E-10	3.07E-09	2.64E-08	--	6.89E-09	2.15E-09	8.78E-10	1.17E-11	6.70E-12	--
2,3,7,8-TCDD Equivalent (P)	3.45E-11	3.88E-10	3.33E-09	--	8.70E-10	2.72E-10	1.11E-10	1.48E-12	8.46E-13	--
VOCs										
Chloroform	1.23E-07	1.76E-10	9.85E-08	--	1.71E-09	3.76E-10	3.10E-10	5.79E-12	3.31E-12	--
Dichloromethane	7.87E-05	1.84E-08	8.80E-06	--	1.64E-07	3.69E-08	3.12E-08	6.00E-10	3.43E-10	--
Formaldehyde	1.87E-02	3.90E-07	1.07E-03	--	2.24E-06	5.72E-07	5.73E-07	1.26E-08	7.22E-09	--
Tetrachloroethylene	4.86E-06	9.49E-09	1.42E-05	--	1.10E-07	2.33E-08	1.80E-08	3.13E-10	1.79E-10	--
Vinyl Chloride	2.18E-08	4.95E-11	3.34E-08	--	5.75E-10	1.22E-10	9.38E-11	1.63E-12	9.30E-13	--
Chlorinated Monocyclic A										
1,2-Dichlorobenzene	3.72E-07	6.03E-10	1.51E-07	--	2.52E-09	7.15E-10	8.90E-10	2.25E-11	1.29E-11	--
1,2,4-Trichlorobenzene	3.33E-06	1.32E-09	6.43E-07	--	5.79E-09	1.58E-09	2.13E-09	5.64E-11	3.22E-11	--
1,2,4,5-Tetrachlorobenzene	5.98E-07	9.11E-09	1.57E-05	--	3.68E-08	9.83E-09	1.90E-08	5.77E-10	3.29E-10	--
Pentachlorobenzene	2.73E-08	1.78E-08	1.46E-05	--	6.43E-08	1.70E-08	4.10E-08	1.32E-09	7.57E-10	--
Hexachlorobenzene	1.91E-07	8.84E-09	3.02E-05	--	3.43E-08	8.71E-09	2.04E-08	6.57E-10	3.75E-10	--
2,4-Dichlorophenol	4.15E-05	4.53E-08	1.45E-05	--	4.33E-07	9.55E-08	7.92E-08	1.49E-09	8.53E-10	--
2,4,6-Trichlorophenol	4.55E-05	2.56E-08	1.44E-05	--	2.30E-07	5.11E-08	4.27E-08	8.21E-10	4.69E-10	--
2,3,4,6-Tetrachlorophenol	1.31E-06	7.97E-08	1.05E-04	--	4.75E-07	1.13E-07	8.43E-08	1.58E-09	9.05E-10	--
Pentachlorophenol	8.34E-06	5.10E-05	1.92E-03	--	1.12E-04	3.56E-05	9.53E-06	3.74E-09	2.14E-09	--
Inorganics										
Antimony	3.97E-08	7.73E-09	1.17E-07	--	1.00E-08	3.11E-09	1.65E-09	2.76E-11	1.58E-11	--
Arsenic	1.37E-08	3.68E-09	6.75E-07	--	6.30E-09	1.71E-09	2.06E-09	5.88E-11	3.36E-11	--
Barium	5.50E-07	5.95E-09	5.65E-05	--	1.42E-08	4.14E-09	4.38E-09	1.03E-10	5.87E-11	--
Beryllium	7.07E-10	2.08E-10	5.59E-09	--	4.37E-10	1.04E-10	2.32E-10	7.75E-12	4.43E-12	--
Boron	1.36E-05	2.90E-07	2.51E-07	--	4.02E-07	1.32E-07	7.70E-08	1.28E-09	7.30E-10	--
Cadmium	5.22E-06	2.12E-08	1.02E-04	--	4.97E-08	1.55E-08	1.32E-08	2.49E-10	1.43E-10	--
Chromium (Total)	1.86E-08	1.91E-08	3.21E-07	--	3.27E-08	8.37E-09	1.25E-08	3.93E-10	2.24E-10	--
Cobalt	3.99E-10	5.71E-09	4.01E-10	--	6.30E-09	1.92E-09	9.67E-10	1.99E-11	1.14E-11	--
Lead	1.48E-05	2.41E-07	2.14E-08	--	5.97E-07	1.56E-07	2.83E-07	8.63E-09	4.93E-09	--
Mercury - Elemental	--	--	--	--	--	--	--	--	--	--
Mercury - Inorganic	1.76E-06	3.08E-06	--	--	7.05E-06	2.24E-06	8.79E-07	4.53E-09	2.59E-09	--
Methyl Mercury	9.83E-08	8.74E-08	1.58E-02	--	1.90E-07	6.07E-08	1.69E-08	1.47E-11	8.42E-12	--
Nickel	2.60E-07	9.22E-08	3.93E-06	--	2.26E-07	5.69E-08	1.08E-07	3.37E-09	1.93E-09	--
Phosphorous	4.18E-06	4.04E-05	1.03E-07	--	5.70E-05	1.92E-05	1.55E-05	3.51E-07	2.01E-07	--
Silver	9.51E-08	8.88E-09	9.83E-07	--	1.89E-08	5.86E-09	4.78E-09	9.18E-11	5.25E-11	--
Vanadium	1.74E-09	4.07E-09	4.58E-09	--	4.77E-09	1.40E-09	9.67E-10	2.46E-11	1.41E-11	--
Zinc	3.80E-04	5.77E-08	1.41E-03	--	1.40E-07	4.29E-08	4.24E-08	9.26E-10	5.29E-10	--