AMERICAN CHEMICAL SERVICES NPL SITE
BASELINE RISK ASSESSMENT

GRIFFITH, INDIANA

Prepared For The
U.S. Environmental Protection Agency, Region VI
USEPA Work Assignment 029-ROBE-05J7
BVSPC Project No. 46517

Prepared By
Black & Veatch Special Projects Corp.

November 2000

Tables 5-1-1
through 5-4-84

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-1
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_cRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.78E-006
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.14E-006
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.46E-005
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	1.68E+004	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.44E-002
	Anthracene	8.90E-002	mg/kg	NA	NA	M	7.6E-008	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.54E-007
	Antimony	9.41E-001	mg/kg	NA	NA	M	8.1E-007	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.01E-003
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	5.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.35E-001
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	6.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	2.77E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	7.91E-003
	Barium	1.88E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.30E-003
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	5.1E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	7.1E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	7.4E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	6.2E-008	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	5.80E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	2.48E-003
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.20E-004
	Cadmium	1.66E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.42E-003
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.7E-009	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.71E-008
	Nickel	7.72E+000	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.30E-004
	Selenium	4.59E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.86E-005
	Silver	2.90E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.97E-005
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	7.7E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.70E-005
	Toluene	1.78E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.63E-007
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.05E-005
	Vanadium	1.18E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.45E-003
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.55E-006
	Zinc	9.77E+001	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.79E-004
	(Total)												4.02E-001
Dermal	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	7.4E-007	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	2.28E-004
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	6.8E-007	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	7.57E-005
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.65E-004
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	1.68E+004	mg/kg	NA	NA	M	9.6E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	9.55E-001
	Anthracene	8.90E-002	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.68E-005
	Antimony	9.41E-001	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	1.33E+001
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-1
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_cRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.75E+001
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	4.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	2.77E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	5.52E-001
	Barium	1.88E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.52E-001
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	4.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	5.80E+000	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.65E+001
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.78E-002
	Cadmium	1.66E+000	mg/kg	NA	NA	M	9.4E-005	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.76E+000
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.14E-006
	Nickel	7.72E+000	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.38E-001
	Selenium	4.59E-001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	5.21E-003
	Silver	2.90E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.57E-002
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.10E-003
	Toluene	1.78E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.06E-005
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	8.2E-006	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.39E-003
	Vanadium	1.18E+001	mg/kg	NA	NA	M	6.7E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	9.59E-002
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	8.7E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	4.85E-004
	Zinc	9.77E+001	mg/kg	NA	NA	M	5.5E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	6.16E-002
	(Total)												6.26E+001
												Total Hazard Index Across All Exposure Routes/Pathways	6.3E+001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-2
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_cRWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.03E-004	mg/cu. m.	R	2.02E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.44E-004
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.20E-004	mg/cu. m.	R	2.34E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	8.18E-005
	1,1,2-Trichloroethane	1.30E-002	mg/kg	4.04E-007	mg/cu. m.	R	7.91E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.33E-007	mg/cu. m.	R	2.60E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	1.86E-004	mg/cu. m.	R	3.65E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	4.05E-003
	1,2-Dichloroethane	0.00E+000	mg/kg	4.13E-005	mg/cu. m.	R	8.07E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	5.77E-003
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	1.78E-004	mg/cu. m.	R	3.48E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	4.08E-005	mg/cu. m.	R	7.99E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	7.01E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	9.61E-006	mg/cu. m.	R	1.88E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	3.30E-005
	1,4-Dichlorobenzene	0.00E+000	mg/kg	3.55E-006	mg/cu. m.	R	6.95E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	3.03E-006
	2-Butanone	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	3.65E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.28E-008
	2-Hexanone	0.00E+000	mg/kg	8.89E-004	mg/cu. m.	R	1.74E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.24E-001
	2-Methylnaphthalene	3.40E-001	mg/kg	4.12E-005	mg/cu. m.	R	8.05E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	0.00E+000	mg/kg	1.69E-005	mg/cu. m.	R	3.31E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	0.00E+000	mg/kg	6.16E-006	mg/cu. m.	R	1.21E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.16E-009	mg/cu. m.	R	4.22E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.93E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	1.32E-010	mg/cu. m.	R	2.58E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.05E-004	mg/cu. m.	R	2.06E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.03E-003
	4-Methylphenol	0.00E+000	mg/kg	6.19E-005	mg/cu. m.	R	1.21E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	5.54E-011	mg/cu. m.	R	1.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	6.48E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	4.69E-011	mg/cu. m.	R	9.18E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	3.51E-006	mg/cu. m.	R	6.86E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	1.09E-006	mg/cu. m.	R	2.14E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	1.53E-004	mg/cu. m.	R	2.99E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	4.44E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	2.43E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	8.90E-002	mg/kg	1.93E-007	mg/cu. m.	R	3.77E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	9.41E-001	mg/kg	3.20E-009	mg/cu. m.	R	6.26E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.04E-001	mg/kg	3.07E-010	mg/cu. m.	R	6.00E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	6.71E-001	mg/kg	2.23E-009	mg/cu. m.	R	4.37E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	5.50E+000	mg/kg	2.90E-009	mg/cu. m.	R	5.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	8.11E-001	mg/kg	1.33E-008	mg/cu. m.	R	2.60E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	2.77E+000	mg/kg	2.05E-009	mg/cu. m.	R	4.02E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.88E+002	mg/kg	1.40E-007	mg/cu. m.	R	2.74E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.96E-004
	Benzene	0.00E+000	mg/kg	1.07E-004	mg/cu. m.	R	2.10E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.24E-002
	Benzoic Acid	0.00E+000	mg/kg	1.59E-004	mg/cu. m.	R	3.11E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	5.90E-002	mg/kg	1.49E-010	mg/cu. m.	R	2.91E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	8.25E-002	mg/kg	1.08E-010	mg/cu. m.	R	2.12E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	8.60E-002	mg/kg	2.55E-010	mg/cu. m.	R	4.99E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.64E-011	mg/cu. m.	R	1.10E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	2.47E-010	mg/cu. m.	R	4.83E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.95E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	5.80E+000	mg/kg	1.97E-009	mg/cu. m.	R	3.86E-010	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	6.77E-005
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	4.62E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	3.43E-005	mg/cu. m.	R	6.71E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	2.09E-008	mg/cu. m.	R	4.09E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	0.00E+000	mg/kg	1.59E-008	mg/cu. m.	R	3.11E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.66E+000	mg/kg	5.74E-009	mg/cu. m.	R	1.12E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	2.00E-003	mg/kg	6.10E-008	mg/cu. m.	R	1.19E-008	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	5.97E-008
	Chlorobenzene	0.00E+000	mg/kg	5.85E-006	mg/cu. m.	R	1.14E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.29E-004
	Chloroform	3.00E-003	mg/kg	1.44E-004	mg/cu. m.	R	2.82E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.28E-001

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-2
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_cRWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	3.25E+001	mg/kg	6.97E-008	mg/cu. m.	R	1.36E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	7.40E-002	mg/kg	1.95E-010	mg/cu. m.	R	3.82E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	1.62E-006	mg/cu. m.	R	3.18E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.59E+000	mg/kg	3.03E-009	mg/cu. m.	R	5.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	2.85E+001	mg/kg	7.20E-008	mg/cu. m.	R	1.41E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	1.00E+000	mg/kg	6.96E-010	mg/cu. m.	R	1.36E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	9.59E-011	mg/cu. m.	R	1.88E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	9.31E-010	mg/cu. m.	R	1.82E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	0.00E+000	mg/kg	9.79E-009	mg/cu. m.	R	1.91E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	5.10E-002	mg/kg	2.93E-009	mg/cu. m.	R	5.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.10E-001	mg/kg	5.64E-010	mg/cu. m.	R	1.10E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	6.90E-012	mg/cu. m.	R	1.35E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	0.00E+000	mg/kg	6.68E-004	mg/cu. m.	R	1.31E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.51E-004
	Fluoranthene	9.80E-002	mg/kg	2.30E-010	mg/cu. m.	R	4.51E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	1.83E-006	mg/cu. m.	R	3.58E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	3.82E-013	mg/cu. m.	R	7.47E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	1.82E-013	mg/cu. m.	R	3.56E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	2.90E-002	mg/kg	1.82E-011	mg/cu. m.	R	3.56E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	5.14E-010	mg/cu. m.	R	1.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	5.84E-012	mg/cu. m.	R	1.10E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	4.40E-002	mg/kg	8.02E-011	mg/cu. m.	R	1.57E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.40E-001	mg/kg	1.87E-004	mg/cu. m.	R	3.67E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.42E+002	mg/kg	5.11E-007	mg/cu. m.	R	9.99E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	2.52E+003	mg/kg	7.92E-007	mg/cu. m.	R	1.55E-007	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.08E-002
	Mercury	3.85E+000	mg/kg	2.75E-009	mg/cu. m.	R	5.38E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	6.26E-006
	Methylene Chloride	0.00E+000	mg/kg	3.54E-004	mg/cu. m.	R	6.93E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	8.06E-005
	m,p-xylene	0.00E+000	mg/kg	9.38E-006	mg/cu. m.	R	1.84E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	0.00E+000	mg/kg	9.43E-005	mg/cu. m.	R	1.85E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	2.05E-002
	Nickel	7.72E+000	mg/kg	5.97E-009	mg/cu. m.	R	1.17E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	6.15E-008	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	4.51E-006	mg/cu. m.	R	8.82E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	1.74E-009	mg/cu. m.	R	3.41E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	7.18E-010	mg/cu. m.	R	1.40E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	0.00E+000	mg/kg	3.77E-005	mg/cu. m.	R	7.38E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	1.20E-001	mg/kg	3.86E-010	mg/cu. m.	R	7.56E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.59E-001	mg/kg	4.49E-010	mg/cu. m.	R	8.78E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	2.90E-001	mg/kg	5.51E-010	mg/cu. m.	R	1.08E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	2.78E-005	mg/cu. m.	R	5.44E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.90E-005
	Tetrachloroethene	8.99E-001	mg/kg	1.66E-003	mg/cu. m.	R	3.25E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.32E-003
	Thallium	0.00E+000	mg/kg	2.72E-011	mg/cu. m.	R	5.32E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.78E-001	mg/kg	7.45E-003	mg/cu. m.	R	1.46E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.28E-002
	Trichloroethene	1.44E-001	mg/kg	4.89E-004	mg/cu. m.	R	9.56E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.18E+001	mg/kg	7.78E-009	mg/cu. m.	R	1.52E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	1.07E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.53E+001	mg/kg	4.30E-003	mg/cu. m.	R	8.41E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	9.77E+001	mg/kg	2.51E-007	mg/cu. m.	R	4.92E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												5.30E-001

0

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-3
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_cRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	4.0E-009	mg/kg-day	5.7E-002	kg-day/mg	2.3E-010
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	3.7E-009	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	6.4E-008	mg/kg-day	4.5E-001	kg-day/mg	2.9E-008
	Aluminum	1.68E+004	mg/kg	NA	NA	M	5.1E-003	mg/kg-day		kg-day/mg	
	Anthracene	8.90E-002	mg/kg	NA	NA	M	2.7E-008	mg/kg-day		kg-day/mg	
	Antimony	9.41E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	2.0E+000	kg-day/mg	3.1E-007
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	2.0E+000	kg-day/mg	4.1E-007
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E+000	kg-day/mg	3.4E-006
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	2.0E+000	kg-day/mg	5.0E-007
	Arsenic	2.77E+000	mg/kg	NA	NA	M	8.5E-007	mg/kg-day	1.5E+000	kg-day/mg	1.3E-006
	Barium	1.88E+002	mg/kg	NA	NA	M	5.8E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	7.3E-001	kg-day/mg	1.3E-008
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	7.3E+000	kg-day/mg	1.8E-007
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	2.6E-008	mg/kg-day	7.3E-001	kg-day/mg	1.9E-008
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	7.3E-002	kg-day/mg	1.6E-009
	Beryllium	5.80E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	1.4E-002	kg-day/mg	4.2E-008
	Cadmium	1.66E+000	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		kg-day/mg	
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	6.1E-010	mg/kg-day		kg-day/mg	
	Nickel	7.72E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Selenium	4.59E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Silver	2.90E-001	mg/kg	NA	NA	M	8.9E-008	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	5.2E-002	kg-day/mg	1.4E-008
	Toluene	1.78E-001	mg/kg	NA	NA	M	5.5E-008	mg/kg-day		kg-day/mg	
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	4.4E-008	mg/kg-day	1.1E-002	kg-day/mg	4.8E-010
	Vanadium	1.18E+001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Zinc	9.77E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	(Total)										6.18E-006
Dermal	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	2.6E-007	mg/kg-day	7.0E-002	kg-day/mg	1.85E-008
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	4.3E-006	mg/kg-day	4.5E-001	kg-day/mg	1.92E-006
	Aluminum	1.68E+004	mg/kg	NA	NA	M	3.4E-001	mg/kg-day		kg-day/mg	
	Anthracene	8.90E-002	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Antimony	9.41E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	2.0E+000	kg-day/mg	2.04E-005

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-3
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_cRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E+000	kg-day/mg	2.72E-005
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.2E+000	kg-day/mg	2.51E-004
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	2.0E+000	kg-day/mg	3.29E-005
	Arsenic	2.77E+000	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	1.6E+000	kg-day/mg	8.87E-005
	Barium	1.88E+002	mg/kg	NA	NA	M	3.8E-003	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	7.3E-001	kg-day/mg	8.73E-007
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	8.6E+000	kg-day/mg	1.44E-005
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	7.3E-001	kg-day/mg	1.27E-006
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-002	kg-day/mg	1.07E-007
	Beryllium	5.80E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	1.4E-002	kg-day/mg	2.78E-006
	Cadmium	1.66E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	4.1E-008	mg/kg-day		kg-day/mg	
	Nickel	7.72E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Selenium	4.59E-001	mg/kg	NA	NA	M	9.3E-006	mg/kg-day		kg-day/mg	
	Silver	2.90E-001	mg/kg	NA	NA	M	5.9E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	5.2E-002	kg-day/mg	9.48E-007
	Toluene	1.78E-001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		kg-day/mg	
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	1.1E-002	kg-day/mg	3.27E-008
	Vanadium	1.18E+001	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		kg-day/mg	
	Zinc	9.77E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		kg-day/mg	
	(Total)										4.44E-004
										Total Hazard Index Across All Exposure Routes/Pathways	4.5E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-1-4
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: Area1RME.wk4 \ TT_Inh_cRWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.03E-004	mg/cu. m.	R	7.21E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.20E-004	mg/cu. m.	R	8.36E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	1.30E-002	mg/kg	4.04E-007	mg/cu. m.	R	2.82E-008	mg/kg-day	5.60E-002	mg/kg-day	1.58E-009
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.33E-007	mg/cu. m.	R	9.27E-009	mg/kg-day	2.00E-001	mg/kg-day	1.85E-009
	1,2-Dichlorobenzene	0.00E+000	mg/kg	1.86E-004	mg/cu. m.	R	1.30E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	4.13E-005	mg/cu. m.	R	2.88E-006	mg/kg-day	9.10E-002	mg/kg-day	2.62E-007
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	1.78E-004	mg/cu. m.	R	1.24E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	4.08E-005	mg/cu. m.	R	2.85E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	9.61E-006	mg/cu. m.	R	6.71E-007	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	3.55E-006	mg/cu. m.	R	2.48E-007	mg/kg-day	2.20E-002	mg/kg-day	5.46E-009
	2-Butanone	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	1.30E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	8.89E-004	mg/cu. m.	R	6.21E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.40E-001	mg/kg	4.12E-005	mg/cu. m.	R	2.88E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	0.00E+000	mg/kg	1.69E-005	mg/cu. m.	R	1.18E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	0.00E+000	mg/kg	6.18E-006	mg/cu. m.	R	4.31E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.16E-009	mg/cu. m.	R	1.51E-010	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	6.88E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	1.32E-010	mg/cu. m.	R	9.20E-012	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.05E-004	mg/cu. m.	R	7.37E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	0.00E+000	mg/kg	6.19E-005	mg/cu. m.	R	4.32E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	5.54E-011	mg/cu. m.	R	3.87E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	2.31E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	4.69E-011	mg/cu. m.	R	3.28E-012	mg/kg-day	3.40E-001	mg/kg-day	1.11E-012
	Acenaphthene	0.00E+000	mg/kg	3.51E-006	mg/cu. m.	R	2.45E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	1.09E-006	mg/cu. m.	R	7.63E-008	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	1.53E-004	mg/cu. m.	R	1.07E-005	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	1.59E-011	mg/kg-day	1.70E+001	mg/kg-day	2.70E-010
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	8.67E-013	mg/kg-day	6.30E+000	mg/kg-day	5.47E-012
	Anthracene	8.90E-002	mg/kg	1.93E-007	mg/cu. m.	R	1.35E-008	mg/kg-day		mg/kg-day	
	Antimony	9.41E-001	mg/kg	3.20E-009	mg/cu. m.	R	2.24E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.04E-001	mg/kg	3.07E-010	mg/cu. m.	R	2.14E-011	mg/kg-day	2.00E+000	mg/kg-day	4.28E-011
	Aroclor-1248	6.71E-001	mg/kg	2.23E-009	mg/cu. m.	R	1.56E-010	mg/kg-day	2.00E+000	mg/kg-day	3.12E-010
	Aroclor-1254	5.50E+000	mg/kg	2.90E-009	mg/cu. m.	R	2.03E-010	mg/kg-day	2.00E+000	mg/kg-day	4.06E-010
	Aroclor-1260	8.11E-001	mg/kg	1.33E-008	mg/cu. m.	R	9.30E-010	mg/kg-day	2.00E+000	mg/kg-day	1.86E-009
	Arsenic	2.77E+000	mg/kg	2.05E-009	mg/cu. m.	R	1.43E-010	mg/kg-day	1.51E+001	mg/kg-day	2.17E-009
	Barium	1.88E+002	mg/kg	1.40E-007	mg/cu. m.	R	9.80E-009	mg/kg-day		mg/kg-day	
	Benzene	0.00E+000	mg/kg	1.07E-004	mg/cu. m.	R	7.51E-006	mg/kg-day	2.90E-002	mg/kg-day	2.18E-007
	Benzoic Acid	0.00E+000	mg/kg	1.59E-004	mg/cu. m.	R	1.11E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	5.90E-002	mg/kg	1.49E-010	mg/cu. m.	R	1.04E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	8.25E-002	mg/kg	1.08E-010	mg/cu. m.	R	7.56E-012	mg/kg-day	3.10E+000	mg/kg-day	2.34E-011
	Benzo(b)fluoranthene	8.60E-002	mg/kg	2.55E-010	mg/cu. m.	R	1.78E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.64E-011	mg/cu. m.	R	3.94E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	2.47E-010	mg/cu. m.	R	1.72E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	6.97E-011	mg/kg-day		mg/kg-day	
	Beryllium	5.80E+000	mg/kg	1.97E-009	mg/cu. m.	R	1.38E-010	mg/kg-day	8.40E+000	mg/kg-day	1.16E-009
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	1.65E-012	mg/kg-day	1.80E+000	mg/kg-day	2.97E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	3.43E-005	mg/cu. m.	R	2.40E-006	mg/kg-day	1.10E+000	mg/kg-day	2.64E-006
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	2.09E-008	mg/cu. m.	R	1.46E-009	mg/kg-day	1.40E-002	mg/kg-day	2.05E-011
	Butylbenzylphthalate	0.00E+000	mg/kg	1.59E-008	mg/cu. m.	R	1.11E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.66E+000	mg/kg	5.74E-009	mg/cu. m.	R	4.01E-010	mg/kg-day	6.30E+000	mg/kg-day	2.53E-009
	Carbon Disulfide	2.00E-003	mg/kg	6.10E-008	mg/cu. m.	R	4.26E-009	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.85E-006	mg/cu. m.	R	4.09E-007	mg/kg-day		mg/kg-day	
	Chloroform	3.00E-003	mg/kg	1.44E-004	mg/cu. m.	R	1.01E-005	mg/kg-day	8.10E-002	mg/kg-day	8.15E-007

Table 5-1-4
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: Area1RME.wk4 \ TT_Inh_cRWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	3.25E+001	mg/kg	6.97E-008	mg/cu. m.	R	4.87E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	8.12E-010	mg/kg-day	4.10E+001	mg/kg-day	3.33E-008
	Chrysene	7.40E-002	mg/kg	1.95E-010	mg/cu. m.	R	1.36E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	1.62E-006	mg/cu. m.	R	1.13E-007	mg/kg-day		mg/kg-day	
	Cobalt	3.59E+000	mg/kg	3.03E-009	mg/cu. m.	R	2.12E-010	mg/kg-day		mg/kg-day	
	Copper	2.85E+001	mg/kg	7.20E-008	mg/cu. m.	R	5.03E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.00E+000	mg/kg	6.96E-010	mg/cu. m.	R	4.86E-011	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	9.59E-011	mg/cu. m.	R	6.70E-012	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	9.31E-010	mg/cu. m.	R	6.51E-011	mg/kg-day		mg/kg-day	
	Dimethylphthalate	0.00E+000	mg/kg	9.79E-009	mg/cu. m.	R	6.84E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	5.10E-002	mg/kg	2.93E-009	mg/cu. m.	R	2.05E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.10E-001	mg/kg	5.64E-010	mg/cu. m.	R	3.94E-011	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	6.90E-012	mg/cu. m.	R	4.82E-013	mg/kg-day		mg/kg-day	
	Ethyl Benzene	0.00E+000	mg/kg	6.68E-004	mg/cu. m.	R	4.67E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	9.80E-002	mg/kg	2.30E-010	mg/cu. m.	R	1.61E-011	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	1.83E-006	mg/cu. m.	R	1.28E-007	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	3.82E-013	mg/cu. m.	R	2.67E-014	mg/kg-day	4.50E+000	mg/kg-day	1.20E-013
	Heptachlor epoxide	0.00E+000	mg/kg	1.82E-013	mg/cu. m.	R	1.27E-014	mg/kg-day	9.10E+000	mg/kg-day	1.16E-013
	Hexachlorobenzene	2.90E-002	mg/kg	1.82E-011	mg/cu. m.	R	1.27E-012	mg/kg-day	1.60E+000	mg/kg-day	2.03E-012
	Hexachlorobutadiene	0.00E+000	mg/kg	5.14E-010	mg/cu. m.	R	3.59E-011	mg/kg-day	7.80E-002	mg/kg-day	2.80E-012
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	3.94E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	4.40E-002	mg/kg	8.02E-011	mg/cu. m.	R	5.61E-012	mg/kg-day		mg/kg-day	
	Isophorone	1.40E-001	mg/kg	1.87E-004	mg/cu. m.	R	1.31E-005	mg/kg-day		mg/kg-day	
	Lead	1.42E+002	mg/kg	5.11E-007	mg/cu. m.	R	3.57E-008	mg/kg-day		mg/kg-day	
	Manganese	2.52E+003	mg/kg	7.92E-007	mg/cu. m.	R	5.54E-008	mg/kg-day		mg/kg-day	
	Mercury	3.85E+000	mg/kg	2.75E-009	mg/cu. m.	R	1.92E-010	mg/kg-day		mg/kg-day	
	Methylene Chloride	0.00E+000	mg/kg	3.54E-004	mg/cu. m.	R	2.48E-005	mg/kg-day	1.65E-003	mg/kg-day	4.09E-008
	m,p-xylene	0.00E+000	mg/kg	9.38E-006	mg/cu. m.	R	6.56E-007	mg/kg-day		mg/kg-day	
	Naphthalene	0.00E+000	mg/kg	9.43E-005	mg/cu. m.	R	6.59E-006	mg/kg-day		mg/kg-day	
	Nickel	7.72E+000	mg/kg	5.97E-009	mg/cu. m.	R	4.17E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	6.15E-008	mg/cu. m.	R	4.30E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	4.51E-006	mg/cu. m.	R	3.15E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	1.74E-009	mg/cu. m.	R	1.22E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	7.18E-010	mg/cu. m.	R	5.02E-011	mg/kg-day		mg/kg-day	
	Phenol	0.00E+000	mg/kg	3.77E-005	mg/cu. m.	R	2.64E-006	mg/kg-day		mg/kg-day	
	Pyrene	1.20E-001	mg/kg	3.86E-010	mg/cu. m.	R	2.70E-011	mg/kg-day		mg/kg-day	
	Selenium	4.59E-001	mg/kg	4.49E-010	mg/cu. m.	R	3.14E-011	mg/kg-day		mg/kg-day	
	Silver	2.90E-001	mg/kg	5.51E-010	mg/cu. m.	R	3.85E-011	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	2.78E-005	mg/cu. m.	R	1.94E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.99E-001	mg/kg	1.66E-003	mg/cu. m.	R	1.16E-004	mg/kg-day	2.00E-003	mg/kg-day	2.32E-007
	Thallium	0.00E+000	mg/kg	2.72E-011	mg/cu. m.	R	1.90E-012	mg/kg-day		mg/kg-day	
	Toluene	1.78E-001	mg/kg	7.45E-003	mg/cu. m.	R	5.21E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	1.44E-001	mg/kg	4.89E-004	mg/cu. m.	R	3.42E-005	mg/kg-day	6.00E-003	mg/kg-day	2.05E-007
	Vanadium	1.18E+001	mg/kg	7.78E-009	mg/cu. m.	R	5.44E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	3.83E-007	mg/kg-day	3.00E-001	mg/kg-day	1.15E-007
	Xylenes (total)	1.53E+001	mg/kg	4.30E-003	mg/cu. m.	R	3.00E-004	mg/kg-day		mg/kg-day	
	Zinc	9.77E+001	mg/kg	2.51E-007	mg/cu. m.	R	1.76E-008	mg/kg-day		mg/kg-day	
	(Total)										4.58E-006

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-5
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT wk4 \ TT_ID_cRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	4.9E-009	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.22E-006
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	4.5E-009	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	5.00E-007
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.38E-006
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	7.9E-008	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	1.68E+004	mg/kg	NA	NA	M	6.3E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	6.31E-003
	Anthracene	8.90E-002	mg/kg	NA	NA	M	3.3E-008	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.11E-007
	Antimony	9.41E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	8.82E-004
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.03E-001
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	2.77E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	3.46E-003
	Barium	1.88E+002	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.01E-003
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	3.2E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	2.7E-008	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	5.80E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.09E-003
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.84E-004
	Cadmium	1.66E+000	mg/kg	NA	NA	M	6.2E-007	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	6.21E-004
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	7.5E-010	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.50E-009
	Nickel	7.72E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E-004
	Selenium	4.59E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.44E-005
	Silver	2.90E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.18E-005
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.37E-005
	Toluene	1.78E-001	mg/kg	NA	NA	M	6.7E-008	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.34E-007
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	5.4E-008	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	8.98E-006
	Vanadium	1.18E+001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	6.34E-004
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	5.7E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.87E-006
	Zinc	9.77E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.22E-004
	(Total)												1.76E-001
Dermal	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	3.44E-005
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.14E-005
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.46E-004
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	1.68E+004	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.44E-001
	Anthracene	8.90E-002	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.54E-006
	Antimony	9.41E-001	mg/kg	NA	NA	M	8.1E-006	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.02E+000
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-5
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_cRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	5.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	4.7E-005	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.65E+000
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	2.77E+000	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	8.33E-002
	Barium	1.88E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.30E-002
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	7.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	5.80E+000	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.49E+000
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.20E-003
	Cadmium	1.66E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	5.68E-001
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.71E-007
	Nickel	7.72E+000	mg/kg	NA	NA	M	6.6E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	6.61E-002
	Selenium	4.59E-001	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.87E-004
	Silver	2.90E-001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.37E-003
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	7.7E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.71E-004
	Toluene	1.78E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.64E-006
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	2.09E-004
	Vanadium	1.18E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.45E-002
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.32E-005
	Zinc	9.77E+001	mg/kg	NA	NA	M	8.4E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	9.30E-003
	(Total)												9.45E+000
												Total Hazard Index Across All Exposure Routes/Pathways	9.6E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-6
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_inh_cRWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.03E-004	mg/cu. m.	R	1.77E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.26E-004
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.20E-004	mg/cu. m.	R	2.05E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.17E-005
	1,1,2-Trichloroethane	1.30E-002	mg/kg	4.04E-007	mg/cu. m.	R	6.93E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.33E-007	mg/cu. m.	R	2.27E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	1.86E-004	mg/cu. m.	R	3.19E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	3.55E-003
	1,2-Dichloroethane	0.00E+000	mg/kg	4.13E-005	mg/cu. m.	R	7.07E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	5.05E-003
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	1.78E-004	mg/cu. m.	R	3.05E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	4.08E-005	mg/cu. m.	R	7.00E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	6.14E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	9.61E-006	mg/cu. m.	R	1.65E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.89E-005
	1,4-Dichlorobenzene	0.00E+000	mg/kg	3.55E-006	mg/cu. m.	R	6.09E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.66E-006
	2-Butanone	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	3.20E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.12E-008
	2-Hexanone	0.00E+000	mg/kg	8.89E-004	mg/cu. m.	R	1.52E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.09E-001
	2-Methylnaphthalene	3.40E-001	mg/kg	4.12E-005	mg/cu. m.	R	7.06E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	0.00E+000	mg/kg	1.69E-005	mg/cu. m.	R	2.90E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	0.00E+000	mg/kg	6.16E-006	mg/cu. m.	R	1.06E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.16E-009	mg/cu. m.	R	3.70E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	1.32E-010	mg/cu. m.	R	2.26E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.05E-004	mg/cu. m.	R	1.81E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	9.04E-004
	4-Methylphenol	0.00E+000	mg/kg	6.19E-005	mg/cu. m.	R	1.06E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	5.54E-011	mg/cu. m.	R	9.50E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	5.67E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	4.69E-011	mg/cu. m.	R	8.04E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	3.51E-006	mg/cu. m.	R	6.01E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	1.09E-006	mg/cu. m.	R	1.87E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	1.53E-004	mg/cu. m.	R	2.62E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	3.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	2.13E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	8.90E-002	mg/kg	1.93E-007	mg/cu. m.	R	3.30E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	9.41E-001	mg/kg	3.20E-009	mg/cu. m.	R	5.49E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.04E-001	mg/kg	3.07E-010	mg/cu. m.	R	5.25E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	6.71E-001	mg/kg	2.23E-009	mg/cu. m.	R	3.83E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	5.50E+000	mg/kg	2.90E-009	mg/cu. m.	R	4.98E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	8.11E-001	mg/kg	1.33E-008	mg/cu. m.	R	2.28E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	2.77E+000	mg/kg	2.05E-009	mg/cu. m.	R	3.52E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.88E+002	mg/kg	1.40E-007	mg/cu. m.	R	2.40E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.72E-004
	Benzene	0.00E+000	mg/kg	1.07E-004	mg/cu. m.	R	1.84E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.08E-002
	Benzoic Acid	0.00E+000	mg/kg	1.59E-004	mg/cu. m.	R	2.73E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	5.90E-002	mg/kg	1.49E-010	mg/cu. m.	R	2.55E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	8.25E-002	mg/kg	1.08E-010	mg/cu. m.	R	1.85E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	8.60E-002	mg/kg	2.55E-010	mg/cu. m.	R	4.37E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.64E-011	mg/cu. m.	R	9.67E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	2.47E-010	mg/cu. m.	R	4.23E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.71E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	5.80E+000	mg/kg	1.97E-009	mg/cu. m.	R	3.38E-010	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	5.93E-005
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	4.05E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	3.43E-005	mg/cu. m.	R	5.88E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	2.09E-008	mg/cu. m.	R	3.58E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	0.00E+000	mg/kg	1.59E-008	mg/cu. m.	R	2.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.66E+000	mg/kg	5.74E-009	mg/cu. m.	R	9.83E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	2.00E-003	mg/kg	6.10E-008	mg/cu. m.	R	1.05E-008	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	5.23E-008

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-6
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_inh_cRWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chlorobenzene	0.00E+000	mg/kg	5.85E-006	mg/cu. m.	R	1.00E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.01E-004
	Chloroform	3.00E-003	mg/kg	1.44E-004	mg/cu. m.	R	2.47E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.87E-001
	Chromium 3+	3.25E+001	mg/kg	6.97E-008	mg/cu. m.	R	1.19E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	1.99E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	7.40E-002	mg/kg	1.95E-010	mg/cu. m.	R	3.34E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	1.62E-006	mg/cu. m.	R	2.78E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.59E+000	mg/kg	3.03E-009	mg/cu. m.	R	5.20E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	2.85E+001	mg/kg	7.20E-008	mg/cu. m.	R	1.23E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	1.00E+000	mg/kg	6.96E-010	mg/cu. m.	R	1.19E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	9.59E-011	mg/cu. m.	R	1.64E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	9.31E-010	mg/cu. m.	R	1.60E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	0.00E+000	mg/kg	9.79E-009	mg/cu. m.	R	1.68E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	5.10E-002	mg/kg	2.93E-009	mg/cu. m.	R	5.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.10E-001	mg/kg	5.64E-010	mg/cu. m.	R	9.66E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	6.90E-012	mg/cu. m.	R	1.18E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	0.00E+000	mg/kg	6.68E-004	mg/cu. m.	R	1.14E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	3.95E-004
	Fluoranthene	9.80E-002	mg/kg	2.30E-010	mg/cu. m.	R	3.95E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	1.83E-006	mg/cu. m.	R	3.14E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	3.82E-013	mg/cu. m.	R	6.54E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	1.82E-013	mg/cu. m.	R	3.12E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	2.90E-002	mg/kg	1.82E-011	mg/cu. m.	R	3.12E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	5.14E-010	mg/cu. m.	R	8.81E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	9.67E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	4.40E-002	mg/kg	8.02E-011	mg/cu. m.	R	1.38E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.40E-001	mg/kg	1.87E-004	mg/cu. m.	R	3.21E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.42E+002	mg/kg	5.11E-007	mg/cu. m.	R	8.75E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	2.52E+003	mg/kg	7.92E-007	mg/cu. m.	R	1.36E-007	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	9.49E-003
	Mercury	3.85E+000	mg/kg	2.75E-009	mg/cu. m.	R	4.71E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.48E-006
	Methylene Chloride	0.00E+000	mg/kg	3.54E-004	mg/cu. m.	R	6.07E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	7.06E-005
	m,p-xylene	0.00E+000	mg/kg	9.38E-006	mg/cu. m.	R	1.61E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	0.00E+000	mg/kg	9.43E-005	mg/cu. m.	R	1.62E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.80E-002
	Nickel	7.72E+000	mg/kg	5.97E-009	mg/cu. m.	R	1.02E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	6.15E-008	mg/cu. m.	R	1.05E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	4.51E-006	mg/cu. m.	R	7.73E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	1.74E-009	mg/cu. m.	R	2.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	7.18E-010	mg/cu. m.	R	1.23E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	0.00E+000	mg/kg	3.77E-005	mg/cu. m.	R	6.47E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	1.20E-001	mg/kg	3.86E-010	mg/cu. m.	R	6.62E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.59E-001	mg/kg	4.49E-010	mg/cu. m.	R	7.69E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	2.90E-001	mg/kg	5.51E-010	mg/cu. m.	R	9.45E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	2.78E-005	mg/cu. m.	R	4.77E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.67E-005
	Tetrachloroethene	8.99E-001	mg/kg	1.66E-003	mg/cu. m.	R	2.84E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.03E-003
	Thallium	0.00E+000	mg/kg	2.72E-011	mg/cu. m.	R	4.66E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.78E-001	mg/kg	7.45E-003	mg/cu. m.	R	1.28E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.12E-002
	Trichloroethene	1.44E-001	mg/kg	4.89E-004	mg/cu. m.	R	8.38E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.18E+001	mg/kg	7.78E-009	mg/cu. m.	R	1.33E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	9.40E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.53E+001	mg/kg	4.30E-003	mg/cu. m.	R	7.37E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	9.77E+001	mg/kg	2.51E-007	mg/cu. m.	R	4.31E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												4.64E-001

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-7
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_cRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	3.5E-010	mg/kg-day	5.7E-002	kg-day/mg	2.0E-011
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	3.2E-010	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	9.1E-009	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	5.6E-009	mg/kg-day	4.5E-001	kg-day/mg	2.5E-009
	Aluminum	1.68E+004	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	Anthracene	8.90E-002	mg/kg	NA	NA	M	2.4E-009	mg/kg-day		kg-day/mg	
	Antimony	9.41E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	2.0E+000	kg-day/mg	2.7E-008
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	2.0E+000	kg-day/mg	3.6E-008
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	2.0E+000	kg-day/mg	2.9E-007
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	2.0E+000	kg-day/mg	4.3E-008
	Arsenic	2.77E+000	mg/kg	NA	NA	M	7.4E-008	mg/kg-day	1.5E+000	kg-day/mg	1.1E-007
	Barium	1.88E+002	mg/kg	NA	NA	M	5.0E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	1.6E-009	mg/kg-day	7.3E-001	kg-day/mg	1.2E-009
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	2.2E-009	mg/kg-day	7.3E+000	kg-day/mg	1.6E-008
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	2.3E-009	mg/kg-day	7.3E-001	kg-day/mg	1.7E-009
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	1.9E-009	mg/kg-day	7.3E-002	kg-day/mg	1.4E-010
	Beryllium	5.80E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day	1.4E-002	kg-day/mg	3.7E-009
	Cadmium	1.66E+000	mg/kg	NA	NA	M	4.4E-008	mg/kg-day		kg-day/mg	
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	5.4E-011	mg/kg-day		kg-day/mg	
	Nickel	7.72E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Selenium	4.59E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	Silver	2.90E-001	mg/kg	NA	NA	M	7.8E-009	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	2.4E-008	mg/kg-day	5.2E-002	kg-day/mg	1.3E-009
	Toluene	1.78E-001	mg/kg	NA	NA	M	4.8E-009	mg/kg-day		kg-day/mg	
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	3.8E-009	mg/kg-day	1.1E-002	kg-day/mg	4.2E-011
	Vanadium	1.18E+001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		kg-day/mg	
	Zinc	9.77E+001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	(Total)										5.41E-007
Dermal	1,1,2-Trichloroethane	1.30E-002	mg/kg	NA	NA	M	8.0E-009	mg/kg-day	7.0E-002	kg-day/mg	5.60E-010
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	7.3E-009	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.40E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	4.5E-001	kg-day/mg	5.79E-008
	Aluminum	1.68E+004	mg/kg	NA	NA	M	1.0E-002	mg/kg-day		kg-day/mg	
	Anthracene	8.90E-002	mg/kg	NA	NA	M	5.4E-008	mg/kg-day		kg-day/mg	
	Antimony	9.41E-001	mg/kg	NA	NA	M	5.8E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.04E-001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	2.0E+000	kg-day/mg	6.17E-007

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-7
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_cRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aroclor-1248	6.71E-001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	2.0E+000	kg-day/mg	8.22E-007
	Aroclor-1254	5.50E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	2.2E+000	kg-day/mg	7.57E-006
	Aroclor-1260	8.11E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	2.0E+000	kg-day/mg	9.93E-007
	Arsenic	2.77E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.6E+000	kg-day/mg	2.68E-006
	Barium	1.88E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	3.6E-008	mg/kg-day	7.3E-001	kg-day/mg	2.64E-008
	Benzo(a)pyrene	8.25E-002	mg/kg	NA	NA	M	5.1E-008	mg/kg-day	8.6E+000	kg-day/mg	4.34E-007
	Benzo(b)fluoranthene	8.60E-002	mg/kg	NA	NA	M	5.3E-008	mg/kg-day	7.3E-001	kg-day/mg	3.84E-008
	Benzo(k)fluoranthene	7.25E-002	mg/kg	NA	NA	M	4.4E-008	mg/kg-day	7.3E-002	kg-day/mg	3.24E-009
	Beryllium	5.80E+000	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day	1.4E-002	kg-day/mg	8.40E-008
	Cadmium	1.66E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	Nickel	7.72E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Selenium	4.59E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		kg-day/mg	
	Silver	2.90E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.99E-001	mg/kg	NA	NA	M	5.5E-007	mg/kg-day	5.2E-002	kg-day/mg	2.86E-008
	Toluene	1.78E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Trichloroethene	1.44E-001	mg/kg	NA	NA	M	8.8E-008	mg/kg-day	1.1E-002	kg-day/mg	9.87E-010
	Vanadium	1.18E+001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.53E+001	mg/kg	NA	NA	M	9.4E-006	mg/kg-day		kg-day/mg	
	Zinc	9.77E+001	mg/kg	NA	NA	M	6.0E-005	mg/kg-day		kg-day/mg	
	(Total)										1.34E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.4E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-8
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_cRWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.03E-004	mg/cu. m.	R	1.26E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.20E-004	mg/cu. m.	R	1.46E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	1.30E-002	mg/kg	4.04E-007	mg/cu. m.	R	4.95E-009	mg/kg-day	5.60E-002	mg/kg-day	2.77E-010
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.33E-007	mg/cu. m.	R	1.62E-009	mg/kg-day	2.00E-001	mg/kg-day	3.25E-010
	1,2-Dichlorobenzene	0.00E+000	mg/kg	1.86E-004	mg/cu. m.	R	2.28E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	4.13E-005	mg/cu. m.	R	5.05E-007	mg/kg-day	9.10E-002	mg/kg-day	4.60E-008
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	1.78E-004	mg/cu. m.	R	2.18E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	4.08E-005	mg/cu. m.	R	5.00E-007	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	9.61E-006	mg/cu. m.	R	1.18E-007	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	3.55E-006	mg/cu. m.	R	4.35E-008	mg/kg-day	2.20E-002	mg/kg-day	9.56E-010
	2-Butanone	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	2.28E-010	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	8.89E-004	mg/cu. m.	R	1.09E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.40E-001	mg/kg	4.12E-005	mg/cu. m.	R	5.04E-007	mg/kg-day		mg/kg-day	
	2-Methylphenol	0.00E+000	mg/kg	1.69E-005	mg/cu. m.	R	2.07E-007	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	0.00E+000	mg/kg	6.16E-006	mg/cu. m.	R	7.55E-008	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.16E-009	mg/cu. m.	R	2.64E-011	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.21E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	1.32E-010	mg/cu. m.	R	1.61E-012	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.05E-004	mg/cu. m.	R	1.29E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	0.00E+000	mg/kg	6.19E-005	mg/cu. m.	R	7.57E-007	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	5.54E-011	mg/cu. m.	R	6.78E-013	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	4.05E-013	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	4.69E-011	mg/cu. m.	R	5.74E-013	mg/kg-day	3.40E-001	mg/kg-day	1.95E-013
	Acenaphthene	0.00E+000	mg/kg	3.51E-006	mg/cu. m.	R	4.29E-008	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	1.09E-006	mg/cu. m.	R	1.34E-008	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	1.53E-004	mg/cu. m.	R	1.87E-006	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	2.78E-012	mg/kg-day	1.70E+001	mg/kg-day	4.72E-011
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	1.52E-013	mg/kg-day	6.30E+000	mg/kg-day	9.58E-013
	Anthracene	8.90E-002	mg/kg	1.93E-007	mg/cu. m.	R	2.36E-009	mg/kg-day		mg/kg-day	
	Antimony	9.41E-001	mg/kg	3.20E-009	mg/cu. m.	R	3.92E-011	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.04E-001	mg/kg	3.07E-010	mg/cu. m.	R	3.75E-012	mg/kg-day	2.00E+000	mg/kg-day	7.51E-012
	Aroclor-1248	6.71E-001	mg/kg	2.23E-009	mg/cu. m.	R	2.73E-011	mg/kg-day	2.00E+000	mg/kg-day	5.47E-011
	Aroclor-1254	5.50E+000	mg/kg	2.90E-009	mg/cu. m.	R	3.56E-011	mg/kg-day	2.00E+000	mg/kg-day	7.11E-011
	Aroclor-1260	8.11E-001	mg/kg	1.33E-008	mg/cu. m.	R	1.63E-010	mg/kg-day	2.00E+000	mg/kg-day	3.26E-010
	Arsenic	2.77E+000	mg/kg	2.05E-009	mg/cu. m.	R	2.51E-011	mg/kg-day	1.51E+001	mg/kg-day	3.79E-010
	Barium	1.88E+002	mg/kg	1.40E-007	mg/cu. m.	R	1.72E-009	mg/kg-day		mg/kg-day	
	Benzene	0.00E+000	mg/kg	1.07E-004	mg/cu. m.	R	1.32E-006	mg/kg-day	2.90E-002	mg/kg-day	3.82E-008
	Benzoic Acid	0.00E+000	mg/kg	1.59E-004	mg/cu. m.	R	1.95E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	5.90E-002	mg/kg	1.49E-010	mg/cu. m.	R	1.82E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	8.25E-002	mg/kg	1.08E-010	mg/cu. m.	R	1.32E-012	mg/kg-day	3.10E+000	mg/kg-day	4.10E-012
	Benzo(b)fluoranthene	8.60E-002	mg/kg	2.55E-010	mg/cu. m.	R	3.12E-012	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.64E-011	mg/cu. m.	R	6.91E-013	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	7.25E-002	mg/kg	2.47E-010	mg/cu. m.	R	3.02E-012	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.22E-011	mg/kg-day		mg/kg-day	
	Beryllium	5.80E+000	mg/kg	1.97E-009	mg/cu. m.	R	2.42E-011	mg/kg-day	8.40E+000	mg/kg-day	2.03E-010
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	2.89E-013	mg/kg-day	1.80E+000	mg/kg-day	5.21E-013
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	3.43E-005	mg/cu. m.	R	4.20E-007	mg/kg-day	1.10E+000	mg/kg-day	4.62E-007
	bis(2-Ethylhexyl)phthalate	9.80E+000	mg/kg	2.09E-008	mg/cu. m.	R	2.56E-010	mg/kg-day	1.40E-002	mg/kg-day	3.58E-012
	Butylbenzylphthalate	0.00E+000	mg/kg	1.59E-008	mg/cu. m.	R	1.94E-010	mg/kg-day		mg/kg-day	
	Cadmium	1.66E+000	mg/kg	5.74E-009	mg/cu. m.	R	7.02E-011	mg/kg-day	6.30E+000	mg/kg-day	4.42E-010
	Carbon Disulfide	2.00E-003	mg/kg	6.10E-008	mg/cu. m.	R	7.47E-010	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Surface Soil (0' to 2')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-8
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_cRWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chlorobenzene	0.00E+000	mg/kg	5.85E-006	mg/cu. m.	R	7.16E-008	mg/kg-day		mg/kg-day	
	Chloroform	3.00E-003	mg/kg	1.44E-004	mg/cu. m.	R	1.76E-006	mg/kg-day	8.10E-002	mg/kg-day	1.43E-007
	Chromium 3+	3.25E+001	mg/kg	6.97E-008	mg/cu. m.	R	8.53E-010	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	1.42E-010	mg/kg-day	4.10E+001	mg/kg-day	5.83E-009
	Chrysene	7.40E-002	mg/kg	1.95E-010	mg/cu. m.	R	2.39E-012	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	1.62E-006	mg/cu. m.	R	1.99E-008	mg/kg-day		mg/kg-day	
	Cobalt	3.59E+000	mg/kg	3.03E-009	mg/cu. m.	R	3.71E-011	mg/kg-day		mg/kg-day	
	Copper	2.85E+001	mg/kg	7.20E-008	mg/cu. m.	R	8.82E-010	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.00E+000	mg/kg	6.96E-010	mg/cu. m.	R	8.52E-012	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	9.59E-011	mg/cu. m.	R	1.17E-012	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	9.31E-010	mg/cu. m.	R	1.14E-011	mg/kg-day		mg/kg-day	
	Dimethylphthalate	0.00E+000	mg/kg	9.79E-009	mg/cu. m.	R	1.20E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	5.10E-002	mg/kg	2.93E-009	mg/cu. m.	R	3.59E-011	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.10E-001	mg/kg	5.64E-010	mg/cu. m.	R	6.90E-012	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	6.90E-012	mg/cu. m.	R	8.44E-014	mg/kg-day		mg/kg-day	
	Ethyl Benzene	0.00E+000	mg/kg	6.68E-004	mg/cu. m.	R	8.18E-006	mg/kg-day		mg/kg-day	
	Fluoranthene	9.80E-002	mg/kg	2.30E-010	mg/cu. m.	R	2.82E-012	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	1.83E-006	mg/cu. m.	R	2.24E-008	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	3.82E-013	mg/cu. m.	R	4.67E-015	mg/kg-day	4.50E+000	mg/kg-day	2.10E-014
	Heptachlor epoxide	0.00E+000	mg/kg	1.82E-013	mg/cu. m.	R	2.23E-015	mg/kg-day	9.10E+000	mg/kg-day	2.03E-014
	Hexachlorobenzene	2.90E-002	mg/kg	1.82E-011	mg/cu. m.	R	2.23E-013	mg/kg-day	1.60E+000	mg/kg-day	3.56E-013
	Hexachlorobutadiene	0.00E+000	mg/kg	5.14E-010	mg/cu. m.	R	6.29E-012	mg/kg-day	7.80E-002	mg/kg-day	4.91E-013
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	6.91E-014	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	4.40E-002	mg/kg	8.02E-011	mg/cu. m.	R	9.83E-013	mg/kg-day		mg/kg-day	
	Isophorone	1.40E-001	mg/kg	1.87E-004	mg/cu. m.	R	2.29E-006	mg/kg-day		mg/kg-day	
	Lead	1.42E+002	mg/kg	5.11E-007	mg/cu. m.	R	6.25E-009	mg/kg-day		mg/kg-day	
	Manganese	2.52E+003	mg/kg	7.92E-007	mg/cu. m.	R	9.70E-009	mg/kg-day		mg/kg-day	
	Mercury	3.85E+000	mg/kg	2.75E-009	mg/cu. m.	R	3.37E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	0.00E+000	mg/kg	3.54E-004	mg/cu. m.	R	4.34E-006	mg/kg-day	1.65E-003	mg/kg-day	7.16E-009
	m,p-xylene	0.00E+000	mg/kg	9.38E-006	mg/cu. m.	R	1.15E-007	mg/kg-day		mg/kg-day	
	Naphthalene	0.00E+000	mg/kg	9.43E-005	mg/cu. m.	R	1.15E-006	mg/kg-day		mg/kg-day	
	Nickel	7.72E+000	mg/kg	5.97E-009	mg/cu. m.	R	7.30E-011	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	6.15E-008	mg/cu. m.	R	7.53E-010	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	4.51E-006	mg/cu. m.	R	5.52E-008	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	1.74E-009	mg/cu. m.	R	2.14E-011	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	7.18E-010	mg/cu. m.	R	8.79E-012	mg/kg-day		mg/kg-day	
	Phenol	0.00E+000	mg/kg	3.77E-005	mg/cu. m.	R	4.62E-007	mg/kg-day		mg/kg-day	
	Pyrene	1.20E-001	mg/kg	3.86E-010	mg/cu. m.	R	4.73E-012	mg/kg-day		mg/kg-day	
	Selenium	4.59E-001	mg/kg	4.49E-010	mg/cu. m.	R	5.50E-012	mg/kg-day		mg/kg-day	
	Silver	2.90E-001	mg/kg	5.51E-010	mg/cu. m.	R	6.75E-012	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	2.78E-005	mg/cu. m.	R	3.40E-007	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.99E-001	mg/kg	1.66E-003	mg/cu. m.	R	2.03E-005	mg/kg-day	2.00E-003	mg/kg-day	4.06E-008
	Thallium	0.00E+000	mg/kg	2.72E-011	mg/cu. m.	R	3.33E-013	mg/kg-day		mg/kg-day	
	Toluene	1.78E-001	mg/kg	7.45E-003	mg/cu. m.	R	9.13E-005	mg/kg-day		mg/kg-day	
	Trichloroethene	1.44E-001	mg/kg	4.89E-004	mg/cu. m.	R	5.98E-006	mg/kg-day	6.00E-003	mg/kg-day	3.59E-008
	Vanadium	1.18E+001	mg/kg	7.78E-009	mg/cu. m.	R	9.53E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	6.71E-008	mg/kg-day	3.00E-001	mg/kg-day	2.01E-008
	Xylenes (total)	1.53E+001	mg/kg	4.30E-003	mg/cu. m.	R	5.26E-005	mg/kg-day		mg/kg-day	
	Zinc	9.77E+001	mg/kg	2.51E-007	mg/cu. m.	R	3.08E-009	mg/kg-day		mg/kg-day	
	(Total)										8.02E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-9
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fCWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.0E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.16E+000
	1,2-Dichlorobenzene	4.00E+000	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.18E-004
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	6.55E-006
	2-Methylnaphthalene	3.00E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.36E-002
	2-Methylphenol	9.20E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	9.03E-004
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.95E-003
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	7.4E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	9.21E-002
	4-Methylphenol	1.70E+001	mg/kg	NA	NA	M	8.3E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.67E-002
	4,4'-DDD	3.60E+000	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	1.55E-002	mg/kg	NA	NA	M	7.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	9.00E-004
	Aluminum	1.30E+004	mg/kg	NA	NA	M	6.4E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	6.37E-002
	Anthracene	4.70E-001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	7.69E-006
	Antimony	1.56E+001	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.91E-001
	Aroclor-1242	4.00E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.00E+001	mg/kg	NA	NA	M	3.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.45E+001
	Aroclor-1260	1.70E+000	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	2.79E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	4.57E-002
	Barium	3.88E+002	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.72E-002
	Benzene	7.10E+003	mg/kg	NA	NA	M	3.5E-002	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.16E+001
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.83E-001	mg/kg	NA	NA	M	9.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	1.82E-001	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	5.13E+000	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.26E-002
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.38E-001
	Butylbenzylphthalate	9.60E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.36E-002
	Cadmium	1.28E+001	mg/kg	NA	NA	M	6.3E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	6.26E-002
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	9.8E-009	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.82E-008
	Carbon Tetrachloride	3.60E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day		mg/kg-day	NA	NA	
	Chlorobenzene	1.80E+001	mg/kg	NA	NA	M	8.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.42E-003
	Chloroform	1.00E+003	mg/kg	NA	NA	M	4.9E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.91E-001
	Chromium 3+	1.81E+002	mg/kg	NA	NA	M	8.9E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	5.93E-004
	Chrysene	7.40E-002	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	5.9E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.89E-001
	Cobalt	9.25E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.57E-004
	Copper	8.96E+001	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.10E-002
	Cyanide (total)	8.69E+000	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.13E-003
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.16E-003
	Dieldrin	2.40E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	2.36E-002
	Diethylphthalate	4.40E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	2.70E-004
	Dimethylphthalate	9.58E+001	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	4.70E-005
	Di-n-butylphthalate	3.30E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.62E-002
	Di-n-octylphthalate	2.40E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.89E-003

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-9
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME wk4 \ TT_ID_fCWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Endrin	1.60E+000	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.62E-002
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.29E-001
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.66E-004
	Fluorene	1.40E+001	mg/kg	NA	NA	M	6.9E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.72E-003
	gamma-Chlordane	1.20E+000	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.18E-002
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	3.62E-003
	Hexachlorobutadiene	1.11E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.72E-001
	Indeno(1,2,3-cd)pyrene	1.82E-001	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.39E+003	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.21E-001
	Isophorone	6.58E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.61E-002
	Lead	1.19E+003	mg/kg	NA	NA	M	5.8E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	2.32E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.70E-001
	Mercury	2.70E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	7.50E+002	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.14E-002
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.35E-002
	Naphthalene	1.96E+001	mg/kg	NA	NA	M	9.6E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.81E-003
	Nickel	1.02E+001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.50E-003
	ortho-xylene	6.10E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.50E-004
	Pentachlorophenol	2.61E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.27E-003
	Phenol	5.90E+000	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	4.83E-005
	Pyrene	2.83E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.63E-004
	Selenium	6.30E-001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	6.19E-004
	Silver	1.28E+000	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.26E-003
	Styrene	5.90E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.45E-001
	Tetrachloroethene	2.00E+005	mg/kg	NA	NA	M	9.8E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.82E+001
	Toluene	1.10E+003	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.70E-002
	Trichloroethene	1.78E+001	mg/kg	NA	NA	M	8.7E-005	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.46E-002
	Vanadium	1.17E+001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.23E-003
	Xylenes (total)	2.28E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	5.60E-003
	Zinc	4.41E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	7.21E-003
	(Total)												1.44E+002
Dermal	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.2E+000	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.23E+001
	1,2-Dichlorobenzene	4.00E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.64E-003
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	7.1E-007	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	7.91E-005
	2-Methylnaphthalene	3.00E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.90E-001
	2-Methylphenol	9.20E+000	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.09E-002
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	7.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.56E-002
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	8.9E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.11E+000
	4-Methylphenol	1.70E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.10E-001
	4,4'-DDD	3.60E+000	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	1.55E-002	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	6.5E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.09E-002
	Aluminum	1.30E+004	mg/kg	NA	NA	M	7.7E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.70E-001
	Anthracene	4.70E-001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.29E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-9
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fCWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Antimony	1.56E+001	mg/kg	NA	NA	M	9.2E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.31E+002
	Aroclor-1242	4.00E+002	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.00E+001	mg/kg	NA	NA	M	4.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	5.9E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	3.33E+002
	Aroclor-1260	1.70E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	2.79E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	5.82E-001
	Barium	3.88E+002	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.28E-001
	Benzene	7.10E+003	mg/kg	NA	NA	M	4.2E-001	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	1.56E+002
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.83E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	1.82E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	5.13E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.52E+001
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.71E+000
	Butylbenzylphthalate	9.60E+002	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.85E-001
	Cadmium	1.28E+001	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.03E+001
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.19E-006
	Carbon Tetrachloride	3.60E+003	mg/kg	NA	NA	M	2.1E-001	mg/kg-day		mg/kg-day	NA	NA	
	Chlorobenzene	1.80E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	1.72E-001
	Chloroform	1.00E+003	mg/kg	NA	NA	M	5.9E-002	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	6.21E+000
	Chromium 3+	1.81E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.79E+000
	Chrysene	7.40E-002	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.12E+000
	Cobalt	9.25E+000	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	9.15E-003
	Copper	8.96E+001	mg/kg	NA	NA	M	5.3E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	2.22E-001
	Cyanide (total)	8.69E+000	mg/kg	NA	NA	M	5.2E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.16E-002
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	6.23E-002
	Dieldrin	2.40E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	2.85E-001
	Diethylphthalate	4.40E+001	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.26E-003
	Dimethylphthalate	9.58E+001	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	5.68E-004
	Di-n-butylphthalate	3.30E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.02E-001
	Di-n-octylphthalate	2.40E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.12E-002
	Endrin	1.60E+000	mg/kg	NA	NA	M	9.5E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	3.16E-001
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	4.0E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.32E+000
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.64E-003
	Fluorene	1.40E+001	mg/kg	NA	NA	M	8.3E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.08E-002
	gamma-Chlordane	1.20E+000	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.42E-001
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	5.47E-002
	Hexachlorobutadiene	1.11E+001	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	3.29E+000
	Indeno(1,2,3-cd)pyrene	1.82E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.39E+003	mg/kg	NA	NA	M	4.4E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.46E+000
	Isophorone	6.58E+002	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.95E-001
	Lead	1.19E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	2.32E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.89E+000
	Mercury	2.70E+001	mg/kg	NA	NA	M	1.6E-003	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	7.50E+002	mg/kg	NA	NA	M	4.4E-002	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.35E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-9
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fCWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	3.3E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.81E-001
	Naphthalene	1.96E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.81E-002
	Nickel	1.02E+001	mg/kg	NA	NA	M	6.0E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	6.04E-001
	ortho-xylene	6.10E+001	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.01E-003
	Pentachlorophenol	2.61E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.16E-002
	Phenol	5.90E+000	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.83E-004
	Pyrene	2.83E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.60E-003
	Selenium	6.30E-001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.48E-003
	Silver	1.28E+000	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	7.22E-002
	Styrene	5.90E+003	mg/kg	NA	NA	M	3.5E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.75E+000
	Tetrachloroethene	2.00E+005	mg/kg	NA	NA	M	1.2E+001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.19E+003
	Toluene	1.10E+003	mg/kg	NA	NA	M	6.5E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.26E-001
	Trichloroethene	1.78E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.80E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	7.0E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	9.95E-002
	Xylenes (total)	2.28E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.56E-002
	Zinc	4.41E+002	mg/kg	NA	NA	M	2.6E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.90E-001
	(Total)												2.06E+003
												Total Hazard Index Across All Exposure Routes/Pathways	2.2E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-10
Calculation of Non Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_fCWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	4.69E-003	mg/cu. m.	R	1.44E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.03E-002
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.35E-001	mg/cu. m.	R	1.03E-001	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.59E-001
	1,1,2-Trichloroethane	0.00E+000	mg/kg	6.08E-004	mg/cu. m.	R	1.86E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.33E-004	mg/cu. m.	R	4.07E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	4.00E+000	mg/kg	4.84E-004	mg/cu. m.	R	1.48E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	1.65E-002
	1,2-Dichloroethane	0.00E+000	mg/kg	5.29E-003	mg/cu. m.	R	1.62E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.16E+000
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	4.18E-002	mg/cu. m.	R	1.28E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	3.04E-003	mg/cu. m.	R	9.34E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	8.19E-001
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	4.69E-005	mg/cu. m.	R	1.44E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.53E-004
	1,3-Dichlorobenzene	0.00E+000	mg/kg	4.28E-008	mg/cu. m.	R	1.31E-008	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	6.57E-006
	1,4-Dichlorobenzene	0.00E+000	mg/kg	1.89E-004	mg/cu. m.	R	5.78E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.53E-004
	2-Butanone	0.00E+000	mg/kg	1.77E-005	mg/cu. m.	R	5.44E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.90E-005
	2-Methylnaphthalene	3.00E+002	mg/kg	2.80E-004	mg/cu. m.	R	8.60E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	9.20E+000	mg/kg	4.57E-005	mg/cu. m.	R	1.40E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.44E-005	mg/cu. m.	R	4.40E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	3.19E-005	mg/cu. m.	R	9.80E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	1.17E-008	mg/cu. m.	R	3.58E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.15E-002	mg/cu. m.	R	3.52E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.76E-001
	4-Methylphenol	1.70E+001	mg/kg	1.35E-004	mg/cu. m.	R	4.14E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.60E+000	mg/kg	1.60E-007	mg/cu. m.	R	4.92E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	2.14E-007	mg/cu. m.	R	6.56E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	2.41E-005	mg/cu. m.	R	7.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.32E-006	mg/cu. m.	R	2.86E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	1.94E-002	mg/cu. m.	R	5.96E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	4.70E-001	mg/kg	7.40E-007	mg/cu. m.	R	2.27E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.56E+001	mg/kg	7.26E-007	mg/cu. m.	R	2.23E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	4.00E+002	mg/kg	1.37E-006	mg/cu. m.	R	4.20E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.00E+001	mg/kg	9.41E-007	mg/cu. m.	R	2.89E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.58E-006	mg/cu. m.	R	4.86E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	1.70E+000	mg/kg	9.83E-007	mg/cu. m.	R	3.02E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	2.79E+000	mg/kg	2.22E-007	mg/cu. m.	R	6.81E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	3.88E+002	mg/kg	1.20E-005	mg/cu. m.	R	3.69E-006	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.63E-002
	Benzene	7.10E+003	mg/kg	5.88E-002	mg/cu. m.	R	1.81E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.06E+001
	Benzoic Acid	0.00E+000	mg/kg	1.98E-004	mg/cu. m.	R	6.07E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	5.90E-002	mg/kg	6.56E-010	mg/cu. m.	R	2.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	9.17E-010	mg/cu. m.	R	2.81E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	1.83E-001	mg/kg	9.56E-010	mg/cu. m.	R	2.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	1.82E-001	mg/kg	8.06E-010	mg/cu. m.	R	2.47E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	5.13E+000	mg/kg	4.38E-008	mg/cu. m.	R	1.35E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	2.36E-003
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	1.70E-004	mg/cu. m.	R	5.22E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.48E-005	mg/cu. m.	R	4.53E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	9.60E+002	mg/kg	5.58E-006	mg/cu. m.	R	1.71E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.28E+001	mg/kg	6.69E-007	mg/cu. m.	R	2.05E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-10
Calculation of Non Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4) TT_Inh_ICWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Carbon Disulfide	2.00E-003	mg/kg	1.18E-006	mg/cu. m.	R	3.62E-007	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.81E-006
	Chlorobenzene	1.80E+001	mg/kg	7.51E-004	mg/cu. m.	R	2.30E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.61E-002
	Chloroform	1.00E+003	mg/kg	5.48E-002	mg/cu. m.	R	1.68E-002	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.95E+002
	Chromium 3+	1.81E+002	mg/kg	7.56E-006	mg/cu. m.	R	2.32E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.26E-006	mg/cu. m.	R	3.87E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	7.40E-002	mg/kg	8.22E-010	mg/cu. m.	R	2.52E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.09E-001	mg/cu. m.	R	6.41E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	9.25E+000	mg/kg	5.11E-007	mg/cu. m.	R	1.57E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	8.96E+001	mg/kg	3.19E-006	mg/cu. m.	R	9.78E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	8.69E+000	mg/kg	4.32E-007	mg/cu. m.	R	1.33E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	1.90E-007	mg/cu. m.	R	5.84E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	2.40E-001	mg/kg	1.10E-008	mg/cu. m.	R	3.36E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	4.40E+001	mg/kg	6.98E-007	mg/cu. m.	R	2.14E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	9.58E+001	mg/kg	2.42E-006	mg/cu. m.	R	7.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.30E+002	mg/kg	3.80E-006	mg/cu. m.	R	1.17E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	2.40E+001	mg/kg	4.47E-007	mg/cu. m.	R	1.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	5.35E-008	mg/cu. m.	R	1.64E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	1.60E+000	mg/kg	7.14E-008	mg/cu. m.	R	2.19E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	6.11E-010	mg/cu. m.	R	1.88E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	5.07E-002	mg/cu. m.	R	1.56E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	5.37E-002
	Fluoranthene	3.80E+000	mg/kg	1.70E-007	mg/cu. m.	R	5.22E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.40E+001	mg/kg	1.04E-005	mg/cu. m.	R	3.19E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	1.20E+000	mg/kg	5.43E-008	mg/cu. m.	R	1.67E-008	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	8.34E-005
	Hexachlorobenzene	5.90E-001	mg/kg	3.22E-010	mg/cu. m.	R	9.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	1.11E+001	mg/kg	2.71E-007	mg/cu. m.	R	8.33E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.82E-001	mg/kg	4.89E-010	mg/cu. m.	R	1.50E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	6.58E+002	mg/kg	1.56E-003	mg/cu. m.	R	4.79E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.19E+003	mg/kg	3.87E-005	mg/cu. m.	R	1.19E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	2.32E+003	mg/kg	3.00E-005	mg/cu. m.	R	9.19E-006	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	6.43E-001
	Mercury	2.70E+001	mg/kg	1.45E-007	mg/cu. m.	R	4.45E-008	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.18E-004
	Methylene Chloride	7.50E+002	mg/kg	7.55E-002	mg/cu. m.	R	2.32E-002	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.69E-002
	m,p-xylene	5.50E+003	mg/kg	5.68E-002	mg/cu. m.	R	1.74E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	1.96E+001	mg/kg	9.58E-004	mg/cu. m.	R	2.94E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.27E-001
	Nickel	1.02E+001	mg/kg	4.68E-007	mg/cu. m.	R	1.44E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.10E+001	mg/kg	2.48E-002	mg/cu. m.	R	7.60E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	2.61E+001	mg/kg	8.77E-007	mg/cu. m.	R	2.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	4.03E-007	mg/cu. m.	R	1.24E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	5.90E+000	mg/kg	1.31E-004	mg/cu. m.	R	4.02E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.58E-007	mg/cu. m.	R	7.91E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	2.83E+000	mg/kg	2.64E-007	mg/cu. m.	R	8.09E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	6.30E-001	mg/kg	3.15E-008	mg/cu. m.	R	9.68E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.28E+000	mg/kg	1.61E-008	mg/cu. m.	R	4.94E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.90E+003	mg/kg	3.10E-003	mg/cu. m.	R	9.51E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.33E-003

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-10
Calculation of Non Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_ICWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Tetrachloroethene	2.00E+005	mg/kg	6.58E-002	mg/cu. m.	R	2.02E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.44E-001
	Toluene	1.10E+003	mg/kg	1.22E-001	mg/cu. m.	R	3.75E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.29E-001
	Trichloroethene	1.78E+001	mg/kg	5.01E-002	mg/cu. m.	R	1.54E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	6.20E-007	mg/cu. m.	R	1.90E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.28E+003	mg/kg	5.53E-002	mg/cu. m.	R	1.70E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	4.41E+002	mg/kg	1.70E-005	mg/cu. m.	R	5.23E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												2.10E+002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-11
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wb4 \ TT_IO_ICWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	4.00E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	6.3E-010	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.00E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	9.20E+000	mg/kg	NA	NA	M	4.8E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	6.3E-007	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	4.5E-001	kg-day/mg	5.0E-009
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	7.9E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.70E+001	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.60E+000	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	2.4E-001	kg-day/mg	4.5E-008
	4,4'-DDE	1.55E-002	mg/kg	NA	NA	M	8.2E-010	mg/kg-day	3.4E-001	kg-day/mg	2.8E-010
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	5.8E-007	mg/kg-day		kg-day/mg	
	Aluminum	1.30E+004	mg/kg	NA	NA	M	6.8E-004	mg/kg-day		kg-day/mg	
	Anthracene	4.70E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	Antimony	1.56E+001	mg/kg	NA	NA	M	8.2E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	4.00E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	2.0E+000	kg-day/mg	4.2E-005
	Aroclor-1248	7.00E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	2.0E+000	kg-day/mg	7.4E-006
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	2.0E+000	kg-day/mg	1.1E-005
	Aroclor-1260	1.70E+000	mg/kg	NA	NA	M	8.9E-008	mg/kg-day	2.0E+000	kg-day/mg	1.8E-007
	Arsenic	2.79E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	1.5E+000	kg-day/mg	2.2E-007
	Barium	3.88E+002	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Benzene	7.10E+003	mg/kg	NA	NA	M	3.7E-004	mg/kg-day	2.9E-002	kg-day/mg	1.1E-005
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	3.1E-009	mg/kg-day	7.3E-001	kg-day/mg	2.3E-009
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	9.7E-009	mg/kg-day	7.3E+000	kg-day/mg	7.1E-008
	Benzo(b)fluoranthene	1.83E-001	mg/kg	NA	NA	M	9.6E-009	mg/kg-day	7.3E-001	kg-day/mg	7.0E-009
	Benzo(k)fluoranthene	1.82E-001	mg/kg	NA	NA	M	9.6E-009	mg/kg-day	7.3E-002	kg-day/mg	7.0E-010
	Beryllium	5.13E+000	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.4E-002	kg-day/mg	1.9E-006
	Butylbenzylphthalate	9.60E+002	mg/kg	NA	NA	M	5.0E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.28E+001	mg/kg	NA	NA	M	6.7E-007	mg/kg-day		kg-day/mg	
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.1E-010	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	3.60E+003	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.80E+001	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	Chloroform	1.00E+003	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	6.1E-003	kg-day/mg	3.2E-007
	Chromium 3+	1.81E+002	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	Chrysene	7.40E-002	mg/kg	NA	NA	M	3.9E-009	mg/kg-day	7.3E-003	kg-day/mg	2.8E-011
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	Cobalt	9.25E+000	mg/kg	NA	NA	M	4.9E-007	mg/kg-day		kg-day/mg	
	Copper	8.96E+001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	8.69E+000	mg/kg	NA	NA	M	4.6E-007	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Dieldrin	2.40E-001	mg/kg	NA	NA	M	1.3E-008	mg/kg-day	1.6E+001	kg-day/mg	2.0E-007
	Diethylphthalate	4.40E+001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	9.58E+001	mg/kg	NA	NA	M	5.0E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.30E+002	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	2.40E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Endrin	1.60E+000	mg/kg	NA	NA	M	8.4E-008	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Fluorene	1.40E+001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		kg-day/mg	
	gamma-Chlordane	1.20E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day	3.5E-001	kg-day/mg	2.2E-008
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day	1.6E+000	kg-day/mg	5.0E-008
	Hexachlorobutadiene	1.11E+001	mg/kg	NA	NA	M	5.8E-007	mg/kg-day	7.8E-002	kg-day/mg	4.6E-008
	Indeno(1,2,3-cd)pyrene	1.82E-001	mg/kg	NA	NA	M	9.6E-009	mg/kg-day	7.3E-001	kg-day/mg	7.0E-009
	Iron	7.39E+003	mg/kg	NA	NA	M	3.9E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-11
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wb4 \ TT_3D_ICWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Isophorone	6.58E+002	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	9.5E-004	kg-day/mg	3.3E-008
	Lead	1.19E+003	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	Manganese	2.32E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Mercury	2.70E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.50E+002	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	7.5E-003	kg-day/mg	3.0E-007
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	2.9E-004	mg/kg-day		kg-day/mg	
	Naphthalene	1.96E+001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Nickel	1.02E+001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	6.10E+001	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	2.61E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	1.2E-001	kg-day/mg	1.6E-007
	Phenol	5.90E+000	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	Pyrene	2.83E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Selenium	6.30E-001	mg/kg	NA	NA	M	3.3E-008	mg/kg-day		kg-day/mg	
	Silver	1.26E+000	mg/kg	NA	NA	M	6.7E-008	mg/kg-day		kg-day/mg	
	Styrene	5.90E+003	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	2.00E+005	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	5.2E-002	kg-day/mg	5.5E-004
	Toluene	1.10E+003	mg/kg	NA	NA	M	5.8E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	1.78E+001	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	1.1E-002	kg-day/mg	1.0E-008
	Vanadium	1.17E+001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.28E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Zinc	4.41E+002	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	(Total)										6.21E-004
Dermal	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.3E-002	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	4.00E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	NA	NA	M	7.6E-009	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.00E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	9.20E+000	mg/kg	NA	NA	M	5.8E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	7.6E-006	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	4.5E-001	kg-day/mg	6.01E-008
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	9.5E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.70E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.60E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	2.4E-001	kg-day/mg	5.49E-007
	4,4'-DDE	1.55E-002	mg/kg	NA	NA	M	9.9E-009	mg/kg-day	3.4E-001	kg-day/mg	3.35E-009
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		kg-day/mg	
	Aluminum	1.30E+004	mg/kg	NA	NA	M	8.3E-003	mg/kg-day		kg-day/mg	
	Anthracene	4.70E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		kg-day/mg	
	Antimony	1.56E+001	mg/kg	NA	NA	M	9.9E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	4.00E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	2.0E+000	kg-day/mg	5.08E-004
	Aroclor-1248	7.00E+001	mg/kg	NA	NA	M	4.4E-005	mg/kg-day	2.0E+000	kg-day/mg	8.90E-005
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	2.2E+000	kg-day/mg	1.43E-004
	Aroclor-1260	1.70E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.16E-006
	Arsenic	2.79E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	1.6E+000	kg-day/mg	2.80E-006
	Barium	3.88E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	Benzene	7.10E+003	mg/kg	NA	NA	M	4.5E-003	mg/kg-day	3.2E-002	kg-day/mg	1.45E-004
	Benzo(a)anthracene	5.90E-002	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	7.3E-001	kg-day/mg	2.74E-006
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	8.6E+000	kg-day/mg	1.01E-006
	Benzo(b)fluoranthene	1.83E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.49E-008
	Benzo(k)fluoranthene	1.82E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-002	kg-day/mg	8.44E-009
	Beryllium	5.13E+000	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.4E-002	kg-day/mg	2.31E-005
	Butylbenzylphthalate	9.60E+002	mg/kg	NA	NA	M	6.1E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.26E+001	mg/kg	NA	NA	M	8.1E-006	mg/kg-day		kg-day/mg	
	Carbon Disulfide	2.00E-003	mg/kg	NA	NA	M	1.3E-009	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	3.60E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-11
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wb4 \ TT_IO_ICWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chloroform	1.00E+003	mg/kg	NA	NA	M	6.4E-004	mg/kg-day	6.4E-003	kg-day/mg	4.06E-006
	Chromium 3+	1.81E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Chrysene	7.40E-002	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	1.8E-002	kg-day/mg	8.37E-010
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	7.6E-004	mg/kg-day		kg-day/mg	
	Cobalt	9.25E+000	mg/kg	NA	NA	M	5.9E-006	mg/kg-day		kg-day/mg	
	Copper	8.98E+001	mg/kg	NA	NA	M	5.7E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	8.69E+000	mg/kg	NA	NA	M	5.5E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	Dieldrin	2.40E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	1.6E+001	kg-day/mg	2.44E-006
	Diethylphthalate	4.40E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	9.58E+001	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.30E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	2.40E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Endrin	1.60E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	4.3E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.40E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	gamma-Chlordane	1.20E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	3.5E-001	kg-day/mg	2.67E-007
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day	2.0E+000	kg-day/mg	7.50E-007
	Hexachlorobutadiene	1.11E+001	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	7.8E-002	kg-day/mg	5.50E-007
	Indeno(1,2,3-cd)pyrene	1.82E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.44E-008
	Iron	7.39E+003	mg/kg	NA	NA	M	4.7E-003	mg/kg-day		kg-day/mg	
	Isophorone	6.58E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	9.5E-004	kg-day/mg	3.97E-007
	Lead	1.19E+003	mg/kg	NA	NA	M	7.6E-004	mg/kg-day		kg-day/mg	
	Manganese	2.32E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day		kg-day/mg	
	Mercury	2.70E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.50E+002	mg/kg	NA	NA	M	4.8E-004	mg/kg-day	1.4E-002	kg-day/mg	6.50E-006
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	3.5E-003	mg/kg-day		kg-day/mg	
	Naphthalene	1.96E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Nickel	1.02E+001	mg/kg	NA	NA	M	6.5E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.10E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	2.61E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	1.2E-001	kg-day/mg	1.99E-006
	Phenol	5.90E+000	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		kg-day/mg	
	Pyrene	2.83E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Selenium	6.30E-001	mg/kg	NA	NA	M	4.0E-007	mg/kg-day		kg-day/mg	
	Silver	1.28E+000	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		kg-day/mg	
	Styrene	5.90E+003	mg/kg	NA	NA	M	3.8E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	2.00E+005	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	5.2E-002	kg-day/mg	6.61E-003
	Toluene	1.10E+003	mg/kg	NA	NA	M	7.0E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	1.78E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	1.1E-002	kg-day/mg	1.27E-007
	Vanadium	1.17E+001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.28E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Zinc	4.41E+002	mg/kg	NA	NA	M	2.8E-004	mg/kg-day		kg-day/mg	
	(Total)										7.54E-003
										Total Hazard Index Across All Exposure Routes/Pathways	8.2E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-12
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_ICWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	4.69E-003	mg/cu. m.	R	1.54E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.35E-001	mg/cu. m.	R	1.10E-003	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	6.08E-004	mg/cu. m.	R	2.00E-006	mg/kg-day	5.60E-002	mg/kg-day	1.12E-007
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.33E-004	mg/cu. m.	R	4.37E-007	mg/kg-day	2.00E-001	mg/kg-day	8.73E-008
	1,2-Dichlorobenzene	4.00E+000	mg/kg	4.84E-004	mg/cu. m.	R	1.59E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	5.29E-003	mg/cu. m.	R	1.74E-005	mg/kg-day	9.10E-002	mg/kg-day	1.58E-006
	1,2-Dichloroethene (total)	1.20E-002	mg/kg	4.18E-002	mg/cu. m.	R	1.38E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	3.04E-003	mg/cu. m.	R	1.00E-005	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	4.69E-005	mg/cu. m.	R	1.54E-007	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	4.28E-008	mg/cu. m.	R	1.41E-010	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	1.89E-004	mg/cu. m.	R	6.20E-007	mg/kg-day	2.20E-002	mg/kg-day	1.36E-008
	2-Butanone	0.00E+000	mg/kg	1.77E-005	mg/cu. m.	R	5.83E-008	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.00E+002	mg/kg	2.80E-004	mg/cu. m.	R	9.22E-007	mg/kg-day		mg/kg-day	
	2-Methylphenol	9.20E+000	mg/kg	4.57E-005	mg/cu. m.	R	1.50E-007	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.44E-005	mg/cu. m.	R	4.72E-008	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	3.19E-005	mg/cu. m.	R	1.05E-007	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	2.10E-001	mg/kg	1.17E-008	mg/cu. m.	R	3.84E-011	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.15E-002	mg/cu. m.	R	3.77E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.70E+001	mg/kg	1.35E-004	mg/cu. m.	R	4.44E-007	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.60E+000	mg/kg	1.60E-007	mg/cu. m.	R	5.27E-010	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	2.14E-007	mg/cu. m.	R	7.03E-010	mg/kg-day	3.40E-001	mg/kg-day	2.39E-010
	Acenaphthene	1.10E+001	mg/kg	2.41E-005	mg/cu. m.	R	7.93E-008	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.32E-006	mg/cu. m.	R	3.06E-008	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	1.94E-002	mg/cu. m.	R	6.39E-005	mg/kg-day		mg/kg-day	
	Anthracene	4.70E-001	mg/kg	7.40E-007	mg/cu. m.	R	2.43E-009	mg/kg-day		mg/kg-day	
	Antimony	1.56E+001	mg/kg	7.26E-007	mg/cu. m.	R	2.39E-009	mg/kg-day		mg/kg-day	
	Aroclor-1242	4.00E+002	mg/kg	1.37E-006	mg/cu. m.	R	4.50E-009	mg/kg-day	2.00E+000	mg/kg-day	8.99E-009
	Aroclor-1248	7.00E+001	mg/kg	9.41E-007	mg/cu. m.	R	3.09E-009	mg/kg-day	2.00E+000	mg/kg-day	6.18E-009
	Aroclor-1254	1.00E+002	mg/kg	1.58E-006	mg/cu. m.	R	5.20E-009	mg/kg-day	2.00E+000	mg/kg-day	1.04E-008
	Aroclor-1260	1.70E+000	mg/kg	9.83E-007	mg/cu. m.	R	3.23E-009	mg/kg-day	2.00E+000	mg/kg-day	6.47E-009
	Arsenic	2.79E+000	mg/kg	2.22E-007	mg/cu. m.	R	7.30E-010	mg/kg-day	1.51E+001	mg/kg-day	1.10E-008
	Barium	3.88E+002	mg/kg	1.20E-005	mg/cu. m.	R	3.95E-008	mg/kg-day		mg/kg-day	
	Benzene	7.10E+003	mg/kg	5.88E-002	mg/cu. m.	R	1.93E-004	mg/kg-day	2.90E-002	mg/kg-day	5.61E-006
	Benzoic Acid	0.00E+000	mg/kg	1.98E-004	mg/cu. m.	R	6.50E-007	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	5.90E-002	mg/kg	6.56E-010	mg/cu. m.	R	2.16E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	9.17E-010	mg/cu. m.	R	3.01E-012	mg/kg-day	3.10E+000	mg/kg-day	9.34E-012
	Benzo(b)fluoranthene	1.83E-001	mg/kg	9.56E-010	mg/cu. m.	R	3.14E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	1.82E-001	mg/kg	8.06E-010	mg/cu. m.	R	2.65E-012	mg/kg-day		mg/kg-day	
	Beryllium	5.13E+000	mg/kg	4.38E-008	mg/cu. m.	R	1.44E-010	mg/kg-day	8.40E+000	mg/kg-day	1.21E-009
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	1.70E-004	mg/cu. m.	R	5.60E-007	mg/kg-day	1.10E+000	mg/kg-day	6.16E-007
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.48E-005	mg/cu. m.	R	4.85E-008	mg/kg-day	1.40E-002	mg/kg-day	6.79E-010
	Butylbenzylphthalate	9.60E+002	mg/kg	5.58E-006	mg/cu. m.	R	1.84E-008	mg/kg-day		mg/kg-day	
	Cadmium	1.28E+001	mg/kg	6.69E-007	mg/cu. m.	R	2.20E-009	mg/kg-day	6.30E+000	mg/kg-day	1.39E-008
	Carbon Disulfide	2.00E-003	mg/kg	1.18E-006	mg/cu. m.	R	3.88E-009	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.80E+001	mg/kg	7.51E-004	mg/cu. m.	R	2.47E-006	mg/kg-day		mg/kg-day	
	Chloroform	1.00E+003	mg/kg	5.48E-002	mg/cu. m.	R	1.80E-004	mg/kg-day	8.10E-002	mg/kg-day	1.46E-005
	Chromium 3+	1.81E+002	mg/kg	7.56E-006	mg/cu. m.	R	2.49E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.26E-006	mg/cu. m.	R	4.14E-009	mg/kg-day	4.10E+001	mg/kg-day	1.70E-007
	Chrysene	7.40E-002	mg/kg	8.22E-010	mg/cu. m.	R	2.70E-012	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.09E-001	mg/cu. m.	R	6.87E-004	mg/kg-day		mg/kg-day	
	Cobalt	9.25E+000	mg/kg	5.11E-007	mg/cu. m.	R	1.68E-009	mg/kg-day		mg/kg-day	
	Copper	8.96E+001	mg/kg	3.19E-006	mg/cu. m.	R	1.05E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	8.89E+000	mg/kg	4.32E-007	mg/cu. m.	R	1.42E-009	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	1.90E-007	mg/cu. m.	R	6.26E-010	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-12
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_ICWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Dieldrin	2.40E-001	mg/kg	1.10E-008	mg/cu. m.	R	3.60E-011	mg/kg-day	1.60E+001	mg/kg-day	5.76E-010
	Diethylphthalate	4.40E+001	mg/kg	6.98E-007	mg/cu. m.	R	2.29E-009	mg/kg-day		mg/kg-day	
	Dimethylphthalate	9.58E+001	mg/kg	2.42E-006	mg/cu. m.	R	7.95E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.30E+002	mg/kg	3.80E-006	mg/cu. m.	R	1.25E-008	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	2.40E+001	mg/kg	4.47E-007	mg/cu. m.	R	1.47E-009	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	5.35E-008	mg/cu. m.	R	1.76E-010	mg/kg-day		mg/kg-day	
	Endrin	1.60E+000	mg/kg	7.14E-008	mg/cu. m.	R	2.35E-010	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	6.11E-010	mg/cu. m.	R	2.01E-012	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	5.07E-002	mg/cu. m.	R	1.67E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	1.70E-007	mg/cu. m.	R	5.59E-010	mg/kg-day		mg/kg-day	
	Fluorene	1.40E+001	mg/kg	1.04E-005	mg/cu. m.	R	3.41E-008	mg/kg-day		mg/kg-day	
	gamma-Chlordane	1.20E+000	mg/kg	5.43E-008	mg/cu. m.	R	1.79E-010	mg/kg-day	3.50E-001	mg/kg-day	6.25E-011
	Hexachlorobenzene	5.90E-001	mg/kg	3.22E-010	mg/cu. m.	R	1.06E-012	mg/kg-day	1.60E+000	mg/kg-day	1.69E-012
	Hexachlorobutadiene	1.11E+001	mg/kg	2.71E-007	mg/cu. m.	R	8.92E-010	mg/kg-day	7.80E-002	mg/kg-day	6.96E-011
	Indeno(1,2,3-cd)pyrene	1.82E-001	mg/kg	4.89E-010	mg/cu. m.	R	1.61E-012	mg/kg-day		mg/kg-day	
	Isophorone	6.58E+002	mg/kg	1.56E-003	mg/cu. m.	R	5.14E-006	mg/kg-day		mg/kg-day	
	Lead	1.19E+003	mg/kg	3.87E-005	mg/cu. m.	R	1.27E-007	mg/kg-day		mg/kg-day	
	Manganese	2.32E+003	mg/kg	3.00E-005	mg/cu. m.	R	9.85E-008	mg/kg-day		mg/kg-day	
	Mercury	2.70E+001	mg/kg	1.45E-007	mg/cu. m.	R	4.77E-010	mg/kg-day		mg/kg-day	
	Methylene Chloride	7.50E+002	mg/kg	7.55E-002	mg/cu. m.	R	2.48E-004	mg/kg-day	1.65E-003	mg/kg-day	4.10E-007
	m,p-xylene	5.50E+003	mg/kg	5.68E-002	mg/cu. m.	R	1.87E-004	mg/kg-day		mg/kg-day	
	Naphthalene	1.96E+001	mg/kg	9.58E-004	mg/cu. m.	R	3.15E-006	mg/kg-day		mg/kg-day	
	Nickel	1.02E+001	mg/kg	4.68E-007	mg/cu. m.	R	1.54E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	6.10E+001	mg/kg	2.48E-002	mg/cu. m.	R	8.14E-005	mg/kg-day		mg/kg-day	
	Pentachlorophenol	2.61E+001	mg/kg	8.77E-007	mg/cu. m.	R	2.88E-009	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	4.03E-007	mg/cu. m.	R	1.33E-009	mg/kg-day		mg/kg-day	
	Phenol	5.90E+000	mg/kg	1.31E-004	mg/cu. m.	R	4.30E-007	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.58E-007	mg/cu. m.	R	8.47E-010	mg/kg-day		mg/kg-day	
	Pyrene	2.83E+000	mg/kg	2.64E-007	mg/cu. m.	R	8.66E-010	mg/kg-day		mg/kg-day	
	Selenium	6.30E-001	mg/kg	3.15E-008	mg/cu. m.	R	1.04E-010	mg/kg-day		mg/kg-day	
	Silver	1.28E+000	mg/kg	1.61E-008	mg/cu. m.	R	5.30E-011	mg/kg-day		mg/kg-day	
	Styrene	5.90E+003	mg/kg	3.10E-003	mg/cu. m.	R	1.02E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	2.00E+005	mg/kg	6.58E-002	mg/cu. m.	R	2.16E-004	mg/kg-day	2.00E-003	mg/kg-day	4.33E-007
	Toluene	1.10E+003	mg/kg	1.22E-001	mg/cu. m.	R	4.01E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	1.78E+001	mg/kg	5.01E-002	mg/cu. m.	R	1.65E-004	mg/kg-day	6.00E-003	mg/kg-day	9.89E-007
	Vanadium	1.17E+001	mg/kg	6.20E-007	mg/cu. m.	R	2.04E-009	mg/kg-day		mg/kg-day	
	Xylenes (total)	2.28E+003	mg/kg	5.53E-002	mg/cu. m.	R	1.82E-004	mg/kg-day		mg/kg-day	
	Zinc	4.41E+002	mg/kg	1.70E-005	mg/cu. m.	R	5.60E-008	mg/kg-day		mg/kg-day	
	(Total)										2.47E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-13
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_RWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.88E-004
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.99E-001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.73E-003
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.57E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.65E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.14E-003
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.28E-002
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.68E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	7.5E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.51E-005
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.48E-004
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	7.56E-004
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.37E-002
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.08E-004
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	3.5E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.17E-003
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.14E-004
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.61E-002
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.02E-003
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.18E-002
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.57E-004
	Acetone	6.50E+002	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.57E-003
	Aluminum	8.22E+003	mg/kg	NA	NA	M	7.0E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.03E-003
	Anthracene	1.10E+000	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.14E-006
	Antimony	8.34E+000	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.78E-002
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	6.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.28E+000
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.01E-002
	Barium	1.60E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.96E-003
	Benzene	6.61E+003	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.89E+000
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.78E-006
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	6.64E-004
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	8.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.11E-001
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	4.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.05E-003
	Cadmium	1.42E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.21E-002
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	8.6E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.28E-004
	Chloroform	2.10E+003	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.80E-001
	Chromium 3+	6.85E+001	mg/kg	NA	NA	M	7.8E-005	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	5.05E-005
	Chrysene	2.60E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.03E-001
	Cobalt	7.32E+000	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.04E-004
	Copper	5.31E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.14E-003
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.60E-004
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	8.99E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-13
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_RWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	2.58E-005
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	5.11E-006
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.13E-003
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.18E-004
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.74E-002
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.13E-005
	Fluorene	9.49E+000	mg/kg	NA	NA	M	8.1E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.03E-004
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	6.31E-004
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	3.41E-002
	Iron	6.72E+003	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.92E-002
	Isophorone	2.96E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.27E-003
	Lead	5.99E+002	mg/kg	NA	NA	M	5.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	9.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.89E-002
	Mercury	2.99E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	8.13E-003
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.35E-003
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.99E-002
	Nickel	7.89E+000	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.38E-004
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	9.4E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	4.71E-004
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.63E-004
	Phenol	1.87E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.67E-005
	Pyrene	5.90E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.68E-004
	Selenium	4.31E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.38E-005
	Silver	1.67E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.87E-004
	Styrene	9.00E+001	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.85E-004
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.11E-001
	Toluene	2.00E+005	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.56E-001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.00E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.44E-003
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.07E-002
	Zinc	2.29E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.55E-004
	(Total)												9.77E+000
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.25E-002
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.2E+000	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.96E+001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	1.42E-001
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	5.27E-003
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.76E-002
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.57E-002
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.51E+000
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.44E-002
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.66E-003
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	9.84E-003
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	5.28E-002
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.08E-001
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.38E-002
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	7.76E-002
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.41E-002
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	8.5E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.06E+000
	4-Methylphenol	1.78E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.08E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-13
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fRWe1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	7.85E-001
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.04E-002
	Acetone	6.50E+002	mg/kg	NA	NA	M	3.7E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	4.70E-001
	Aluminum	8.22E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.66E-001
	Anthracene	1.10E+000	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.08E-004
	Antimony	8.34E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	4.0E-008	mg/kg-day	NA	NA	1.18E+002
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	3.19E+002
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	7.03E-001
	Barium	1.60E+002	mg/kg	NA	NA	M	9.1E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.30E-001
	Benzene	6.61E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	1.39E+002
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.84E-004
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	8.8E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.40E+000
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	5.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.38E+000
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.36E-001
	Cadmium	1.42E+001	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.22E+001
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	9.15E-002
	Chloroform	2.10E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	1.25E+001
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	5.0E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	8.37E-001
	Chrysene	2.60E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	6.8E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.81E+000
	Cobalt	7.32E+000	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.92E-003
	Copper	5.31E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.26E-001
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.12E-002
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.96E-002
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.71E-003
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.39E-004
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.46E-001
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.77E-002
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.13E+000
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.39E-003
	Fluorene	9.49E+000	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.35E-002
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	5.23E-002
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.26E+000
	Iron	6.72E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.27E+000
	Isophorone	2.96E+002	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.41E-002
	Lead	5.99E+002	mg/kg	NA	NA	M	3.4E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	6.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.24E+000
	Mercury	2.99E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	9.80E-001
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	3.1E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.73E-001
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	2.6E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.32E+000
	Nickel	7.89E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.48E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-13
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_RWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	6.2E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.47E-002
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.73E-002
	Phenol	1.87E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.77E-003
	Pyrene	5.90E+000	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.12E-002
	Selenium	4.31E-001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.90E-003
	Silver	1.67E+000	mg/kg	NA	NA	M	9.5E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	9.05E-002
	Styrene	9.00E+001	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.55E-002
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.71E+001
	Toluene	2.00E+005	mg/kg	NA	NA	M	1.1E+001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.68E+001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	2.70E+001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	6.7E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	9.52E-002
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.93E-001
	Zinc	2.29E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.45E-001
	(Total)												8.53E+002
												Total Hazard Index Across All Exposure Routes/Pathways	8.6E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-1
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	1.30E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	9.29E-004
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	6.83E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.39E-002
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	3.94E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	1.71E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	1.74E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	1.93E-002
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	1.59E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.14E-001
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	1.55E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	3.18E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	2.79E-001
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	5.73E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	1.01E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	8.64E-011	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	4.32E-008
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	5.36E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.34E-004
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	4.91E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.72E-007
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	1.74E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.24E-001
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	2.32E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	1.62E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	3.97E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	2.59E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	5.41E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	8.45E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.93E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	5.15E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	3.71E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.85E-002
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	3.23E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	3.62E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	3.64E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	6.48E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	4.81E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	7.38E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	2.59E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	2.81E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	4.44E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	2.43E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	2.16E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	2.20E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	3.04E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	2.45E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	3.77E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	4.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	5.34E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	3.58E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.55E-004
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	1.25E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	7.34E-001
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	7.75E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	2.32E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	1.40E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	4.38E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	1.18E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	4.35E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.95E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	9.96E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.75E-005
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	4.62E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	5.48E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	3.62E-008	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-14
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	1.54E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	2.57E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	2.39E-009	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.19E-008
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	2.10E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.19E-002
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	1.29E-003	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.50E+001
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	2.70E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	4.51E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	3.11E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	4.74E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	1.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	1.83E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	9.81E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	4.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	1.83E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	2.36E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	1.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	7.25E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	9.00E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	1.09E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	1.18E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	1.57E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	2.70E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	1.30E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.48E-003
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	4.10E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	3.17E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	1.18E-010	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	5.89E-007
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	1.49E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	7.13E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	7.12E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	6.92E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	1.10E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	1.19E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	4.88E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	1.67E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	6.86E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	4.80E-003
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	3.87E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	4.50E-006
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	1.97E-002	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.29E-002
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	1.18E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	1.50E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.66E-001
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	1.26E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	6.66E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	3.37E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	1.03E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	4.34E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	5.69E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	6.44E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.31E-001	mg/kg	6.08E-010	mg/cu. m.	R	1.19E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	1.34E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	1.45E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.06E-004
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	2.12E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.51E-002

Scena. . imeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-14
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4:TT_Inh_RWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	5.86E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	7.53E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	6.60E-002
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	1.72E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	1.46E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	1.07E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	3.68E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	7.53E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.66E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-15
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	6.4E-003	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	5.7E-002	kg-day/mg	1.4E-007
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	2.0E-001	kg-day/mg	2.4E-007
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	8.5E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	9.1E-002	kg-day/mg	1.1E-006
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	6.8E-002	kg-day/mg	4.6E-007
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	2.4E-002	kg-day/mg	3.8E-008
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	9.8E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	4.6E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	5.4E-006	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	3.4E-001	kg-day/mg	7.2E-007
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	2.0E+000	kg-day/mg	3.2E-005
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.0E+000	kg-day/mg	4.5E-005
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	2.0E+000	kg-day/mg	6.1E-005
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	2.0E+000	kg-day/mg	1.3E-005
	Arsenic	3.53E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	1.5E+000	kg-day/mg	1.6E-006
	Barium	1.60E+002	mg/kg	NA	NA	M	4.9E-005	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.9E-002	kg-day/mg	5.9E-005
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day	7.3E-001	kg-day/mg	3.8E-008
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	5.6E-008	mg/kg-day	7.3E+000	kg-day/mg	4.1E-007
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.7E-008
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-002	kg-day/mg	8.7E-009
	Beryllium	1.55E+000	mg/kg	NA	NA	M	4.7E-007	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	1.1E+000	kg-day/mg	3.5E-006
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	1.4E-002	kg-day/mg	1.1E-005
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	6.4E-004	mg/kg-day	6.1E-003	kg-day/mg	3.9E-006
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	8.0E-008	mg/kg-day	7.3E-003	kg-day/mg	5.8E-010
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	3.7E-004	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-15
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	7.6E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	1.6E+000	kg-day/mg	2.9E-007
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.8E-002	kg-day/mg	1.9E-007
	Iron	6.72E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	9.1E-005	mg/kg-day	9.5E-004	kg-day/mg	8.6E-008
	Lead	5.99E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	7.5E-003	kg-day/mg	1.3E-006
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	3.4E-004	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	6.0E-006	mg/kg-day	1.2E-001	kg-day/mg	7.2E-007
	Phenol	1.87E+001	mg/kg	NA	NA	M	5.7E-006	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	5.2E-002	kg-day/mg	1.3E-004
	Toluene	2.00E+005	mg/kg	NA	NA	M	6.1E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	8.6E-004	mg/kg-day	1.1E-002	kg-day/mg	9.4E-006
	Vanadium	1.17E+001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	7.6E-003	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	7.0E-005	mg/kg-day		kg-day/mg	
	(Total)										3.77E-004
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	4.3E-001	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.0E-002	kg-day/mg	1.16E-005
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	2.9E-001	kg-day/mg	2.26E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	5.6E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	8.1E-004	mg/kg-day	9.1E-002	kg-day/mg	7.38E-005
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	6.8E-002	kg-day/mg	3.03E-005
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.4E-002	kg-day/mg	2.53E-006
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	6.5E-003	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-15
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME wk4 \ TT_ID_fRWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	3.4E-001	kg-day/mg	4.77E-005
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	2.0E+000	kg-day/mg	2.13E-003
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E+000	kg-day/mg	2.96E-003
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.2E+000	kg-day/mg	4.55E-003
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E+000	kg-day/mg	8.92E-004
	Arsenic	3.53E+000	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	1.6E+000	kg-day/mg	1.13E-004
	Barium	1.60E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	3.2E-002	kg-day/mg	4.32E-003
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	7.3E-001	kg-day/mg	2.52E-006
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	8.6E+000	kg-day/mg	3.21E-005
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	7.3E-001	kg-day/mg	5.77E-006
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	7.3E-002	kg-day/mg	5.77E-007
	Beryllium	1.55E+000	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.1E+000	kg-day/mg	2.30E-004
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	5.3E-002	mg/kg-day	1.4E-002	kg-day/mg	7.38E-004
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	9.7E-003	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	4.3E-002	mg/kg-day	6.4E-003	kg-day/mg	2.72E-004
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	1.8E-002	kg-day/mg	9.38E-008
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	7.6E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E+000	kg-day/mg	2.39E-005
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.8E-002	kg-day/mg	1.26E-005
	Iron	6.72E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	6.0E-003	mg/kg-day	9.5E-004	kg-day/mg	5.70E-006
	Lead	5.99E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.3E-002	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.4E-002	kg-day/mg	1.58E-004
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.1E-001	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	9.4E-003	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-15
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_RWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.2E-002	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	1.2E-001	kg-day/mg	4.79E-005
	Phenol	1.87E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	5.2E-002	kg-day/mg	8.75E-003
	Toluene	2.00E+005	mg/kg	NA	NA	M	4.1E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	1.1E-002	kg-day/mg	6.37E-004
	Vanadium	1.17E+001	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	5.1E-001	mg/kg-day		kg-day/mg	
	Zinc *(Total)*	2.29E+002	mg/kg	NA	NA	M	4.6E-003	mg/kg-day		kg-day/mg	2.61E-002
										Total Hazard Index Across All Exposure Routes/Pathways	2.6E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-16
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	4.64E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	2.44E-003	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	1.41E-005	mg/kg-day	5.60E-002	mg/kg-day	7.88E-007
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	6.10E-006	mg/kg-day	2.00E-001	mg/kg-day	1.22E-006
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	6.20E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	5.69E-005	mg/kg-day	9.10E-002	mg/kg-day	5.17E-006
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	5.54E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	1.14E-004	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	2.05E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	3.08E-011	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	1.92E-005	mg/kg-day	2.20E-002	mg/kg-day	4.21E-007
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	1.75E-008	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	6.22E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	8.30E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	5.77E-006	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	1.42E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	9.23E-007	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	1.93E-009	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	3.02E-011	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	6.88E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	1.84E-012	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	1.32E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	1.15E-005	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	1.29E-009	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	1.30E-010	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	2.31E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	1.72E-010	mg/kg-day	3.40E-001	mg/kg-day	5.84E-011
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	2.64E-006	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	9.25E-007	mg/kg-day		mg/kg-day	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	1.00E-004	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	1.59E-011	mg/kg-day	1.70E+001	mg/kg-day	2.70E-010
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	8.67E-013	mg/kg-day	6.30E+000	mg/kg-day	5.47E-012
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	7.71E-008	mg/kg-day		mg/kg-day	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	7.86E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	1.09E-009	mg/kg-day	2.00E+000	mg/kg-day	2.17E-009
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	8.77E-010	mg/kg-day	2.00E+000	mg/kg-day	1.75E-009
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	1.35E-009	mg/kg-day	2.00E+000	mg/kg-day	2.69E-009
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	1.68E-009	mg/kg-day	2.00E+000	mg/kg-day	3.37E-009
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	1.91E-010	mg/kg-day	1.51E+001	mg/kg-day	2.88E-009
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	1.28E-008	mg/kg-day		mg/kg-day	
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	4.46E-004	mg/kg-day	2.90E-002	mg/kg-day	1.29E-005
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	2.77E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	8.27E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	5.01E-012	mg/kg-day	3.10E+000	mg/kg-day	1.55E-011
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	1.57E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	4.21E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	1.55E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	6.97E-011	mg/kg-day		mg/kg-day	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	3.56E-011	mg/kg-day	8.40E+000	mg/kg-day	2.99E-010
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	1.65E-012	mg/kg-day	1.80E+000	mg/kg-day	2.97E-012
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	1.96E-005	mg/kg-day	1.10E+000	mg/kg-day	2.15E-005
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	1.29E-008	mg/kg-day	1.40E-002	mg/kg-day	1.81E-010

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-16
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	5.51E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	9.17E-010	mg/kg-day	6.30E+000	mg/kg-day	5.78E-009
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	8.53E-010	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	7.49E-005	mg/kg-day		mg/kg-day	
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	4.61E-004	mg/kg-day	8.10E-002	mg/kg-day	3.73E-005
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	9.65E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	1.61E-009	mg/kg-day	4.10E+001	mg/kg-day	6.60E-008
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	1.11E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	1.69E-003	mg/kg-day		mg/kg-day	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	4.55E-010	mg/kg-day		mg/kg-day	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	6.53E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	3.51E-010	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	1.54E-010	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	6.55E-014	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	8.41E-012	mg/kg-day	1.60E+001	mg/kg-day	1.35E-010
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	6.13E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	2.59E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	3.21E-009	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	3.91E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	4.21E-011	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	5.61E-011	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	9.64E-014	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	4.63E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	1.47E-010	mg/kg-day		mg/kg-day	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	1.13E-006	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	4.21E-011	mg/kg-day	3.50E-001	mg/kg-day	1.47E-011
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	5.33E-015	mg/kg-day	4.50E+000	mg/kg-day	2.40E-014
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	2.55E-015	mg/kg-day	9.10E+000	mg/kg-day	2.32E-014
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	2.54E-013	mg/kg-day	1.60E+000	mg/kg-day	4.07E-013
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	2.47E-010	mg/kg-day	7.80E-002	mg/kg-day	1.93E-011
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	3.94E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	4.26E-012	mg/kg-day		mg/kg-day	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	1.74E-004	mg/kg-day		mg/kg-day	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	5.96E-008	mg/kg-day		mg/kg-day	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	2.45E-008	mg/kg-day		mg/kg-day	
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	1.38E-010	mg/kg-day		mg/kg-day	
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	7.03E-003	mg/kg-day	1.65E-003	mg/kg-day	1.16E-005
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	4.22E-003	mg/kg-day		mg/kg-day	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	5.34E-005	mg/kg-day		mg/kg-day	
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	4.50E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	2.38E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	1.20E-003	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	8.11E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	3.66E-010	mg/kg-day		mg/kg-day	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	1.55E-005	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	2.03E-010	mg/kg-day		mg/kg-day	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	2.30E-010	mg/kg-day		mg/kg-day	
	Selenium	4.31E-001	mg/kg	6.06E-010	mg/cu. m.	R	4.24E-011	mg/kg-day		mg/kg-day	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	4.79E-011	mg/kg-day		mg/kg-day	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	5.17E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	7.56E-004	mg/kg-day	2.00E-003	mg/kg-day	1.51E-006

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-16
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_tRWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	2.09E-012	mg/kg-day		mg/kg-day	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	2.69E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	6.15E-004	mg/kg-day	6.00E-003	mg/kg-day	3.69E-006
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	5.20E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	3.83E-007	mg/kg-day	3.00E-001	mg/kg-day	1.15E-007
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	1.32E-003	mg/kg-day		mg/kg-day	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	2.69E-008	mg/kg-day		mg/kg-day	
	(Total)										9.64E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-17
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_RWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.25E-005
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	7.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.94E-001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	7.59E-004
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.44E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.16E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.00E-004
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	9.0E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.00E-002
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.61E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.10E-005
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.50E-005
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.31E-004
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.00E-003
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	9.11E-005
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	5.13E-004
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.25E-004
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	7.03E-003
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.32E-003
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	5.19E-003
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.88E-005
	Acetone	6.50E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.44E-003
	Aluminum	8.22E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	3.08E-003
	Anthracene	1.10E+000	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.38E-006
	Antimony	8.34E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	7.82E-003
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.88E+000
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	4.41E-003
	Barium	1.60E+002	mg/kg	NA	NA	M	6.0E-005	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	8.58E-004
	Benzene	6.61E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	8.26E-001
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.22E-006
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	6.4E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	6.9E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	5.8E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	2.91E-004
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	3.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	9.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.88E-002
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.96E-004
	Cadmium	1.42E+001	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	5.32E-003
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.88E-004
	Chloroform	2.10E+003	mg/kg	NA	NA	M	7.9E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.88E-002
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	2.21E-005
	Chrysene	2.60E-001	mg/kg	NA	NA	M	9.8E-008	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.50E-002
	Cobalt	7.32E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.58E-005
	Copper	5.31E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.98E-004
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.01E-005
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.94E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-17
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	9.0E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.13E-005
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.24E-006
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	9.3E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.34E-004
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.83E-004
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.51E-002
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.56E-005
	Fluorene	9.49E+000	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.90E-005
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	2.77E-004
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	1.49E-002
	Iron	6.72E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.39E-003
	Isophorone	2.96E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.55E-004
	Lead	5.99E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	4.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.14E-002
	Mercury	2.99E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.56E-003
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.03E-003
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.70E-003
	Nickel	7.89E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.48E-004
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	4.1E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.06E-004
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.46E-004
	Phenol	1.87E+001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.17E-005
	Pyrene	5.90E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.38E-005
	Selenium	4.31E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.23E-005
	Silver	1.67E+000	mg/kg	NA	NA	M	6.3E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.26E-004
	Styrene	9.00E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.69E-004
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.11E-001
	Toluene	2.00E+005	mg/kg	NA	NA	M	7.5E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.75E-001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.75E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	6.29E-004
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	4.69E-003
	Zinc	2.29E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.87E-004
	(Total)												4.28E+000
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.89E-003
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.00E+000
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	6.9E-005	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	2.14E-002
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	7.96E-004
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.65E-003
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.14E-002
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.29E-001
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.69E-003
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.51E-004
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.49E-003
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	4.5E-003	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	7.97E-003
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.37E-001
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.08E-003
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.17E-002
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.14E-003

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-17
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.61E-001
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	4.65E-002
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.19E-001
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	9.4E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.57E-003
	Acetone	6.50E+002	mg/kg	NA	NA	M	5.6E-003	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	7.10E-002
	Aluminum	8.22E+003	mg/kg	NA	NA	M	7.0E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.04E-002
	Anthracene	1.10E+000	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.14E-005
	Antimony	8.34E+000	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	1.79E+001
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	6.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	8.6E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	4.82E+001
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.06E-001
	Barium	1.60E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.96E-002
	Benzene	6.61E+003	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	2.10E+001
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.79E-005
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	6.65E-001
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	8.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.11E+000
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	4.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.05E-002
	Cadmium	1.42E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	4.86E+000
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	1.38E-002
	Chloroform	2.10E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	1.88E+000
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.26E-001
	Chrysene	2.60E-001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.03E+000
	Cobalt	7.32E+000	mg/kg	NA	NA	M	6.3E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.05E-003
	Copper	5.31E+001	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.90E-002
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.20E-003
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	9.00E-003
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	2.58E-004
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	5.1E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	5.11E-005
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.20E-002
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.19E-003
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	6.24E-001
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.14E-004
	Fluorene	9.49E+000	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.03E-003
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	7.90E-003
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	3.41E-001
	Iron	6.72E+003	mg/kg	NA	NA	M	5.8E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.92E-001
	Isophorone	2.96E+002	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.27E-002
	Lead	5.99E+002	mg/kg	NA	NA	M	5.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	9.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.89E-001
	Mercury	2.99E+000	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-17
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_RWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.48E-001
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	4.7E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.62E-002
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.99E-001
	Nickel	7.89E+000	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	6.76E-002
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	5.24E-003
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.63E-003
	Phenol	1.87E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.68E-004
	Pyrene	5.90E+000	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.69E-003
	Selenium	4.31E-001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.39E-004
	Silver	1.67E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.37E-002
	Styrene	9.00E+001	mg/kg	NA	NA	M	7.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.86E-003
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.11E+000
	Toluene	2.00E+005	mg/kg	NA	NA	M	1.7E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.57E+000
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	4.08E+000
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.44E-002
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	2.1E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.20E-001
	Zinc	2.29E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.18E-002
	(Total)												1.29E+002
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-1o
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	1.14E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	8.14E-004
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	5.98E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.09E-002
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	3.45E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	1.50E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	1.52E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	1.69E-002
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	1.39E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	9.96E-002
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	1.36E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	2.79E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	2.44E-001
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	5.02E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	8.81E-005
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	7.57E-011	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	3.78E-008
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	4.70E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.05E-004
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	4.30E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.50E-007
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	1.53E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.09E-001
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	2.04E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	1.42E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	3.47E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	2.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	4.74E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	7.40E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	4.51E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	3.25E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.62E-002
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	2.83E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	3.17E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	3.19E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	5.67E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	4.21E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	6.46E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	2.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	2.46E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	3.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	2.13E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	1.89E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	1.93E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	2.67E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	2.15E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	3.30E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	4.13E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	4.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	3.13E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.24E-004
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	1.09E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	6.43E-001
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	6.79E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	2.03E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	1.23E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	3.84E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	1.03E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	3.81E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.71E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	8.73E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.53E-005
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	4.05E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	4.80E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	3.17E-008	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-18
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	1.35E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	2.25E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	2.09E-009	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.05E-008
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	1.84E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	3.67E-002
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	1.13E-003	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.31E+001
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	2.37E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	3.95E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	2.72E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	4.15E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	1.12E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	1.60E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	8.60E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	3.78E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	1.61E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	2.06E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	1.50E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	6.35E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	7.88E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	9.59E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	1.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	1.38E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	2.36E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	1.14E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	3.92E-003
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	3.59E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	2.78E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	1.03E-010	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	5.16E-007
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	1.31E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	6.24E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	6.23E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	6.06E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	9.67E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	1.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	4.27E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	1.46E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	6.01E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	4.20E-003
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	3.39E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.94E-006
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	1.72E-002	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.00E-002
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	1.03E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	1.31E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.46E-001
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	1.10E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	5.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	2.95E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	1.99E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	8.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	3.80E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	4.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	5.64E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.31E-001	mg/kg	6.06E-010	mg/cu. m.	R	1.04E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	1.18E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	1.27E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.44E-004
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	1.85E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.32E-002

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-18
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	5.13E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	6.59E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	5.78E-002
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	1.51E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	1.28E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	9.40E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	3.23E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	6.60E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.46E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-19
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	5.9E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	5.6E-004	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	5.7E-002	kg-day/mg	1.2E-008
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	2.0E-001	kg-day/mg	2.1E-008
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	7.5E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	9.1E-002	kg-day/mg	9.8E-008
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	5.9E-007	mg/kg-day	6.8E-002	kg-day/mg	4.0E-008
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	2.4E-008	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	2.4E-002	kg-day/mg	3.3E-009
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	8.6E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	4.0E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	4.7E-007	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	3.4E-001	kg-day/mg	6.3E-008
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.9E-008	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	2.0E+000	kg-day/mg	2.8E-006
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	2.0E+000	kg-day/mg	3.9E-006
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	2.0E+000	kg-day/mg	5.4E-006
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	5.9E-007	mg/kg-day	2.0E+000	kg-day/mg	1.2E-006
	Arsenic	3.53E+000	mg/kg	NA	NA	M	9.5E-008	mg/kg-day	1.5E+000	kg-day/mg	1.4E-007
	Barium	1.60E+002	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.9E-002	kg-day/mg	5.1E-006
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	4.6E-009	mg/kg-day	7.3E-001	kg-day/mg	3.3E-009
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	4.9E-009	mg/kg-day	7.3E+000	kg-day/mg	3.6E-008
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	7.3E-001	kg-day/mg	7.6E-009
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	7.3E-002	kg-day/mg	7.6E-010
	Beryllium	1.55E+000	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	1.1E+000	kg-day/mg	3.0E-007
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	7.0E-005	mg/kg-day	1.4E-002	kg-day/mg	9.8E-007
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	6.1E-003	kg-day/mg	3.4E-007
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	7.0E-009	mg/kg-day	7.3E-003	kg-day/mg	5.1E-011
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-19
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	6.5E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	6.7E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.6E-008	mg/kg-day	1.6E+000	kg-day/mg	2.5E-008
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	7.8E-002	kg-day/mg	1.7E-008
	Iron	6.72E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	9.5E-004	kg-day/mg	7.5E-009
	Lead	5.99E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	8.0E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	7.5E-003	kg-day/mg	1.1E-007
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	5.3E-007	mg/kg-day	1.2E-001	kg-day/mg	6.3E-008
	Phenol	1.87E+001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	4.5E-008	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	5.2E-002	kg-day/mg	1.2E-005
	Toluene	2.00E+005	mg/kg	NA	NA	M	5.4E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	1.1E-002	kg-day/mg	8.3E-007
	Vanadium	1.17E+001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	6.1E-006	mg/kg-day		kg-day/mg	
	(Total)										3.31E-005
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.3E-002	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	7.0E-002	kg-day/mg	3.49E-007
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	2.9E-001	kg-day/mg	6.82E-007
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	9.1E-002	kg-day/mg	2.23E-006
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	6.8E-002	kg-day/mg	9.16E-007
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	2.4E-002	kg-day/mg	7.64E-008
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	7.3E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-19
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_RWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	9.2E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	3.4E-001	kg-day/mg	1.44E-006
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	6.7E-007	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	2.0E+000	kg-day/mg	6.43E-005
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	2.0E+000	kg-day/mg	8.93E-005
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	2.2E+000	kg-day/mg	1.38E-004
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	2.0E+000	kg-day/mg	2.69E-005
	Arsenic	3.53E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	1.6E+000	kg-day/mg	3.41E-006
	Barium	1.60E+002	mg/kg	NA	NA	M	9.8E-005	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	3.2E-002	kg-day/mg	1.30E-004
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	7.3E-001	kg-day/mg	7.60E-008
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	8.6E+000	kg-day/mg	9.70E-007
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	7.3E-001	kg-day/mg	1.74E-007
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	7.3E-002	kg-day/mg	1.74E-008
	Beryllium	1.55E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	1.1E+000	kg-day/mg	6.95E-006
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	1.4E-002	kg-day/mg	2.23E-005
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	2.9E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	6.4E-003	kg-day/mg	8.21E-006
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	1.8E-002	kg-day/mg	2.83E-009
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	5.8E-006	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day	2.0E+000	kg-day/mg	7.22E-007
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	7.8E-002	kg-day/mg	3.80E-007
	Iron	6.72E+003	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	9.5E-004	kg-day/mg	1.72E-007
	Lead	5.99E+002	mg/kg	NA	NA	M	3.7E-004	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	7.0E-004	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-19
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fRWa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	1.4E-002	kg-day/mg	4.76E-006
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	3.4E-003	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	2.8E-004	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	1.2E-001	kg-day/mg	1.45E-006
	Phenol	1.87E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	5.2E-002	kg-day/mg	2.64E-004
	Toluene	2.00E+005	mg/kg	NA	NA	M	1.2E-001	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.1E-002	kg-day/mg	1.92E-005
	Vanadium	1.17E+001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	(Total)										7.87E-004
										Total Hazard Index Across All Exposure Routes/Pathways	8.2E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	*Soil*
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-20
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_fRWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	8.14E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	4.27E-004	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	2.47E-006	mg/kg-day	5.60E-002	mg/kg-day	1.38E-007
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	1.07E-006	mg/kg-day	2.00E-001	mg/kg-day	2.14E-007
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	1.09E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	9.96E-006	mg/kg-day	9.10E-002	mg/kg-day	9.06E-007
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	9.70E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	1.99E-005	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	3.59E-007	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	5.40E-012	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	3.36E-006	mg/kg-day	2.20E-002	mg/kg-day	7.38E-008
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	3.07E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	1.09E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	1.45E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	1.01E-006	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	2.48E-007	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	1.62E-007	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	3.38E-010	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	5.29E-012	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.21E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	3.22E-013	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	2.32E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	2.02E-006	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	2.26E-010	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	2.28E-011	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	4.05E-013	mg/kg-day		mg/kg-day	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	3.01E-011	mg/kg-day	3.40E-001	mg/kg-day	1.02E-011
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	4.62E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	1.62E-007	mg/kg-day		mg/kg-day	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	1.76E-005	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	2.78E-012	mg/kg-day	1.70E+001	mg/kg-day	4.72E-011
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	1.52E-013	mg/kg-day	6.30E+000	mg/kg-day	9.58E-013
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	1.35E-008	mg/kg-day		mg/kg-day	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	1.38E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	1.90E-010	mg/kg-day	2.00E+000	mg/kg-day	3.81E-010
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	1.54E-010	mg/kg-day	2.00E+000	mg/kg-day	3.07E-010
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	2.36E-010	mg/kg-day	2.00E+000	mg/kg-day	4.72E-010
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	2.95E-010	mg/kg-day	2.00E+000	mg/kg-day	5.90E-010
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	3.34E-011	mg/kg-day	1.51E+001	mg/kg-day	5.04E-010
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	2.24E-009	mg/kg-day		mg/kg-day	
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	7.81E-005	mg/kg-day	2.90E-002	mg/kg-day	2.26E-006
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	4.85E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	1.45E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	8.77E-013	mg/kg-day	3.10E+000	mg/kg-day	2.72E-012
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	2.74E-012	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	7.38E-013	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	2.72E-012	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.22E-011	mg/kg-day		mg/kg-day	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	6.23E-012	mg/kg-day	8.40E+000	mg/kg-day	5.24E-011
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	2.89E-013	mg/kg-day	1.80E+000	mg/kg-day	5.21E-013
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	3.43E-006	mg/kg-day	1.10E+000	mg/kg-day	3.77E-006
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	2.27E-009	mg/kg-day	1.40E-002	mg/kg-day	3.17E-011

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-20
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	9.66E-010	mg/kg-day		mg/kg-day	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	1.61E-010	mg/kg-day	6.30E+000	mg/kg-day	1.01E-009
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	1.49E-010	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	1.31E-005	mg/kg-day		mg/kg-day	
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	8.07E-005	mg/kg-day	8.10E-002	mg/kg-day	6.54E-006
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	1.69E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	2.82E-010	mg/kg-day	4.10E+001	mg/kg-day	1.16E-008
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	1.95E-012	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	2.96E-004	mg/kg-day		mg/kg-day	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	7.97E-011	mg/kg-day		mg/kg-day	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	1.14E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	6.14E-011	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	2.70E-011	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	1.15E-014	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	1.47E-012	mg/kg-day	1.60E+001	mg/kg-day	2.36E-011
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	1.07E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	4.54E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	5.63E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	6.85E-011	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	7.37E-012	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	9.83E-012	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	1.69E-014	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	8.12E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	2.57E-011	mg/kg-day		mg/kg-day	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	1.98E-007	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	7.37E-012	mg/kg-day	3.50E-001	mg/kg-day	2.58E-012
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	9.34E-016	mg/kg-day	4.50E+000	mg/kg-day	4.20E-015
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	4.46E-016	mg/kg-day	9.10E+000	mg/kg-day	4.06E-015
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	4.45E-014	mg/kg-day	1.60E+000	mg/kg-day	7.12E-014
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	4.33E-011	mg/kg-day	7.80E-002	mg/kg-day	3.38E-012
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	6.91E-014	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	7.47E-013	mg/kg-day		mg/kg-day	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	3.05E-005	mg/kg-day		mg/kg-day	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	1.04E-008	mg/kg-day		mg/kg-day	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	4.29E-009	mg/kg-day		mg/kg-day	
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	2.42E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	1.23E-003	mg/kg-day	1.65E-003	mg/kg-day	2.03E-006
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	7.39E-004	mg/kg-day		mg/kg-day	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	9.36E-006	mg/kg-day		mg/kg-day	
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	7.89E-011	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	4.17E-010	mg/kg-day		mg/kg-day	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	2.11E-004	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	1.42E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	6.42E-011	mg/kg-day		mg/kg-day	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	2.72E-006	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	3.56E-011	mg/kg-day		mg/kg-day	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	4.03E-011	mg/kg-day		mg/kg-day	
	Selenium	4.31E-001	mg/kg	6.06E-010	mg/cu. m.	R	7.42E-012	mg/kg-day		mg/kg-day	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	8.40E-012	mg/kg-day		mg/kg-day	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	9.06E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	1.32E-004	mg/kg-day	2.00E-003	mg/kg-day	2.65E-007

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-20
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	3.67E-013	mg/kg-day		mg/kg-day	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	4.71E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	1.08E-004	mg/kg-day	6.00E-003	mg/kg-day	6.46E-007
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	9.11E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	6.71E-008	mg/kg-day	3.00E-001	mg/kg-day	2.01E-008
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	2.31E-004	mg/kg-day		mg/kg-day	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	4.71E-009	mg/kg-day		mg/kg-day	
	(Total)										1.69E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-21
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.xls4 \TT_ID_ILAWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.48E-004
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.18E+000
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	9.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.28E-003
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.33E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.49E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.50E-003
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.01E-002
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.85E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	9.9E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.31E-005
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.95E-004
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	6.0E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	9.96E-004
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.80E-002
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.74E-004
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.54E-003
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.76E-004
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.11E-002
	4-Methylphenol	1.78E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.98E-003
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	7.8E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.56E-002
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.07E-004
	Acetone	6.50E+002	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.33E-003
	Aluminum	8.22E+003	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	9.26E-003
	Anthracene	1.10E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.13E-006
	Antimony	8.34E+000	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.35E-002
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	5.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	8.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	5.64E+000
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.33E-002
	Barium	1.60E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.58E-003
	Benzene	6.61E+003	mg/kg	NA	NA	M	7.5E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.48E+000
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.66E-006
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	4.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	4.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	8.75E-004
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.47E-001
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.69E-003
	Cadmium	1.42E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.60E-002
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.64E-004
	Chloroform	2.10E+003	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.37E-001
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	6.65E-005
	Chrysene	2.60E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.35E-001
	Cobalt	7.32E+000	mg/kg	NA	NA	M	8.3E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.38E-004
	Copper	5.31E+001	mg/kg	NA	NA	M	6.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.50E-003
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.11E-004
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.18E-003
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.39E-005
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	6.73E-006
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.81E-003
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.51E-004
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	7.6E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.55E-002
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	4.3E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.07E-004
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.68E-004
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	6.7E-007	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	8.31E-004

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-21
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_IUWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	9.0E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	4.48E-002
	Iron	6.72E+003	mg/kg	NA	NA	M	7.6E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.52E-002
	Isophorone	2.96E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.67E-003
	Lead	5.99E+002	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.43E-002
	Mercury	2.99E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	6.4E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.07E-002
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	6.2E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.10E-003
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	5.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.62E-002
	Nickel	7.89E+000	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.45E-004
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.20E-004
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.41E-004
	Phenol	1.87E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.52E-005
	Pyrene	5.90E+000	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.22E-004
	Selenium	4.31E-001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.72E-005
	Silver	1.67E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.77E-004
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.07E-004
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.36E-001
	Toluene	2.00E+005	mg/kg	NA	NA	M	2.3E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.13E+000
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	3.2E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	5.26E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.89E-003
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.41E-002
	Zinc	2.29E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.62E-004
	(Total)												1.29E+001
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.25E-002
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.2E+000	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.96E+001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	1.42E-001
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	5.27E-003
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.78E-002
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.57E-002
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.51E+000
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.44E-002
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.66E-003
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	9.84E-003
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	5.28E-002
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.08E-001
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.38E-002
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	7.76E-002
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.41E-002
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	8.5E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.06E+000
	4-Methylphenol	1.78E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.08E-001
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	7.85E-001
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.04E-002
	Acetone	6.50E+002	mg/kg	NA	NA	M	3.7E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	4.70E-001
	Aluminum	8.22E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.66E-001
	Anthracene	1.10E+000	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.06E-004
	Antimony	8.34E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	1.18E+002
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	3.19E+002
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	7.03E-001
	Barium	1.60E+002	mg/kg	NA	NA	M	9.1E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.30E-001
	Benzene	6.61E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	1.39E+002
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.84E-004
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Ben[illegible]pyrene	1.85E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-21
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_3D_IUWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	8.8E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.40E+000
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	5.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.38E+000
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.36E-001
	Cadmium	1.42E+001	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.22E+001
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	9.15E-002
	Chloroform	2.10E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	1.25E+001
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	5.0E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	8.37E-001
	Chrysene	2.60E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	6.8E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.81E+000
	Cobalt	7.32E+000	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.92E-003
	Copper	5.31E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.26E-001
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.12E-002
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.96E-002
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.71E-003
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.39E-004
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.46E-001
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.77E-002
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.13E+000
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.39E-003
	Fluorene	9.49E+000	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.35E-002
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	5.23E-002
	Hexachlorobutadiene	7.98E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.26E+000
	Iron	6.72E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.27E+000
	Isophorone	2.96E+002	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.41E-002
	Lead	5.99E+002	mg/kg	NA	NA	M	3.4E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	6.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.24E+000
	Mercury	2.99E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	9.80E-001
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	3.1E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.73E-001
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	2.6E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.32E+000
	Nickel	7.89E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.48E-001
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	6.2E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.47E-002
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.73E-002
	Phenol	1.87E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.77E-003
	Pyrene	5.90E+000	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.12E-002
	Selenium	4.31E-001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.90E-003
	Silver	1.67E+000	mg/kg	NA	NA	M	9.5E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	9.05E-002
	Styrene	9.00E+001	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.55E-002
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.71E+001
	Toluene	2.00E+005	mg/kg	NA	NA	M	1.1E+001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.68E+001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	2.70E+001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	6.7E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	9.52E-002
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.93E-001
	Zinc	2.29E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.45E-001
	(Total)												8.53E+002
												Total Hazard Index Across All Exposure Routes/Pathways	8.7E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-22
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_tnh_RWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	4.69E-003	mg/cu. m.	R	9.18E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.56E-003
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.35E-001	mg/cu. m.	R	6.55E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.29E-001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	6.08E-004	mg/cu. m.	R	1.19E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	1.33E-004	mg/cu. m.	R	2.60E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.79E+001	mg/kg	4.84E-004	mg/cu. m.	R	9.46E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	1.05E-002
	1,2-Dichloroethane	4.00E+001	mg/kg	5.29E-003	mg/cu. m.	R	1.04E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	7.40E-001
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	4.18E-002	mg/cu. m.	R	8.19E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.20E+001	mg/kg	3.04E-003	mg/cu. m.	R	5.96E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	5.23E-001
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	4.69E-005	mg/cu. m.	R	9.18E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	1.61E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.28E-006	mg/cu. m.	R	8.38E-009	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	4.19E-006
	1,4-Dichlorobenzene	5.20E+000	mg/kg	1.89E-004	mg/cu. m.	R	3.69E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	1.61E-004
	2-Butanone	5.30E+002	mg/kg	1.77E-005	mg/cu. m.	R	3.47E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.21E-005
	2-Methylnaphthalene	3.20E+002	mg/kg	2.80E-004	mg/cu. m.	R	5.49E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.21E+001	mg/kg	4.57E-005	mg/cu. m.	R	8.93E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	4.10E+000	mg/kg	1.44E-005	mg/cu. m.	R	2.81E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	3.19E-005	mg/cu. m.	R	6.25E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.17E-008	mg/cu. m.	R	2.28E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.15E-002	mg/cu. m.	R	2.24E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.12E-001
	4-Methylphenol	1.76E+001	mg/kg	1.35E-004	mg/cu. m.	R	2.64E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	1.60E-007	mg/cu. m.	R	3.14E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	6.92E+000	mg/kg	2.14E-007	mg/cu. m.	R	4.18E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	2.41E-005	mg/cu. m.	R	4.72E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.32E-006	mg/cu. m.	R	1.82E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	6.50E+002	mg/kg	1.94E-002	mg/cu. m.	R	3.80E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.10E+000	mg/kg	7.40E-007	mg/cu. m.	R	1.45E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.34E+000	mg/kg	7.26E-007	mg/cu. m.	R	1.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.25E+001	mg/kg	1.37E-006	mg/cu. m.	R	2.68E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.29E+001	mg/kg	9.41E-007	mg/cu. m.	R	1.84E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.58E-006	mg/cu. m.	R	3.10E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.20E+001	mg/kg	9.83E-007	mg/cu. m.	R	1.92E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.53E+000	mg/kg	2.22E-007	mg/cu. m.	R	4.35E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.60E+002	mg/kg	1.20E-005	mg/cu. m.	R	2.35E-006	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.68E-002
	Benzene	6.61E+003	mg/kg	5.88E-002	mg/cu. m.	R	1.15E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	6.77E+000
	Benzoic Acid	1.30E+001	mg/kg	1.98E-004	mg/cu. m.	R	3.87E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	1.70E-001	mg/kg	6.56E-010	mg/cu. m.	R	1.28E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	9.17E-010	mg/cu. m.	R	1.79E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	9.56E-010	mg/cu. m.	R	1.87E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	8.06E-010	mg/cu. m.	R	1.58E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.55E+000	mg/kg	4.38E-006	mg/cu. m.	R	8.58E-009	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.50E-003
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	1.70E-004	mg/cu. m.	R	3.33E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.48E-005	mg/cu. m.	R	2.89E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.78E+002	mg/kg	5.58E-006	mg/cu. m.	R	1.09E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.42E+001	mg/kg	6.69E-007	mg/cu. m.	R	1.31E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.18E-006	mg/cu. m.	R	2.31E-007	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.15E-006
	Chlorobenzene	1.00E+001	mg/kg	7.51E-004	mg/cu. m.	R	1.47E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.94E-002
	Chloroform	2.10E+003	mg/kg	5.48E-002	mg/cu. m.	R	1.07E-002	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.25E+002
	Chromium 3+	8.85E+001	mg/kg	7.56E-006	mg/cu. m.	R	1.48E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.26E-006	mg/cu. m.	R	2.47E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	2.60E-001	mg/kg	8.22E-010	mg/cu. m.	R	1.61E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.09E-001	mg/cu. m.	R	4.09E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	7.32E+000	mg/kg	5.11E-007	mg/cu. m.	R	1.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.31E+001	mg/kg	3.19E-006	mg/cu. m.	R	6.24E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	3.74E+000	mg/kg	4.32E-007	mg/cu. m.	R	8.46E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	1.90E-007	mg/cu. m.	R	3.73E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	1.10E-006	mg/cu. m.	R	2.14E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	2.41E+001	mg/kg	6.98E-007	mg/cu. m.	R	1.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	5.97E+001	mg/kg	2.42E-006	mg/cu. m.	R	4.73E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-22
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \TT_Inh_RWs1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-butylphthalate	2.49E+002	mg/kg	3.80E-006	mg/cu. m.	R	7.44E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	9.77E+000	mg/kg	4.47E-007	mg/cu. m.	R	8.76E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	5.35E-008	mg/cu. m.	R	1.05E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	7.14E-008	mg/cu. m.	R	1.40E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	6.11E-010	mg/cu. m.	R	1.20E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	5.07E-002	mg/cu. m.	R	9.92E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	3.42E-002
	Fluoranthene	3.80E+000	mg/kg	1.70E-007	mg/cu. m.	R	3.33E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.49E+000	mg/kg	1.04E-005	mg/cu. m.	R	2.03E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	5.43E-008	mg/cu. m.	R	1.06E-008	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	5.32E-005
	Hexachlorobenzene	5.90E-001	mg/kg	3.22E-010	mg/cu. m.	R	6.31E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	7.96E+000	mg/kg	2.71E-007	mg/cu. m.	R	5.31E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	4.89E-010	mg/cu. m.	R	9.57E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.96E+002	mg/kg	1.56E-003	mg/cu. m.	R	3.06E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	5.99E+002	mg/kg	3.87E-005	mg/cu. m.	R	7.57E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.14E+003	mg/kg	3.00E-005	mg/cu. m.	R	5.86E-006	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	4.10E-001
	Mercury	2.99E+000	mg/kg	1.45E-007	mg/cu. m.	R	2.84E-008	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.30E-004
	Methylene Chloride	5.70E+002	mg/kg	7.55E-002	mg/cu. m.	R	1.48E-002	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.72E-002
	m,p-xylene	5.50E+003	mg/kg	5.68E-002	mg/cu. m.	R	1.11E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.64E+002	mg/kg	9.58E-004	mg/cu. m.	R	1.88E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	2.08E-001
	Nickel	7.89E+000	mg/kg	4.68E-007	mg/cu. m.	R	9.16E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.10E+003	mg/kg	2.48E-002	mg/cu. m.	R	4.84E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.97E+001	mg/kg	8.77E-007	mg/cu. m.	R	1.72E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	4.03E-007	mg/cu. m.	R	7.89E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.87E+001	mg/kg	1.31E-004	mg/cu. m.	R	2.56E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.58E-007	mg/cu. m.	R	5.04E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	5.90E+000	mg/kg	2.64E-007	mg/cu. m.	R	5.16E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.31E-001	mg/kg	3.15E-008	mg/cu. m.	R	6.17E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.87E+000	mg/kg	1.61E-008	mg/cu. m.	R	3.15E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	9.00E+001	mg/kg	3.10E-003	mg/cu. m.	R	6.07E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.12E-003
	Tetrachloroethene	8.30E+003	mg/kg	8.58E-002	mg/cu. m.	R	1.29E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	9.20E-002
	Toluene	2.00E+005	mg/kg	1.22E-001	mg/cu. m.	R	2.39E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.10E-001
	Trichloroethene	2.80E+003	mg/kg	5.01E-002	mg/cu. m.	R	9.81E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	6.20E-007	mg/cu. m.	R	1.21E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.50E+004	mg/kg	5.53E-002	mg/cu. m.	R	1.08E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	2.29E+002	mg/kg	1.70E-005	mg/cu. m.	R	3.33E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.34E+002

0

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-23
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_fUWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	8.5E-003	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	5.7E-002	kg-day/mg	1.9E-007
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	2.0E-001	kg-day/mg	3.1E-007
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	9.1E-002	kg-day/mg	1.5E-006
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	9.7E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	6.8E-002	kg-day/mg	6.0E-007
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	2.4E-002	kg-day/mg	5.0E-008
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	6.0E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.78E+001	mg/kg	NA	NA	M	7.1E-006	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	3.4E-001	kg-day/mg	9.5E-007
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	4.4E-007	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	2.0E+000	kg-day/mg	4.2E-005
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E+000	kg-day/mg	5.9E-005
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	2.0E+000	kg-day/mg	8.1E-005
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	2.0E+000	kg-day/mg	1.8E-005
	Arsenic	3.53E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	1.5E+000	kg-day/mg	2.1E-006
	Barium	1.60E+002	mg/kg	NA	NA	M	6.4E-005	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	2.9E-002	kg-day/mg	7.7E-005
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	5.2E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	6.8E-008	mg/kg-day	7.3E-001	kg-day/mg	5.0E-008
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	7.4E-008	mg/kg-day	7.3E+000	kg-day/mg	5.4E-007
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	7.3E-001	kg-day/mg	1.1E-007
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	7.3E-002	kg-day/mg	1.1E-008
	Beryllium	1.55E+000	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	1.1E+000	kg-day/mg	4.6E-006
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.4E-002	kg-day/mg	1.5E-005
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	5.7E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	6.1E-003	kg-day/mg	5.2E-006
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	7.3E-003	kg-day/mg	7.6E-010
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	4.8E-004	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	9.7E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	2.7E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	1.6E+000	kg-day/mg	3.8E-007

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-23
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wb4 \ TT_ID_fUWa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	7.8E-002	kg-day/mg	2.5E-007
	Iron	6.72E+003	mg/kg	NA	NA	M	2.7E-003	mg/kg-day		kg-day/mg	
	Isophorone	2.98E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	9.5E-004	kg-day/mg	1.1E-007
	Lead	5.99E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	4.6E-004	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	7.5E-003	kg-day/mg	1.7E-006
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	4.4E-004	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	1.2E-001	kg-day/mg	9.5E-007
	Phenol	1.87E+001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	6.7E-007	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	5.2E-002	kg-day/mg	1.7E-004
	Toluene	2.00E+005	mg/kg	NA	NA	M	8.1E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	1.1E-002	kg-day/mg	1.2E-005
	Vanadium	1.17E+001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	1.0E-002	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	9.2E-005	mg/kg-day		kg-day/mg	
	(Total)										4.97E-004
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	4.3E-001	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.0E-002	kg-day/mg	1.16E-005
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	2.9E-001	kg-day/mg	2.26E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	5.6E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	8.1E-004	mg/kg-day	9.1E-002	kg-day/mg	7.38E-005
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	6.8E-002	kg-day/mg	3.03E-005
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.4E-002	kg-day/mg	2.53E-006
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	6.5E-003	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.78E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	3.4E-001	kg-day/mg	4.77E-005
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	2.0E+000	kg-day/mg	2.13E-003
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E+000	kg-day/mg	2.96E-003
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.2E+000	kg-day/mg	4.55E-003
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E+000	kg-day/mg	8.92E-004
	Arsenic	3.53E+000	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	1.6E+000	kg-day/mg	1.13E-004
	Barium	1.60E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	3.2E-002	kg-day/mg	4.32E-003
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	7.3E-001	kg-day/mg	2.52E-006
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	8.6E+000	kg-day/mg	3.21E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-23
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_RAWs1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	7.3E-001	kg-day/mg	5.77E-006
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	7.3E-002	kg-day/mg	5.77E-007
	Beryllium	1.55E+000	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.1E+000	kg-day/mg	2.30E-004
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	5.3E-002	mg/kg-day	1.4E-002	kg-day/mg	7.38E-004
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	9.7E-003	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	4.3E-002	mg/kg-day	6.4E-003	kg-day/mg	2.72E-004
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	1.8E-002	kg-day/mg	9.38E-006
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	7.6E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E+000	kg-day/mg	2.39E-005
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.8E-002	kg-day/mg	1.26E-005
	Iron	6.72E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	6.0E-003	mg/kg-day	9.5E-004	kg-day/mg	5.70E-006
	Lead	5.99E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.3E-002	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.4E-002	kg-day/mg	1.58E-004
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.1E-001	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	9.4E-003	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.2E-002	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	1.2E-001	kg-day/mg	4.79E-005
	Phenol	1.87E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	5.2E-002	kg-day/mg	8.75E-003
	Toluene	2.00E+005	mg/kg	NA	NA	M	4.1E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	1.1E-002	kg-day/mg	6.37E-004
	Vanadium	1.17E+001	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	5.1E-001	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	4.6E-003	mg/kg-day		kg-day/mg	
	(Total)										2.61E-002
										Total Hazard Index Across All Exposure Routes/Pathways	2.7E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-24
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWs1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	4.69E-003	mg/cu. m.	R	3.28E-004	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.35E-001	mg/cu. m.	R	2.34E-002	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	6.08E-004	mg/cu. m.	R	4.25E-005	mg/kg-day	5.60E-002	mg/kg-day	2.38E-006
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	1.33E-004	mg/cu. m.	R	9.28E-006	mg/kg-day	2.00E-001	mg/kg-day	1.86E-006
	1,2-Dichlorobenzene	2.79E+001	mg/kg	4.84E-004	mg/cu. m.	R	3.38E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	4.00E+001	mg/kg	5.29E-003	mg/cu. m.	R	3.70E-004	mg/kg-day	9.10E-002	mg/kg-day	3.37E-005
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	4.18E-002	mg/cu. m.	R	2.92E-003	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.20E+001	mg/kg	3.04E-003	mg/cu. m.	R	2.13E-004	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	4.69E-005	mg/cu. m.	R	3.28E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.28E-006	mg/cu. m.	R	2.99E-009	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	1.89E-004	mg/cu. m.	R	1.32E-005	mg/kg-day	2.20E-002	mg/kg-day	2.90E-007
	2-Butanone	5.30E+002	mg/kg	1.77E-005	mg/cu. m.	R	1.24E-006	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.20E+002	mg/kg	2.80E-004	mg/cu. m.	R	1.96E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.21E+001	mg/kg	4.57E-005	mg/cu. m.	R	3.19E-006	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	4.10E+000	mg/kg	1.44E-005	mg/cu. m.	R	1.00E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	3.19E-005	mg/cu. m.	R	2.23E-006	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.17E-006	mg/cu. m.	R	8.15E-010	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.15E-002	mg/cu. m.	R	8.02E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.76E+001	mg/kg	1.35E-004	mg/cu. m.	R	9.43E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	1.60E-007	mg/cu. m.	R	1.12E-008	mg/kg-day		mg/kg-day	
	4,4'-DDT	6.92E+000	mg/kg	2.14E-007	mg/cu. m.	R	1.49E-008	mg/kg-day	3.40E-001	mg/kg-day	5.08E-009
	Acenaphthene	1.10E+001	mg/kg	2.41E-005	mg/cu. m.	R	1.69E-006	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.32E-006	mg/cu. m.	R	6.51E-007	mg/kg-day		mg/kg-day	
	Acetone	6.50E+002	mg/kg	1.94E-002	mg/cu. m.	R	1.36E-003	mg/kg-day		mg/kg-day	
	Anthracene	1.10E+000	mg/kg	7.40E-007	mg/cu. m.	R	5.17E-008	mg/kg-day		mg/kg-day	
	Antimony	8.34E+000	mg/kg	7.26E-007	mg/cu. m.	R	5.08E-008	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.25E+001	mg/kg	1.37E-006	mg/cu. m.	R	9.56E-008	mg/kg-day	2.00E+000	mg/kg-day	1.91E-007
	Aroclor-1248	7.29E+001	mg/kg	9.41E-007	mg/cu. m.	R	6.57E-008	mg/kg-day	2.00E+000	mg/kg-day	1.31E-007
	Aroclor-1254	1.00E+002	mg/kg	1.58E-006	mg/cu. m.	R	1.11E-007	mg/kg-day	2.00E+000	mg/kg-day	2.21E-007
	Aroclor-1260	2.20E+001	mg/kg	9.83E-007	mg/cu. m.	R	6.87E-008	mg/kg-day	2.00E+000	mg/kg-day	1.37E-007
	Arsenic	3.53E+000	mg/kg	2.22E-007	mg/cu. m.	R	1.55E-008	mg/kg-day	1.51E+001	mg/kg-day	2.34E-007
	Barium	1.60E+002	mg/kg	1.20E-005	mg/cu. m.	R	8.40E-007	mg/kg-day		mg/kg-day	
	Benzene	6.61E+003	mg/kg	5.88E-002	mg/cu. m.	R	4.11E-003	mg/kg-day	2.90E-002	mg/kg-day	1.19E-004
	Benzoic Acid	1.30E+001	mg/kg	1.98E-004	mg/cu. m.	R	1.38E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	1.70E-001	mg/kg	6.56E-010	mg/cu. m.	R	4.58E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	9.17E-010	mg/cu. m.	R	6.41E-011	mg/kg-day	3.10E+000	mg/kg-day	1.99E-010
	Benzo(b)fluoranthene	3.90E-001	mg/kg	9.56E-010	mg/cu. m.	R	6.68E-011	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	8.06E-010	mg/cu. m.	R	5.63E-011	mg/kg-day		mg/kg-day	
	Beryllium	1.55E+000	mg/kg	4.38E-008	mg/cu. m.	R	3.06E-009	mg/kg-day	8.40E+000	mg/kg-day	2.57E-008
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	1.70E-004	mg/cu. m.	R	1.19E-005	mg/kg-day	1.10E+000	mg/kg-day	1.31E-005
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.48E-005	mg/cu. m.	R	1.03E-006	mg/kg-day	1.40E-002	mg/kg-day	1.44E-008
	Butylbenzylphthalate	4.78E+002	mg/kg	5.58E-006	mg/cu. m.	R	3.90E-007	mg/kg-day		mg/kg-day	
	Cadmium	1.42E+001	mg/kg	6.69E-007	mg/cu. m.	R	4.68E-008	mg/kg-day	6.30E+000	mg/kg-day	2.95E-007
	Carbon Disulfide	0.00E+000	mg/kg	1.18E-006	mg/cu. m.	R	8.24E-008	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+001	mg/kg	7.51E-004	mg/cu. m.	R	5.25E-005	mg/kg-day		mg/kg-day	
	Chloroform	2.10E+003	mg/kg	5.48E-002	mg/cu. m.	R	3.83E-003	mg/kg-day	8.10E-002	mg/kg-day	3.10E-004
	Chromium 3+	8.85E+001	mg/kg	7.56E-006	mg/cu. m.	R	5.28E-007	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.26E-006	mg/cu. m.	R	8.80E-008	mg/kg-day	4.10E+001	mg/kg-day	3.61E-006
	Chrysene	2.60E-001	mg/kg	8.22E-010	mg/cu. m.	R	5.75E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.09E-001	mg/cu. m.	R	1.46E-002	mg/kg-day		mg/kg-day	
	Cobalt	7.32E+000	mg/kg	5.11E-007	mg/cu. m.	R	3.57E-008	mg/kg-day		mg/kg-day	
	Copper	5.31E+001	mg/kg	3.19E-006	mg/cu. m.	R	2.23E-007	mg/kg-day		mg/kg-day	
	Cyanide (total)	3.74E+000	mg/kg	4.32E-007	mg/cu. m.	R	3.02E-008	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	1.90E-007	mg/cu. m.	R	1.33E-008	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	1.10E-006	mg/cu. m.	R	7.65E-010	mg/kg-day	1.60E+001	mg/kg-day	1.22E-008
	Diethylphthalate	2.41E+001	mg/kg	6.98E-007	mg/cu. m.	R	4.88E-008	mg/kg-day		mg/kg-day	
	Dimethylphthalate	5.97E+001	mg/kg	2.42E-006	mg/cu. m.	R	1.69E-007	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-24
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWs1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Di-n-butylphthalate	2.49E+002	mg/kg	3.80E-006	mg/cu. m.	R	2.66E-007	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	9.77E+000	mg/kg	4.47E-007	mg/cu. m.	R	3.13E-008	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	5.35E-008	mg/cu. m.	R	3.74E-009	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	7.14E-008	mg/cu. m.	R	4.99E-009	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	6.11E-010	mg/cu. m.	R	4.27E-011	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	5.07E-002	mg/cu. m.	R	3.54E-003	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	1.70E-007	mg/cu. m.	R	1.19E-008	mg/kg-day		mg/kg-day	
	Fluorene	9.49E+000	mg/kg	1.04E-005	mg/cu. m.	R	7.26E-007	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	5.43E-008	mg/cu. m.	R	3.80E-009	mg/kg-day	3.50E-001	mg/kg-day	1.33E-009
	Hexachlorobenzene	5.90E-001	mg/kg	3.22E-010	mg/cu. m.	R	2.25E-011	mg/kg-day	1.60E+000	mg/kg-day	3.60E-011
	Hexachlorobutadiene	7.98E+000	mg/kg	2.71E-007	mg/cu. m.	R	1.90E-008	mg/kg-day	7.80E-002	mg/kg-day	1.48E-009
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	4.89E-010	mg/cu. m.	R	3.42E-011	mg/kg-day		mg/kg-day	
	Isophorone	2.96E+002	mg/kg	1.56E-003	mg/cu. m.	R	1.09E-004	mg/kg-day		mg/kg-day	
	Lead	5.99E+002	mg/kg	3.87E-005	mg/cu. m.	R	2.70E-006	mg/kg-day		mg/kg-day	
	Manganese	1.14E+003	mg/kg	3.00E-005	mg/cu. m.	R	2.09E-006	mg/kg-day		mg/kg-day	
	Mercury	2.99E+000	mg/kg	1.45E-007	mg/cu. m.	R	1.01E-008	mg/kg-day		mg/kg-day	
	Methylene Chloride	5.70E+002	mg/kg	7.55E-002	mg/cu. m.	R	5.28E-003	mg/kg-day	1.65E-003	mg/kg-day	8.71E-006
	m,p-xylene	5.50E+003	mg/kg	5.68E-002	mg/cu. m.	R	3.97E-003	mg/kg-day		mg/kg-day	
	Naphthalene	4.64E+002	mg/kg	9.58E-004	mg/cu. m.	R	6.70E-005	mg/kg-day		mg/kg-day	
	Nickel	7.89E+000	mg/kg	4.68E-007	mg/cu. m.	R	3.27E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	1.10E+003	mg/kg	2.48E-002	mg/cu. m.	R	1.73E-003	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.97E+001	mg/kg	8.77E-007	mg/cu. m.	R	6.13E-008	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	4.03E-007	mg/cu. m.	R	2.82E-008	mg/kg-day		mg/kg-day	
	Phenol	1.67E+001	mg/kg	1.31E-004	mg/cu. m.	R	9.15E-006	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.58E-007	mg/cu. m.	R	1.80E-008	mg/kg-day		mg/kg-day	
	Pyrene	5.90E+000	mg/kg	2.64E-007	mg/cu. m.	R	1.84E-008	mg/kg-day		mg/kg-day	
	Selenium	4.31E-001	mg/kg	3.15E-008	mg/cu. m.	R	2.20E-009	mg/kg-day		mg/kg-day	
	Silver	1.67E+000	mg/kg	1.61E-008	mg/cu. m.	R	1.13E-009	mg/kg-day		mg/kg-day	
	Styrene	9.00E+001	mg/kg	3.10E-003	mg/cu. m.	R	2.17E-004	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.30E+003	mg/kg	6.58E-002	mg/cu. m.	R	4.60E-003	mg/kg-day	2.00E-003	mg/kg-day	9.20E-006
	Toluene	2.00E+005	mg/kg	1.22E-001	mg/cu. m.	R	8.53E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	2.80E+003	mg/kg	5.01E-002	mg/cu. m.	R	3.50E-003	mg/kg-day	6.00E-003	mg/kg-day	2.10E-005
	Vanadium	1.17E+001	mg/kg	6.20E-007	mg/cu. m.	R	4.33E-008	mg/kg-day		mg/kg-day	
	Xylenes (total)	2.50E+004	mg/kg	5.53E-002	mg/cu. m.	R	3.87E-003	mg/kg-day		mg/kg-day	
	Zinc	2.29E+002	mg/kg	1.70E-005	mg/cu. m.	R	1.19E-006	mg/kg-day		mg/kg-day	
	(Total)										5.24E-004

0

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-25
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_RAWs1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.14E-004
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.50E+000
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.89E-003
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	5.6E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	9.29E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	4.42E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	5.7E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.90E-003
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.81E-002
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.14E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.19E-005
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.48E-004
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.26E-003
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.29E-002
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	3.47E-004
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.95E-003
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.57E-004
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.68E-002
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	5.04E-003
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	9.9E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.98E-002
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.62E-004
	Acetone	6.50E+002	mg/kg	NA	NA	M	9.3E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.29E-003
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.17E-002
	Anthracene	1.10E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.24E-006
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.98E-002
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	7.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	7.14E+000
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.68E-002
	Barium	1.60E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.27E-003
	Benzene	6.61E+003	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	3.15E+000
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	4.64E-006
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.11E-003
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.86E-001
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.41E-003
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	2.03E-002
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.14E-004
	Chloroform	2.10E+003	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.00E-001
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	8.43E-005
	Chrysene	2.60E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.71E-001
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.74E-004
	Copper	5.31E+001	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.90E-003
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.67E-004
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.50E-003
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.30E-005
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	8.52E-006
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.56E-003
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.98E-004
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	9.6E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.57E-002
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	5.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.36E-004
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.39E-004
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.4E-007	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	1.05E-003

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-25
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_RAWs1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	5.68E-002
	Iron	6.72E+003	mg/kg	NA	NA	M	9.6E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.20E-002
	Isophorone	2.96E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.12E-003
	Lead	5.99E+002	mg/kg	NA	NA	M	8.6E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.15E-002
	Mercury	2.99E+000	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	8.1E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.36E-002
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	7.9E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.93E-003
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.32E-002
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.63E-004
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	7.86E-004
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	9.39E-004
	Phenol	1.87E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	4.46E-005
	Pyrene	5.90E+000	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.81E-004
	Selenium	4.31E-001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.23E-004
	Silver	1.67E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.78E-004
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.43E-004
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.19E+000
	Toluene	2.00E+005	mg/kg	NA	NA	M	2.9E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.43E+000
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	6.67E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.40E-003
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.79E-002
	Zinc	2.29E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.09E-003
	(Total)												1.63E+001
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.14E-003
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	3.0E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.50E+001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	3.57E-002
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	1.33E-003
	1,2-Dichlorobenzene	2.78E+001	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	4.42E-003
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.90E-002
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.81E-001
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.14E-003
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.19E-004
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.48E-003
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	7.6E-003	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.33E-002
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	4.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.29E-001
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	3.47E-003
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.95E-002
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.57E-003
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.68E-001
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	7.76E-002
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	9.9E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.98E-001
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.62E-003
	Acetone	6.50E+002	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	1.18E-001
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.17E-001
	Anthracene	1.10E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.24E-005
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.98E+001
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	7.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	8.03E+001
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.77E-001
	Barium	1.60E+002	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.27E-002
	Benzene	6.61E+003	mg/kg	NA	NA	M	9.4E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	3.50E+001
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	4.64E-005
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-25
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_RAWs1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.11E+000
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	3.7E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.86E+000
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.41E-002
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	8.10E+000
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	2.30E-002
	Chloroform	2.10E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	3.14E+000
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.11E-001
	Chrysene	2.60E-001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.71E+000
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.74E-003
	Copper	5.31E+001	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	3.16E-002
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.34E-003
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	6.0E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.50E-002
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.30E-004
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	8.52E-005
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	3.67E-002
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.98E-003
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	9.6E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.04E+000
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.36E-003
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.39E-003
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	1.32E-002
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	5.68E-001
	Iron	6.72E+003	mg/kg	NA	NA	M	9.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.20E-001
	Isophorone	2.96E+002	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.12E-002
	Lead	5.99E+002	mg/kg	NA	NA	M	8.6E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.15E-001
	Mercury	2.99E+000	mg/kg	NA	NA	M	4.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	8.1E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	2.47E-001
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	7.9E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	4.37E-002
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	6.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.32E-001
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.13E-001
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	8.73E-003
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	9.39E-003
	Phenol	1.87E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	4.46E-004
	Pyrene	5.90E+000	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.81E-003
	Selenium	4.31E-001	mg/kg	NA	NA	M	6.2E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.23E-003
	Silver	1.67E+000	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.28E-002
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.43E-003
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.19E+001
	Toluene	2.00E+005	mg/kg	NA	NA	M	2.9E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.43E+001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	6.80E+000
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.40E-002
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	3.6E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.00E-001
	Zinc	2.29E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.64E-002
	(Total)												2.15E+002
												Total Hazard Index Across All Exposure Routes/Pathways	2.3E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-26
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RfVs1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	4.69E-003	mg/cu. m.	R	1.34E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	9.57E-003
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.35E-001	mg/cu. m.	R	9.56E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.34E-001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	6.08E-004	mg/cu. m.	R	1.74E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	1.33E-004	mg/cu. m.	R	3.79E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.79E+001	mg/kg	4.84E-004	mg/cu. m.	R	1.38E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	1.54E-002
	1,2-Dichloroethane	4.00E+001	mg/kg	5.29E-003	mg/cu. m.	R	1.51E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.08E+000
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	4.18E-002	mg/cu. m.	R	1.20E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.20E+001	mg/kg	3.04E-003	mg/cu. m.	R	8.70E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	7.63E-001
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	4.69E-005	mg/cu. m.	R	1.34E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.35E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.28E-008	mg/cu. m.	R	1.22E-008	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	6.11E-006
	1,4-Dichlorobenzene	5.20E+000	mg/kg	1.89E-004	mg/cu. m.	R	5.39E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.35E-004
	2-Butanone	5.30E+002	mg/kg	1.77E-005	mg/cu. m.	R	5.06E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.77E-005
	2-Methylnaphthalene	3.20E+002	mg/kg	2.80E-004	mg/cu. m.	R	8.01E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.21E+001	mg/kg	4.57E-005	mg/cu. m.	R	1.30E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	4.10E+000	mg/kg	1.44E-005	mg/cu. m.	R	4.10E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	3.19E-005	mg/cu. m.	R	9.12E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.17E-008	mg/cu. m.	R	3.33E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.15E-002	mg/cu. m.	R	3.28E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.64E-001
	4-Methylphenol	1.76E+001	mg/kg	1.35E-004	mg/cu. m.	R	3.86E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	1.60E-007	mg/cu. m.	R	4.58E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	6.92E+000	mg/kg	2.14E-007	mg/cu. m.	R	6.11E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	2.41E-005	mg/cu. m.	R	6.90E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.32E-006	mg/cu. m.	R	2.66E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	6.50E+002	mg/kg	1.94E-002	mg/cu. m.	R	5.55E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.10E+000	mg/kg	7.40E-007	mg/cu. m.	R	2.11E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.34E+000	mg/kg	7.26E-007	mg/cu. m.	R	2.08E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.25E+001	mg/kg	1.37E-006	mg/cu. m.	R	3.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.29E+001	mg/kg	9.41E-007	mg/cu. m.	R	2.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.58E-006	mg/cu. m.	R	4.52E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.20E+001	mg/kg	9.83E-007	mg/cu. m.	R	2.81E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.53E+000	mg/kg	2.22E-007	mg/cu. m.	R	6.35E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.60E+002	mg/kg	1.20E-005	mg/cu. m.	R	3.43E-006	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.45E-002
	Benzene	6.61E+003	mg/kg	5.88E-002	mg/cu. m.	R	1.68E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	9.89E+000
	Benzoic Acid	1.30E+001	mg/kg	1.98E-004	mg/cu. m.	R	5.65E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	1.70E-001	mg/kg	6.56E-010	mg/cu. m.	R	1.87E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	9.17E-010	mg/cu. m.	R	2.62E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	9.56E-010	mg/cu. m.	R	2.73E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	8.06E-010	mg/cu. m.	R	2.30E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.55E+000	mg/kg	4.38E-008	mg/cu. m.	R	1.25E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	2.20E-003
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	1.70E-004	mg/cu. m.	R	4.86E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.48E-005	mg/cu. m.	R	4.21E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.78E+002	mg/kg	5.58E-006	mg/cu. m.	R	1.60E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.42E+001	mg/kg	6.69E-007	mg/cu. m.	R	1.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.18E-006	mg/cu. m.	R	3.37E-007	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.68E-006
	Chlorobenzene	1.00E+001	mg/kg	7.51E-004	mg/cu. m.	R	2.15E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.29E-002
	Chloroform	2.10E+003	mg/kg	5.48E-002	mg/cu. m.	R	1.57E-002	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.82E+002
	Chromium 3+	8.85E+001	mg/kg	7.56E-006	mg/cu. m.	R	2.16E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.26E-006	mg/cu. m.	R	3.60E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	2.60E-001	mg/kg	8.22E-010	mg/cu. m.	R	2.35E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.09E-001	mg/cu. m.	R	5.97E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	7.32E+000	mg/kg	5.11E-007	mg/cu. m.	R	1.46E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.31E+001	mg/kg	3.19E-006	mg/cu. m.	R	9.11E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	3.74E+000	mg/kg	4.32E-007	mg/cu. m.	R	1.23E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	1.90E-007	mg/cu. m.	R	5.44E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	1.10E-008	mg/cu. m.	R	3.13E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	2.41E+001	mg/kg	6.96E-007	mg/cu. m.	R	1.99E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	5.97E+001	mg/kg	2.42E-006	mg/cu. m.	R	6.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-26
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RMa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-butylphthalate	2.49E+002	mg/kg	3.80E-006	mg/cu. m.	R	1.09E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	9.77E+000	mg/kg	4.47E-007	mg/cu. m.	R	1.28E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	5.35E-008	mg/cu. m.	R	1.53E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	7.14E-008	mg/cu. m.	R	2.04E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	6.11E-010	mg/cu. m.	R	1.75E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	5.07E-002	mg/cu. m.	R	1.45E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	5.00E-002
	Fluoranthene	3.80E+000	mg/kg	1.70E-007	mg/cu. m.	R	4.86E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.49E+000	mg/kg	1.04E-005	mg/cu. m.	R	2.97E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	5.43E-008	mg/cu. m.	R	1.55E-008	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	7.76E-005
	Hexachlorobenzene	5.90E-001	mg/kg	3.22E-010	mg/cu. m.	R	9.21E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	7.96E+000	mg/kg	2.71E-007	mg/cu. m.	R	7.75E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	4.89E-010	mg/cu. m.	R	1.40E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.96E+002	mg/kg	1.56E-003	mg/cu. m.	R	4.46E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	5.99E+002	mg/kg	3.87E-005	mg/cu. m.	R	1.11E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.14E+003	mg/kg	3.00E-005	mg/cu. m.	R	8.58E-006	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	5.98E-001
	Mercury	2.99E+000	mg/kg	1.45E-007	mg/cu. m.	R	4.15E-008	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	4.82E-004
	Methylene Chloride	5.70E+002	mg/kg	7.55E-002	mg/cu. m.	R	2.16E-002	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.51E-002
	m,p-xylene	5.50E+003	mg/kg	5.68E-002	mg/cu. m.	R	1.62E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.64E+002	mg/kg	9.58E-004	mg/cu. m.	R	2.74E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.04E-001
	Nickel	7.89E+000	mg/kg	4.68E-007	mg/cu. m.	R	1.34E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.10E+003	mg/kg	2.48E-002	mg/cu. m.	R	7.07E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.97E+001	mg/kg	8.77E-007	mg/cu. m.	R	2.51E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	4.03E-007	mg/cu. m.	R	1.15E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.87E+001	mg/kg	1.31E-004	mg/cu. m.	R	3.74E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.58E-007	mg/cu. m.	R	7.37E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	5.90E+000	mg/kg	2.64E-007	mg/cu. m.	R	7.53E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.31E-001	mg/kg	3.15E-008	mg/cu. m.	R	9.01E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.67E+000	mg/kg	1.61E-008	mg/cu. m.	R	4.60E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	9.00E+001	mg/kg	3.10E-003	mg/cu. m.	R	8.86E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.10E-003
	Tetrachloroethene	8.30E+003	mg/kg	6.58E-002	mg/cu. m.	R	1.88E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.34E-001
	Toluene	2.00E+005	mg/kg	1.22E-001	mg/cu. m.	R	3.49E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.08E-001
	Trichloroethene	2.80E+003	mg/kg	5.01E-002	mg/cu. m.	R	1.43E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	6.20E-007	mg/cu. m.	R	1.77E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.50E+004	mg/kg	5.53E-002	mg/cu. m.	R	1.58E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	2.29E+002	mg/kg	1.70E-005	mg/cu. m.	R	4.87E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.96E+002

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-27
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fUWe1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	5.7E-002	kg-day/mg	6.5E-010
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	5.5E-009	mg/kg-day	2.0E-001	kg-day/mg	1.1E-009
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	3.9E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	5.6E-008	mg/kg-day	9.1E-002	kg-day/mg	5.1E-009
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day	6.8E-002	kg-day/mg	2.1E-009
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	6.0E-009	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	7.3E-009	mg/kg-day	2.4E-002	kg-day/mg	1.7E-010
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	5.7E-009	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	9.7E-009	mg/kg-day	3.4E-001	kg-day/mg	3.3E-009
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	1.5E-008	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	1.5E-009	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	7.3E-008	mg/kg-day	2.0E+000	kg-day/mg	1.5E-007
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	2.0E+000	kg-day/mg	2.0E-007
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	2.0E+000	kg-day/mg	2.8E-007
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day	2.0E+000	kg-day/mg	6.2E-008
	Arsenic	3.53E+000	mg/kg	NA	NA	M	4.9E-009	mg/kg-day	1.5E+000	kg-day/mg	7.4E-009
	Barium	1.60E+002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	9.2E-006	mg/kg-day	2.9E-002	kg-day/mg	2.7E-007
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	2.4E-010	mg/kg-day	7.3E-001	kg-day/mg	1.7E-010
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	2.6E-010	mg/kg-day	7.3E+000	kg-day/mg	1.9E-009
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.5E-010	mg/kg-day	7.3E-001	kg-day/mg	4.0E-010
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.5E-010	mg/kg-day	7.3E-002	kg-day/mg	4.0E-011
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.2E-009	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	1.1E+000	kg-day/mg	1.6E-008
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	1.4E-002	kg-day/mg	5.1E-008
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	6.7E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	6.1E-003	kg-day/mg	1.8E-008
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	3.6E-010	mg/kg-day	7.3E-003	kg-day/mg	2.7E-012
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.0E-008	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	7.4E-008	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	5.2E-009	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	5.9E-009	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	8.3E-008	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	9.4E-006	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	5.3E-009	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.2E-010	mg/kg-day	1.6E+000	kg-day/mg	1.3E-009

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-27
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fUWs1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Hexachlorobutadiene	7.98E+000	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	7.8E-002	kg-day/mg	8.7E-010
	Iron	6.72E+003	mg/kg	NA	NA	M	9.4E-006	mg/kg-day		kg-day/mg	
	Isophorone	2.98E+002	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	9.5E-004	kg-day/mg	3.9E-010
	Lead	5.99E+002	mg/kg	NA	NA	M	8.4E-007	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	4.2E-009	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	7.5E-003	kg-day/mg	6.0E-009
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	7.7E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	6.5E-007	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	1.2E-001	kg-day/mg	3.3E-009
	Phenol	1.87E+001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	8.2E-009	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	6.0E-010	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	2.3E-009	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	5.2E-002	kg-day/mg	6.0E-007
	Toluene	2.00E+005	mg/kg	NA	NA	M	2.8E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	1.1E-002	kg-day/mg	4.3E-008
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	(Total)										1.72E-006
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	2.9E-004	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.0E-002	kg-day/mg	7.97E-009
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	5.5E-008	mg/kg-day	2.9E-001	kg-day/mg	1.56E-008
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	9.1E-002	kg-day/mg	5.09E-008
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	6.8E-002	kg-day/mg	2.09E-008
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	6.0E-008	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	7.3E-008	mg/kg-day	2.4E-002	kg-day/mg	1.74E-009
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	5.7E-008	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	9.7E-008	mg/kg-day	3.4E-001	kg-day/mg	3.29E-008
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	9.1E-006	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	1.5E-008	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	2.0E+000	kg-day/mg	1.47E-006
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	2.0E+000	kg-day/mg	2.04E-006
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	2.2E+000	kg-day/mg	3.14E-006
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	2.0E+000	kg-day/mg	6.15E-007
	Arsenic	3.53E+000	mg/kg	NA	NA	M	4.9E-008	mg/kg-day	1.6E+000	kg-day/mg	7.79E-008
	Barium	1.60E+002	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	9.2E-005	mg/kg-day	3.2E-002	kg-day/mg	2.96E-006
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	2.4E-009	mg/kg-day	7.3E-001	kg-day/mg	1.73E-009
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	2.6E-009	mg/kg-day	8.6E+000	kg-day/mg	2.21E-008

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-27
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_IUVVa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.5E-009	mg/kg-day	7.3E-001	kg-day/mg	3.98E-009
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.5E-009	mg/kg-day	7.3E-002	kg-day/mg	3.98E-010
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	1.1E+000	kg-day/mg	1.59E-007
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	1.4E-002	kg-day/mg	5.09E-007
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	6.7E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	6.4E-003	kg-day/mg	1.87E-007
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	3.6E-009	mg/kg-day	1.8E-002	kg-day/mg	6.47E-011
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	5.2E-008	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	5.9E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	8.3E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	5.3E-008	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.2E-009	mg/kg-day	2.0E+000	kg-day/mg	1.65E-008
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.8E-002	kg-day/mg	8.67E-009
	Iron	6.72E+003	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	9.5E-004	kg-day/mg	3.93E-009
	Lead	5.99E+002	mg/kg	NA	NA	M	8.4E-006	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	8.0E-006	mg/kg-day	1.4E-002	kg-day/mg	1.09E-007
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	7.7E-005	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	6.5E-006	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	1.2E-001	kg-day/mg	3.31E-008
	Phenol	1.87E+001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	8.2E-008	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	6.0E-009	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	5.2E-002	kg-day/mg	6.03E-006
	Toluene	2.00E+005	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	1.1E-002	kg-day/mg	4.39E-007
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	(Total)										1.80E-005
										Total Hazard Index Across All Exposure Routes/Pathways	2.0E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-28
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RWs1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	4.69E-003	mg/cu. m.	R	1.31E-008	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.35E-001	mg/cu. m.	R	9.36E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	6.08E-004	mg/cu. m.	R	1.70E-007	mg/kg-day	5.60E-002	mg/kg-day	9.51E-009
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	1.33E-004	mg/cu. m.	R	3.71E-008	mg/kg-day	2.00E-001	mg/kg-day	7.42E-009
	1,2-Dichlorobenzene	2.79E+001	mg/kg	4.84E-004	mg/cu. m.	R	1.35E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	4.00E+001	mg/kg	5.29E-003	mg/cu. m.	R	1.48E-006	mg/kg-day	9.10E-002	mg/kg-day	1.35E-007
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	4.18E-002	mg/cu. m.	R	1.17E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.20E+001	mg/kg	3.04E-003	mg/cu. m.	R	8.51E-007	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	4.69E-005	mg/cu. m.	R	1.31E-008	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.26E-006	mg/cu. m.	R	1.20E-011	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	1.89E-004	mg/cu. m.	R	5.27E-008	mg/kg-day	2.20E-002	mg/kg-day	1.16E-009
	2-Butanone	5.30E+002	mg/kg	1.77E-005	mg/cu. m.	R	4.96E-009	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.20E+002	mg/kg	2.80E-004	mg/cu. m.	R	7.84E-008	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.21E+001	mg/kg	4.57E-005	mg/cu. m.	R	1.28E-008	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	4.10E+000	mg/kg	1.44E-005	mg/cu. m.	R	4.01E-009	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	3.19E-005	mg/cu. m.	R	8.93E-009	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.17E-008	mg/cu. m.	R	3.26E-012	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.15E-002	mg/cu. m.	R	3.21E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.76E+001	mg/kg	1.35E-004	mg/cu. m.	R	3.77E-008	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	1.60E-007	mg/cu. m.	R	4.48E-011	mg/kg-day		mg/kg-day	
	4,4'-DDT	6.92E+000	mg/kg	2.14E-007	mg/cu. m.	R	5.98E-011	mg/kg-day	3.40E-001	mg/kg-day	2.03E-011
	Acenaphthene	1.10E+001	mg/kg	2.41E-005	mg/cu. m.	R	6.75E-009	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.32E-006	mg/cu. m.	R	2.60E-009	mg/kg-day		mg/kg-day	
	Acetone	6.50E+002	mg/kg	1.94E-002	mg/cu. m.	R	5.43E-006	mg/kg-day		mg/kg-day	
	Anthracene	1.10E+000	mg/kg	7.40E-007	mg/cu. m.	R	2.07E-010	mg/kg-day		mg/kg-day	
	Antimony	8.34E+000	mg/kg	7.26E-007	mg/cu. m.	R	2.03E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.25E+001	mg/kg	1.37E-006	mg/cu. m.	R	3.82E-010	mg/kg-day	2.00E+000	mg/kg-day	7.65E-010
	Aroclor-1248	7.29E+001	mg/kg	9.41E-007	mg/cu. m.	R	2.63E-010	mg/kg-day	2.00E+000	mg/kg-day	5.26E-010
	Aroclor-1254	1.00E+002	mg/kg	1.58E-006	mg/cu. m.	R	4.43E-010	mg/kg-day	2.00E+000	mg/kg-day	8.85E-010
	Aroclor-1260	2.20E+001	mg/kg	9.83E-007	mg/cu. m.	R	2.75E-010	mg/kg-day	2.00E+000	mg/kg-day	5.50E-010
	Arsenic	3.53E+000	mg/kg	2.22E-007	mg/cu. m.	R	6.21E-011	mg/kg-day	1.51E+001	mg/kg-day	9.38E-010
	Barium	1.60E+002	mg/kg	1.20E-005	mg/cu. m.	R	3.36E-009	mg/kg-day		mg/kg-day	
	Benzene	6.61E+003	mg/kg	5.88E-002	mg/cu. m.	R	1.64E-005	mg/kg-day	2.90E-002	mg/kg-day	4.77E-007
	Benzoic Acid	1.30E+001	mg/kg	1.98E-004	mg/cu. m.	R	5.53E-008	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	1.70E-001	mg/kg	6.56E-010	mg/cu. m.	R	1.83E-013	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	9.17E-010	mg/cu. m.	R	2.56E-013	mg/kg-day	3.10E+000	mg/kg-day	7.94E-013
	Benzo(b)fluoranthene	3.90E-001	mg/kg	9.56E-010	mg/cu. m.	R	2.67E-013	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	8.08E-010	mg/cu. m.	R	2.25E-013	mg/kg-day		mg/kg-day	
	Beryllium	1.55E+000	mg/kg	4.38E-006	mg/cu. m.	R	1.23E-011	mg/kg-day	8.40E+000	mg/kg-day	1.03E-010
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	1.70E-004	mg/cu. m.	R	4.76E-008	mg/kg-day	1.10E+000	mg/kg-day	5.24E-008
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.48E-005	mg/cu. m.	R	4.12E-009	mg/kg-day	1.40E-002	mg/kg-day	5.77E-011
	Butylbenzylphthalate	4.78E+002	mg/kg	5.58E-006	mg/cu. m.	R	1.56E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.42E+001	mg/kg	6.69E-007	mg/cu. m.	R	1.87E-010	mg/kg-day	6.30E+000	mg/kg-day	1.18E-009
	Carbon Disulfide	0.00E+000	mg/kg	1.18E-006	mg/cu. m.	R	3.30E-010	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+001	mg/kg	7.51E-004	mg/cu. m.	R	2.10E-007	mg/kg-day		mg/kg-day	
	Chloroform	2.10E+003	mg/kg	5.48E-002	mg/cu. m.	R	1.53E-005	mg/kg-day	8.10E-002	mg/kg-day	1.24E-006
	Chromium 3+	8.85E+001	mg/kg	7.56E-006	mg/cu. m.	R	2.11E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.26E-006	mg/cu. m.	R	3.52E-010	mg/kg-day	4.10E+001	mg/kg-day	1.44E-008
	Chrysene	2.60E-001	mg/kg	8.22E-010	mg/cu. m.	R	2.30E-013	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.09E-001	mg/cu. m.	R	5.84E-005	mg/kg-day		mg/kg-day	
	Cobalt	7.32E+000	mg/kg	5.11E-007	mg/cu. m.	R	1.43E-010	mg/kg-day		mg/kg-day	
	Copper	5.31E+001	mg/kg	3.19E-006	mg/cu. m.	R	8.91E-010	mg/kg-day		mg/kg-day	
	Cyanide (total)	3.74E+000	mg/kg	4.32E-007	mg/cu. m.	R	1.21E-010	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	1.90E-007	mg/cu. m.	R	5.32E-011	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	1.10E-006	mg/cu. m.	R	3.06E-012	mg/kg-day	1.60E+001	mg/kg-day	4.90E-011
	Diethylphthalate	2.41E+001	mg/kg	6.98E-007	mg/cu. m.	R	1.95E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	5.97E+001	mg/kg	2.42E-006	mg/cu. m.	R	6.76E-010	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-28
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RMs1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Di-n-butylphthalate	2.49E+002	mg/kg	3.80E-006	mg/cu. m.	R	1.06E-009	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	9.77E+000	mg/kg	4.47E-007	mg/cu. m.	R	1.25E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	5.35E-006	mg/cu. m.	R	1.50E-011	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	7.14E-006	mg/cu. m.	R	2.00E-011	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	6.11E-010	mg/cu. m.	R	1.71E-013	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	5.07E-002	mg/cu. m.	R	1.42E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	1.70E-007	mg/cu. m.	R	4.75E-011	mg/kg-day		mg/kg-day	
	Fluorene	9.49E+000	mg/kg	1.04E-005	mg/cu. m.	R	2.90E-009	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	5.43E-006	mg/cu. m.	R	1.52E-011	mg/kg-day	3.50E-001	mg/kg-day	5.32E-012
	Hexachlorobenzene	5.90E-001	mg/kg	3.22E-010	mg/cu. m.	R	9.01E-014	mg/kg-day	1.60E+000	mg/kg-day	1.44E-013
	Hexachlorobutadiene	7.96E+000	mg/kg	2.71E-007	mg/cu. m.	R	7.59E-011	mg/kg-day	7.80E-002	mg/kg-day	5.92E-012
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	4.89E-010	mg/cu. m.	R	1.37E-013	mg/kg-day		mg/kg-day	
	Isophorone	2.98E+002	mg/kg	1.56E-003	mg/cu. m.	R	4.37E-007	mg/kg-day		mg/kg-day	
	Lead	5.99E+002	mg/kg	3.87E-005	mg/cu. m.	R	1.08E-008	mg/kg-day		mg/kg-day	
	Manganese	1.14E+003	mg/kg	3.00E-005	mg/cu. m.	R	8.37E-009	mg/kg-day		mg/kg-day	
	Mercury	2.99E+000	mg/kg	1.45E-007	mg/cu. m.	R	4.06E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	5.70E+002	mg/kg	7.55E-002	mg/cu. m.	R	2.11E-005	mg/kg-day	1.65E-003	mg/kg-day	3.48E-008
	m,p-xylene	5.50E+003	mg/kg	5.68E-002	mg/cu. m.	R	1.59E-005	mg/kg-day		mg/kg-day	
	Naphthalene	4.64E+002	mg/kg	9.58E-004	mg/cu. m.	R	2.68E-007	mg/kg-day		mg/kg-day	
	Nickel	7.89E+000	mg/kg	4.68E-007	mg/cu. m.	R	1.31E-010	mg/kg-day		mg/kg-day	
	ortho-xylene	1.10E+003	mg/kg	2.48E-002	mg/cu. m.	R	6.92E-006	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.97E+001	mg/kg	8.77E-007	mg/cu. m.	R	2.45E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	4.03E-007	mg/cu. m.	R	1.13E-010	mg/kg-day		mg/kg-day	
	Phenol	1.67E+001	mg/kg	1.31E-004	mg/cu. m.	R	3.66E-008	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.58E-007	mg/cu. m.	R	7.21E-011	mg/kg-day		mg/kg-day	
	Pyrene	5.90E+000	mg/kg	2.64E-007	mg/cu. m.	R	7.37E-011	mg/kg-day		mg/kg-day	
	Selenium	4.31E-001	mg/kg	3.15E-006	mg/cu. m.	R	8.82E-012	mg/kg-day		mg/kg-day	
	Silver	1.67E+000	mg/kg	1.61E-006	mg/cu. m.	R	4.50E-012	mg/kg-day		mg/kg-day	
	Styrene	9.00E+001	mg/kg	3.10E-003	mg/cu. m.	R	8.67E-007	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.30E+003	mg/kg	6.58E-002	mg/cu. m.	R	1.84E-005	mg/kg-day	2.00E-003	mg/kg-day	3.68E-008
	Toluene	2.00E+005	mg/kg	1.22E-001	mg/cu. m.	R	3.41E-005	mg/kg-day		mg/kg-day	
	Trichloroethene	2.80E+003	mg/kg	5.01E-002	mg/cu. m.	R	1.40E-005	mg/kg-day	6.00E-003	mg/kg-day	8.41E-008
	Vanadium	1.17E+001	mg/kg	6.20E-007	mg/cu. m.	R	1.73E-010	mg/kg-day		mg/kg-day	
	Xylenes (total)	2.50E+004	mg/kg	5.53E-002	mg/cu. m.	R	1.55E-005	mg/kg-day		mg/kg-day	
	Zinc	2.29E+002	mg/kg	1.70E-005	mg/cu. m.	R	4.76E-009	mg/kg-day		mg/kg-day	
	(Total)										2.10E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-29
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_IT\a1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units.	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.58E-005
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	5.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.66E-001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.14E-004
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	9.9E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.65E-005
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	7.85E-005
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.38E-004
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	6.76E-003
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.09E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.44E-006
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.40E-005
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.24E-004
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.06E-003
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	6.16E-005
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	3.47E-004
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.52E-004
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.76E-003
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.95E-004
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.51E-003
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.65E-005
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.65E-003
	Aluminum	8.22E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	2.08E-003
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.30E-007
	Antimony	8.34E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	5.29E-003
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.27E+000
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	9.0E-007	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.99E-003
	Barium	1.60E+002	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.80E-004
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	5.59E-001
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	8.24E-007
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	4.3E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	4.7E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	9.9E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	9.9E-008	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	3.9E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.97E-004
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.30E-002
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.06E-004
	Cadmium	1.42E+001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.60E-003
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.27E-004
	Chloroform	2.10E+003	mg/kg	NA	NA	M	5.3E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.33E-002
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.50E-005
	Chrysene	2.60E-001	mg/kg	NA	NA	M	6.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.04E-002
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.09E-005
	Copper	5.31E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.37E-004
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.74E-005
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.66E-004
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	7.64E-006
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.51E-006
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	6.3E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	6.32E-004
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.24E-004
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.70E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-29
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_IO_ITa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	9.6E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.41E-005
	Fluorene	9.49E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.02E-005
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	1.87E-004
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	1.01E-002
	Iron	6.72E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.68E-003
	Isophorone	2.96E+002	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.76E-004
	Lead	5.99E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E-002
	Mercury	2.99E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.41E-003
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.97E-004
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.89E-003
	Nickel	7.89E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.00E-004
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.39E-004
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.67E-004
	Phenol	1.87E+001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	7.92E-006
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.99E-005
	Selenium	4.31E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.19E-005
	Silver	1.67E+000	mg/kg	NA	NA	M	4.2E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.49E-005
	Styrene	9.00E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.14E-004
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.11E-001
	Toluene	2.00E+005	mg/kg	NA	NA	M	5.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.54E-001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	7.1E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.18E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	4.25E-004
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	6.3E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.17E-003
	Zinc	2.29E+002	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.94E-004
	(Total)												2.89E+000
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.91E-003
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.34E+001
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	5.58E-002
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	2.07E-003
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	6.91E-003
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	8.9E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.98E-002
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	5.95E-001
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.60E-003
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.55E-004
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.87E-003
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	2.08E-002
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.57E-001
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	5.42E-003
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	9.2E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	3.05E-002
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.34E-002
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.18E-001
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.21E-001
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.09E-001
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.09E-003
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	1.85E-001
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.83E-001
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.18E-005
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	4.65E+001
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.6E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.25E+002
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-29
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_IT\a1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Arsenic	3.53E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.77E-001
	Barium	1.60E+002	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.11E-002
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	5.47E+001
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	7.25E-005
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.73E+000
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	5.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.90E+000
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.33E-002
	Cadmium	1.42E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.27E+001
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	3.60E-002
	Chloroform	2.10E+003	mg/kg	NA	NA	M	4.7E-002	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	4.91E+000
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.29E-001
	Chrysene	2.60E-001	mg/kg	NA	NA	M	5.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.68E+000
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.72E-003
	Copper	5.31E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	4.94E-002
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.34E-003
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	9.4E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.34E-002
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	6.72E-004
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.33E-004
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	5.6E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	5.73E-002
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.09E-002
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.63E+000
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.12E-003
	Fluorene	9.49E+000	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.30E-003
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	2.06E-002
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	8.88E-001
	Iron	6.72E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.00E-001
	Isophorone	2.96E+002	mg/kg	NA	NA	M	6.6E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.31E-002
	Lead	5.99E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.27E+000
	Mercury	2.99E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	3.86E-001
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	6.82E-002
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.18E-001
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.76E-001
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.5E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.36E-002
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.47E-002
	Phenol	1.87E+001	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	6.97E-004
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.39E-003
	Selenium	4.31E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.93E-003
	Silver	1.67E+000	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	3.56E-002
	Styrene	9.00E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.00E-002
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.9E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.85E+001
	Toluene	2.00E+005	mg/kg	NA	NA	M	4.5E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.23E+001
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	6.2E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.06E+001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.74E-002
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	5.6E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.12E-001
	Zinc	2.29E+002	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.69E-002
	(Total)												3.36E+002
												Total Hazard Index Across All Exposure Routes/Pathways	3.4E+002

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-30
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWs1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	5.62E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	4.01E-005
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	2.95E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.03E-003
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	1.70E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	7.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	7.50E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	8.33E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	6.88E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	4.91E-003
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	6.70E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	1.37E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.21E-002
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	2.48E-007	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	4.34E-006
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	3.73E-012	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	1.87E-009
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	2.32E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	1.01E-005
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	2.12E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.41E-009
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	7.52E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	5.37E-003
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	1.00E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	6.98E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	1.71E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	1.12E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	2.34E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	3.65E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	8.32E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	2.23E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	1.60E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	8.01E-004
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	1.40E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	1.56E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	1.57E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	2.80E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	2.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	3.19E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	1.12E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	1.22E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	1.92E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	1.05E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	9.33E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	9.50E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	1.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	1.06E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	1.63E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	2.04E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	2.31E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	1.54E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.10E-005
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	5.39E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	3.17E-002
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	3.35E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	1.00E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	6.05E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	1.89E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	5.09E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	1.88E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	8.43E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	4.30E-012	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	7.55E-007
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	2.00E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	2.37E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.80E+003	mg/kg	1.85E-007	mg/cu. m.	R	1.56E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	6.67E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	1.11E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	1.03E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	5.16E-010
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	9.06E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	1.81E-003
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	5.57E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	6.48E-001

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-30
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_RWs1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	1.17E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	1.95E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	1.34E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	2.05E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	5.50E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	7.90E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	4.24E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	1.86E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	7.92E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	1.02E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	7.42E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	3.13E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	3.89E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	4.73E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	5.09E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	6.78E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	1.17E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	5.61E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.93E-004
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	1.77E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	1.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	5.09E-012	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	2.54E-008
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	6.45E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	3.08E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	3.07E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	2.99E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	4.77E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	5.16E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	2.11E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	7.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	2.96E-009	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.07E-004
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	1.67E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.94E-007
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	8.50E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	9.88E-004
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	5.10E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	6.46E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	7.18E-003
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	5.45E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	2.88E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	1.46E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	9.81E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	4.43E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	1.88E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	2.46E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	2.78E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.31E-001	mg/kg	6.06E-010	mg/cu. m.	R	5.12E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	5.80E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	6.26E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.19E-005
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	9.15E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.53E-004
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	2.53E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	3.25E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.85E-003
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	7.44E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	6.29E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	4.64E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	1.59E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	3.25E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												7.19E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-31
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_ID_IT\a1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	4.6E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	4.4E-004	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	5.7E-002	kg-day/mg	9.8E-009
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	8.2E-008	mg/kg-day	2.0E-001	kg-day/mg	1.6E-008
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	5.9E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	8.5E-007	mg/kg-day	9.1E-002	kg-day/mg	7.7E-008
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	4.6E-007	mg/kg-day	6.8E-002	kg-day/mg	3.2E-008
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	9.1E-008	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.9E-008	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	2.4E-002	kg-day/mg	2.6E-009
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	6.8E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	8.7E-008	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	3.4E-001	kg-day/mg	5.0E-008
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.2E-006
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	2.0E+000	kg-day/mg	3.1E-006
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	2.0E+000	kg-day/mg	4.2E-006
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	4.6E-007	mg/kg-day	2.0E+000	kg-day/mg	9.3E-007
	Arsenic	3.53E+000	mg/kg	NA	NA	M	7.5E-008	mg/kg-day	1.5E+000	kg-day/mg	1.1E-007
	Barium	1.60E+002	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.9E-002	kg-day/mg	4.1E-006
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	3.6E-009	mg/kg-day	7.3E-001	kg-day/mg	2.6E-009
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	3.9E-009	mg/kg-day	7.3E+000	kg-day/mg	2.8E-008
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	8.2E-009	mg/kg-day	7.3E-001	kg-day/mg	6.0E-009
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	8.2E-009	mg/kg-day	7.3E-002	kg-day/mg	6.0E-010
	Beryllium	1.55E+000	mg/kg	NA	NA	M	3.3E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	1.1E+000	kg-day/mg	2.4E-007
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	1.4E-002	kg-day/mg	7.7E-007
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	4.4E-005	mg/kg-day	6.1E-003	kg-day/mg	2.7E-007
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	5.5E-009	mg/kg-day	7.3E-003	kg-day/mg	4.0E-011
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	2.5E-005	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	7.9E-008	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	8.9E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	5.3E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-31
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \TT_ID_ITa1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	8.0E-008	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	1.6E+000	kg-day/mg	2.0E-008
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	7.8E-002	kg-day/mg	1.3E-008
	Iron	6.72E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	9.5E-004	kg-day/mg	5.9E-009
	Lead	5.99E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	7.5E-003	kg-day/mg	9.0E-008
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	9.8E-006	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	4.2E-007	mg/kg-day	1.2E-001	kg-day/mg	5.0E-008
	Phenol	1.87E+001	mg/kg	NA	NA	M	4.0E-007	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	9.1E-009	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	3.5E-008	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	5.2E-002	kg-day/mg	9.1E-006
	Toluene	2.00E+005	mg/kg	NA	NA	M	4.2E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	1.1E-002	kg-day/mg	6.5E-007
	Vanadium	1.17E+001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	(Total)										2.61E-005
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	3.9E-002	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	7.0E-002	kg-day/mg	1.06E-006
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	7.3E-006	mg/kg-day	2.9E-001	kg-day/mg	2.07E-006
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	5.2E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	9.1E-002	kg-day/mg	6.77E-006
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	6.8E-002	kg-day/mg	2.78E-006
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	9.7E-006	mg/kg-day	2.4E-002	kg-day/mg	2.32E-007
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	9.9E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	6.0E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	7.6E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.4E-001	kg-day/mg	4.37E-006
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	9.8E-005	mg/kg-day	2.0E+000	kg-day/mg	1.95E-004
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.0E+000	kg-day/mg	2.71E-004
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	2.2E+000	kg-day/mg	4.18E-004
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	2.0E+000	kg-day/mg	8.18E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-31
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_IO_(Ta1RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Arsenic	3.53E+000	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	1.6E+000	kg-day/mg	1.04E-005
	Barium	1.60E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	3.2E-002	kg-day/mg	3.96E-004
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	7.3E-001	kg-day/mg	2.31E-007
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day	8.6E+000	kg-day/mg	2.95E-006
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	7.3E-001	kg-day/mg	5.30E-007
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	7.3E-002	kg-day/mg	5.30E-008
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.1E+000	kg-day/mg	2.11E-005
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	4.8E-003	mg/kg-day	1.4E-002	kg-day/mg	6.77E-005
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	8.9E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	6.4E-003	kg-day/mg	2.49E-005
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	4.8E-007	mg/kg-day	1.8E-002	kg-day/mg	8.61E-009
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	9.9E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	4.6E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	7.1E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.19E-006
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	7.8E-002	kg-day/mg	1.15E-006
	Iron	6.72E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	9.5E-004	kg-day/mg	5.23E-007
	Lead	5.99E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	1.4E-002	kg-day/mg	1.45E-005
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.0E-002	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	8.6E-004	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	1.2E-001	kg-day/mg	4.40E-006
	Phenol	1.87E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	5.2E-002	kg-day/mg	8.03E-004
	Toluene	2.00E+005	mg/kg	NA	NA	M	3.7E-001	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	5.2E-003	mg/kg-day	1.1E-002	kg-day/mg	5.85E-005
	Vanadium	1.17E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	4.6E-002	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	(Total)										2.39E-003
										Total Hazard Index Across All Exposure Routes/Pathways	2.4E-003

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-32
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \ TT_Inh_IWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	4.68E-007	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	2.46E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	1.42E-007	mg/kg-day	5.60E-002	mg/kg-day	7.95E-009
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	6.15E-008	mg/kg-day	2.00E-001	mg/kg-day	1.23E-008
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	6.25E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	5.73E-007	mg/kg-day	9.10E-002	mg/kg-day	5.22E-008
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	5.58E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	1.14E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	2.06E-008	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	3.11E-013	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	1.93E-007	mg/kg-day	2.20E-002	mg/kg-day	4.25E-009
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	1.77E-010	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	6.27E-007	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	8.37E-008	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	5.82E-008	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	1.43E-008	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	9.31E-009	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	1.95E-011	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	3.04E-013	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	6.93E-010	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	1.85E-014	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	1.33E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	1.16E-007	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	1.30E-011	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	1.31E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	2.33E-014	mg/kg-day		mg/kg-day	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	1.73E-012	mg/kg-day	3.40E-001	mg/kg-day	5.88E-013
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	2.66E-008	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	9.33E-009	mg/kg-day		mg/kg-day	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	1.01E-006	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	1.60E-013	mg/kg-day	1.70E+001	mg/kg-day	2.72E-012
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	8.74E-015	mg/kg-day	6.30E+000	mg/kg-day	5.51E-014
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	7.78E-010	mg/kg-day		mg/kg-day	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	7.92E-012	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	1.10E-011	mg/kg-day	2.00E+000	mg/kg-day	2.19E-011
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	8.84E-012	mg/kg-day	2.00E+000	mg/kg-day	1.77E-011
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	1.36E-011	mg/kg-day	2.00E+000	mg/kg-day	2.71E-011
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	1.70E-011	mg/kg-day	2.00E+000	mg/kg-day	3.40E-011
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	1.92E-012	mg/kg-day	1.51E+001	mg/kg-day	2.90E-011
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	1.29E-010	mg/kg-day		mg/kg-day	
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	4.49E-006	mg/kg-day	2.90E-002	mg/kg-day	1.30E-007
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	2.79E-007	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	8.34E-014	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	5.05E-014	mg/kg-day	3.10E+000	mg/kg-day	1.56E-013
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	1.58E-013	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	4.24E-014	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	1.57E-013	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	7.03E-013	mg/kg-day		mg/kg-day	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	3.59E-013	mg/kg-day	8.40E+000	mg/kg-day	3.01E-012
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	1.66E-014	mg/kg-day	1.80E+000	mg/kg-day	3.00E-014
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	1.97E-007	mg/kg-day	1.10E+000	mg/kg-day	2.17E-007
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	1.30E-010	mg/kg-day	1.40E-002	mg/kg-day	1.83E-012
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	5.56E-011	mg/kg-day		mg/kg-day	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	9.25E-012	mg/kg-day	6.30E+000	mg/kg-day	5.82E-011
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	8.60E-012	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	7.55E-007	mg/kg-day		mg/kg-day	
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	4.64E-006	mg/kg-day	8.10E-002	mg/kg-day	3.76E-007

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-32
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area1RME.wk4 \TT_Inh_ffWa1RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	9.73E-011	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	1.62E-011	mg/kg-day	4.10E+001	mg/kg-day	6.65E-010
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	1.12E-013	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	1.71E-005	mg/kg-day		mg/kg-day	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	4.59E-012	mg/kg-day		mg/kg-day	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	6.59E-011	mg/kg-day		mg/kg-day	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	3.53E-012	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	1.55E-012	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	6.60E-016	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	8.48E-014	mg/kg-day	1.60E+001	mg/kg-day	1.36E-012
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	6.18E-012	mg/kg-day		mg/kg-day	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	2.61E-011	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	3.24E-011	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	3.94E-012	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	4.24E-013	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	5.65E-013	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	9.72E-016	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	4.67E-006	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	1.48E-012	mg/kg-day		mg/kg-day	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	1.14E-008	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	4.24E-013	mg/kg-day	3.50E-001	mg/kg-day	1.48E-013
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	5.38E-017	mg/kg-day	4.50E+000	mg/kg-day	2.42E-016
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	2.57E-017	mg/kg-day	9.10E+000	mg/kg-day	2.33E-016
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	2.56E-015	mg/kg-day	1.60E+000	mg/kg-day	4.10E-015
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	2.49E-012	mg/kg-day	7.80E-002	mg/kg-day	1.94E-013
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	3.97E-015	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	4.30E-014	mg/kg-day		mg/kg-day	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	1.76E-006	mg/kg-day		mg/kg-day	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	6.01E-010	mg/kg-day		mg/kg-day	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	2.47E-010	mg/kg-day		mg/kg-day	
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	1.39E-012	mg/kg-day		mg/kg-day	
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	7.08E-005	mg/kg-day	1.65E-003	mg/kg-day	1.17E-007
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	4.25E-005	mg/kg-day		mg/kg-day	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	5.39E-007	mg/kg-day		mg/kg-day	
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	4.54E-012	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	2.40E-011	mg/kg-day		mg/kg-day	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	1.21E-005	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	8.17E-012	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	3.69E-012	mg/kg-day		mg/kg-day	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	1.56E-007	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	2.05E-012	mg/kg-day		mg/kg-day	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	2.32E-012	mg/kg-day		mg/kg-day	
	Selenium	4.31E-001	mg/kg	6.06E-010	mg/cu. m.	R	4.27E-013	mg/kg-day		mg/kg-day	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	4.83E-013	mg/kg-day		mg/kg-day	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	5.21E-007	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	7.62E-006	mg/kg-day	2.00E-003	mg/kg-day	1.52E-008
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	2.11E-014	mg/kg-day		mg/kg-day	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	2.71E-005	mg/kg-day		mg/kg-day	
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	6.20E-006	mg/kg-day	6.00E-003	mg/kg-day	3.72E-008
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	5.24E-012	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	3.86E-009	mg/kg-day	3.00E-001	mg/kg-day	1.16E-009
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	1.33E-005	mg/kg-day		mg/kg-day	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	2.71E-010	mg/kg-day		mg/kg-day	
	(Total)										9.71E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-33
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_ITa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.45E-005
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.90E-002
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	5.3E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.33E-004
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.27E-006
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.04E-005
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	8.77E-005
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.75E-003
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.83E-005
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	5.8E-008	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.93E-006
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	3.4E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.14E-005
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.81E-005
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.05E-003
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.60E-005
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	8.99E-005
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	7.9E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.95E-005
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	9.9E-005	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.23E-003
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.32E-004
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	4.5E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	9.10E-004
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.21E-005
	Acetone	6.50E+002	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.27E-004
	Aluminum	8.22E+003	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	5.40E-004
	Anthracene	1.10E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.41E-007
	Antimony	8.34E+000	mg/kg	NA	NA	M	5.5E-007	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.37E-003
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	3.29E-001
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.53E+000	mg/kg	NA	NA	M	2.3E-007	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	7.74E-004
	Barium	1.60E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.50E-004
	Benzene	6.61E+003	mg/kg	NA	NA	M	4.3E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.45E-001
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	8.5E-007	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.14E-007
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	5.10E-005
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.55E-003
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.57E-004
	Cadmium	1.42E+001	mg/kg	NA	NA	M	9.3E-007	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	9.33E-004
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.29E-005
	Chloroform	2.10E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.38E-002
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	5.8E-006	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	3.88E-006
	Chrysene	2.60E-001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.89E-003
	Cobalt	7.32E+000	mg/kg	NA	NA	M	4.8E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	8.02E-006
	Copper	5.31E+001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.73E-005
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.23E-005
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	6.90E-005
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.98E-006
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.92E-007
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.64E-004
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.21E-005
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.41E-003

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-33
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_IT\a1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.25E-006
	Fluorene	9.49E+000	mg/kg	NA	NA	M	6.2E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.56E-005
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.9E-008	mg/kg-day	8.0E-004	mg/kg-day	NA	NA	4.85E-005
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.62E-003
	Iron	6.72E+003	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.47E-003
	Isophorone	2.96E+002	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	9.74E-005
	Lead	5.99E+002	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.75E-003
	Mercury	2.99E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.25E-004
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.81E-004
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.53E-003
	Nickel	7.89E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.59E-005
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.62E-005
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.32E-005
	Phenol	1.87E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.05E-006
	Pyrene	5.90E+000	mg/kg	NA	NA	M	3.9E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.29E-005
	Selenium	4.31E-001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	5.67E-006
	Silver	1.67E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.20E-005
	Styrene	9.00E+001	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.96E-005
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.46E-002
	Toluene	2.00E+005	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.58E-002
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.07E-002
	Vanadium	1.17E+001	mg/kg	NA	NA	M	7.7E-007	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.10E-004
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	8.22E-004
	Zinc	2.29E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.03E-005
	(Total)												7.50E-001
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.17E-004
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.99E+000
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.2E-003	mg/kg-day	NA	NA	4.73E-003
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	1.76E-004
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.86E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.52E-003
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	5.05E-002
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	8.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.14E-004
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.55E-005
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	9.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.28E-004
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.76E-003
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	6.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.03E-002
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.60E-004
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	7.8E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.59E-003
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.14E-003
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.55E-002
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.03E-002
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.62E-002
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.47E-004
	Acetone	6.50E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	1.57E-002
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.56E-002
	Anthracene	1.10E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.94E-006
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.95E+000
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	9.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.06E+001
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-33
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_ITa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Arsenic	3.53E+000	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.35E-002
	Barium	1.60E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.33E-003
	Benzene	6.61E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	4.64E+000
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	6.15E-006
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.47E-001
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	4.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.46E-001
	Butylbenzylphthalate	4.76E+002	mg/kg	NA	NA	M	9.0E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.52E-003
	Cadmium	1.42E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.07E+000
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	3.05E-003
	Chloroform	2.10E+003	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	4.16E-001
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.79E-002
	Chrysene	2.60E-001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.27E-001
	Cobalt	7.32E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.31E-004
	Copper	5.31E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	4.19E-003
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.08E-004
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	8.0E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.99E-003
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	5.70E-005
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.13E-005
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	4.86E-003
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.25E-004
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.38E-001
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	7.2E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.80E-004
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.50E-004
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	6.4E-004	mg/kg-day	NA	NA	1.75E-003
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	7.53E-002
	Iron	6.72E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.24E-002
	Isophorone	2.96E+002	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.80E-003
	Lead	5.99E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.14E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.08E-001
	Mercury	2.99E+000	mg/kg	NA	NA	M	5.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	3.27E-002
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	5.79E-003
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	8.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.40E-002
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.49E-002
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.16E-003
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.24E-003
	Phenol	1.87E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.91E-005
	Pyrene	5.90E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.72E-004
	Selenium	4.31E-001	mg/kg	NA	NA	M	8.2E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.63E-004
	Silver	1.67E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	3.02E-003
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.52E-004
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.57E+000
	Toluene	2.00E+005	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.89E+000
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	5.3E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	9.02E-001
	Vanadium	1.17E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.18E-003
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	4.7E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.64E-002
	Zinc	2.29E+002	mg/kg	NA	NA	M	4.3E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	4.83E-003
	(Total)												2.85E+001

Total Hazard Index Across All Exposure Routes/Pathways 2.9E+001

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-34
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_inh: hWa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	1.46E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.04E-005
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	7.65E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.67E-004
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	4.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	1.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	1.94E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.16E-004
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	1.78E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m	1.27E-003
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	1.74E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	3.56E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	3.12E-003
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	6.42E-008	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	1.13E-006
	1,3-Dichlorobenzene	8.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	9.67E-013	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	4.84E-010
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	6.01E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.62E-006
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	5.50E-010	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.92E-009
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	1.95E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.39E-003
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	2.60E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	1.81E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	4.44E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	2.90E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	6.06E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	9.46E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	2.16E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	5.77E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	4.15E-006	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	2.08E-004
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	3.62E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	4.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	4.08E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	7.25E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	5.38E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	8.27E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	2.90E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	3.15E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	4.97E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	2.72E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	2.42E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	2.46E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	3.41E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	2.75E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	4.22E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	5.28E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	5.98E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	4.01E-010	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.86E-006
	Benzene	6.81E+003	mg/kg	6.38E-003	mg/cu. m.	R	1.40E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	8.22E-003
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	8.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	2.59E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	1.57E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	4.91E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	1.32E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	4.87E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	2.19E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	1.12E-012	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.96E-007
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	5.18E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	6.14E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	4.06E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	1.73E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	2.88E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	2.67E-011	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.34E-010
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	2.35E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.70E-004
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	1.44E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.68E-001

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-34
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_RfVa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	3.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	5.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	3.48E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	5.31E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	1.43E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	2.05E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	1.10E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	4.83E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	2.05E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	2.64E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	1.92E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	8.12E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	1.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	1.23E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	1.32E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	1.76E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	3.02E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	1.45E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	5.01E-005
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	4.59E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	3.55E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	1.32E-012	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	6.60E-009
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	1.67E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	7.98E-017	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	7.97E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	7.75E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	1.24E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	1.34E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	5.46E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	1.87E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	7.68E-010	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	5.37E-005
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	4.33E-012	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.04E-008
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	2.20E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.56E-004
	m,p-xylene	5.50E+003	mg/kg	8.03E-002	mg/cu. m.	R	1.32E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	1.68E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.86E-003
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	1.41E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	7.46E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	3.78E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	2.54E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	1.15E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	4.86E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	6.38E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	7.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	4.31E-001	mg/kg	6.08E-010	mg/cu. m.	R	1.33E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	1.50E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	1.62E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.67E-006
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	2.37E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.69E-004
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	6.56E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	8.43E-005	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	7.40E-004
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	1.93E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	1.63E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-008	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	4.13E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	8.44E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.86E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-35
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_fTa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	9.9E-006	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	3.8E-009	mg/kg-day	5.7E-002	kg-day/mg	2.2E-010
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	1.8E-009	mg/kg-day	2.0E-001	kg-day/mg	3.7E-010
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	1.9E-008	mg/kg-day	9.1E-002	kg-day/mg	1.7E-009
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	6.8E-002	kg-day/mg	7.0E-010
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	2.0E-009	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	4.1E-010	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	2.4E-009	mg/kg-day	2.4E-002	kg-day/mg	5.9E-011
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	5.7E-009	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	1.9E-009	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	5.6E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	8.3E-009	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	3.2E-009	mg/kg-day	3.4E-001	kg-day/mg	1.1E-009
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	5.2E-009	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	3.9E-006	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	5.2E-010	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	3.9E-009	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	2.0E+000	kg-day/mg	4.9E-008
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day	2.0E+000	kg-day/mg	6.8E-008
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	4.7E-008	mg/kg-day	2.0E+000	kg-day/mg	9.4E-008
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	2.0E+000	kg-day/mg	2.1E-008
	Arsenic	3.53E+000	mg/kg	NA	NA	M	1.7E-009	mg/kg-day	1.5E+000	kg-day/mg	2.5E-009
	Barium	1.60E+002	mg/kg	NA	NA	M	7.5E-008	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	2.9E-002	kg-day/mg	9.0E-008
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	6.1E-009	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	8.0E-011	mg/kg-day	7.3E-001	kg-day/mg	5.8E-011
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	8.7E-011	mg/kg-day	7.3E+000	kg-day/mg	6.3E-010
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.8E-010	mg/kg-day	7.3E-001	kg-day/mg	1.3E-010
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	1.8E-010	mg/kg-day	7.3E-002	kg-day/mg	1.3E-011
	Beryllium	1.55E+000	mg/kg	NA	NA	M	7.3E-010	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	4.8E-009	mg/kg-day	1.1E+000	kg-day/mg	5.3E-009
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	1.4E-002	kg-day/mg	1.7E-008
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	6.7E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	4.7E-009	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	9.9E-007	mg/kg-day	6.1E-003	kg-day/mg	6.0E-009
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	1.2E-010	mg/kg-day	7.3E-003	kg-day/mg	8.9E-013
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	5.6E-007	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	3.4E-009	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	1.8E-009	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	2.0E-009	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	4.6E-009	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-35
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_ITa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	1.8E-009	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	4.5E-009	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.8E-010	mg/kg-day	1.6E+000	kg-day/mg	4.4E-010
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	3.7E-009	mg/kg-day	7.8E-002	kg-day/mg	2.9E-010
	Iron	6.72E+003	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	9.5E-004	kg-day/mg	1.3E-010
	Lead	5.99E+002	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	5.4E-007	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	7.5E-003	kg-day/mg	2.0E-009
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	3.7E-009	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	9.3E-009	mg/kg-day	1.2E-001	kg-day/mg	1.1E-009
	Phenol	1.87E+001	mg/kg	NA	NA	M	8.8E-009	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	2.8E-009	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	2.0E-010	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	7.9E-010	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	5.2E-002	kg-day/mg	2.0E-007
	Toluene	2.00E+005	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.1E-002	kg-day/mg	1.4E-008
	Vanadium	1.17E+001	mg/kg	NA	NA	M	5.5E-009	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	(Total)										5.80E-007
Dermal	1,1-Dichloroethane	2.20E+001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	NA	NA	M	2.8E-004	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.0E-002	kg-day/mg	7.71E-009
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	NA	NA	M	5.3E-008	mg/kg-day	2.9E-001	kg-day/mg	1.51E-008
	1,2-Dichlorobenzene	2.79E+001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	4.00E+001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day	9.1E-002	kg-day/mg	4.92E-008
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.20E+001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	6.8E-002	kg-day/mg	2.02E-008
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	NA	NA	M	5.8E-008	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	8.80E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	NA	NA	M	7.0E-008	mg/kg-day	2.4E-002	kg-day/mg	1.69E-009
	2-Butanone	5.30E+002	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	3.20E+002	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.21E+001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	2,4-Dichlorophenol	4.10E+000	mg/kg	NA	NA	M	5.5E-008	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	1.20E+001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.76E+001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	4,4'-DDT	6.92E+000	mg/kg	NA	NA	M	9.4E-008	mg/kg-day	3.4E-001	kg-day/mg	3.18E-008
	Acenaphthene	1.10E+001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Acetone	6.50E+002	mg/kg	NA	NA	M	8.8E-006	mg/kg-day		kg-day/mg	
	Aluminum	8.22E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.10E+000	mg/kg	NA	NA	M	1.5E-008	mg/kg-day		kg-day/mg	
	Antimony	8.34E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	5.25E+001	mg/kg	NA	NA	M	7.1E-007	mg/kg-day	2.0E+000	kg-day/mg	1.42E-006
	Aroclor-1248	7.29E+001	mg/kg	NA	NA	M	9.9E-007	mg/kg-day	2.0E+000	kg-day/mg	1.97E-006
	Aroclor-1254	1.00E+002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	2.2E+000	kg-day/mg	3.04E-006
	Aroclor-1260	2.20E+001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	2.0E+000	kg-day/mg	5.95E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-35
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_ID_ITa1CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Arsenic	3.53E+000	mg/kg	NA	NA	M	4.8E-008	mg/kg-day	1.6E+000	kg-day/mg	7.54E-008
	Barium	1.60E+002	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Benzene	6.61E+003	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	3.2E-002	kg-day/mg	2.88E-006
	Benzoic Acid	1.30E+001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	1.70E-001	mg/kg	NA	NA	M	2.3E-009	mg/kg-day	7.3E-001	kg-day/mg	1.68E-009
	Benzo(a)pyrene	1.85E-001	mg/kg	NA	NA	M	2.5E-009	mg/kg-day	6.6E+000	kg-day/mg	2.14E-008
	Benzo(b)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.3E-009	mg/kg-day	7.3E-001	kg-day/mg	3.85E-009
	Benzo(k)fluoranthene	3.90E-001	mg/kg	NA	NA	M	5.3E-009	mg/kg-day	7.3E-002	kg-day/mg	3.85E-010
	Beryllium	1.55E+000	mg/kg	NA	NA	M	2.1E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	1.1E+000	kg-day/mg	1.54E-007
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	1.4E-002	kg-day/mg	4.92E-007
	Butylbenzylphthalate	4.78E+002	mg/kg	NA	NA	M	6.5E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.42E+001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Chloroform	2.10E+003	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	6.4E-003	kg-day/mg	1.81E-007
	Chromium 3+	8.85E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Chrysene	2.60E-001	mg/kg	NA	NA	M	3.5E-009	mg/kg-day	1.8E-002	kg-day/mg	6.26E-011
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Cobalt	7.32E+000	mg/kg	NA	NA	M	9.9E-008	mg/kg-day		kg-day/mg	
	Copper	5.31E+001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day		kg-day/mg	
	Cyanide (total)	3.74E+000	mg/kg	NA	NA	M	5.1E-008	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.20E+000	mg/kg	NA	NA	M	5.7E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.41E+001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	5.97E+001	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.49E+002	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	9.77E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.70E+003	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	3.80E+000	mg/kg	NA	NA	M	5.1E-008	mg/kg-day		kg-day/mg	
	Fluorene	9.49E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Hexachlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.0E-009	mg/kg-day	2.0E+000	kg-day/mg	1.60E-008
	Hexachlorobutadiene	7.96E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.8E-002	kg-day/mg	8.39E-009
	Iron	6.72E+003	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		kg-day/mg	
	Isophorone	2.96E+002	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	9.5E-004	kg-day/mg	3.81E-009
	Lead	5.99E+002	mg/kg	NA	NA	M	8.1E-006	mg/kg-day		kg-day/mg	
	Manganese	1.14E+003	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Mercury	2.99E+000	mg/kg	NA	NA	M	4.0E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	5.70E+002	mg/kg	NA	NA	M	7.7E-006	mg/kg-day	1.4E-002	kg-day/mg	1.05E-007
	m,p-xylene	5.50E+003	mg/kg	NA	NA	M	7.4E-005	mg/kg-day		kg-day/mg	
	Naphthalene	4.64E+002	mg/kg	NA	NA	M	6.3E-006	mg/kg-day		kg-day/mg	
	Nickel	7.89E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	1.10E+003	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.97E+001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	1.2E-001	kg-day/mg	3.20E-008
	Phenol	1.87E+001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	Pyrene	5.90E+000	mg/kg	NA	NA	M	8.0E-008	mg/kg-day		kg-day/mg	
	Selenium	4.31E-001	mg/kg	NA	NA	M	5.8E-009	mg/kg-day		kg-day/mg	
	Silver	1.67E+000	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	Styrene	9.00E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.30E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	5.2E-002	kg-day/mg	5.84E-006
	Toluene	2.00E+005	mg/kg	NA	NA	M	2.7E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	2.80E+003	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	1.1E-002	kg-day/mg	4.25E-007
	Vanadium	1.17E+001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.50E+004	mg/kg	NA	NA	M	3.4E-004	mg/kg-day		kg-day/mg	
	Zinc	2.29E+002	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	(Total)										1.74E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.8E-005

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-36
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_hh_ffVa1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.20E+001	mg/kg	6.65E-004	mg/cu. m.	R	1.04E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	2.10E+004	mg/kg	3.49E-002	mg/cu. m.	R	5.46E-007	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	8.10E+000	mg/kg	2.01E-004	mg/cu. m.	R	3.15E-009	mg/kg-day	5.60E-002	mg/kg-day	1.77E-010
	1,1,2,2-Tetrachloroethane	3.90E+000	mg/kg	8.72E-005	mg/cu. m.	R	1.37E-009	mg/kg-day	2.00E-001	mg/kg-day	2.73E-010
	1,2-Dichlorobenzene	2.79E+001	mg/kg	8.87E-004	mg/cu. m.	R	1.39E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	4.00E+001	mg/kg	8.13E-004	mg/cu. m.	R	1.27E-008	mg/kg-day	9.10E-002	mg/kg-day	1.16E-009
	1,2-Dichloroethene (total)	2.40E+002	mg/kg	7.92E-003	mg/cu. m.	R	1.24E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.20E+001	mg/kg	1.62E-003	mg/cu. m.	R	2.54E-008	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	4.30E+000	mg/kg	2.93E-005	mg/cu. m.	R	4.59E-010	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	6.80E-001	mg/kg	4.41E-010	mg/cu. m.	R	6.91E-015	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	5.20E+000	mg/kg	2.74E-004	mg/cu. m.	R	4.29E-009	mg/kg-day	2.20E-002	mg/kg-day	9.44E-011
	2-Butanone	5.30E+002	mg/kg	2.51E-007	mg/cu. m.	R	3.93E-012	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	8.90E-004	mg/cu. m.	R	1.39E-008	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	3.20E+002	mg/kg	1.19E-004	mg/cu. m.	R	1.86E-009	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.21E+001	mg/kg	8.26E-005	mg/cu. m.	R	1.29E-009	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	4.10E+000	mg/kg	2.03E-005	mg/cu. m.	R	3.17E-010	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	1.20E+001	mg/kg	1.32E-005	mg/cu. m.	R	2.07E-010	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	4.33E-013	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	4.32E-010	mg/cu. m.	R	6.76E-015	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	9.84E-007	mg/cu. m.	R	1.54E-011	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	2.63E-011	mg/cu. m.	R	4.12E-016	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	1.50E+003	mg/kg	1.89E-003	mg/cu. m.	R	2.97E-008	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.76E+001	mg/kg	1.65E-004	mg/cu. m.	R	2.58E-009	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.85E-008	mg/cu. m.	R	2.89E-013	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	1.86E-009	mg/cu. m.	R	2.91E-014	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	3.31E-011	mg/cu. m.	R	5.18E-016	mg/kg-day		mg/kg-day	
	4,4'-DDT	6.92E+000	mg/kg	2.46E-009	mg/cu. m.	R	3.85E-014	mg/kg-day	3.40E-001	mg/kg-day	1.31E-014
	Acenaphthene	1.10E+001	mg/kg	3.77E-005	mg/cu. m.	R	5.90E-010	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	1.32E-005	mg/cu. m.	R	2.07E-010	mg/kg-day		mg/kg-day	
	Acetone	6.50E+002	mg/kg	1.44E-003	mg/cu. m.	R	2.25E-008	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	2.27E-010	mg/cu. m.	R	3.55E-015	mg/kg-day	1.70E+001	mg/kg-day	6.04E-014
	alpha-BHC	0.00E+000	mg/kg	1.24E-011	mg/cu. m.	R	1.94E-016	mg/kg-day	6.30E+000	mg/kg-day	1.22E-015
	Anthracene	1.10E+000	mg/kg	1.10E-006	mg/cu. m.	R	1.73E-011	mg/kg-day		mg/kg-day	
	Antimony	8.34E+000	mg/kg	1.12E-008	mg/cu. m.	R	1.76E-013	mg/kg-day		mg/kg-day	
	Aroclor-1242	5.25E+001	mg/kg	1.55E-008	mg/cu. m.	R	2.43E-013	mg/kg-day	2.00E+000	mg/kg-day	4.87E-013
	Aroclor-1248	7.29E+001	mg/kg	1.25E-008	mg/cu. m.	R	1.96E-013	mg/kg-day	2.00E+000	mg/kg-day	3.93E-013
	Aroclor-1254	1.00E+002	mg/kg	1.93E-008	mg/cu. m.	R	3.01E-013	mg/kg-day	2.00E+000	mg/kg-day	6.03E-013
	Aroclor-1260	2.20E+001	mg/kg	2.41E-008	mg/cu. m.	R	3.77E-013	mg/kg-day	2.00E+000	mg/kg-day	7.55E-013
	Arsenic	3.53E+000	mg/kg	2.73E-009	mg/cu. m.	R	4.27E-014	mg/kg-day	1.51E+001	mg/kg-day	6.45E-013
	Barium	1.60E+002	mg/kg	1.83E-007	mg/cu. m.	R	2.86E-012	mg/kg-day		mg/kg-day	
	Benzene	6.61E+003	mg/kg	6.38E-003	mg/cu. m.	R	9.98E-008	mg/kg-day	2.90E-002	mg/kg-day	2.89E-009
	Benzoic Acid	1.30E+001	mg/kg	3.96E-004	mg/cu. m.	R	6.20E-009	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	1.70E-001	mg/kg	1.18E-010	mg/cu. m.	R	1.85E-015	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.85E-001	mg/kg	7.16E-011	mg/cu. m.	R	1.12E-015	mg/kg-day	3.10E+000	mg/kg-day	3.48E-015
	Benzo(b)fluoranthene	3.90E-001	mg/kg	2.24E-010	mg/cu. m.	R	3.51E-015	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.02E-011	mg/cu. m.	R	9.43E-016	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E-001	mg/kg	2.22E-010	mg/cu. m.	R	3.48E-015	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	9.97E-010	mg/cu. m.	R	1.56E-014	mg/kg-day		mg/kg-day	
	Beryllium	1.55E+000	mg/kg	5.09E-010	mg/cu. m.	R	7.97E-015	mg/kg-day	8.40E+000	mg/kg-day	6.69E-014
	beta-BHC	0.00E+000	mg/kg	2.36E-011	mg/cu. m.	R	3.70E-016	mg/kg-day	1.80E+000	mg/kg-day	6.66E-016
	bis(2-Chloroethyl) ether	1.03E+001	mg/kg	2.80E-004	mg/cu. m.	R	4.39E-009	mg/kg-day	1.10E+000	mg/kg-day	4.82E-009
	bis(2-Ethylhexyl)phthalate	2.60E+003	mg/kg	1.85E-007	mg/cu. m.	R	2.90E-012	mg/kg-day	1.40E-002	mg/kg-day	4.06E-014
	Butylbenzylphthalate	4.78E+002	mg/kg	7.89E-008	mg/cu. m.	R	1.24E-012	mg/kg-day		mg/kg-day	
	Cadmium	1.42E+001	mg/kg	1.31E-008	mg/cu. m.	R	2.05E-013	mg/kg-day	6.30E+000	mg/kg-day	1.29E-012
	Carbon Disulfide	0.00E+000	mg/kg	1.22E-008	mg/cu. m.	R	1.91E-013	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+001	mg/kg	1.07E-003	mg/cu. m.	R	1.68E-008	mg/kg-day		mg/kg-day	
	Chloroform	2.10E+003	mg/kg	6.59E-003	mg/cu. m.	R	1.03E-007	mg/kg-day	8.10E-002	mg/kg-day	8.36E-009

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 1, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-36
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area1CT.wk4 \ TT_Inh_flWe1CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	8.85E+001	mg/kg	1.38E-007	mg/cu. m.	R	2.16E-012	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	2.30E-008	mg/cu. m.	R	3.60E-013	mg/kg-day	4.10E+001	mg/kg-day	1.48E-011
	Chrysene	2.60E-001	mg/kg	1.59E-010	mg/cu. m.	R	2.49E-015	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	1.20E+003	mg/kg	2.42E-002	mg/cu. m.	R	3.79E-007	mg/kg-day		mg/kg-day	
	Cobalt	7.32E+000	mg/kg	6.51E-009	mg/cu. m.	R	1.02E-013	mg/kg-day		mg/kg-day	
	Copper	5.31E+001	mg/kg	9.35E-008	mg/cu. m.	R	1.46E-012	mg/kg-day		mg/kg-day	
	Cyanide (total)	3.74E+000	mg/kg	5.02E-009	mg/cu. m.	R	7.85E-014	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.20E+000	mg/kg	2.20E-009	mg/cu. m.	R	3.45E-014	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	9.37E-013	mg/cu. m.	R	1.47E-017	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	1.20E-010	mg/cu. m.	R	1.88E-015	mg/kg-day	1.60E+001	mg/kg-day	3.01E-014
	Diethylphthalate	2.41E+001	mg/kg	8.78E-009	mg/cu. m.	R	1.37E-013	mg/kg-day		mg/kg-day	
	Dimethylphthalate	5.97E+001	mg/kg	3.71E-008	mg/cu. m.	R	5.80E-013	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.49E+002	mg/kg	4.60E-008	mg/cu. m.	R	7.20E-013	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	9.77E+000	mg/kg	5.59E-009	mg/cu. m.	R	8.76E-014	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	9.42E-015	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	8.02E-010	mg/cu. m.	R	1.26E-014	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.38E-012	mg/cu. m.	R	2.16E-017	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.70E+003	mg/kg	6.63E-003	mg/cu. m.	R	1.04E-007	mg/kg-day		mg/kg-day	
	Fluoranthene	3.80E+000	mg/kg	2.10E-009	mg/cu. m.	R	3.28E-014	mg/kg-day		mg/kg-day	
	Fluorene	9.49E+000	mg/kg	1.62E-005	mg/cu. m.	R	2.54E-010	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	6.02E-010	mg/cu. m.	R	9.42E-015	mg/kg-day	3.50E-001	mg/kg-day	3.30E-015
	Heptachlor	0.00E+000	mg/kg	7.63E-014	mg/cu. m.	R	1.19E-018	mg/kg-day	4.50E+000	mg/kg-day	5.38E-018
	Heptachlor epoxide	0.00E+000	mg/kg	3.64E-014	mg/cu. m.	R	5.70E-019	mg/kg-day	9.10E+000	mg/kg-day	5.19E-018
	Hexachlorobenzene	5.90E-001	mg/kg	3.64E-012	mg/cu. m.	R	5.69E-017	mg/kg-day	1.60E+000	mg/kg-day	9.11E-017
	Hexachlorobutadiene	7.96E+000	mg/kg	3.53E-009	mg/cu. m.	R	5.53E-014	mg/kg-day	7.80E-002	mg/kg-day	4.32E-015
	Hexane, n-	0.00E+000	mg/kg	5.64E-012	mg/cu. m.	R	8.83E-017	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	6.10E-011	mg/cu. m.	R	9.55E-016	mg/kg-day		mg/kg-day	
	Isophorone	2.96E+002	mg/kg	2.49E-003	mg/cu. m.	R	3.90E-008	mg/kg-day		mg/kg-day	
	Lead	5.99E+002	mg/kg	8.53E-007	mg/cu. m.	R	1.33E-011	mg/kg-day		mg/kg-day	
	Manganese	1.14E+003	mg/kg	3.51E-007	mg/cu. m.	R	5.49E-012	mg/kg-day		mg/kg-day	
	Mercury	2.99E+000	mg/kg	1.98E-009	mg/cu. m.	R	3.09E-014	mg/kg-day		mg/kg-day	
	Methylene Chloride	5.70E+002	mg/kg	1.01E-001	mg/cu. m.	R	1.57E-006	mg/kg-day	1.65E-003	mg/kg-day	2.60E-009
	m,p-xylene	5.50E+003	mg/kg	6.03E-002	mg/cu. m.	R	9.45E-007	mg/kg-day		mg/kg-day	
	Naphthalene	4.64E+002	mg/kg	7.65E-004	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day	
	Nickel	7.89E+000	mg/kg	6.44E-009	mg/cu. m.	R	1.01E-013	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	3.40E-008	mg/cu. m.	R	5.33E-013	mg/kg-day		mg/kg-day	
	ortho-xylene	1.10E+003	mg/kg	1.72E-002	mg/cu. m.	R	2.70E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.97E+001	mg/kg	1.16E-008	mg/cu. m.	R	1.82E-013	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.24E-009	mg/cu. m.	R	8.21E-014	mg/kg-day		mg/kg-day	
	Phenol	1.87E+001	mg/kg	2.22E-004	mg/cu. m.	R	3.47E-009	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	2.91E-009	mg/cu. m.	R	4.55E-014	mg/kg-day		mg/kg-day	
	Pyrene	5.90E+000	mg/kg	3.29E-009	mg/cu. m.	R	5.15E-014	mg/kg-day		mg/kg-day	
	Selenium	4.31E-001	mg/kg	6.06E-010	mg/cu. m.	R	9.49E-015	mg/kg-day		mg/kg-day	
	Silver	1.67E+000	mg/kg	6.86E-010	mg/cu. m.	R	1.07E-014	mg/kg-day		mg/kg-day	
	Styrene	9.00E+001	mg/kg	7.40E-004	mg/cu. m.	R	1.16E-008	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.30E+003	mg/kg	1.08E-002	mg/cu. m.	R	1.69E-007	mg/kg-day	2.00E-003	mg/kg-day	3.39E-010
	Thallium	0.00E+000	mg/kg	2.99E-011	mg/cu. m.	R	4.69E-016	mg/kg-day		mg/kg-day	
	Toluene	2.00E+005	mg/kg	3.85E-002	mg/cu. m.	R	6.02E-007	mg/kg-day		mg/kg-day	
	Trichloroethene	2.80E+003	mg/kg	8.80E-003	mg/cu. m.	R	1.38E-007	mg/kg-day	6.00E-003	mg/kg-day	8.27E-010
	Vanadium	1.17E+001	mg/kg	7.44E-009	mg/cu. m.	R	1.16E-013	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	5.48E-006	mg/cu. m.	R	8.59E-011	mg/kg-day	3.00E-001	mg/kg-day	2.58E-011
	Xylenes (total)	2.50E+004	mg/kg	1.88E-002	mg/cu. m.	R	2.95E-007	mg/kg-day		mg/kg-day	
	Zinc	2.29E+002	mg/kg	3.85E-007	mg/cu. m.	R	6.03E-012	mg/kg-day		mg/kg-day	
	(Total)										2.16E-008

Scenario Timeframe:	Current
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

le 5-1-37
Calculat Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_cTo2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	4.4E-009	mg/kg-day		mg/kg-day	NA	NA	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.37E-001
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.18E-003
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.41E-002
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.15E-003
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.47E-003
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.22E-003
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.23E-003
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.12E-002
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	9.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.83E-002
	Acetone	2.50E+005	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.27E+000
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.17E-003
	Antimony	1.64E+002	mg/kg	NA	NA	M	8.3E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.08E-001
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.19E-001
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.32E-002
	Barium	2.69E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.95E-002
	Benzene	8.90E+004	mg/kg	NA	NA	M	4.5E-002	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.50E+001
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.09E-003
	Cadmium	1.06E+002	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	5.38E-002
	Chloroform	3.10E+004	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.57E+000
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	5.00E-004
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	7.1E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.10E-006
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.78E-004
	Copper	1.32E+003	mg/kg	NA	NA	M	6.7E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.67E-002
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	5.58E-006
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.26E-004
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.96E-002
	Iron	1.92E+004	mg/kg	NA	NA	M	9.7E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.25E-002
	Isophorone	2.10E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.33E-004
	Lead	1.02E+004	mg/kg	NA	NA	M	5.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.02E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.69E-007
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	1.6E-008	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	8.12E-009
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.55E-003
	Nickel	5.33E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.35E-003
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	6.1E-009	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.04E-009
	Phenol	1.70E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.44E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.44E-004
	Silver	3.49E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.54E-003
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.38E+000
	Toluene	2.60E+005	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.59E-001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.96E-002
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.2E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.84E-004
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	7.10E-002
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.40E-002
Dermal	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	7.4E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.68E+001
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.21E-002
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	2.51E+000
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.08E-002
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.47E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	5.36E-002

Scenario Timeframe:	Current
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-37
Calculation of Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_cTa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.82E-002
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.81E+000
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.24E+000
	Acetone	2.50E+005	mg/kg	NA	NA	M	5.6E+000	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	7.11E+001
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.84E-001
	Antimony	1.64E+002	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	9.15E+002
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	7.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	5.89E+000
	Aroclor-1260	8.20E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	6.09E-001
	Barium	2.69E+003	mg/kg	NA	NA	M	6.0E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	8.58E-001
	Benzene	8.90E+004	mg/kg	NA	NA	M	2.0E+000	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	7.36E+002
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.68E-001
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	9.46E+001
	Chloroform	3.10E+004	mg/kg	NA	NA	M	6.9E-001	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	7.24E+001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	5.51E+000
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.12E-004
	Cobalt	3.29E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.22E-002
	Copper	1.32E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.23E+000
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.46E-004
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.93E-002
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.89E+000
	Iron	1.92E+004	mg/kg	NA	NA	M	4.3E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.43E+000
	Isophorone	2.10E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.34E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	2.3E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	9.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.49E-001
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	4.5E-007	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.35E-005
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	7.1E-007	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.97E-007
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.56E-001
	Nickel	5.33E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.19E+000
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.49E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	6.32E-003
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.71E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	7.8E-004	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	7.42E-001
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	1.0E+000	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.05E+002
	Toluene	2.60E+005	mg/kg	NA	NA	M	5.8E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.90E+001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	7.8E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.33E+000
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.89E-002
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	6.2E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.49E+000
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.9E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.06E+000
	(Total)												2.09E+003
										Total Hazard Index Across All Exposure Routes/Pathways			2.1E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-38
Calculation of Non-Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \TT_Inh_cTa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.72E-003	mg/cu. m.	R	1.45E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.04E-004
	1,1,1-Trichloroethane	3.30E+004	mg/kg	1.99E-003	mg/cu. m.	R	1.68E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.89E-005
	1,1,2-Trichloroethane	0.00E+000	mg/kg	2.76E-006	mg/cu. m.	R	2.33E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.21E-006	mg/cu. m.	R	1.87E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.10E-003	mg/cu. m.	R	2.62E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.92E-003
	1,2-Dichloroethane	0.00E+000	mg/kg	6.88E-004	mg/cu. m.	R	5.81E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	4.15E-003
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	2.87E-003	mg/cu. m.	R	2.42E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	6.80E-004	mg/cu. m.	R	5.75E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	5.05E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.60E-004	mg/cu. m.	R	1.35E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.37E-005
	1,4-Dichlorobenzene	0.00E+000	mg/kg	5.92E-005	mg/cu. m.	R	5.00E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.18E-006
	2-Butanone	6.40E+004	mg/kg	3.11E-007	mg/cu. m.	R	2.63E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	9.19E-009
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	1.25E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	8.95E-002
	2-Methylnaphthalene	5.80E+001	mg/kg	3.54E-004	mg/cu. m.	R	2.99E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.79E-004	mg/cu. m.	R	2.36E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.02E-004	mg/cu. m.	R	8.60E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.43E-006	mg/cu. m.	R	1.21E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	1.39E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	9.00E-012	mg/cu. m.	R	7.61E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	1.76E-003	mg/cu. m.	R	1.49E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	7.43E-004
	4-Methylphenol	1.80E+002	mg/kg	1.02E-003	mg/cu. m.	R	8.66E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	9.17E-010	mg/cu. m.	R	7.75E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	5.52E-010	mg/cu. m.	R	4.66E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	7.81E-010	mg/cu. m.	R	6.61E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	5.84E-005	mg/cu. m.	R	4.93E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	7.46E-008	mg/cu. m.	R	6.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	2.50E+005	mg/kg	2.54E-003	mg/cu. m.	R	2.15E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	3.78E-009	mg/cu. m.	R	3.20E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.07E-010	mg/cu. m.	R	1.75E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	0.00E+000	mg/kg	1.50E-006	mg/cu. m.	R	1.27E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.30E-006	mg/cu. m.	R	3.63E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	0.00E+000	mg/kg	3.66E-010	mg/cu. m.	R	3.10E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	3.30E+002	mg/kg	3.13E-006	mg/cu. m.	R	2.65E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.70E+000	mg/kg	2.29E-008	mg/cu. m.	R	1.94E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	6.20E+001	mg/kg	2.16E-007	mg/cu. m.	R	1.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	4.04E-009	mg/cu. m.	R	3.42E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	6.87E-007	mg/cu. m.	R	5.81E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	4.15E-005
	Benzene	8.90E+004	mg/kg	1.77E-003	mg/cu. m.	R	1.49E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	8.78E-003
	Benzoic Acid	0.00E+000	mg/kg	2.65E-003	mg/cu. m.	R	2.24E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	0.00E+000	mg/kg	1.76E-009	mg/cu. m.	R	1.49E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	0.00E+000	mg/kg	9.44E-010	mg/cu. m.	R	7.98E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	2.82E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.40E-010	mg/cu. m.	R	7.95E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	2.82E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	1.66E-008	mg/cu. m.	R	1.41E-010	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	5.53E-007
	Beryllium	0.00E+000	mg/kg	3.73E-010	mg/cu. m.	R	3.15E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	beta-BHC	0.00E+000	mg/kg	3.94E-010	mg/cu. m.	R	3.33E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	5.72E-004	mg/cu. m.	R	4.83E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	2.28E-007	mg/cu. m.	R	1.93E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	0.00E+000	mg/kg	2.64E-007	mg/cu. m.	R	2.23E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.06E+002	mg/kg	7.11E-008	mg/cu. m.	R	6.01E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.76E-010
	Carbon Disulfide	0.00E+000	mg/kg	4.17E-009	mg/cu. m.	R	3.53E-011	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	6.55E-005
	Chlorobenzene	0.00E+000	mg/kg	3.88E-005	mg/cu. m.	R	3.28E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.36E-001
	Chloroform	3.10E+004	mg/kg	2.40E-003	mg/cu. m.	R	2.03E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 3+	1.48E+003	mg/kg	8.28E-007	mg/cu. m.	R	7.00E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.38E-007	mg/cu. m.	R	1.17E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	0.00E+000	mg/kg	2.42E-009	mg/cu. m.	R	2.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-38
Calculation of Non-Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4:\TT_Inh_sTo2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	2.71E-005	mg/cu. m.	R	2.29E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.07E-006	mg/cu. m.	R	9.01E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	8.63E-007	mg/cu. m.	R	7.30E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	1.20E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	1.58E-009	mg/cu. m.	R	1.34E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	1.55E-008	mg/cu. m.	R	1.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.10E+002	mg/kg	1.63E-007	mg/cu. m.	R	1.38E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	8.40E+001	mg/kg	4.77E-008	mg/cu. m.	R	4.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	0.00E+000	mg/kg	8.19E-009	mg/cu. m.	R	6.93E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	4.71E-013	mg/cu. m.	R	3.98E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	7.80E+003	mg/kg	1.05E-002	mg/cu. m.	R	8.87E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	3.06E-004
	Fluoranthene	0.00E+000	mg/kg	2.67E-009	mg/cu. m.	R	2.26E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	3.04E-005	mg/cu. m.	R	2.57E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	2.53E-012	mg/cu. m.	R	2.14E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	1.21E-012	mg/cu. m.	R	1.02E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	1.24E-012	mg/cu. m.	R	1.05E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	8.56E-009	mg/cu. m.	R	7.24E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	7.95E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	8.80E-010	mg/cu. m.	R	7.44E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.10E+002	mg/kg	3.05E-003	mg/cu. m.	R	2.58E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	6.71E-006	mg/cu. m.	R	5.67E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	2.46E-007	mg/cu. m.	R	2.08E-009	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.45E-004
	Mercury	7.85E+000	mg/kg	5.36E-009	mg/cu. m.	R	4.53E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.27E-007
	Methylene Chloride	2.00E-002	mg/kg	5.90E-003	mg/cu. m.	R	4.99E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	5.80E-005
	m,p-xylene	3.20E-002	mg/kg	1.56E-004	mg/cu. m.	R	1.32E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	1.40E+002	mg/kg	1.54E-003	mg/cu. m.	R	1.30E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.45E-002
	Nickel	5.33E+001	mg/kg	1.73E-008	mg/cu. m.	R	1.46E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	4.07E-007	mg/cu. m.	R	3.44E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.20E-002	mg/kg	7.52E-005	mg/cu. m.	R	6.35E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	2.90E-008	mg/cu. m.	R	2.45E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.12E-008	mg/cu. m.	R	9.47E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	6.24E-004	mg/cu. m.	R	5.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	0.00E+000	mg/kg	5.09E-009	mg/cu. m.	R	4.30E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.25E-009	mg/cu. m.	R	1.90E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	6.17E-009	mg/cu. m.	R	5.21E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	4.04E-004	mg/cu. m.	R	3.42E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.20E-005
	Tetrachloroethene	4.70E+004	mg/kg	2.44E-002	mg/cu. m.	R	2.06E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.47E-003
	Thallium	0.00E+000	mg/kg	4.53E-010	mg/cu. m.	R	3.83E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.60E+005	mg/kg	1.17E-001	mg/cu. m.	R	9.87E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	8.65E-003
	Trichloroethene	3.50E+002	mg/kg	7.26E-003	mg/cu. m.	R	6.14E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	7.27E-009	mg/cu. m.	R	6.15E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	9.14E-005	mg/cu. m.	R	7.73E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.80E+005	mg/kg	6.48E-002	mg/cu. m.	R	5.48E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.52E-006	mg/cu. m.	R	2.13E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												3.72E-001

Scenario Timeframe:	Current
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-39
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 | TT_1D_cTa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethene	8.80E-003	mg/kg	NA	NA	M	3.6E-010	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	2.7E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	7.6E-006	mg/kg-day		kg-day/mg	
	Acetone	2.50E+005	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Antimony	1.84E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E+000	kg-day/mg	2.8E-005
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	2.0E+000	kg-day/mg	4.0E-007
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	2.0E+000	kg-day/mg	5.2E-006
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	1.5E+000	kg-day/mg	4.9E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Benzene	8.90E+004	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	2.9E-002	kg-day/mg	1.1E-004
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	1.4E-002	kg-day/mg	1.4E-007
	Cadmium	1.06E+002	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		kg-day/mg	
	Chloroform	3.10E+004	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	6.1E-003	kg-day/mg	8.0E-006
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	5.9E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	3.3E-004	mg/kg-day		kg-day/mg	
	Iron	1.92E+004	mg/kg	NA	NA	M	8.1E-004	mg/kg-day		kg-day/mg	
	Isophorone	2.10E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	9.5E-004	kg-day/mg	8.4E-009
	Lead	1.02E+004	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	8.5E-010	mg/kg-day	7.5E-003	kg-day/mg	6.3E-012
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		kg-day/mg	
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	5.9E-006	mg/kg-day		kg-day/mg	
	Nickel	5.33E+001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	5.1E-010	mg/kg-day		kg-day/mg	
	Phenol	1.70E+002	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	5.2E-002	kg-day/mg	1.0E-004
	Toluene	2.60E+005	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.1E-002	kg-day/mg	1.6E-007
	Vanadium	1.22E+001	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
Dermal	1,1-Dichloroethene	8.80E-003	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	6.1E-002	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	3.9E-004	mg/kg-day		kg-day/mg	
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	1.2E-001	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-39
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \TT_ID_cTa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day		kg-day/mg	
	Acetone	2.50E+005	mg/kg	NA	NA	M	4.6E-001	mg/kg-day		kg-day/mg	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	6.1E-004	mg/kg-day	2.0E+000	kg-day/mg	1.23E-003
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	2.2E+000	kg-day/mg	1.96E-005
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E+000	kg-day/mg	2.31E-004
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.6E+000	kg-day/mg	2.28E-005
	Barium	2.69E+003	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Benzene	8.90E+004	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	3.2E-002	kg-day/mg	5.33E-003
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	1.4E-002	kg-day/mg	6.25E-006
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Chloroform	3.10E+004	mg/kg	NA	NA	M	5.8E-002	mg/kg-day	6.4E-003	kg-day/mg	3.68E-004
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	7.60E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Iron	1.92E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day		kg-day/mg	
	Isophorone	2.10E+002	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	9.5E-004	kg-day/mg	3.71E-007
	Lead	1.02E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	7.5E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	3.7E-008	mg/kg-day	1.4E-002	kg-day/mg	5.07E-010
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	6.0E-008	mg/kg-day		kg-day/mg	
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Nickel	5.33E+001	mg/kg	NA	NA	M	9.9E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		kg-day/mg	
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	8.7E-002	mg/kg-day	5.2E-002	kg-day/mg	4.55E-003
	Toluene	2.60E+005	mg/kg	NA	NA	M	4.8E-001	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	6.5E-004	mg/kg-day	1.1E-002	kg-day/mg	7.31E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	5.2E-001	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	(Total)										1.18E-002
										Total Hazard Index Across All Exposure Routes/Pathways	1.2E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-40
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_cTa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.72E-003	mg/cu. m.	R	7.91E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	1.99E-003	mg/cu. m.	R	9.17E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	2.76E-006	mg/cu. m.	R	1.27E-010	mg/kg-day	5.60E-002	mg/kg-day	7.12E-012
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.21E-006	mg/cu. m.	R	1.02E-008	mg/kg-day	2.00E-001	mg/kg-day	2.04E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.10E-003	mg/cu. m.	R	1.43E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	6.88E-004	mg/cu. m.	R	3.16E-006	mg/kg-day	9.10E-002	mg/kg-day	2.88E-007
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	2.87E-003	mg/cu. m.	R	1.32E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	6.80E-004	mg/cu. m.	R	3.13E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.60E-004	mg/cu. m.	R	7.37E-007	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	5.92E-005	mg/cu. m.	R	2.72E-007	mg/kg-day	2.20E-002	mg/kg-day	5.99E-009
	2-Butanone	6.40E+004	mg/kg	3.11E-007	mg/cu. m.	R	1.43E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	6.82E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.80E+001	mg/kg	3.54E-004	mg/cu. m.	R	1.63E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.79E-004	mg/cu. m.	R	1.29E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.02E-004	mg/cu. m.	R	4.68E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.43E-008	mg/cu. m.	R	6.58E-011	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	7.55E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	9.00E-012	mg/cu. m.	R	4.14E-014	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	1.76E-003	mg/cu. m.	R	8.09E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	1.02E-003	mg/cu. m.	R	4.72E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	9.17E-010	mg/cu. m.	R	4.22E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	5.52E-010	mg/cu. m.	R	2.54E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	7.81E-010	mg/cu. m.	R	3.60E-012	mg/kg-day	3.40E-001	mg/kg-day	1.22E-012
	Acenaphthene	0.00E+000	mg/kg	5.84E-005	mg/cu. m.	R	2.69E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	7.46E-008	mg/cu. m.	R	3.43E-010	mg/kg-day		mg/kg-day	
	Acetone	2.50E+005	mg/kg	2.54E-003	mg/cu. m.	R	1.17E-005	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	3.78E-009	mg/cu. m.	R	1.74E-011	mg/kg-day	1.70E+001	mg/kg-day	2.96E-010
	alpha-BHC	0.00E+000	mg/kg	2.07E-010	mg/cu. m.	R	9.52E-013	mg/kg-day	6.30E+000	mg/kg-day	6.00E-012
	Anthracene	0.00E+000	mg/kg	1.50E-006	mg/cu. m.	R	6.90E-009	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.30E-006	mg/cu. m.	R	1.98E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	0.00E+000	mg/kg	3.66E-010	mg/cu. m.	R	1.69E-012	mg/kg-day	2.00E+000	mg/kg-day	3.37E-012
	Aroclor-1248	3.30E+002	mg/kg	3.13E-006	mg/cu. m.	R	1.44E-010	mg/kg-day	2.00E+000	mg/kg-day	2.88E-010
	Aroclor-1254	4.70E+000	mg/kg	2.29E-006	mg/cu. m.	R	1.06E-010	mg/kg-day	2.00E+000	mg/kg-day	2.11E-010
	Aroclor-1260	6.20E+001	mg/kg	2.16E-007	mg/cu. m.	R	9.96E-010	mg/kg-day	2.00E+000	mg/kg-day	1.99E-009
	Arsenic	7.78E+000	mg/kg	4.04E-009	mg/cu. m.	R	1.86E-011	mg/kg-day	1.51E+001	mg/kg-day	2.81E-010
	Barium	2.69E+003	mg/kg	6.87E-007	mg/cu. m.	R	3.16E-009	mg/kg-day		mg/kg-day	
	Benzene	8.90E+004	mg/kg	1.77E-003	mg/cu. m.	R	8.13E-006	mg/kg-day	2.90E-002	mg/kg-day	2.36E-007
	Benzoic Acid	0.00E+000	mg/kg	2.65E-003	mg/cu. m.	R	1.22E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	0.00E+000	mg/kg	1.76E-009	mg/cu. m.	R	8.12E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	0.00E+000	mg/kg	9.44E-010	mg/cu. m.	R	4.34E-012	mg/kg-day	3.10E+000	mg/kg-day	1.35E-011
	Benzo(b)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	1.54E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.40E-010	mg/cu. m.	R	4.33E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	1.54E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	1.66E-006	mg/cu. m.	R	7.65E-011	mg/kg-day		mg/kg-day	
	Beryllium	0.00E+000	mg/kg	3.73E-010	mg/cu. m.	R	1.72E-012	mg/kg-day	8.40E+000	mg/kg-day	1.44E-011
	beta-BHC	0.00E+000	mg/kg	3.94E-010	mg/cu. m.	R	1.81E-012	mg/kg-day	1.80E+000	mg/kg-day	3.26E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	5.72E-004	mg/cu. m.	R	2.63E-006	mg/kg-day	1.10E+000	mg/kg-day	2.89E-006
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	2.28E-007	mg/cu. m.	R	1.05E-009	mg/kg-day	1.40E-002	mg/kg-day	1.47E-011
	Butylbenzylphthalate	0.00E+000	mg/kg	2.64E-007	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.08E+002	mg/kg	7.11E-008	mg/cu. m.	R	3.27E-010	mg/kg-day	6.30E+000	mg/kg-day	2.06E-009
	Carbon Disulfide	0.00E+000	mg/kg	4.17E-009	mg/cu. m.	R	1.92E-011	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	3.88E-005	mg/cu. m.	R	1.78E-007	mg/kg-day		mg/kg-day	
	Chloroform	3.10E+004	mg/kg	2.40E-003	mg/cu. m.	R	1.10E-005	mg/kg-day	8.10E-002	mg/kg-day	8.94E-007
	Chromium 3+	1.48E+003	mg/kg	8.28E-007	mg/cu. m.	R	3.81E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.38E-007	mg/cu. m.	R	6.36E-010	mg/kg-day	4.10E+001	mg/kg-day	2.61E-008
	Chrysene	0.00E+000	mg/kg	2.42E-009	mg/cu. m.	R	1.12E-011	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-40
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_cTa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	2.71E-005	mg/cu. m.	R	1.25E-007	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	4.90E-011	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.63E-007	mg/cu. m.	R	3.97E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	6.51E-012	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	1.58E-009	mg/cu. m.	R	7.27E-012	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	1.55E-008	mg/cu. m.	R	7.14E-011	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.10E+002	mg/kg	1.63E-007	mg/cu. m.	R	7.50E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	8.40E+001	mg/kg	4.77E-008	mg/cu. m.	R	2.20E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	0.00E+000	mg/kg	8.19E-009	mg/cu. m.	R	3.77E-011	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	4.71E-013	mg/cu. m.	R	2.17E-015	mg/kg-day		mg/kg-day	
	Ethyl Benzene	7.80E+003	mg/kg	1.05E-002	mg/cu. m.	R	4.83E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	0.00E+000	mg/kg	2.67E-009	mg/cu. m.	R	1.23E-011	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	3.04E-005	mg/cu. m.	R	1.40E-007	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	2.53E-012	mg/cu. m.	R	1.16E-014	mg/kg-day	4.50E+000	mg/kg-day	5.24E-014
	Heptachlor epoxide	0.00E+000	mg/kg	1.21E-012	mg/cu. m.	R	5.55E-015	mg/kg-day	9.10E+000	mg/kg-day	5.05E-014
	Hexachlorobenzene	0.00E+000	mg/kg	1.24E-012	mg/cu. m.	R	5.72E-015	mg/kg-day	1.60E+000	mg/kg-day	9.15E-015
	Hexachlorobutadiene	0.00E+000	mg/kg	8.56E-009	mg/cu. m.	R	3.94E-011	mg/kg-day	7.80E-002	mg/kg-day	3.07E-012
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	4.33E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	8.80E-010	mg/cu. m.	R	4.05E-012	mg/kg-day		mg/kg-day	
	Isophorone	2.10E+002	mg/kg	3.05E-003	mg/cu. m.	R	1.41E-005	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.71E-006	mg/cu. m.	R	3.09E-008	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	2.48E-007	mg/cu. m.	R	1.13E-009	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.36E-009	mg/cu. m.	R	2.47E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-002	mg/kg	5.90E-003	mg/cu. m.	R	2.72E-005	mg/kg-day	1.65E-003	mg/kg-day	4.48E-008
	m,p-xylene	3.20E-002	mg/kg	1.56E-004	mg/cu. m.	R	7.20E-007	mg/kg-day		mg/kg-day	
	Naphthalene	1.40E+002	mg/kg	1.54E-003	mg/cu. m.	R	7.10E-006	mg/kg-day		mg/kg-day	
	Nickel	5.33E+001	mg/kg	1.73E-008	mg/cu. m.	R	7.95E-011	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	4.07E-007	mg/cu. m.	R	1.88E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	1.20E-002	mg/kg	7.52E-005	mg/cu. m.	R	3.46E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	2.90E-008	mg/cu. m.	R	1.33E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.12E-008	mg/cu. m.	R	5.15E-011	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	6.24E-004	mg/cu. m.	R	2.87E-006	mg/kg-day		mg/kg-day	
	Pyrene	0.00E+000	mg/kg	5.09E-009	mg/cu. m.	R	2.34E-011	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.25E-009	mg/cu. m.	R	1.04E-011	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	6.17E-009	mg/cu. m.	R	2.84E-011	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	4.04E-004	mg/cu. m.	R	1.86E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.70E+004	mg/kg	2.44E-002	mg/cu. m.	R	1.12E-004	mg/kg-day	2.00E-003	mg/kg-day	2.24E-007
	Thallium	0.00E+000	mg/kg	4.53E-010	mg/cu. m.	R	2.08E-012	mg/kg-day		mg/kg-day	
	Toluene	2.60E+005	mg/kg	1.17E-001	mg/cu. m.	R	5.37E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	7.26E-003	mg/cu. m.	R	3.34E-005	mg/kg-day	6.00E-003	mg/kg-day	2.00E-007
	Vanadium	1.22E+001	mg/kg	7.27E-009	mg/cu. m.	R	3.35E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	9.14E-005	mg/cu. m.	R	4.21E-007	mg/kg-day	3.00E-001	mg/kg-day	1.26E-007
	Xylenes (total)	2.80E+005	mg/kg	6.48E-002	mg/cu. m.	R	2.98E-004	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.52E-006	mg/cu. m.	R	1.16E-008	mg/kg-day		mg/kg-day	
	(Total)										4.95E-006

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-41
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_eTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	1.1E-009	mg/kg-day		mg/kg-day	NA	NA	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	4.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.17E-001
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.07E-004
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	8.4E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.40E-002
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.99E-004
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	7.6E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.81E-004
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	3.16E-004
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.79E-004
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.07E-002
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.73E-003
	Acetone	2.50E+005	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.29E-001
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.08E-003
	Antimony	1.64E+002	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	5.39E-002
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	4.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	6.2E-007	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	3.09E-002
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	8.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	3.41E-003
	Barium	2.69E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.05E-003
	Benzene	8.90E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	3.90E+000
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.58E-003
	Cadmium	1.06E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.39E-002
	Chloroform	3.10E+004	mg/kg	NA	NA	M	4.1E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.08E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.30E-004
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.84E-006
	Cobalt	3.29E+001	mg/kg	NA	NA	M	4.3E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.21E-005
	Copper	1.32E+003	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.34E-003
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.45E-006
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.10E-004
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.03E-002
	Iron	1.92E+004	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.42E-003
	Isophorone	2.10E+002	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.38E-004
	Lead	1.02E+004	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.64E-003
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	2.6E-009	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.38E-008
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	4.2E-009	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.10E-009
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.21E-004
	Nickel	5.33E+001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.50E-004
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	1.6E-009	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	7.89E-010
	Phenol	1.70E+002	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.73E-005
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.19E-004
	Silver	3.49E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.18E-004
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	6.2E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.18E-001
	Toluene	2.60E+005	mg/kg	NA	NA	M	3.4E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.71E-001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	7.67E-003
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.29E-004
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	3.7E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.84E-002
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.63E-003
Dermal	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	6.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.12E+000
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	4.42E-003
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	2.13E-001
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.31E-003
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.49E-003
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.54E-003

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-41
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_cTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.33E-003
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.54E-001
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.05E-001
	Acetone	2.50E+005	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	6.03E+000
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.56E-002
	Antimony	1.64E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	7.76E+001
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	6.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	5.00E-001
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	5.17E-002
	Barium	2.69E+003	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	7.28E-002
	Benzene	6.90E+004	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	6.24E+001
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.27E-002
	Cadmium	1.08E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	8.03E+000
	Chloroform	3.10E+004	mg/kg	NA	NA	M	5.9E-002	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	6.15E+000
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.67E-001
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.65E-005
	Cobalt	3.29E+001	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.04E-003
	Copper	1.32E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.04E-001
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.08E-005
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.64E-003
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.61E-001
	Iron	1.92E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.21E-001
	Isophorone	2.10E+002	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.99E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.81E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	3.8E-008	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.15E-006
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	6.1E-008	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.37E-008
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.33E-002
	Nickel	5.33E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.01E-001
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	2.3E-008	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.26E-008
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.37E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.15E-003
	Silver	3.49E+001	mg/kg	NA	NA	M	6.6E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	6.29E-002
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	8.9E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.90E+000
	Toluene	2.60E+005	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.46E+000
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.13E-001
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.30E-003
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	5.3E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.98E-001
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.74E-001
	(Total)												1.78E+002
										Total Hazard Index Across All Exposure Routes/Pathways			1.8E+002

Scenario Timeframe:	Current
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-42
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wb4 \ TT_Inh_cTa2CT.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.72E-003	mg/cu. m.	R	3.77E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.69E-005
	1,1,1-Trichloroethane	3.30E+004	mg/kg	1.99E-003	mg/cu. m.	R	4.37E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.53E-005
	1,1,2-Trichloroethane	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	6.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.21E-006	mg/cu. m.	R	4.85E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.10E-003	mg/cu. m.	R	6.80E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	7.56E-004
	1,2-Dichloroethane	0.00E+000	mg/kg	6.88E-004	mg/cu. m.	R	1.51E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.08E-003
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	2.87E-003	mg/cu. m.	R	6.28E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	6.80E-004	mg/cu. m.	R	1.49E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.31E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.60E-004	mg/cu. m.	R	3.51E-007	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	6.16E-006
	1,4-Dichlorobenzene	0.00E+000	mg/kg	5.92E-005	mg/cu. m.	R	1.30E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	5.66E-007
	2-Butanone	6.40E+004	mg/kg	3.11E-007	mg/cu. m.	R	6.81E-010	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.38E-009
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	3.25E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.32E-002
	2-Methylnaphthalene	5.80E+001	mg/kg	3.54E-004	mg/cu. m.	R	7.76E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.79E-004	mg/cu. m.	R	6.13E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.02E-004	mg/cu. m.	R	2.23E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.43E-006	mg/cu. m.	R	3.13E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	3.59E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	9.00E-012	mg/cu. m.	R	1.97E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	1.76E-003	mg/cu. m.	R	3.85E-006	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.93E-004
	4-Methylphenol	1.80E+002	mg/kg	1.02E-003	mg/cu. m.	R	2.25E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	9.17E-010	mg/cu. m.	R	2.01E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	5.52E-010	mg/cu. m.	R	1.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	7.81E-010	mg/cu. m.	R	1.71E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	5.84E-005	mg/cu. m.	R	1.28E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	7.46E-008	mg/cu. m.	R	1.64E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	2.50E+005	mg/kg	2.54E-003	mg/cu. m.	R	5.57E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	3.78E-009	mg/cu. m.	R	8.29E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.07E-010	mg/cu. m.	R	4.53E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	0.00E+000	mg/kg	1.50E-006	mg/cu. m.	R	3.29E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.30E-006	mg/cu. m.	R	9.42E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	0.00E+000	mg/kg	3.66E-010	mg/cu. m.	R	8.03E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	3.30E+002	mg/kg	3.13E-006	mg/cu. m.	R	6.87E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.70E+000	mg/kg	2.29E-006	mg/cu. m.	R	5.03E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	6.20E+001	mg/kg	2.16E-007	mg/cu. m.	R	4.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	4.04E-009	mg/cu. m.	R	8.86E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	6.87E-007	mg/cu. m.	R	1.51E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.08E-005
	Benzene	8.90E+004	mg/kg	1.77E-003	mg/cu. m.	R	3.87E-006	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	2.28E-003
	Benzoic Acid	0.00E+000	mg/kg	2.65E-003	mg/cu. m.	R	5.81E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	0.00E+000	mg/kg	1.76E-009	mg/cu. m.	R	3.87E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	0.00E+000	mg/kg	9.44E-010	mg/cu. m.	R	2.07E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	7.32E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.40E-010	mg/cu. m.	R	2.06E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	7.32E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	1.66E-006	mg/cu. m.	R	3.64E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	0.00E+000	mg/kg	3.73E-010	mg/cu. m.	R	8.18E-013	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.43E-007
	beta-BHC	0.00E+000	mg/kg	3.94E-010	mg/cu. m.	R	8.63E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	5.72E-004	mg/cu. m.	R	1.25E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	2.28E-007	mg/cu. m.	R	4.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	0.00E+000	mg/kg	2.64E-007	mg/cu. m.	R	5.78E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.08E+002	mg/kg	7.11E-008	mg/cu. m.	R	1.56E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	4.17E-009	mg/cu. m.	R	9.14E-012	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	4.57E-011
	Chlorobenzene	0.00E+000	mg/kg	3.88E-005	mg/cu. m.	R	8.49E-008	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	1.70E-005
	Chloroform	3.10E+004	mg/kg	2.40E-003	mg/cu. m.	R	5.26E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	6.11E-002
	Chromium 3+	1.48E+003	mg/kg	8.26E-007	mg/cu. m.	R	1.82E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.38E-007	mg/cu. m.	R	3.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	0.00E+000	mg/kg	2.42E-009	mg/cu. m.	R	5.31E-012	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-42
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk1 \ TT_inh_cTa2CT.wk1

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	2.71E-005	mg/cu. m.	R	5.93E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	2.34E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	8.63E-007	mg/cu. m.	R	1.89E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	3.10E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	1.58E-009	mg/cu. m.	R	3.46E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	1.55E-008	mg/cu. m.	R	3.40E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.10E+002	mg/kg	1.63E-007	mg/cu. m.	R	3.57E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	6.40E+001	mg/kg	4.77E-008	mg/cu. m.	R	1.05E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	0.00E+000	mg/kg	8.19E-009	mg/cu. m.	R	1.80E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	4.71E-013	mg/cu. m.	R	1.03E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	7.80E+003	mg/kg	1.05E-002	mg/cu. m.	R	2.30E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	7.93E-005
	Fluoranthene	0.00E+000	mg/kg	2.67E-009	mg/cu. m.	R	5.86E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	3.04E-005	mg/cu. m.	R	6.67E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	2.53E-012	mg/cu. m.	R	5.54E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	1.21E-012	mg/cu. m.	R	2.64E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	1.24E-012	mg/cu. m.	R	2.72E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	8.56E-009	mg/cu. m.	R	1.88E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	2.06E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	8.80E-010	mg/cu. m.	R	1.93E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	2.10E+002	mg/kg	3.05E-003	mg/cu. m.	R	6.69E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	6.71E-006	mg/cu. m.	R	1.47E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	2.46E-007	mg/cu. m.	R	5.38E-010	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	3.76E-005
	Mercury	7.85E+000	mg/kg	5.36E-009	mg/cu. m.	R	1.17E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.37E-007
	Methylene Chloride	2.00E-002	mg/kg	5.90E-003	mg/cu. m.	R	1.29E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.50E-005
	m,p-xylene	3.20E-002	mg/kg	1.56E-004	mg/cu. m.	R	3.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	1.40E+002	mg/kg	1.54E-003	mg/cu. m.	R	3.38E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.76E-003
	Nickel	5.33E+001	mg/kg	1.73E-008	mg/cu. m.	R	3.79E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	4.07E-007	mg/cu. m.	R	8.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.20E-002	mg/kg	7.52E-005	mg/cu. m.	R	1.65E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	2.90E-008	mg/cu. m.	R	6.36E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.12E-008	mg/cu. m.	R	2.45E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	6.24E-004	mg/cu. m.	R	1.37E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	0.00E+000	mg/kg	5.09E-009	mg/cu. m.	R	1.11E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.25E-009	mg/cu. m.	R	4.93E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	6.17E-009	mg/cu. m.	R	1.35E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	4.04E-004	mg/cu. m.	R	8.86E-007	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.10E-006
	Tetrachloroethene	4.70E+004	mg/kg	2.44E-002	mg/cu. m.	R	5.34E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	3.81E-004
	Thallium	0.00E+000	mg/kg	4.53E-010	mg/cu. m.	R	9.93E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.60E+005	mg/kg	1.17E-001	mg/cu. m.	R	2.56E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.24E-003
	Trichloroethene	3.50E+002	mg/kg	7.26E-003	mg/cu. m.	R	1.59E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	7.27E-009	mg/cu. m.	R	1.59E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	9.14E-005	mg/cu. m.	R	2.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.80E+005	mg/kg	6.46E-002	mg/cu. m.	R	1.42E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	6.29E+003	mg/kg	2.52E-006	mg/cu. m.	R	5.52E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												9.65E-002

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-43
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_fD_cTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
Ingestion	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	8.1E-012	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.7E-002	kg-day/mg	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-001	kg-day/mg	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E-002	kg-day/mg	
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.8E-002	kg-day/mg	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-002	kg-day/mg	
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	6.0E-005	mg/kg-day		kg-day/mg	
	2-Chloronaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	8.5E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	5.4E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	2,4-Dichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E-001	kg-day/mg	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	6.1E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	4-Nitrophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4,4'-DDD	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-001	kg-day/mg	
	4,4'-DDE	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.4E-001	kg-day/mg	
	4,4'-DDT	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.4E-001	kg-day/mg	
	Acenaphthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetaldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetone	2.50E+005	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	Acetophenone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Aldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.7E+001	kg-day/mg	
	alpha-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.3E+000	kg-day/mg	
	alpha-Chlordane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.5E-001	kg-day/mg	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	7.7E-006	mg/kg-day		kg-day/mg	
	Ammonia**	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	6.2E-007
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	2.0E+000	kg-day/mg	6.6E-009
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	4.4E-009	mg/kg-day	2.0E+000	kg-day/mg	1.2E-007
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	5.8E-006	mg/kg-day	2.0E+000	kg-day/mg	1.1E-006
	Arsenic	7.78E+000	mg/kg	NA	NA	M	7.3E-009	mg/kg-day	1.5E+000	kg-day/mg	
	Azobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Barium	2.69E+003	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Benzene	8.90E+004	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	2.9E-002	kg-day/mg	2.4E-006
	Benzoic Acid	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-001	kg-day/mg	
	Benzo(a)pyrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E+000	kg-day/mg	
	Benzo(b)fluoranthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-001	kg-day/mg	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(k)fluoranthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-002	kg-day/mg	
	Benzyl Alcohol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Beryllium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	beta-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E+000	kg-day/mg	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E+000	kg-day/mg	
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	2.3E-007	mg/kg-day	1.4E-002	kg-day/mg	3.2E-009

Scenario Timeframe:	*Current*
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-43
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wb4 \ TT_ID_cTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Bromodichloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butanol, 1-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butylbenzylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cadmium	*1.08E+002*	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	Cadmium (water)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Caprolactam	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbazole	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-002	kg-day/mg	
	Carbon Disulfide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorodifluoromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-003	kg-day/mg	
	Chloroform	3.10E+004	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	6.1E-003	kg-day/mg	1.8E-007
	Chloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Chromium 6+	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.0E-005	kg-day/mg	
	Chrysene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-003	kg-day/mg	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	1.3E-010	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cyclohexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E+000	kg-day/mg	
	Dieldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.6E+001	kg-day/mg	
	Diethyl ether	*0.00E+000*	mg/kg	NA	NA	M	*0.0E+000*	mg/kg-day		kg-day/mg	
	Diethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	7.9E-008	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dioxane, 1,4-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan I	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan sulfate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin aldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin ketone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	7.3E-006	mg/kg-day		kg-day/mg	
	Fluoranthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Fluorene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	gamma-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.3E+000	kg-day/mg	
	gamma-Chlordane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.5E-001	kg-day/mg	
	Heptachlor	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E+000	kg-day/mg	
	Heptachlor epoxide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E+000	kg-day/mg	
	Hexachlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.6E+000	kg-day/mg	
	Hexachlorobutadiene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.8E-002	kg-day/mg	
	Hexane, n-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	*0.00E+000*	mg/kg	NA	NA	M	*0.0E+000*	mg/kg-day	*7.3E-001*	kg-day/mg	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Isophorone	2.10E+002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	9.5E-004	kg-day/mg	1.9E-010
	Lead	1.02E+004	mg/kg	NA	NA	M	9.8E-006	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	7.4E-009	mg/kg-day		kg-day/mg	
	Methoxychlor	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	1.9E-011	mg/kg-day	7.5E-003	kg-day/mg	1.4E-013
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	3.0E-011	mg/kg-day		kg-day/mg	
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Nickel	5.33E+001	mg/kg	NA	NA	M	5.0E-008	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.9E-003	kg-day/mg	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	1.1E-011	mg/kg-day		kg-day/mg	
	p-Cymene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pentachlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.2E-001	kg-day/mg	
	Phenanthrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-43
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_RD_cTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol, 4,4'-(1-methylethylidene)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phthalic anhydride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pyrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	7.8E-009	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	3.3E-008	mg/kg-day		kg-day/mg	
	Styrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	4.4E-005	mg/kg-day	5.2E-002	kg-day/mg	2.3E-006
	Tetrahydrofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Thallium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Toluene	2.60E+005	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	1.1E-002	kg-day/mg	3.6E-009
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	1.9E+000	kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	(Total)										5.66E-006
Dermal	1,1-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
Dermal	1,1-Dichloroethene	8.80E-003	mg/kg	NA	NA	M	1.2E-010	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-001	kg-day/mg	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E-002	kg-day/mg	
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.8E-002	kg-day/mg	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-002	kg-day/mg	
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	2-Chloronaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	7.8E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	2,4-Dichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E-001	kg-day/mg	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	NA	NA	M	8.8E-005	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Nitrophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-001	kg-day/mg	
	4,4'-DDD	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.4E-001	kg-day/mg	
	4,4'-DDE	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.4E-001	kg-day/mg	
	4,4'-DDT	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetaldehyde	0.00E+000	mg/kg	NA	NA	M	3.4E-003	mg/kg-day		kg-day/mg	
	Acetone	2.50E+005	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetophenone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.7E+001	kg-day/mg	
	Aldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.3E+000	kg-day/mg	
	alpha-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.5E-001	kg-day/mg	
	alpha-Chlordane	0.00E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ammonia**	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Anthracene	0.00E+000	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		kg-day/mg	
	Antimony	1.84E+002	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1242	0.00E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	2.0E+000	kg-day/mg	8.93E-006
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M					

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-43
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_TD_cTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	6.4E-008	mg/kg-day	2.2E+000	kg-day/mg	1.43E-007
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	8.4E-007	mg/kg-day	2.0E+000	kg-day/mg	1.68E-006
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	1.6E+000	kg-day/mg	1.66E-007
	Azobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Barium	2.69E+003	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Benzene	8.90E+004	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	3.2E-002	kg-day/mg	3.88E-005
	Benzoic Acid	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-001	kg-day/mg	
	Benzo(a)pyrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	8.6E+000	kg-day/mg	
	Benzo(b)fluoranthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-001	kg-day/mg	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(k)fluoranthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-002	kg-day/mg	
	Benzyl Alcohol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Beryllium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	beta-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E+000	kg-day/mg	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E+000	kg-day/mg	
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	1.4E-002	kg-day/mg	4.54E-008
	Bromodichloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butanol, 1-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butylbenzylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Cadmium (water)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Caprolactam	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbazole	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-002	kg-day/mg	
	Carbon Disulfide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorodifluoromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-003	kg-day/mg	
	Chloroform	3.10E+004	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	6.4E-003	kg-day/mg	2.68E-006
	Chloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Chromium 6+	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.0E-004	kg-day/mg	
	Chrysene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E-002	kg-day/mg	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	1.9E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cyclohexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	8.1E+000	kg-day/mg	
	Dieldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.6E+001	kg-day/mg	
	Diethyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Diethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dioxane, 1,4-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan I	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan sulfate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin aldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin ketone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Fluorene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	gamma-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.3E+000	kg-day/mg	
	gamma-Chlordane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.5E-001	kg-day/mg	
	Heptachlor	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E+000	kg-day/mg	
	Heptachlor epoxide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E+000	kg-day/mg	
	Hexachlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Hexachlorobutadiene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.8E-002	kg-day/mg	
	Hexane, n-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E-001	kg-day/mg	
	Iron	1.92E+004	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-43
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File Area2CT.wb4 \ TT_IO_cTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Isophorone	2.10E+002	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	9.5E-004	kg-day/mg	2.70E-009
	Lead	1.02E+004	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	5.4E-006	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Methoxychlor	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	2.7E-010	mg/kg-day	1.4E-002	kg-day/mg	3.69E-012
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	4.3E-010	mg/kg-day		kg-day/mg	
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Nickel	5.33E+001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.9E-003	kg-day/mg	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	1.6E-010	mg/kg-day		kg-day/mg	
	p-Cymene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pentachlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.2E-001	kg-day/mg	
	Phenanthrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol	1.70E+002	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	Phenol, 4,4'-(1-methylethylidene)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phthalic anhydride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pyrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	4.7E-007	mg/kg-day		kg-day/mg	
	Styrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	6.4E-004	mg/kg-day	5.2E-002	kg-day/mg	3.31E-005
	Tetrahydrofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Thallium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Toluene	2.60E+005	mg/kg	NA	NA	M	3.5E-003	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	1.1E-002	kg-day/mg	5.31E-008
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.9E+000	kg-day/mg	
	Xylenes (total)	2.60E+005	mg/kg	NA	NA	M	3.8E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	(Total)										8.55E-005
										Total Hazard Index Across All Exposure Routes/Pathways	9.1E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	not evaluated for central tendency
Exposure Medium:	not evaluated for central tendency
Exposure Point:	not evaluated for central tendency
Receptor Population:	not evaluated for central tendency
Receptor Age:	Adult

Table 5-1-44
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_cTa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.72E-003	mg/cu. m.	R	5.38E-008	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	1.99E-003	mg/cu. m.	R	6.24E-008	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	2.76E-008	mg/cu. m.	R	8.64E-013	mg/kg-day	5.60E-002	mg/kg-day	4.84E-014
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.21E-006	mg/cu. m.	R	6.92E-011	mg/kg-day	2.00E-001	mg/kg-day	1.38E-011
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.10E-003	mg/cu. m.	R	9.72E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	6.88E-004	mg/cu. m.	R	2.15E-008	mg/kg-day	9.10E-002	mg/kg-day	1.96E-009
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	2.87E-003	mg/cu. m.	R	8.98E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	6.80E-004	mg/cu. m.	R	2.13E-008	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.60E-004	mg/cu. m.	R	5.01E-009	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	5.92E-005	mg/cu. m.	R	1.85E-009	mg/kg-day	2.20E-002	mg/kg-day	4.08E-011
	2-Butanone	6.40E+004	mg/kg	3.11E-007	mg/cu. m.	R	9.73E-012	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	4.64E-007	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.80E+001	mg/kg	3.54E-004	mg/cu. m.	R	1.11E-008	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.79E-004	mg/cu. m.	R	8.75E-009	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.02E-004	mg/cu. m.	R	3.18E-009	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.43E-008	mg/cu. m.	R	4.48E-013	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	5.14E-010	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	9.00E-012	mg/cu. m.	R	2.82E-016	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	1.76E-003	mg/cu. m.	R	5.50E-008	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	1.02E-003	mg/cu. m.	R	3.21E-008	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	9.17E-010	mg/cu. m.	R	2.87E-014	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	5.52E-010	mg/cu. m.	R	1.73E-014	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	7.81E-010	mg/cu. m.	R	2.45E-014	mg/kg-day	3.40E-001	mg/kg-day	8.32E-015
	Acenaphthene	0.00E+000	mg/kg	5.84E-005	mg/cu. m.	R	1.83E-009	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	7.46E-008	mg/cu. m.	R	2.34E-012	mg/kg-day		mg/kg-day	
	Acetone	2.50E+005	mg/kg	2.54E-003	mg/cu. m.	R	7.96E-008	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	3.78E-009	mg/cu. m.	R	1.18E-013	mg/kg-day	1.70E+001	mg/kg-day	2.01E-012
	alpha-BHC	0.00E+000	mg/kg	2.07E-010	mg/cu. m.	R	6.48E-015	mg/kg-day	6.30E+000	mg/kg-day	4.08E-014
	Anthracene	0.00E+000	mg/kg	1.50E-006	mg/cu. m.	R	4.70E-011	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.30E-008	mg/cu. m.	R	1.35E-012	mg/kg-day		mg/kg-day	
	Aroclor-1242	0.00E+000	mg/kg	3.66E-010	mg/cu. m.	R	1.15E-014	mg/kg-day	2.00E+000	mg/kg-day	2.29E-014
	Aroclor-1248	3.30E+002	mg/kg	3.13E-008	mg/cu. m.	R	9.81E-013	mg/kg-day	2.00E+000	mg/kg-day	1.96E-012
	Aroclor-1254	4.70E+000	mg/kg	2.29E-008	mg/cu. m.	R	7.18E-013	mg/kg-day	2.00E+000	mg/kg-day	1.44E-012
	Aroclor-1260	6.20E+001	mg/kg	2.16E-007	mg/cu. m.	R	6.78E-012	mg/kg-day	2.00E+000	mg/kg-day	1.36E-011
	Arsenic	7.78E+000	mg/kg	4.04E-009	mg/cu. m.	R	1.27E-013	mg/kg-day	1.51E+001	mg/kg-day	1.91E-012
	Barium	2.69E+003	mg/kg	6.87E-007	mg/cu. m.	R	2.15E-011	mg/kg-day		mg/kg-day	
	Benzene	8.90E+004	mg/kg	1.77E-003	mg/cu. m.	R	5.53E-008	mg/kg-day	2.90E-002	mg/kg-day	1.60E-009
	Benzoic Acid	0.00E+000	mg/kg	2.65E-003	mg/cu. m.	R	8.30E-008	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	0.00E+000	mg/kg	1.76E-009	mg/cu. m.	R	5.52E-014	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	0.00E+000	mg/kg	9.44E-010	mg/cu. m.	R	2.96E-014	mg/kg-day	3.10E+000	mg/kg-day	9.16E-014
	Benzo(b)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	1.05E-013	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.40E-010	mg/cu. m.	R	2.94E-014	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	0.00E+000	mg/kg	3.34E-009	mg/cu. m.	R	1.05E-013	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	1.66E-006	mg/cu. m.	R	5.20E-013	mg/kg-day		mg/kg-day	
	Beryllium	0.00E+000	mg/kg	3.73E-010	mg/cu. m.	R	1.17E-014	mg/kg-day	8.40E+000	mg/kg-day	9.81E-014
	beta-BHC	0.00E+000	mg/kg	3.94E-010	mg/cu. m.	R	1.23E-014	mg/kg-day	1.80E+000	mg/kg-day	2.22E-014
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	5.72E-004	mg/cu. m.	R	1.79E-008	mg/kg-day	1.10E+000	mg/kg-day	1.97E-008
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	2.28E-007	mg/cu. m.	R	7.13E-012	mg/kg-day	1.40E-002	mg/kg-day	9.98E-014
	Butylbenzylphthalate	0.00E+000	mg/kg	2.64E-007	mg/cu. m.	R	8.26E-012	mg/kg-day		mg/kg-day	
	Cadmium	1.06E+002	mg/kg	7.11E-008	mg/cu. m.	R	2.23E-012	mg/kg-day	6.30E+000	mg/kg-day	1.40E-011
	Carbon Disulfide	0.00E+000	mg/kg	4.17E-009	mg/cu. m.	R	1.31E-013	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	3.88E-005	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day	
	Chloroform	3.10E+004	mg/kg	2.40E-003	mg/cu. m.	R	7.51E-008	mg/kg-day	8.10E-002	mg/kg-day	6.08E-009
	Chromium 3+	1.48E+003	mg/kg	8.28E-007	mg/cu. m.	R	2.59E-011	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.38E-007	mg/cu. m.	R	4.32E-012	mg/kg-day	4.10E+001	mg/kg-day	1.77E-010
	Chrysene	0.00E+000	mg/kg	2.42E-009	mg/cu. m.	R	7.56E-014	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium: Soil	not evaluated for central tendency
Exposure Medium:	not evaluated for central tendency
Exposure Point:	not evaluated for central tendency
Receptor Population:	not evaluated for central tendency
Receptor Age:	Adult

Table 5-1-44
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_cTa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	2.71E-005	mg/cu. m.	R	8.47E-010	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-006	mg/cu. m.	R	3.34E-013	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.63E-007	mg/cu. m.	R	2.70E-011	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	4.43E-014	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	1.58E-009	mg/cu. m.	R	4.95E-014	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	1.55E-008	mg/cu. m.	R	4.86E-013	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.10E+002	mg/kg	1.63E-007	mg/cu. m.	R	5.10E-012	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	8.40E+001	mg/kg	4.77E-008	mg/cu. m.	R	1.49E-012	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	0.00E+000	mg/kg	8.19E-009	mg/cu. m.	R	2.56E-013	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	4.71E-013	mg/cu. m.	R	1.48E-017	mg/kg-day		mg/kg-day	
	Ethyl Benzene	7.80E+003	mg/kg	1.05E-002	mg/cu. m.	R	3.28E-007	mg/kg-day		mg/kg-day	
	Fluoranthene	0.00E+000	mg/kg	2.67E-009	mg/cu. m.	R	8.37E-014	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	3.04E-005	mg/cu. m.	R	9.52E-010	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	2.53E-012	mg/cu. m.	R	7.92E-017	mg/kg-day	4.50E+000	mg/kg-day	3.56E-016
	Heptachlor epoxide	0.00E+000	mg/kg	1.21E-012	mg/cu. m.	R	3.78E-017	mg/kg-day	9.10E+000	mg/kg-day	3.44E-016
	Hexachlorobenzene	0.00E+000	mg/kg	1.24E-012	mg/cu. m.	R	3.89E-017	mg/kg-day	1.60E+000	mg/kg-day	6.22E-017
	Hexachlorobutadiene	0.00E+000	mg/kg	8.56E-009	mg/cu. m.	R	2.68E-013	mg/kg-day	7.80E-002	mg/kg-day	2.09E-014
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	2.94E-015	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	8.80E-010	mg/cu. m.	R	2.75E-014	mg/kg-day		mg/kg-day	
	Isophorone	2.10E+002	mg/kg	3.05E-003	mg/cu. m.	R	9.56E-008	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.71E-006	mg/cu. m.	R	2.10E-010	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	2.46E-007	mg/cu. m.	R	7.69E-012	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.36E-009	mg/cu. m.	R	1.68E-013	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-002	mg/kg	5.90E-003	mg/cu. m.	R	1.85E-007	mg/kg-day	1.65E-003	mg/kg-day	3.05E-010
	m,p-xylene	3.20E-002	mg/kg	1.56E-004	mg/cu. m.	R	4.90E-009	mg/kg-day		mg/kg-day	
	Naphthalene	1.40E+002	mg/kg	1.54E-003	mg/cu. m.	R	4.83E-008	mg/kg-day		mg/kg-day	
	Nickel	5.33E+001	mg/kg	1.73E-008	mg/cu. m.	R	5.41E-013	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	4.07E-007	mg/cu. m.	R	1.28E-011	mg/kg-day		mg/kg-day	
	ortho-xylene	1.20E-002	mg/kg	7.52E-005	mg/cu. m.	R	2.35E-009	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	2.90E-008	mg/cu. m.	R	9.08E-013	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.12E-008	mg/cu. m.	R	3.51E-013	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	6.24E-004	mg/cu. m.	R	1.95E-008	mg/kg-day		mg/kg-day	
	Pyrene	0.00E+000	mg/kg	5.09E-009	mg/cu. m.	R	1.59E-013	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.25E-009	mg/cu. m.	R	7.04E-014	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	6.17E-009	mg/cu. m.	R	1.93E-013	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	4.04E-004	mg/cu. m.	R	1.27E-008	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.70E+004	mg/kg	2.44E-002	mg/cu. m.	R	7.63E-007	mg/kg-day	2.00E-003	mg/kg-day	1.53E-009
	Thallium	0.00E+000	mg/kg	4.53E-010	mg/cu. m.	R	1.42E-014	mg/kg-day		mg/kg-day	
	Toluene	2.60E+005	mg/kg	1.17E-001	mg/cu. m.	R	3.65E-006	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	7.26E-003	mg/cu. m.	R	2.27E-007	mg/kg-day	6.00E-003	mg/kg-day	1.36E-009
	Vanadium	1.22E+001	mg/kg	7.27E-009	mg/cu. m.	R	2.28E-013	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	9.14E-005	mg/cu. m.	R	2.86E-009	mg/kg-day	3.00E-001	mg/kg-day	8.59E-010
	Xylenes (total)	2.80E+005	mg/kg	6.48E-002	mg/cu. m.	R	2.03E-006	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.52E-006	mg/cu. m.	R	7.89E-011	mg/kg-day		mg/kg-day	
	(Total)										3.37E-008

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-45
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		mg/kg-day	NA	NA	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.10E+000
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.15E-002
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	3.1E-001	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.24E-001
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.12E-002
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.42E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.18E-002
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	4.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.16E-002
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.99E-001
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	8.8E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.77E-001
	Acetone	2.50E+005	mg/kg	NA	NA	M	1.2E+000	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.23E+001
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.04E-002
	Antimony	1.64E+002	mg/kg	NA	NA	M	8.1E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.01E+000
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.15E+000
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.27E-001
	Barium	2.69E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.89E-001
	Benzene	8.90E+004	mg/kg	NA	NA	M	4.4E-001	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.46E+002
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.89E-002
	Cadmium	1.08E+002	mg/kg	NA	NA	M	5.2E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	5.20E-001
	Chloroform	3.10E+004	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.52E+001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	7.3E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	4.84E-003
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	6.9E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.87E-005
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.69E-003
	Copper	1.32E+003	mg/kg	NA	NA	M	6.5E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.62E-001
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	5.40E-005
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	4.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.12E-003
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	3.8E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.83E-001
	Iron	1.92E+004	mg/kg	NA	NA	M	9.4E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.14E-001
	Isophorone	2.10E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.16E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	5.0E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.87E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	9.8E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.64E-006
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	7.86E-008
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	6.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.44E-002
	Nickel	5.33E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.31E-002
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.95E-008
	Phenol	1.70E+002	mg/kg	NA	NA	M	8.3E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.39E-003
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.17E-003
	Silver	3.49E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.43E-002
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	2.3E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.31E+001
	Toluene	2.60E+005	mg/kg	NA	NA	M	1.3E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.38E+000
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.86E-001
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.56E-003
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.87E-001
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.1E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.36E-001
	(Total)												2.18E+002
Dermal	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	2.0E+000	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.79E+001
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.38E-001
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	3.8E+000	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	6.66E+000
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.35E-001
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-45
lation of Non - Cancer Hazards
sonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_FCWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.42E-001
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.61E-001
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	3.9E-001	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.82E+000
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.29E+000
	Acetone	2.50E+005	mg/kg	NA	NA	M	1.5E+001	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	1.89E+002
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.88E-001
	Antimony	1.64E+002	mg/kg	NA	NA	M	9.7E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.43E+003
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.57E+001
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.62E+000
	Barium	2.69E+003	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.28E+000
	Benzene	8.90E+004	mg/kg	NA	NA	M	5.3E+000	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	1.96E+003
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.12E-001
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.3E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	2.52E+002
	Chloroform	3.10E+004	mg/kg	NA	NA	M	1.8E+000	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	1.93E+002
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	8.8E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.46E+001
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.31E-004
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.25E-002
	Copper	1.32E+003	mg/kg	NA	NA	M	7.8E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	3.26E+000
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	6.5E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	6.53E-004
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	5.0E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	5.14E-002
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	4.6E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	5.03E+000
	Iron	1.92E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.80E+000
	Isophorone	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.23E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	6.1E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.19E+000
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	3.60E-005
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.05E-006
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	8.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.15E-001
	Nickel	5.33E+001	mg/kg	NA	NA	M	3.2E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.16E+000
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	7.1E-007	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.95E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.68E-002
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.87E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.97E+000
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	2.8E+000	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.79E+002
	Toluene	2.60E+005	mg/kg	NA	NA	M	1.5E+001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.71E+001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	3.53E+000
	Vanadium	1.22E+001	mg/kg	NA	NA	M	7.2E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.03E-001
	Xylenes (total)	2.60E+005	mg/kg	NA	NA	M	1.7E+001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	9.28E+000
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.46E+000
	(Total)												5.56E+003
												Total Hazard Index Across All Exposure Routes/Pathways	5.8E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-46
Calculation of Non Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_ICWs2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethene	8.60E-003	mg/kg	4.64E-006	mg/cu. m.	R	1.42E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	9.98E-006	mg/cu. m.	R	3.06E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.07E-005
	1,2-Dichlorobenzene	2.10E+002	mg/kg	9.56E-003	mg/cu. m.	R	2.93E-003	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	3.26E-001
	2-Butanone	6.40E+004	mg/kg	1.73E-004	mg/cu. m.	R	5.32E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.86E-004
	2-Hexanone	9.10E+001	mg/kg	2.03E-002	mg/cu. m.	R	6.23E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	4.45E+000
	2-Methylnaphthalene	5.80E+001	mg/kg	3.37E-004	mg/cu. m.	R	1.03E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	7.31E-004	mg/cu. m.	R	2.24E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	3.93E-004	mg/cu. m.	R	1.21E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	6.70E-003	mg/cu. m.	R	2.06E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.03E-001
	4-Methylphenol	1.80E+002	mg/kg	2.79E-003	mg/cu. m.	R	8.55E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	2.50E+005	mg/kg	8.33E-002	mg/cu. m.	R	2.55E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	5.47E-005	mg/cu. m.	R	1.68E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	3.30E+002	mg/kg	1.10E-004	mg/cu. m.	R	3.38E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.70E+000	mg/kg	1.57E-006	mg/cu. m.	R	4.81E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	6.20E+001	mg/kg	2.07E-005	mg/cu. m.	R	6.34E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	2.59E-006	mg/cu. m.	R	7.96E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	8.97E-004	mg/cu. m.	R	2.75E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.97E+000
	Benzene	8.90E+004	mg/kg	6.11E-003	mg/cu. m.	R	1.87E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.10E+000
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	8.00E-005	mg/cu. m.	R	2.45E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	1.30E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	2.16E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	3.50E-005	mg/cu. m.	R	1.07E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.10E-005	mg/cu. m.	R	3.37E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	1.35E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.10E+002	mg/kg	3.67E-005	mg/cu. m.	R	1.13E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	8.40E+001	mg/kg	2.80E-005	mg/cu. m.	R	8.59E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	7.80E+003	mg/kg	4.23E-002	mg/cu. m.	R	1.30E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.48E-002
	Isophorone	2.10E+002	mg/kg	2.24E-003	mg/cu. m.	R	6.87E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	1.04E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.34E-004	mg/cu. m.	R	4.11E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.88E+000
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	8.03E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	9.34E-003
	Methylene Chloride	2.00E-002	mg/kg	6.21E-006	mg/cu. m.	R	1.90E-006	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.21E-006
	m,p-xylene	3.20E-002	mg/kg	3.67E-006	mg/cu. m.	R	1.13E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	1.40E+002	mg/kg	1.70E-003	mg/cu. m.	R	5.22E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	5.80E-001
	Nickel	5.33E+001	mg/kg	1.78E-005	mg/cu. m.	R	5.45E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	1.20E-002	mg/kg	1.31E-006	mg/cu. m.	R	4.01E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	1.56E-003	mg/cu. m.	R	4.80E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.77E-006	mg/cu. m.	R	8.51E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	1.16E-005	mg/cu. m.	R	3.57E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Tetrachloroethene	4.70E+004	mg/kg	7.57E-002	mg/cu. m.	R	2.32E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.66E-001
	Toluene	2.60E+005	mg/kg	1.40E-001	mg/cu. m.	R	4.29E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.76E-001
	Trichloroethene	3.50E+002	mg/kg	7.37E-002	mg/cu. m.	R	2.26E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	4.07E-006	mg/cu. m.	R	1.25E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.80E+005	mg/kg	6.45E-002	mg/cu. m.	R	1.98E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.76E-003	mg/cu. m.	R	8.48E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.20E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-47
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	4.5E-010	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	1.7E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	3.4E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	6.3E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	3.4E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	Acetone	2.50E+005	mg/kg	NA	NA	M	1.3E-002	mg/kg-day		kg-day/mg	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	8.6E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	2.0E+000	kg-day/mg	3.5E-005
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	2.0E+000	kg-day/mg	4.9E-007
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	2.0E+000	kg-day/mg	6.5E-006
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	1.5E+000	kg-day/mg	6.1E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Benzene	8.90E+004	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	2.9E-002	kg-day/mg	1.4E-004
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	1.4E-002	kg-day/mg	1.8E-007
	Cadmium	1.06E+002	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	Chloroform	3.10E+004	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	6.1E-003	kg-day/mg	9.9E-006
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	7.8E-005	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	7.4E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	6.9E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	5.8E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	4.1E-004	mg/kg-day		kg-day/mg	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		kg-day/mg	
	Isophorone	2.10E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	9.5E-004	kg-day/mg	1.0E-008
	Lead	1.02E+004	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	1.1E-009	mg/kg-day	7.5E-003	kg-day/mg	7.9E-012
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	1.7E-009	mg/kg-day		kg-day/mg	
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		kg-day/mg	
	Nickel	5.33E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	6.3E-010	mg/kg-day		kg-day/mg	
	Phenol	1.70E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.4E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	5.2E-002	kg-day/mg	1.3E-004
	Toluene	2.60E+005	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.1E-002	kg-day/mg	2.0E-007
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.4E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.4E-004	mg/kg-day		kg-day/mg	
	(Total)										3.17E-004
Dermal	1,1-Dichloroethene	8.60E-003	mg/kg	NA	NA	M	5.5E-009	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	NA	NA	M	2.1E-002	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	2-Butanone	6.40E+004	mg/kg	NA	NA	M	4.1E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.80E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-47
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME wk4 \ TT_IO_fCWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	7.6E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Acetone	2.50E+005	mg/kg	NA	NA	M	1.6E-001	mg/kg-day		kg-day/mg	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	5.2E-003	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	3.30E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	2.0E+000	kg-day/mg	4.20E-004
	Aroclor-1254	4.70E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.2E+000	kg-day/mg	6.71E-006
	Aroclor-1260	6.20E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	2.0E+000	kg-day/mg	7.88E-005
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	1.6E+000	kg-day/mg	7.81E-006
	Barium	2.69E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day		kg-day/mg	
	Benzene	8.90E+004	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	3.2E-002	kg-day/mg	1.82E-003
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	1.4E-002	kg-day/mg	2.14E-006
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.7E-005	mg/kg-day		kg-day/mg	
	Chloroform	3.10E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	6.4E-003	kg-day/mg	1.26E-004
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	NA	NA	M	8.9E-008	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	8.4E-004	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.10E+002	mg/kg	NA	NA	M	7.0E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	8.40E+001	mg/kg	NA	NA	M	5.3E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	7.80E+003	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Isophorone	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	9.5E-004	kg-day/mg	1.27E-007
	Lead	1.02E+004	mg/kg	NA	NA	M	6.5E-003	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-002	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.4E-002	kg-day/mg	1.73E-010
	m,p-xylene	3.20E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Naphthalene	1.40E+002	mg/kg	NA	NA	M	8.9E-005	mg/kg-day		kg-day/mg	
	Nickel	5.33E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	1.20E-002	mg/kg	NA	NA	M	7.6E-009	mg/kg-day		kg-day/mg	
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	5.3E-006	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.70E+004	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	5.2E-002	kg-day/mg	1.55E-003
	Toluene	2.60E+005	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	1.1E-002	kg-day/mg	2.50E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.80E+005	mg/kg	NA	NA	M	1.8E-001	mg/kg-day		kg-day/mg	
	Zinc	6.29E+003	mg/kg	NA	NA	M	5.3E-003	mg/kg-day		kg-day/mg	
	(Total)										4.02E-003
										Total Hazard Index Across All Exposure Routes/Pathways	4.3E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-48
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_ICWa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethene	8.60E-003	mg/kg	4.64E-006	mg/cu. m.	R	1.53E-008	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	3.30E+004	mg/kg	9.98E-006	mg/cu. m.	R	3.28E-008	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	9.56E-003	mg/cu. m.	R	3.14E-005	mg/kg-day		mg/kg-day	
	2-Butanone	6.40E+004	mg/kg	1.73E-004	mg/cu. m.	R	5.70E-007	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	2.03E-002	mg/cu. m.	R	6.68E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.80E+001	mg/kg	3.37E-004	mg/cu. m.	R	1.11E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	7.31E-004	mg/cu. m.	R	2.40E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	3.93E-004	mg/cu. m.	R	1.29E-006	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.50E+003	mg/kg	6.70E-003	mg/cu. m.	R	2.20E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	2.79E-003	mg/cu. m.	R	9.16E-006	mg/kg-day		mg/kg-day	
	Acetone	2.50E+005	mg/kg	8.33E-002	mg/cu. m.	R	2.74E-004	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	5.47E-005	mg/cu. m.	R	1.80E-007	mg/kg-day		mg/kg-day	
	Aroclor-1248	3.30E+002	mg/kg	1.10E-004	mg/cu. m.	R	3.62E-007	mg/kg-day	2.00E+000	mg/kg-day	7.23E-007
	Aroclor-1254	4.70E+000	mg/kg	1.57E-006	mg/cu. m.	R	5.15E-009	mg/kg-day	2.00E+000	mg/kg-day	1.03E-008
	Aroclor-1260	6.20E+001	mg/kg	2.07E-005	mg/cu. m.	R	6.79E-008	mg/kg-day	2.00E+000	mg/kg-day	1.36E-007
	Arsenic	7.78E+000	mg/kg	2.59E-006	mg/cu. m.	R	8.53E-009	mg/kg-day	1.51E+001	mg/kg-day	1.29E-007
	Barium	2.69E+003	mg/kg	8.97E-004	mg/cu. m.	R	2.95E-006	mg/kg-day		mg/kg-day	
	Benzene	8.90E+004	mg/kg	6.11E-003	mg/cu. m.	R	2.01E-005	mg/kg-day	2.90E-002	mg/kg-day	5.82E-007
	bis(2-Ethylhexyl)phthalate	2.40E+002	mg/kg	8.00E-005	mg/cu. m.	R	2.63E-007	mg/kg-day	1.40E-002	mg/kg-day	3.68E-009
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	1.39E-006	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	2.32E-007	mg/kg-day	4.10E+001	mg/kg-day	9.50E-006
	cis-1,2-Dichloroethene	1.40E-001	mg/kg	3.50E-005	mg/cu. m.	R	1.15E-007	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.10E-005	mg/cu. m.	R	3.61E-008	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	1.45E-006	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.10E+002	mg/kg	3.67E-005	mg/cu. m.	R	1.21E-007	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	8.40E+001	mg/kg	2.80E-005	mg/cu. m.	R	9.21E-008	mg/kg-day		mg/kg-day	
	Ethyl Benzene	7.80E+003	mg/kg	4.23E-002	mg/cu. m.	R	1.39E-004	mg/kg-day		mg/kg-day	
	Isophorone	2.10E+002	mg/kg	2.24E-003	mg/cu. m.	R	7.36E-006	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	1.12E-005	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.34E-004	mg/cu. m.	R	4.41E-007	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	8.60E-009	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-002	mg/kg	6.21E-006	mg/cu. m.	R	2.04E-008	mg/kg-day	1.65E-003	mg/kg-day	3.37E-011
	m,p-xylene	3.20E-002	mg/kg	3.67E-008	mg/cu. m.	R	1.21E-008	mg/kg-day		mg/kg-day	
	Naphthalene	1.40E+002	mg/kg	1.70E-003	mg/cu. m.	R	5.59E-006	mg/kg-day		mg/kg-day	
	Nickel	5.33E+001	mg/kg	1.78E-005	mg/cu. m.	R	5.84E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	1.20E-002	mg/kg	1.31E-006	mg/cu. m.	R	4.29E-009	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	1.56E-003	mg/cu. m.	R	5.14E-006	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.77E-006	mg/cu. m.	R	9.12E-009	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	1.16E-005	mg/cu. m.	R	3.82E-008	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.70E+004	mg/kg	7.57E-002	mg/cu. m.	R	2.49E-004	mg/kg-day	2.00E-003	mg/kg-day	4.98E-007
	Toluene	2.80E+005	mg/kg	1.40E-001	mg/cu. m.	R	4.60E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	7.37E-002	mg/cu. m.	R	2.42E-004	mg/kg-day	6.00E-003	mg/kg-day	1.45E-006
	Vanadium	1.22E+001	mg/kg	4.07E-006	mg/cu. m.	R	1.34E-008	mg/kg-day		mg/kg-day	
	Xylenes (total)	2.80E+005	mg/kg	6.45E-002	mg/cu. m.	R	2.12E-004	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.76E-003	mg/cu. m.	R	9.08E-006	mg/kg-day		mg/kg-day	
	(Total)										1.38E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-49
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	6.38E-004
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.60E-002
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.95E-006
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.15E-002
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	8.8E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.95E-003
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.85E-002
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	4.9E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.91E-003
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.49E-004
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.68E-002
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.12E-002
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.28E-001
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.18E-002
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	4.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.16E-002
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.21E-002
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	8.8E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.77E-001
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	8.3E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.67E-002
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.23E-003
	Acetone	1.20E+003	mg/kg	NA	NA	M	5.9E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.89E-002
	Aldrin	7.70E+000	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	1.26E+000
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.04E-002
	Anthracene	1.30E+000	mg/kg	NA	NA	M	6.4E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.13E-005
	Antimony	1.64E+002	mg/kg	NA	NA	M	8.1E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.01E+000
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	8.84E+000
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.7E-002	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.27E-001
	Barium	2.69E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.89E-001
	Benzene	9.60E+001	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.57E-001
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.95E-004
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.56E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-49
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	8.35E-004
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	3.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.65E-001
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.03E-002
	Cadmium	1.06E+002	mg/kg	NA	NA	M	5.2E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	5.20E-001
	Chloroform	1.40E+002	mg/kg	NA	NA	M	6.9E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.87E-002
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	7.3E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	4.84E-003
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.13E-004
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.69E-003
	Copper	1.32E+003	mg/kg	NA	NA	M	6.5E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.62E-001
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.07E-003
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.93E-004
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.28E-004
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.91E-002
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.19E-003
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.34E-002
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.03E-004
	Fluorene	1.80E+001	mg/kg	NA	NA	M	8.8E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.21E-003
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.28E-002
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	9.4E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.14E-001
	Isophorone	1.80E+003	mg/kg	NA	NA	M	8.8E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.42E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	5.0E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.87E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.56E-003
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.20E-005
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.20E-001
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.36E-002
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.14E-006
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.03E-002
	Phenol	1.70E+002	mg/kg	NA	NA	M	8.3E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.39E-003
	Pyrene	8.00E+000	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.31E-003
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.17E-003
	Silver	3.49E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.43E-002
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.28E-003
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	4.3E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.32E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-49
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Thallium	1.44E+000	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.01E-001
	Toluene	1.30E+003	mg/kg	NA	NA	M	6.4E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.19E-002
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.86E-001
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.56E-003
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	8.84E-003
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.1E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.36E-001
	(Total)												1.62E+001
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	7.7E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.71E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.93E-001
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	5.08E-005
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.38E-001
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.56E-002
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.24E-001
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.93E-002
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.80E-003
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.7E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	4.68E-001
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.35E-001
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.54E+000
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.42E-001
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.61E-001
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.67E-001
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.29E+000
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	5.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.02E-001
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	8.9E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.48E-002
	Acetone	1.20E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	9.07E-001
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	1.52E+001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.88E-001
	Anthracene	1.30E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.57E-004
	Antimony	1.64E+002	mg/kg	NA	NA	M	9.7E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.43E+003
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.20E+002
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.0E-001	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.62E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-49
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_fD_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Barium	2.69E+003	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.28E+000
	Benzene	9.60E+001	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	2.11E+000
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.56E-003
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	8.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.72E-003
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.01E+000
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	6.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.82E+000
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.5E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.25E-001
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.3E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	2.52E+002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	8.3E-003	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	8.70E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	8.8E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.46E+001
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.36E-003
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.25E-002
	Copper	1.32E+003	mg/kg	NA	NA	M	7.8E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	3.26E+000
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.71E-002
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.75E-003
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.54E-003
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.39E-001
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	7.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.86E-002
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.38E-001
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.08E-003
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.67E-002
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.76E-001
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.80E+000
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.1E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.34E-001
	Lead	1.02E+004	mg/kg	NA	NA	M	6.1E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.19E+000
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.22E-001
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.61E-004
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E+000
	Nickel	5.52E+001	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.27E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-49
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	8.24E-005
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.25E-001
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.68E-002
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.58E-002
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.87E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.97E+000
	Styrene	5.20E+001	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.54E-002
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	5.2E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.22E+000
	Thallium	1.44E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.22E+000
	Toluene	1.30E+003	mg/kg	NA	NA	M	7.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.86E-001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	3.53E+000
	Vanadium	1.22E+001	mg/kg	NA	NA	M	7.2E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.03E-001
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	6.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	2.1E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.19E-001
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.46E+000
	(Total)												2.89E+003
												Total Hazard Index Across All Exposure Routes/Pathways	2.9E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-50
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_ICW10a2R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	3.65E-003	mg/cu. m.	R	1.12E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	8.00E-003
	1,1-Dichloroethene	0.00E+000	mg/kg	2.29E-009	mg/cu. m.	R	7.04E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	4.40E-003	mg/cu. m.	R	1.35E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.72E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.76E-005	mg/cu. m.	R	5.40E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	1.75E-006	mg/cu. m.	R	5.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	2.50E-003	mg/cu. m.	R	7.66E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	8.51E-002
	1,2-Dichloroethene	1.80E+001	mg/kg	1.25E-003	mg/cu. m.	R	3.83E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.73E-001
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	4.20E-003	mg/cu. m.	R	1.29E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	5.35E-004	mg/cu. m.	R	1.64E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.44E-001
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.42E-004	mg/cu. m.	R	4.35E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	7.62E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	4.68E-005	mg/cu. m.	R	1.44E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	6.27E-005
	2-Butanone	4.50E+003	mg/kg	1.23E-003	mg/cu. m.	R	3.78E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.32E-003
	2-Hexanone	9.10E+001	mg/kg	1.17E-002	mg/cu. m.	R	3.58E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.56E+000
	2-Methylnaphthalene	5.20E+002	mg/kg	4.91E-004	mg/cu. m.	R	1.51E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.53E-004	mg/cu. m.	R	7.76E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.60E-004	mg/cu. m.	R	4.92E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.05E-005	mg/cu. m.	R	6.29E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.28E-003	mg/cu. m.	R	1.01E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	5.03E-002
	4-Methylphenol	1.80E+002	mg/kg	8.53E-004	mg/cu. m.	R	2.62E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	9.77E-007	mg/cu. m.	R	3.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	2.93E-007	mg/cu. m.	R	9.00E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	5.36E-007	mg/cu. m.	R	1.65E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	5.08E-005	mg/cu. m.	R	1.56E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	1.13E-002	mg/cu. m.	R	3.47E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	2.46E-006	mg/cu. m.	R	7.53E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	1.10E-007	mg/cu. m.	R	3.38E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	4.85E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.81E-005	mg/cu. m.	R	1.48E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	2.32E-006	mg/cu. m.	R	7.12E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	9.13E-005	mg/cu. m.	R	2.80E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	1.20E-005	mg/cu. m.	R	3.68E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	9.30E-004	mg/cu. m.	R	2.85E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	2.40E-006	mg/cu. m.	R	7.36E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	7.82E-004	mg/cu. m.	R	2.40E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.71E+000
	Benzene	9.60E+001	mg/kg	4.01E-003	mg/cu. m.	R	1.23E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	7.24E-001
	Benzoic Acid	2.40E+002	mg/kg	2.15E-003	mg/cu. m.	R	6.61E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	9.00E-007	mg/cu. m.	R	2.76E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	1.53E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	5.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.00E-007	mg/cu. m.	R	1.53E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	5.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.08E-005	mg/cu. m.	R	3.32E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	3.40E-001	mg/kg	1.12E-007	mg/cu. m.	R	3.42E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	6.01E-003
	beta-BHC	8.00E-001	mg/kg	2.55E-007	mg/cu. m.	R	7.83E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	4.80E-004	mg/cu. m.	R	1.47E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	6.36E-004	mg/cu. m.	R	1.95E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	1.40E-004	mg/cu. m.	R	4.30E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.08E+002	mg/kg	3.53E-005	mg/cu. m.	R	1.08E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chlorobenzene	0.00E+000	mg/kg	6.67E-006	mg/cu. m.	R	2.05E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.09E-004
	Chloroform	1.40E+002	mg/kg	5.13E-003	mg/cu. m.	R	1.57E-003	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.83E+001
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	1.30E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	2.16E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.80E+000	mg/kg	1.27E-006	mg/cu. m.	R	3.89E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	5.75E-005	mg/cu. m.	R	1.76E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	9.72E-006	mg/cu. m.	R	2.98E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	1.35E-004	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-50
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_ICW10a2R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Dibenzofuran	2.50E+000	mg/kg	8.33E-007	mg/cu. m.	R	2.56E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	5.73E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	6.40E+001	mg/kg	1.87E-005	mg/cu. m.	R	5.74E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.60E+002	mg/kg	6.67E-005	mg/cu. m.	R	2.66E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	1.09E-004	mg/cu. m.	R	3.35E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	4.33E-006	mg/cu. m.	R	1.33E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.92E-002	mg/cu. m.	R	5.88E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	2.03E-002
	Fluoranthene	4.10E+000	mg/kg	1.37E-006	mg/cu. m.	R	4.19E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	2.98E-005	mg/cu. m.	R	9.15E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-007	mg/cu. m.	R	7.61E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	1.69E-005	mg/cu. m.	R	5.19E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.00E-008	mg/cu. m.	R	3.07E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.80E+003	mg/kg	2.88E-003	mg/cu. m.	R	8.83E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	1.04E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.23E-004	mg/cu. m.	R	3.77E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.64E+000
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	8.03E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	9.34E-003
	Methylene Chloride	6.80E+001	mg/kg	4.65E-003	mg/cu. m.	R	1.43E-003	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.66E-003
	m,p-xylene	4.90E+000	mg/kg	1.24E-004	mg/cu. m.	R	3.81E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.33E-003	mg/cu. m.	R	4.09E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	4.55E-001
	Nickel	5.52E+001	mg/kg	1.59E-005	mg/cu. m.	R	4.86E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	1.84E-006	mg/cu. m.	R	5.65E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.50E+000	mg/kg	5.97E-005	mg/cu. m.	R	1.83E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	6.30E+001	mg/kg	1.99E-005	mg/cu. m.	R	6.10E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	6.78E-006	mg/cu. m.	R	2.08E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	5.36E-004	mg/cu. m.	R	1.65E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	2.67E-006	mg/cu. m.	R	8.18E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.40E-006	mg/cu. m.	R	7.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	9.96E-006	mg/cu. m.	R	3.06E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	5.03E-004	mg/cu. m.	R	1.54E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.39E-004
	Tetrachloroethene	8.80E+002	mg/kg	3.54E-002	mg/cu. m.	R	1.09E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	7.76E-002
	Thallium	1.44E+000	mg/kg	3.15E-007	mg/cu. m.	R	9.66E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.15E-001	mg/cu. m.	R	3.52E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.08E-001
	Trichloroethene	3.50E+002	mg/kg	1.17E-002	mg/cu. m.	R	3.58E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	3.89E-006	mg/cu. m.	R	1.19E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.34E-005	mg/cu. m.	R	2.87E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.60E+003	mg/kg	6.44E-002	mg/cu. m.	R	1.97E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.43E-003	mg/cu. m.	R	7.46E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												2.74E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-51
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.9E-009	mg/kg-day	2.0E-001	kg-day/mg	3.8E-010
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	9.5E-007	mg/kg-day	9.1E-002	kg-day/mg	8.6E-008
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	6.8E-002	kg-day/mg	9.7E-009
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.3E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	4.8E-008	mg/kg-day	2.4E-002	kg-day/mg	1.1E-009
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	6.3E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	2.4E-001	kg-day/mg	4.2E-008
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	4.6E-008	mg/kg-day	3.4E-001	kg-day/mg	1.6E-008
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	8.9E-008	mg/kg-day	3.4E-001	kg-day/mg	3.0E-008
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	7.9E-007	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	1.7E+001	kg-day/mg	6.9E-006
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	6.3E+000	kg-day/mg	1.1E-007
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	6.8E-008	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	8.6E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	2.0E+000	kg-day/mg	3.8E-006
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E+000	kg-day/mg	3.6E-004
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	1.5E+000	kg-day/mg	6.1E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	2.9E-002	kg-day/mg	1.5E-007
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	7.3E-001	kg-day/mg	1.0E-007
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	7.9E-008	mg/kg-day	7.3E+000	kg-day/mg	5.8E-007
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	7.3E-001	kg-day/mg	2.0E-007
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	7.3E-002	kg-day/mg	2.0E-008
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-51
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.2E-008	mg/kg-day	1.8E+000	kg-day/mg	7.6E-008
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	5.8E-006	mg/kg-day	1.1E+000	kg-day/mg	6.4E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.4E-002	kg-day/mg	1.7E-006
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	6.1E-003	kg-day/mg	4.5E-008
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	7.8E-005	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	7.3E-003	kg-day/mg	1.5E-009
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	6.9E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	4.9E-008	mg/kg-day	7.8E-002	kg-day/mg	3.8E-009
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	7.4E-008	mg/kg-day	7.3E-001	kg-day/mg	5.4E-008
	Iron	1.92E+004	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	9.5E-005	mg/kg-day	9.5E-004	kg-day/mg	9.0E-008
	Lead	1.02E+004	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	7.5E-003	kg-day/mg	2.7E-008
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	1.2E-001	kg-day/mg	4.0E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.2E-007	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.4E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	5.2E-002	kg-day/mg	2.4E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-51
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10s2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Thallium	1.44E+000	mg/kg	NA	NA	M	7.6E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	6.8E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.1E-002	kg-day/mg	2.0E-007
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.4E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	5.8E-009	mg/kg-day	1.9E+000	kg-day/mg	1.1E-008
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.4E-004	mg/kg-day		kg-day/mg	
	(Total)										4.16E-004
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	2.3E-008	mg/kg-day	2.9E-001	kg-day/mg	6.54E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	9.1E-002	kg-day/mg	1.04E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	6.8E-002	kg-day/mg	1.17E-007
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	5.8E-007	mg/kg-day	2.4E-002	kg-day/mg	1.39E-008
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	7.6E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	2.4E-001	kg-day/mg	5.03E-007
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	3.4E-001	kg-day/mg	1.90E-007
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	3.4E-001	kg-day/mg	3.67E-007
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	7.6E-004	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	1.7E+001	kg-day/mg	8.32E-005
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	6.3E+000	kg-day/mg	1.32E-006
	Aluminum	8.23E+003	mg/kg	NA	NA	M	5.2E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	8.3E-007	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.2E+000	kg-day/mg	5.14E-005
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	2.0E+000	kg-day/mg	4.32E-003
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	1.6E+000	kg-day/mg	7.81E-006

Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Barium	2.69E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	3.2E-002	kg-day/mg	1.97E-006
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	7.3E-001	kg-day/mg	1.25E-006
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day	8.6E+000	kg-day/mg	8.19E-006
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	7.3E-001	kg-day/mg	2.46E-006
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	7.3E-002	kg-day/mg	2.46E-007
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day	1.8E+000	kg-day/mg	9.15E-007
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	7.0E-005	mg/kg-day	1.1E+000	kg-day/mg	7.69E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	1.4E-002	kg-day/mg	2.05E-005
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.7E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	6.4E-003	kg-day/mg	5.68E-007
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	1.8E-002	kg-day/mg	4.30E-008
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	8.4E-004	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	5.9E-007	mg/kg-day	7.8E-002	kg-day/mg	4.61E-008
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	8.9E-007	mg/kg-day	7.3E-001	kg-day/mg	6.50E-007
	Iron	1.92E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	9.5E-004	kg-day/mg	1.09E-006
	Lead	1.02E+004	mg/kg	NA	NA	M	6.5E-003	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	1.4E-002	kg-day/mg	5.89E-007
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-51
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fCW10a2R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	1.2E-001	kg-day/mg	4.81E-006
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	5.3E-006	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	5.2E-002	kg-day/mg	2.91E-005
	Thallium	1.44E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	8.3E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	1.1E-002	kg-day/mg	2.50E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	7.0E-008	mg/kg-day	1.9E+000	kg-day/mg	1.33E-007
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	5.3E-003	mg/kg-day		kg-day/mg	
	(Total)										5.04E-003
										Total Hazard Index Across All Exposure Routes/Pathways	5.5E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 LTT_bsh_ICW10a2R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	3.85E-003	mg/cu. m.	R	1.20E-005	mg/kg-day		mg/kg-day	
	1,1-Dichloroethene	0.00E+000	mg/kg	2.29E-009	mg/cu. m.	R	7.54E-012	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	4.40E-003	mg/cu. m.	R	1.45E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.76E-005	mg/cu. m.	R	5.79E-008	mg/kg-day	5.60E-002	mg/kg-day	3.24E-009
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	1.75E-006	mg/cu. m.	R	5.75E-009	mg/kg-day	2.00E-001	mg/kg-day	1.15E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	2.50E-003	mg/cu. m.	R	8.21E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	1.60E+001	mg/kg	1.25E-003	mg/cu. m.	R	4.10E-006	mg/kg-day	9.10E-002	mg/kg-day	3.73E-007
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	4.20E-003	mg/cu. m.	R	1.38E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	5.35E-004	mg/cu. m.	R	1.76E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.42E-004	mg/cu. m.	R	4.66E-007	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	4.68E-005	mg/cu. m.	R	1.54E-007	mg/kg-day	2.20E-002	mg/kg-day	3.38E-009
	2-Butanone	4.50E+003	mg/kg	1.23E-003	mg/cu. m.	R	4.05E-006	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.17E-002	mg/cu. m.	R	3.84E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	4.91E-004	mg/cu. m.	R	1.61E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.53E-004	mg/cu. m.	R	8.31E-007	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.60E-004	mg/cu. m.	R	5.28E-007	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.05E-005	mg/cu. m.	R	6.74E-008	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.28E-003	mg/cu. m.	R	1.08E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	8.53E-004	mg/cu. m.	R	2.81E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	9.77E-007	mg/cu. m.	R	3.21E-009	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	2.93E-007	mg/cu. m.	R	9.64E-010	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	5.36E-007	mg/cu. m.	R	1.76E-009	mg/kg-day	3.40E-001	mg/kg-day	6.00E-010
	Acenaphthene	1.50E+001	mg/kg	5.08E-005	mg/cu. m.	R	1.67E-007	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	1.13E-002	mg/cu. m.	R	3.72E-005	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	2.46E-006	mg/cu. m.	R	8.07E-009	mg/kg-day	1.70E+001	mg/kg-day	1.37E-007
	alpha-BHC	3.30E-001	mg/kg	1.10E-007	mg/cu. m.	R	3.62E-010	mg/kg-day	6.30E+000	mg/kg-day	2.28E-009
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	5.19E-009	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.81E-005	mg/cu. m.	R	1.58E-007	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	2.32E-006	mg/cu. m.	R	7.63E-009	mg/kg-day	2.00E+000	mg/kg-day	1.53E-008
	Aroclor-1248	0.00E+000	mg/kg	9.13E-005	mg/cu. m.	R	3.00E-007	mg/kg-day	2.00E+000	mg/kg-day	6.00E-007
	Aroclor-1254	3.60E+001	mg/kg	1.20E-005	mg/cu. m.	R	3.95E-008	mg/kg-day	2.00E+000	mg/kg-day	7.89E-008
	Aroclor-1260	3.40E+003	mg/kg	9.30E-004	mg/cu. m.	R	3.06E-006	mg/kg-day	2.00E+000	mg/kg-day	6.11E-006
	Arsenic	7.78E+000	mg/kg	2.40E-006	mg/cu. m.	R	7.89E-009	mg/kg-day	1.51E+001	mg/kg-day	1.19E-007
	Barium	2.89E+003	mg/kg	7.82E-004	mg/cu. m.	R	2.57E-006	mg/kg-day		mg/kg-day	
	Benzene	9.60E+001	mg/kg	4.01E-003	mg/cu. m.	R	1.32E-005	mg/kg-day	2.90E-002	mg/kg-day	3.83E-007
	Benzoic Acid	2.40E+002	mg/kg	2.15E-003	mg/cu. m.	R	7.08E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	9.00E-007	mg/cu. m.	R	2.96E-009	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	1.64E-009	mg/kg-day	3.10E+000	mg/kg-day	5.10E-009
	Benzo(b)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	5.81E-009	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.00E-007	mg/cu. m.	R	1.64E-009	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	5.81E-009	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.08E-005	mg/cu. m.	R	3.56E-008	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	1.12E-007	mg/cu. m.	R	3.67E-010	mg/kg-day	8.40E+000	mg/kg-day	3.08E-009
	beta-BHC	8.00E-001	mg/kg	2.55E-007	mg/cu. m.	R	8.39E-010	mg/kg-day	1.80E+000	mg/kg-day	1.51E-009
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	4.80E-004	mg/cu. m.	R	1.58E-006	mg/kg-day	1.10E+000	mg/kg-day	1.73E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	6.36E-004	mg/cu. m.	R	2.09E-006	mg/kg-day	1.40E-002	mg/kg-day	2.93E-008
	Butylbenzylphthalate	4.20E+002	mg/kg	1.40E-004	mg/cu. m.	R	4.60E-007	mg/kg-day		mg/kg-day	
	Cadmium	1.06E+002	mg/kg	3.53E-005	mg/cu. m.	R	1.16E-007	mg/kg-day	6.30E+000	mg/kg-day	7.32E-007
	Chlorobenzene	0.00E+000	mg/kg	6.67E-006	mg/cu. m.	R	2.19E-008	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	5.13E-003	mg/cu. m.	R	1.69E-005	mg/kg-day	8.10E-002	mg/kg-day	1.36E-006
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	1.39E-006	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	2.32E-007	mg/kg-day	4.10E+001	mg/kg-day	9.50E-006
	Chrysene	3.80E+000	mg/kg	1.27E-006	mg/cu. m.	R	4.16E-009	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	5.75E-005	mg/cu. m.	R	1.89E-007	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	9.72E-006	mg/cu. m.	R	3.19E-008	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	1.45E-006	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-52
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_inh_ICW10a2R.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Dibenzofuran	2.50E+000	mg/kg	8.33E-007	mg/cu. m.	R	2.74E-009	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	6.14E-011	mg/kg-day		mg/kg-day	
	Diethylphthalate	6.40E+001	mg/kg	1.87E-005	mg/cu. m.	R	6.15E-008	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.60E+002	mg/kg	8.67E-005	mg/cu. m.	R	2.85E-007	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	1.09E-004	mg/cu. m.	R	3.58E-007	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	4.33E-006	mg/cu. m.	R	1.42E-008	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.92E-002	mg/cu. m.	R	6.30E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	1.37E-006	mg/cu. m.	R	4.49E-009	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	2.98E-005	mg/cu. m.	R	9.81E-008	mg/kg-day		mg/kg-day	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-007	mg/cu. m.	R	8.15E-010	mg/kg-day	1.60E+000	mg/kg-day	1.30E-009
	Hexachlorobutadiene	9.30E-001	mg/kg	1.69E-005	mg/cu. m.	R	5.56E-008	mg/kg-day	7.80E-002	mg/kg-day	4.34E-009
	Hexane, n-	0.00E+000	mg/kg	1.00E-008	mg/cu. m.	R	3.29E-011	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.53E-009	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	2.88E-003	mg/cu. m.	R	9.46E-006	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	1.12E-005	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.23E-004	mg/cu. m.	R	4.04E-007	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	8.60E-009	mg/kg-day		mg/kg-day	
	Methylene Chloride	8.80E+001	mg/kg	4.65E-003	mg/cu. m.	R	1.53E-005	mg/kg-day	1.65E-003	mg/kg-day	2.52E-008
	m,p-xylene	4.90E+000	mg/kg	1.24E-004	mg/cu. m.	R	4.06E-007	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.33E-003	mg/cu. m.	R	4.39E-006	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.59E-005	mg/cu. m.	R	5.21E-008	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	1.84E-006	mg/cu. m.	R	6.05E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	5.97E-005	mg/cu. m.	R	1.96E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	1.99E-005	mg/cu. m.	R	6.54E-008	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	6.78E-006	mg/cu. m.	R	2.23E-008	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	5.36E-004	mg/cu. m.	R	1.76E-006	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	2.67E-006	mg/cu. m.	R	8.77E-009	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.40E-006	mg/cu. m.	R	7.90E-009	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	9.98E-006	mg/cu. m.	R	3.27E-008	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	5.03E-004	mg/cu. m.	R	1.65E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.80E+002	mg/kg	3.54E-002	mg/cu. m.	R	1.16E-004	mg/kg-day	2.00E-003	mg/kg-day	2.33E-007
	Thallium	1.44E+000	mg/kg	3.15E-007	mg/cu. m.	R	1.04E-009	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.15E-001	mg/cu. m.	R	3.77E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.17E-002	mg/cu. m.	R	3.84E-005	mg/kg-day	6.00E-003	mg/kg-day	2.30E-007
	Vanadium	1.22E+001	mg/kg	3.89E-006	mg/cu. m.	R	1.28E-008	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.34E-005	mg/cu. m.	R	3.07E-007	mg/kg-day	3.00E-001	mg/kg-day	9.21E-008
	Xylenes (total)	3.60E+003	mg/kg	6.44E-002	mg/cu. m.	R	2.12E-004	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.43E-003	mg/cu. m.	R	7.99E-006	mg/kg-day		mg/kg-day	
	(Total)										2.18E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-53
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_fRWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.11E-004
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.78E-003
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	3.1E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.14E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.00E-003
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.14E-004
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.23E-003
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	8.6E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.56E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	7.8E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.60E-005
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	6.42E-003
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	7.8E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.95E-003
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.23E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.05E-003
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.77E-003
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.85E-003
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.08E-002
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	7.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.91E-003
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.14E-004
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.03E-002
	Aldrin	7.70E+000	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	2.20E-001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	7.0E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.05E-003
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.71E-006
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	3.51E-001
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.54E+000
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.22E-002
	Barium	2.69E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.29E-002
	Benzene	9.60E+001	mg/kg	NA	NA	M	8.2E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.74E-002
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	5.14E-005
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.70E-005
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.46E-004
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.85E-002
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.80E-003
	Cadmium	1.06E+002	mg/kg	NA	NA	M	9.1E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	9.08E-002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.20E-002
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	8.45E-004
	Chrysene	3.80E+000	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.97E-005
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.69E-004
	Copper	1.32E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.83E-002
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.35E-004
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	6.85E-005
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.23E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-53
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File Area2RME.wk4 \ TT_ID_RWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.34E-003
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.57E-004
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.82E-003
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	3.5E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.78E-005
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.85E-004
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	3.98E-003
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.48E-002
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.71E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	8.7E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	6.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	9.70E-004
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.10E-006
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.10E-002
	Nickel	5.52E+001	mg/kg	NA	NA	M	4.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.36E-003
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.07E-006
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.80E-003
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.43E-004
	Pyrene	8.00E+000	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.28E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.42E-003
	Silver	3.49E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	5.98E-003
	Styrene	5.20E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.23E-004
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.53E-002
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.76E-002
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.57E-003
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.99E-002
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.49E-003
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	9.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.54E-003
	Zinc	8.29E+003	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.37E-002
	(Total)												2.83E+000
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.38E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.84E-001
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	4.86E-005
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.32E-001
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.41E-002
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.14E-001
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.68E-002
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	5.2E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.72E-003
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.6E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	4.48E-001
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.2E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.29E-001
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.48E+000
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.36E-001
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.50E-001
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.55E-001
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.14E+000
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.93E-001
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.42E-002
	Acetone	1.20E+003	mg/kg	NA	NA	M	6.8E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	8.68E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-53
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_RWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	1.46E+001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.67E-001
	Anthracene	1.30E+000	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.46E-004
	Antimony	1.64E+002	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.33E+003
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.15E+002
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.9E-001	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.55E+000
	Barium	2.69E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.18E+000
	Benzene	9.60E+001	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	2.02E+000
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.41E-003
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.43E-003
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	9.65E-001
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	6.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.53E+000
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.19E-001
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.0E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	2.41E+002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	7.9E-003	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	8.32E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	8.4E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.40E+001
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.31E-003
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.11E-002
	Copper	1.32E+003	mg/kg	NA	NA	M	7.5E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	3.12E+000
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.55E-002
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.54E-003
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.48E-003
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.28E-001
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.69E-002
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.19E-001
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.82E-003
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.55E-002
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.64E-001
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.63E+000
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.0E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.11E-001
	Lead	1.02E+004	mg/kg	NA	NA	M	5.8E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.14E+000
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.17E-001
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.54E-004
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.39E+000
	Nickel	5.52E+001	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.13E+000
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.88E-005
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.19E-001
	Phenol	1.70E+002	mg/kg	NA	NA	M	9.6E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.61E-002
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.51E-002
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.44E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.89E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-53
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_RWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Styrene	5.20E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.48E-002
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	5.0E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.99E+000
	Thallium	1.44E+000	mg/kg	NA	NA	M	8.2E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.17E+000
	Toluene	1.30E+003	mg/kg	NA	NA	M	7.4E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.69E-001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	3.38E+000
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	9.89E-002
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	6.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.14E-001
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.23E+000
	(Total)												2.76E+003
												Total Hazard Index Across All Exposure Routes/Pathways	2.8E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-54
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_RWa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	3.45E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.47E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	1.60E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.60E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	2.69E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	1.60E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	6.17E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	6.85E-002
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	1.45E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.04E-001
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	6.86E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	1.55E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.36E-001
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	3.16E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	5.54E-004
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	5.90E-012	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	2.95E-009
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	1.52E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	6.66E-005
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	1.05E-007	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.68E-007
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	2.90E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.07E+000
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	7.03E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	5.59E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	2.71E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	2.03E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	3.58E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	5.60E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	3.21E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	3.52E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	6.00E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	3.00E-002
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	2.03E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	2.40E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	2.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	1.08E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	1.85E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	1.19E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	1.77E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	8.79E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	7.40E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	4.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	3.10E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	8.89E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	3.52E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	6.31E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	4.71E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	4.25E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	6.81E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	1.35E-007	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	9.63E-004
	Benzene	9.60E+001	mg/kg	2.80E-003	mg/cu. m.	R	5.49E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	3.23E-001
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	5.58E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.78E-009	mg/cu. m.	R	3.43E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	1.90E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	6.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	1.89E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	6.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-006	mg/cu. m.	R	3.25E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	4.85E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	8.51E-006
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	7.71E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	1.15E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	5.17E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	5.25E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.06E+002	mg/kg	7.75E-008	mg/cu. m.	R	1.52E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	1.63E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	8.16E-010
	Chlorobenzene	0.00E+000	mg/kg	5.98E-004	mg/cu. m.	R	1.17E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.33E-002
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	5.56E-004	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	6.48E+000

Scenario Timeframe:	*Future*
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-54
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_inh_RWa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	1.63E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	2.72E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	4.75E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	3.29E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	2.09E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	1.73E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	2.46E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	3.38E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	1.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	1.61E-012	mg/kg-day		mg/kg-day		mg/cu. m	
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	3.16E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	3.23E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	1.01E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	1.74E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	8.05E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	1.07E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	1.84E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	2.30E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	7.95E-003
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	5.60E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	6.15E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	8.05E-012	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	4.02E-008
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	9.90E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	4.72E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	4.86E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	1.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	1.84E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	1.76E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.60E+003	mg/kg	3.48E-003	mg/cu. m.	R	6.81E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	1.30E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	3.82E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.67E-003
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	1.04E-009	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.21E-005
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	2.50E-003	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.91E-003
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	9.52E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	3.21E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.57E-001
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	3.40E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	4.41E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	2.87E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	5.87E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	1.40E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	3.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	1.04E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	5.34E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	1.57E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	1.50E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.24E-004
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	4.92E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	3.52E-002
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	9.22E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	2.35E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.06E-001
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	2.81E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	1.39E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	1.79E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	1.29E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	4.97E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												9.84E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-55
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME wk4 \ TT_ID_RWk2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	2.0E-001	kg-day/mg	2.2E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	6.4E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	9.1E-002	kg-day/mg	5.0E-007
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	6.8E-002	kg-day/mg	5.6E-008
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	2.4E-002	kg-day/mg	6.7E-009
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	2.4E-001	kg-day/mg	2.4E-007
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	3.4E-001	kg-day/mg	9.1E-008
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day	3.4E-001	kg-day/mg	1.8E-007
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	3.7E-004	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	1.7E+001	kg-day/mg	4.0E-005
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	6.3E+000	kg-day/mg	6.4E-007
	Aluminum	8.23E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	4.0E-007	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	5.0E-005	mg/kg-day		kg-day/mg	
	Arocior-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Arocior-1254	3.60E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E+000	kg-day/mg	2.2E-005
	Arocior-1260	3.40E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	2.0E+000	kg-day/mg	2.1E-003
	Arsenic	7.78E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	1.5E+000	kg-day/mg	3.6E-006
	Barium	2.69E+003	mg/kg	NA	NA	M	8.2E-004	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.9E-002	kg-day/mg	8.5E-007
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	7.3E-001	kg-day/mg	6.0E-007
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	4.6E-007	mg/kg-day	7.3E+000	kg-day/mg	3.3E-006
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.3E-001	kg-day/mg	1.2E-006
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.3E-002	kg-day/mg	1.2E-007
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	1.8E+000	kg-day/mg	4.4E-007
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	1.1E+000	kg-day/mg	3.7E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	7.0E-004	mg/kg-day	1.4E-002	kg-day/mg	9.8E-006
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	6.1E-003	kg-day/mg	2.6E-007
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	7.3E-003	kg-day/mg	8.5E-009
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	7.0E-008	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	8.0E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-55
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_RWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	7.8E-002	kg-day/mg	2.2E-008
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	4.3E-007	mg/kg-day	7.3E-001	kg-day/mg	3.1E-007
	Iron	1.92E+004	mg/kg	NA	NA	M	5.9E-003	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	9.5E-004	kg-day/mg	5.2E-007
	Lead	1.02E+004	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	7.5E-003	kg-day/mg	1.6E-007
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.2E-001	kg-day/mg	2.3E-006
	Phenol	1.70E+002	mg/kg	NA	NA	M	5.2E-005	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	5.2E-002	kg-day/mg	1.4E-005
	Thallium	1.44E+000	mg/kg	NA	NA	M	4.4E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.1E-002	kg-day/mg	1.2E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day	1.9E+000	kg-day/mg	6.4E-008
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day		kg-day/mg	
	(Total)										2.42E-003
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	2.9E-001	kg-day/mg	2.08E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	4.3E-003	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	9.1E-002	kg-day/mg	3.32E-005
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	6.8E-002	kg-day/mg	3.72E-006
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	2.4E-002	kg-day/mg	4.43E-007
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	9.1E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	7.3E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	3.6E-003	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	2.4E-001	kg-day/mg	1.61E-005
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	3.4E-001	kg-day/mg	6.06E-006
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	3.4E-001	kg-day/mg	1.17E-005
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-55
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_fD_fRWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.7E+001	kg-day/mg	2.65E-003
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	6.3E+000	kg-day/mg	4.21E-005
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	2.2E+000	kg-day/mg	1.64E-003
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	6.9E-002	mg/kg-day	2.0E+000	kg-day/mg	1.38E-001
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.6E+000	kg-day/mg	2.49E-004
	Barium	2.69E+003	mg/kg	NA	NA	M	5.5E-002	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	3.2E-002	kg-day/mg	6.27E-005
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	7.3E-001	kg-day/mg	3.99E-005
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	8.6E+000	kg-day/mg	2.61E-004
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	7.3E-001	kg-day/mg	7.84E-005
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	7.3E-002	kg-day/mg	7.84E-006
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	1.8E+000	kg-day/mg	2.92E-005
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	1.1E+000	kg-day/mg	2.45E-003
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	4.7E-002	mg/kg-day	1.4E-002	kg-day/mg	6.53E-004
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	8.5E-003	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	6.4E-003	kg-day/mg	1.81E-005
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	1.8E-002	kg-day/mg	1.37E-006
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	2.7E-002	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	5.3E-003	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	7.9E-003	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	7.8E-002	kg-day/mg	1.47E-006
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	7.3E-001	kg-day/mg	2.07E-005
	Iron	1.92E+004	mg/kg	NA	NA	M	3.9E-001	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	9.5E-004	kg-day/mg	3.47E-005
	Lead	1.02E+004	mg/kg	NA	NA	M	2.1E-001	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	8.1E-003	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.4E-002	kg-day/mg	1.88E-005
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	9.9E-005	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	9.9E-003	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.2E-001	kg-day/mg	1.53E-004
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.4E-003	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	7.1E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-55
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_RWa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Styrene	5.20E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	5.2E-002	kg-day/mg	9.27E-004
	Thallium	1.44E+000	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	2.6E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	1.1E-002	kg-day/mg	7.96E-005
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	1.9E+000	kg-day/mg	4.24E-006
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	7.3E-002	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	(Total)										1.61E-001
										Total Hazard Index Across All Exposure Routes/Pathways	1.6E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium: *Soil*	*Soil*
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-56
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_RWs2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	1.23E-004	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	5.72E-004	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	9.62E-007	mg/kg-day	5.60E-002	mg/kg-day	5.39E-008
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	5.71E-007	mg/kg-day	2.00E-001	mg/kg-day	1.14E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	2.20E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	5.20E-005	mg/kg-day	9.10E-002	mg/kg-day	4.73E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	2.45E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	5.55E-005	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	1.13E-005	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	2.11E-012	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	5.44E-006	mg/kg-day	2.20E-002	mg/kg-day	1.20E-007
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	3.75E-008	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	1.04E-003	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	2.51E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	2.00E-005	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	9.68E-008	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	7.25E-006	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	1.28E-008	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.00E-010	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	1.15E-006	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	1.26E-013	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	2.14E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	7.24E-005	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	8.56E-009	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	7.25E-011	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	3.86E-011	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	6.61E-011	mg/kg-day	3.40E-001	mg/kg-day	2.25E-011
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	4.25E-006	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	6.32E-008	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	3.14E-004	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	2.64E-010	mg/kg-day	1.70E+001	mg/kg-day	4.49E-009
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	1.45E-011	mg/kg-day	6.30E+000	mg/kg-day	9.11E-011
	Anthracene	1.30E+000	mg/kg	1.58E-008	mg/cu. m.	R	1.11E-007	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	3.18E-009	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	1.26E-010	mg/kg-day	2.00E+000	mg/kg-day	2.51E-010
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	2.25E-009	mg/kg-day	2.00E+000	mg/kg-day	4.51E-009
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	1.68E-009	mg/kg-day	2.00E+000	mg/kg-day	3.36E-009
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	1.52E-008	mg/kg-day	2.00E+000	mg/kg-day	3.04E-008
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	2.43E-010	mg/kg-day	1.51E+001	mg/kg-day	3.67E-009
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	4.81E-008	mg/kg-day		mg/kg-day	
	Benzene	9.60E+001	mg/kg	2.80E-003	mg/cu. m.	R	1.96E-004	mg/kg-day	2.90E-002	mg/kg-day	5.68E-006
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	1.99E-004	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	1.23E-010	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	6.80E-011	mg/kg-day	3.10E+000	mg/kg-day	2.11E-010
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	2.39E-010	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	6.75E-011	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	2.39E-010	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	1.16E-009	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	1.73E-011	mg/kg-day	8.40E+000	mg/kg-day	1.46E-010
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	2.75E-011	mg/kg-day	1.80E+000	mg/kg-day	4.95E-011
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	4.11E-005	mg/kg-day	1.10E+000	mg/kg-day	4.52E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	1.85E-008	mg/kg-day	1.40E-002	mg/kg-day	2.58E-010
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	1.88E-008	mg/kg-day		mg/kg-day	
	Cadmium	1.08E+002	mg/kg	7.75E-008	mg/cu. m.	R	5.41E-009	mg/kg-day	6.30E+000	mg/kg-day	3.41E-008
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	5.83E-011	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.96E-004	mg/cu. m.	R	4.17E-005	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	1.98E-004	mg/kg-day	8.10E-002	mg/kg-day	1.61E-005

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-56
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_RWs2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	5.84E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	9.73E-009	mg/kg-day	4.10E+001	mg/kg-day	3.99E-007
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	1.70E-010	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	1.18E-004	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	7.46E-010	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	6.16E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	8.80E-011	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	1.21E-010	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	4.34E-013	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	5.75E-013	mg/kg-day	1.60E+001	mg/kg-day	9.20E-012
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	1.13E-009	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.80E+002	mg/kg	1.65E-007	mg/cu. m.	R	1.15E-008	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	3.62E-009	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	6.20E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	2.87E-012	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	3.83E-012	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	6.59E-015	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	8.23E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.00E-010	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	2.20E-006	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	2.87E-012	mg/kg-day	3.50E-001	mg/kg-day	1.01E-012
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	3.53E-014	mg/kg-day	4.50E+000	mg/kg-day	1.59E-013
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	1.69E-014	mg/kg-day	9.10E+000	mg/kg-day	1.53E-013
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	1.74E-014	mg/kg-day	1.60E+000	mg/kg-day	2.78E-014
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	6.13E-010	mg/kg-day	7.80E-002	mg/kg-day	4.78E-011
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	6.57E-012	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	6.27E-011	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	2.43E-004	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	4.64E-007	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	1.37E-008	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	3.72E-010	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	8.93E-004	mg/kg-day	1.65E-003	mg/kg-day	1.47E-006
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	3.40E-004	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	1.15E-004	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	1.58E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	1.02E-004	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	2.10E-009	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	8.09E-010	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	5.02E-005	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	1.39E-011	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	3.72E-010	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	1.91E-010	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	5.60E-010	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	5.36E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	1.76E-003	mg/kg-day	2.00E-003	mg/kg-day	3.52E-006
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	3.29E-011	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	8.38E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	1.00E-003	mg/kg-day	6.00E-003	mg/kg-day	6.03E-006
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	4.95E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	6.39E-006	mg/kg-day	3.00E-001	mg/kg-day	1.92E-006
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	4.60E-003	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	1.78E-007	mg/kg-day		mg/kg-day	
	(Total)										8.54E-005

Scenario Timeframe:	Future
Medium: Soil	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-56
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_IRWa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	5.84E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	9.73E-009	mg/kg-day	4.10E+001	mg/kg-day	3.99E-007
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	1.70E-010	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	1.18E-004	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	7.46E-010	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	6.16E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	8.80E-011	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	1.21E-010	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	4.34E-013	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	5.75E-013	mg/kg-day	1.60E+001	mg/kg-day	9.20E-012
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	1.13E-009	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	1.15E-008	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	3.62E-009	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	6.20E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	2.87E-012	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	3.83E-012	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	6.59E-015	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	8.23E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.00E-010	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	2.20E-006	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	2.87E-012	mg/kg-day	3.50E-001	mg/kg-day	1.01E-012
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	3.53E-014	mg/kg-day	4.50E+000	mg/kg-day	1.59E-013
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	1.69E-014	mg/kg-day	9.10E+000	mg/kg-day	1.53E-013
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	1.74E-014	mg/kg-day	1.60E+000	mg/kg-day	2.78E-014
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	6.13E-010	mg/kg-day	7.80E-002	mg/kg-day	4.78E-011
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	6.57E-012	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	6.27E-011	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	2.43E-004	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	4.64E-007	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	1.37E-008	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	3.72E-010	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	8.93E-004	mg/kg-day	1.65E-003	mg/kg-day	1.47E-006
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	3.40E-004	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	1.15E-004	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	1.58E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	1.02E-004	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	2.10E-009	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	8.09E-010	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	5.02E-005	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	1.39E-011	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	3.72E-010	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	1.91E-010	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	5.60E-010	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	5.36E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	6.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	1.76E-003	mg/kg-day	2.00E-003	mg/kg-day	3.52E-006
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	3.29E-011	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	8.38E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	1.00E-003	mg/kg-day	6.00E-003	mg/kg-day	6.03E-006
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	4.95E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	6.39E-006	mg/kg-day	3.00E-001	mg/kg-day	1.92E-006
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	4.60E-003	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	1.78E-007	mg/kg-day		mg/kg-day	
	(Total)										8.54E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-57
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT wk4 \ TT_ID_RWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.88E-005
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.22E-003
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.25E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	8.75E-004
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.25E-004
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.42E-003
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.75E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.14E-005
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.81E-003
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.53E-004
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.75E-003
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	9.00E-004
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.65E-003
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.69E-003
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.35E-002
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.28E-003
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	9.38E-005
	Acetone	1.20E+003	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.50E-003
	Aldrin	7.70E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	9.63E-002
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	3.09E-003
	Anthracene	1.30E+000	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.63E-006
	Antimony	1.64E+002	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.54E-001
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	6.75E-001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	9.73E-003
	Barium	2.69E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.44E-002
	Benzene	9.60E+001	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.20E-002
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	9.0E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.25E-005
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	5.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.25E-005
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	6.38E-005
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	8.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.31E-002
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.88E-004
	Cadmium	1.06E+002	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.98E-002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.25E-003
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	3.70E-004
	Chrysene	3.60E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	8.6E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.63E-006
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.06E-004
	Copper	1.32E+003	mg/kg	NA	NA	M	5.0E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.24E-002
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.34E-004
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.00E-005
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	9.8E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	9.75E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-57
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.46E-003
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.44E-004
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.55E-003
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.84E-005
	Fluorene	1.80E+001	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.69E-004
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	1.74E-003
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	5.3E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	7.2E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.40E-002
	Isophorone	1.60E+003	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.38E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	3.8E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.54E-003
	Mercury	7.85E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.25E-004
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	9.19E-007
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.19E-003
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.04E-003
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	4.69E-007
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.88E-004
	Phenol	1.70E+002	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.06E-004
	Pyrene	8.00E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.00E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	6.24E-004
	Silver	3.49E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.62E-003
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	9.75E-005
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.30E-002
	Thallium	1.44E+000	mg/kg	NA	NA	M	5.4E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	7.71E-003
	Toluene	1.30E+003	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.44E-003
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.19E-002
	Vanadium	1.22E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	6.54E-004
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.75E-004
	Zinc	8.29E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.04E-002
	(Total)												1.24E+000
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.11E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.79E-002
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	7.35E-006
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.00E-002
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.14E-003
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.24E-002
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.57E-003
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	7.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.60E-004
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	6.77E-002
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	7.8E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.95E-002
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	4.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.23E-001
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.06E-002
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.77E-002
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.86E-002
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	4.75E-001
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.91E-002
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.14E-003
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	1.31E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-57
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aldrin	7.70E+000	mg/kg	NA	NA	M	6.6E-005	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	2.20E+000
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.05E-002
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.71E-005
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.51E+002
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.73E+001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.34E-001
	Barium	2.69E+003	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.29E-001
	Benzene	9.60E+001	mg/kg	NA	NA	M	8.2E-004	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	3.05E-001
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	5.14E-004
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.71E-004
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.46E-001
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.86E-001
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.80E-002
	Cadmium	1.06E+002	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.63E+001
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	1.26E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.11E+000
	Chrysene	3.80E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.97E-004
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.70E-003
	Copper	1.32E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	4.71E-001
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.36E-003
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	6.86E-004
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.23E-004
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	3.45E-002
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.57E-003
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	5.8E-003	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	6.34E-002
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.79E-004
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.86E-003
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	3.99E-002
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.49E-001
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.71E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	8.7E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E-001
	Mercury	7.85E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.77E-002
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.33E-005
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.10E-001
	Nickel	5.52E+001	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.73E-001
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.19E-005
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.80E-002
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.43E-003
	Pyrene	8.00E+000	mg/kg	NA	NA	M	6.9E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.29E-003
	Selenium	8.32E+000	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.43E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.85E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-57
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File Area2CT.wk4 \ TT_ID_RWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Styrene	5.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.23E-003
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	7.5E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.54E-001
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.76E-001
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.57E-002
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	5.10E-001
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.49E-002
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	9.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.72E-002
	Zinc	8.29E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	7.90E-001
	(Total)												4.18E+002
												Total Hazard Index Across All Exposure Routes/Pathways	4.2E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-58
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RWa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	3.03E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.16E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	1.40E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.90E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	2.36E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	1.40E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	5.40E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	6.00E-002
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	1.27E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	9.10E-002
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	6.01E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	1.36E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.19E-001
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	2.77E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	4.86E-004
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	5.17E-012	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	2.58E-009
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	1.34E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	5.83E-005
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	9.21E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.22E-007
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	2.54E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.81E+000
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	6.16E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	4.90E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	2.37E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	1.78E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	3.14E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	4.90E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	2.81E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	3.08E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	5.26E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	2.63E-002
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	1.78E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	2.10E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	1.78E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	9.46E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	1.62E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	1.04E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	1.55E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	7.70E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	6.48E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	3.55E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	2.72E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	7.79E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	3.08E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	5.53E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	4.12E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	3.73E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	5.96E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	1.18E-007	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	8.44E-004
	Benzene	9.60E+001	mg/kg	2.60E-003	mg/cu. m.	R	4.61E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	2.83E-001
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	4.89E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	3.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	1.67E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	5.85E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	1.66E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	5.85E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	2.85E-009	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	7.46E-006
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	4.25E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	6.75E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	1.01E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	4.53E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	4.60E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.06E+002	mg/kg	7.75E-008	mg/cu. m.	R	1.33E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	1.43E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	7.15E-010
	Chlorobenzene	0.00E+000	mg/kg	5.96E-004	mg/cu. m.	R	1.02E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.04E-002
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	4.87E-004	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.66E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-58
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RfWs2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	2.39E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	4.16E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	2.88E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	1.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	1.51E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	2.16E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	2.96E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	1.06E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	1.41E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	2.77E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	2.83E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	8.88E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	1.52E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	7.05E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	9.40E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	1.62E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	2.02E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	6.96E-003
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	4.90E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	5.39E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	7.05E-012	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	3.52E-008
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	8.67E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	4.14E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	4.26E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	1.50E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	1.61E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	1.54E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	5.97E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	1.14E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	3.35E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.34E-003
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	9.13E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.06E-005
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	2.19E-003	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.55E-003
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	8.34E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	2.82E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.13E-001
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	2.98E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	3.87E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	2.51E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	5.14E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	1.99E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	1.23E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	3.41E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	9.13E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	4.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	1.37E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	1.31E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.59E-004
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	4.31E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	3.08E-002
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	8.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	2.06E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.80E-001
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	2.46E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	1.57E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	1.13E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	4.36E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												8.62E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-59
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	9.6E-010	mg/kg-day	2.0E-001	kg-day/mg	1.9E-010
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	4.8E-007	mg/kg-day	9.1E-002	kg-day/mg	4.4E-008
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day	6.8E-002	kg-day/mg	4.9E-009
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	2.4E-008	mg/kg-day	2.4E-002	kg-day/mg	5.9E-010
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	8.8E-008	mg/kg-day	2.4E-001	kg-day/mg	2.1E-008
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	2.4E-008	mg/kg-day	3.4E-001	kg-day/mg	8.0E-009
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	4.6E-008	mg/kg-day	3.4E-001	kg-day/mg	1.5E-008
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	4.0E-007	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	1.7E+001	kg-day/mg	3.5E-006
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	8.8E-009	mg/kg-day	6.3E+000	kg-day/mg	5.6E-008
	Aluminum	8.23E+003	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	3.5E-008	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	9.6E-007	mg/kg-day	2.0E+000	kg-day/mg	1.9E-006
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	9.1E-005	mg/kg-day	2.0E+000	kg-day/mg	1.8E-004
	Arsenic	7.78E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	1.5E+000	kg-day/mg	3.1E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	7.2E-005	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	2.9E-002	kg-day/mg	7.5E-008
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day	7.3E-001	kg-day/mg	5.3E-008
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	4.0E-008	mg/kg-day	7.3E+000	kg-day/mg	2.9E-007
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	7.3E-001	kg-day/mg	1.0E-007
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	7.3E-002	kg-day/mg	1.0E-008
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	9.1E-009	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	2.1E-008	mg/kg-day	1.8E+000	kg-day/mg	3.9E-008
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	1.1E+000	kg-day/mg	3.2E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	1.4E-002	kg-day/mg	8.6E-007
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	6.1E-003	kg-day/mg	2.3E-008
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	4.0E-005	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	7.3E-003	kg-day/mg	7.4E-010
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	6.2E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	8.8E-007	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	6.7E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-59
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	4.8E-007	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	7.8E-002	kg-day/mg	1.9E-009
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	3.8E-008	mg/kg-day	7.3E-001	kg-day/mg	2.7E-008
	Iron	1.92E+004	mg/kg	NA	NA	M	5.1E-004	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	4.8E-005	mg/kg-day	9.5E-004	kg-day/mg	4.6E-008
	Lead	1.02E+004	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	7.5E-003	kg-day/mg	1.4E-008
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	6.7E-008	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.2E-001	kg-day/mg	2.0E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	9.3E-007	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	5.2E-002	kg-day/mg	1.2E-006
	Thallium	1.44E+000	mg/kg	NA	NA	M	3.9E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	1.1E-002	kg-day/mg	1.0E-007
	Vanadium	1.22E+001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	2.9E-009	mg/kg-day	1.9E+000	kg-day/mg	5.6E-009
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	9.6E-005	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	(Total)										2.12E-004
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	2.9E-001	kg-day/mg	6.30E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	9.1E-002	kg-day/mg	1.00E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	6.8E-002	kg-day/mg	1.12E-007
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	2.4E-002	kg-day/mg	1.34E-008
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	2.4E-001	kg-day/mg	4.85E-007
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day	3.4E-001	kg-day/mg	1.83E-007
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.4E-001	kg-day/mg	3.54E-007
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	9.2E-006	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-59
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_IRWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	1.7E+001	kg-day/mg	8.01E-005
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	6.3E+000	kg-day/mg	1.27E-006
	Aluminum	8.23E+003	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	8.0E-007	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.2E+000	kg-day/mg	4.95E-005
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	2.0E+000	kg-day/mg	4.16E-003
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day	1.6E+000	kg-day/mg	7.52E-006
	Barium	2.69E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	3.2E-002	kg-day/mg	1.89E-006
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	7.3E-001	kg-day/mg	1.21E-006
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day	8.6E+000	kg-day/mg	7.89E-006
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	7.3E-001	kg-day/mg	2.37E-006
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	7.3E-002	kg-day/mg	2.37E-007
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	1.8E+000	kg-day/mg	8.82E-007
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	1.1E+000	kg-day/mg	7.41E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.4E-002	kg-day/mg	1.97E-005
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	6.4E-003	kg-day/mg	5.47E-007
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	9.1E-004	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	1.8E-002	kg-day/mg	4.14E-008
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	8.1E-004	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	7.8E-002	kg-day/mg	4.44E-008
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	7.3E-001	kg-day/mg	6.26E-007
	Iron	1.92E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	9.5E-004	kg-day/mg	1.05E-006
	Lead	1.02E+004	mg/kg	NA	NA	M	6.2E-003	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	1.4E-002	kg-day/mg	5.68E-007
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	1.2E-001	kg-day/mg	4.63E-006
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-59
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT wk4 \ TT_ID_fRWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Styrene	5.20E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	5.2E-002	kg-day/mg	2.80E-005
	Thallium	1.44E+000	mg/kg	NA	NA	M	8.8E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	8.0E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.1E-002	kg-day/mg	2.41E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	6.7E-008	mg/kg-day	1.9E+000	kg-day/mg	1.28E-007
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	5.1E-003	mg/kg-day		kg-day/mg	
	(Total)										4.85E-003
										Total Hazard Index Across All Exposure Routes/Pathways	5.1E-003

(1) *Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.*

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-60
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT Inh RWa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	2.16E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.16E-003	mg/cu. m.	R	1.00E-004	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	1.69E-007	mg/kg-day	5.60E-002	mg/kg-day	9.44E-009
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	1.00E-007	mg/kg-day	2.00E-001	mg/kg-day	2.00E-008
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	3.86E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	9.10E-006	mg/kg-day	9.10E-002	mg/kg-day	8.28E-007
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	4.29E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	9.72E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	1.98E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	3.69E-013	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	9.54E-007	mg/kg-day	2.20E-002	mg/kg-day	2.10E-008
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	6.58E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	1.81E-004	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	4.40E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	3.50E-006	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	1.70E-008	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	1.27E-006	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	2.24E-009	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	3.50E-011	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	2.01E-007	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	2.20E-014	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	3.76E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	1.27E-005	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	1.50E-009	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	1.27E-011	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	6.75E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	1.16E-011	mg/kg-day	3.40E-001	mg/kg-day	3.94E-012
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	7.44E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	1.11E-008	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	5.50E-005	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	4.63E-011	mg/kg-day	1.70E+001	mg/kg-day	7.87E-010
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	2.53E-012	mg/kg-day	6.30E+000	mg/kg-day	1.60E-011
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	1.94E-008	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	5.56E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	2.20E-011	mg/kg-day	2.00E+000	mg/kg-day	4.40E-011
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	3.95E-010	mg/kg-day	2.00E+000	mg/kg-day	7.89E-010
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	2.95E-010	mg/kg-day	2.00E+000	mg/kg-day	5.89E-010
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	2.66E-009	mg/kg-day	2.00E+000	mg/kg-day	5.32E-009
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	4.26E-011	mg/kg-day	1.51E+001	mg/kg-day	6.43E-010
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	8.44E-009	mg/kg-day		mg/kg-day	
	Benzene	9.60E+001	mg/kg	2.80E-003	mg/cu. m.	R	3.43E-005	mg/kg-day	2.90E-002	mg/kg-day	9.96E-007
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	3.49E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	2.15E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	1.19E-011	mg/kg-day	3.10E+000	mg/kg-day	3.69E-011
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	4.18E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	1.18E-011	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	4.18E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	2.04E-010	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	3.04E-012	mg/kg-day	8.40E+000	mg/kg-day	2.55E-011
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	4.82E-012	mg/kg-day	1.80E+000	mg/kg-day	8.68E-012
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	7.21E-006	mg/kg-day	1.10E+000	mg/kg-day	7.93E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	3.23E-009	mg/kg-day	1.40E-002	mg/kg-day	4.53E-011
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	3.29E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.06E+002	mg/kg	7.75E-008	mg/cu. m.	R	9.49E-010	mg/kg-day	6.30E+000	mg/kg-day	5.98E-009
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	1.02E-011	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.96E-004	mg/cu. m.	R	7.30E-006	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	3.48E-005	mg/kg-day	8.10E-002	mg/kg-day	2.82E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-60
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RWa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	1.02E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	1.70E-009	mg/kg-day	4.10E+001	mg/kg-day	6.99E-008
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	2.97E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	2.06E-005	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	1.31E-010	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	1.08E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.54E-011	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	2.12E-011	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	7.60E-014	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	1.01E-013	mg/kg-day	1.60E+001	mg/kg-day	1.61E-012
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	1.98E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	2.02E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	6.35E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	1.09E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	5.04E-013	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	6.71E-013	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	1.15E-015	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	1.44E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	3.50E-011	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	3.85E-007	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	5.04E-013	mg/kg-day	3.50E-001	mg/kg-day	1.76E-013
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	6.19E-015	mg/kg-day	4.50E+000	mg/kg-day	2.79E-014
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	2.96E-015	mg/kg-day	9.10E+000	mg/kg-day	2.69E-014
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	3.04E-015	mg/kg-day	1.60E+000	mg/kg-day	4.87E-015
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	1.07E-010	mg/kg-day	7.80E-002	mg/kg-day	8.38E-012
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	1.15E-012	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	1.10E-011	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	4.26E-005	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	8.13E-008	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	2.39E-009	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	6.52E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	1.57E-004	mg/kg-day	1.65E-003	mg/kg-day	2.58E-007
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	5.96E-005	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	2.01E-005	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	2.13E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	2.76E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	1.79E-005	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	3.67E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.16E-006	mg/cu. m.	R	1.42E-010	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	8.79E-006	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	2.43E-012	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	6.52E-011	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	3.34E-011	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	9.82E-011	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	9.38E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	3.08E-004	mg/kg-day	2.00E-003	mg/kg-day	6.16E-007
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	5.77E-012	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	1.47E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	1.76E-004	mg/kg-day	6.00E-003	mg/kg-day	1.06E-006
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	8.67E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	1.12E-006	mg/kg-day	3.00E-001	mg/kg-day	3.36E-007
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	8.06E-004	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	3.11E-006	mg/kg-day		mg/kg-day	
	(Total)										1.50E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-61
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \TT_ID_&Wa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.47E-004
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	7.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.66E-003
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	4.1E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.76E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.63E-003
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.76E-004
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	4.26E-003
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.13E-003
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.42E-005
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	8.45E-003
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.56E-003
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.93E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.71E-003
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	9.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.96E-003
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	4.1E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	5.07E-003
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.06E-002
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	9.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.83E-003
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.82E-004
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.35E-002
	Aldrin	7.70E+000	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	2.89E-001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	9.28E-003
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.88E-006
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	4.62E-001
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.03E+000
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	3.8E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	8.8E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.92E-002
	Barium	2.69E+003	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.33E-002
	Benzene	9.60E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	3.81E-002
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	6.76E-005
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.28E-004
	Beryllium	3.40E-001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.92E-004
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	9.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.30E-001
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.37E-003
	Cadmium	1.08E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.19E-001
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.58E-002
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.11E-003
	Chrysene	3.80E+000	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.59E-005
	Cobalt	3.29E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.16E-004
	Copper	1.32E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.72E-002
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	7.05E-004
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	9.02E-005
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.93E-005
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.40E-003

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-61
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_IUWs2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.33E-004
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	7.7E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.66E-003
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.16E-004
	Fluorene	1.80E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.07E-004
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	5.24E-003
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	7.21E-002
	Isophorone	1.80E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.01E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.27E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	8.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.90E+001	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.28E-003
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.76E-006
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.76E-002
	Nickel	5.52E+001	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.11E-003
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.41E-006
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.37E-003
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.19E-004
	Pyrene	8.00E+000	mg/kg	NA	NA	M	9.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.01E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.88E-003
	Silver	3.49E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.87E-003
	Styrene	5.20E+001	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.93E-004
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	9.9E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.92E-002
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	2.32E-002
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.33E-003
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	6.58E-002
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.96E-003
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.80E+003	mg/kg	NA	NA	M	4.1E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.03E-003
	Zinc	8.29E+003	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.11E-002
	(Total)												3.73E+000
Dermal	1,1-Dichloroethene	1.30E+001	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.38E-003
	1,1,1-Trichloroethane	8.50E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.84E-001
	1,1,2,2-Tetrachloroethane	3.80E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	4.86E-005
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.32E-001
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.41E-002
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.14E-001
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.68E-002
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	5.2E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.72E-003
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.6E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	4.48E-001
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.2E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.29E-001
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.48E+000
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.36E-001
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.50E-001
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.80E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.55E-001
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.14E+000
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.93E-001
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.42E-002
	Acetone	1.20E+003	mg/kg	NA	NA	M	6.8E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	8.68E-001
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	1.46E+001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-61
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_ILMW2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.67E-001
	Anthracene	1.30E+000	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.46E-004
	Antimony	1.64E+002	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.33E+003
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.15E+002
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.9E-001	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.55E+000
	Barium	2.69E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.18E+000
	Benzene	9.80E+001	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	2.02E+000
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.41E-003
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.43E-003
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	9.85E-001
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	6.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.53E+000
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.19E-001
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.0E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	2.41E+002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	7.9E-003	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	8.32E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	8.4E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.40E+001
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.31E-003
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.11E-002
	Copper	1.32E+003	mg/kg	NA	NA	M	7.5E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	3.12E+000
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.55E-002
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.54E-003
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.48E-003
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.28E-001
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.69E-002
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.19E-001
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.82E-003
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.55E-002
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.64E-001
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.63E+000
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.0E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.11E-001
	Lead	1.02E+004	mg/kg	NA	NA	M	5.8E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.14E+000
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.17E-001
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.54E-004
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.39E+000
	Nickel	5.52E+001	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.13E+000
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.88E-005
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.19E-001
	Phenol	1.70E+002	mg/kg	NA	NA	M	9.6E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.61E-002
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.51E-002
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.44E-002
	Silver	3.48E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.89E+000
	Styrene	5.20E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.48E-002
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	5.0E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.99E+000
	Thallium	1.44E+000	mg/kg	NA	NA	M	8.2E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.17E+000

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-61
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_RAMs2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	1.30E+003	mg/kg	NA	NA	M	7.4E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.69E-001
	Trichloroethane	3.50E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	3.38E+000
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	9.89E-002
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	6.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.80E+003	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.14E-001
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.7E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.23E+000
	(Total)												2.76E+003
										Total Hazard Index Across All Exposure Routes/Pathways			2.8E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-62
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 | TT_Inh_BWa2RME.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	3.65E-003	mg/cu. m.	R	7.14E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	5.10E-003
	1,1-Dichloroethene	0.00E+000	mg/kg	2.29E-009	mg/cu. m.	R	4.49E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	4.40E-003	mg/cu. m.	R	8.61E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.01E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.76E-005	mg/cu. m.	R	3.44E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	1.75E-006	mg/cu. m.	R	3.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	2.50E-003	mg/cu. m.	R	4.89E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	5.43E-002
	1,2-Dichloroethene	1.80E+001	mg/kg	1.25E-003	mg/cu. m.	R	2.44E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.74E-001
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	4.20E-003	mg/cu. m.	R	8.22E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	5.35E-004	mg/cu. m.	R	1.05E-004	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	9.19E-002
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.42E-004	mg/cu. m.	R	2.77E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	4.86E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	4.68E-005	mg/cu. m.	R	9.16E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	4.00E-005
	2-Butanone	4.50E+003	mg/kg	1.23E-003	mg/cu. m.	R	2.41E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	8.44E-004
	2-Hexanone	9.10E+001	mg/kg	1.17E-002	mg/cu. m.	R	2.28E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.63E+000
	2-Methylnaphthalene	5.20E+002	mg/kg	4.91E-004	mg/cu. m.	R	9.61E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.53E-004	mg/cu. m.	R	4.95E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.60E-004	mg/cu. m.	R	3.14E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.05E-005	mg/cu. m.	R	4.01E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.28E-003	mg/cu. m.	R	6.42E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	3.21E-002
	4-Methylphenol	1.80E+002	mg/kg	8.53E-004	mg/cu. m.	R	1.67E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	9.77E-007	mg/cu. m.	R	1.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	2.93E-007	mg/cu. m.	R	5.74E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	5.36E-007	mg/cu. m.	R	1.05E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	5.08E-005	mg/cu. m.	R	9.94E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	1.13E-002	mg/cu. m.	R	2.22E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	2.46E-006	mg/cu. m.	R	4.81E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	1.10E-007	mg/cu. m.	R	2.15E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	3.09E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.81E-005	mg/cu. m.	R	9.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	2.32E-006	mg/cu. m.	R	4.54E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	9.13E-005	mg/cu. m.	R	1.79E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	1.20E-005	mg/cu. m.	R	2.35E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	9.30E-004	mg/cu. m.	R	1.82E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	2.40E-006	mg/cu. m.	R	4.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	7.82E-004	mg/cu. m.	R	1.53E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.09E+000
	Benzene	9.80E+001	mg/kg	4.01E-003	mg/cu. m.	R	7.85E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	4.62E-001
	Benzoic Acid	2.40E+002	mg/kg	2.15E-003	mg/cu. m.	R	4.21E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	9.00E-007	mg/cu. m.	R	1.76E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	9.78E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	3.46E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.00E-007	mg/cu. m.	R	9.78E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	3.46E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.08E-005	mg/cu. m.	R	2.12E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	3.40E-001	mg/kg	1.12E-007	mg/cu. m.	R	2.18E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	3.83E-003
	beta-BHC	8.00E-001	mg/kg	2.55E-007	mg/cu. m.	R	4.99E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	4.80E-004	mg/cu. m.	R	9.39E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	6.36E-004	mg/cu. m.	R	1.24E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	1.40E-004	mg/cu. m.	R	2.74E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.08E+002	mg/kg	3.53E-005	mg/cu. m.	R	6.91E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chlorobenzene	0.00E+000	mg/kg	6.67E-006	mg/cu. m.	R	1.30E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.61E-004
	Chloroform	1.40E+002	mg/kg	5.13E-003	mg/cu. m.	R	1.00E-003	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.17E+001
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	8.28E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	1.38E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.80E+000	mg/kg	1.27E-006	mg/cu. m.	R	2.48E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	5.75E-005	mg/cu. m.	R	1.13E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	9.72E-006	mg/cu. m.	R	1.90E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	8.61E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	2.50E+000	mg/kg	8.33E-007	mg/cu. m.	R	1.63E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-62
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME v64 \ TT_Inh_RMe2RME.xls

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	1.87E-006	mg/cu. m.	R	3.65E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	6.40E+001	mg/kg	1.87E-005	mg/cu. m.	R	3.66E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.80E+002	mg/kg	8.67E-005	mg/cu. m.	R	1.70E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	1.09E-004	mg/cu. m.	R	2.13E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	4.33E-006	mg/cu. m.	R	8.48E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.92E-002	mg/cu. m.	R	3.75E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.29E-002
	Fluoranthene	4.10E+000	mg/kg	1.37E-006	mg/cu. m.	R	2.67E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	2.98E-005	mg/cu. m.	R	5.84E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-007	mg/cu. m.	R	4.85E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	1.69E-005	mg/cu. m.	R	3.31E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.00E-006	mg/cu. m.	R	1.96E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	9.13E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.80E+003	mg/kg	2.88E-003	mg/cu. m.	R	5.63E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	6.65E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.23E-004	mg/cu. m.	R	2.41E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.68E+000
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	5.12E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.95E-003
	Methylene Chloride	6.80E+001	mg/kg	4.65E-003	mg/cu. m.	R	9.10E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.06E-003
	m,p-xylene	4.90E+000	mg/kg	1.24E-004	mg/cu. m.	R	2.43E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.33E-003	mg/cu. m.	R	2.61E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	2.90E-001
	Nickel	5.52E+001	mg/kg	1.58E-005	mg/cu. m.	R	3.10E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	1.84E-006	mg/cu. m.	R	3.60E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.80E+000	mg/kg	5.97E-005	mg/cu. m.	R	1.17E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	8.30E+001	mg/kg	1.99E-005	mg/cu. m.	R	3.89E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	6.78E-006	mg/cu. m.	R	1.33E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	5.36E-004	mg/cu. m.	R	1.05E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	2.67E-006	mg/cu. m.	R	5.22E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.40E-006	mg/cu. m.	R	4.70E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	9.96E-006	mg/cu. m.	R	1.95E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	5.03E-004	mg/cu. m.	R	9.84E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.44E-004
	Tetrachloroethene	8.80E+002	mg/kg	3.54E-002	mg/cu. m.	R	6.92E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	4.95E-002
	Thallium	1.44E+000	mg/kg	3.15E-007	mg/cu. m.	R	6.16E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.15E-001	mg/cu. m.	R	2.24E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.97E-001
	Trichloroethene	3.50E+002	mg/kg	1.17E-002	mg/cu. m.	R	2.29E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	3.89E-006	mg/cu. m.	R	7.62E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.34E-005	mg/cu. m.	R	1.83E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.80E+003	mg/kg	8.44E-002	mg/cu. m.	R	1.26E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.43E-003	mg/cu. m.	R	4.76E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.75E+001

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-63
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \TT_ID_\Area2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	5.2E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	2.0E-001	kg-day/mg	2.9E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day	9.1E-002	kg-day/mg	6.6E-007
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	6.8E-002	kg-day/mg	7.4E-008
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	2.4E-002	kg-day/mg	8.8E-009
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	4.8E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	7.2E-005	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	2.4E-001	kg-day/mg	3.2E-007
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	3.4E-001	kg-day/mg	1.2E-007
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	6.8E-007	mg/kg-day	3.4E-001	kg-day/mg	2.3E-007
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	4.8E-004	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	1.7E+001	kg-day/mg	5.3E-005
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	6.3E+000	kg-day/mg	8.4E-007
	Aluminum	8.23E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	6.6E-005	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.80E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E+000	kg-day/mg	2.9E-005
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E+000	kg-day/mg	2.7E-003
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	1.5E+000	kg-day/mg	4.7E-006
	Barium	2.69E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	2.9E-002	kg-day/mg	1.1E-006
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	9.7E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	7.3E-001	kg-day/mg	7.9E-007
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	6.0E-007	mg/kg-day	7.3E+000	kg-day/mg	4.4E-006
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	7.3E-001	kg-day/mg	1.6E-006
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	7.3E-002	kg-day/mg	1.6E-007
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	1.8E+000	kg-day/mg	5.8E-007
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	4.4E-005	mg/kg-day	1.1E+000	kg-day/mg	4.9E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	9.3E-004	mg/kg-day	1.4E-002	kg-day/mg	1.3E-005
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	4.3E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	6.1E-003	kg-day/mg	3.4E-007
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	6.0E-004	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-003	kg-day/mg	1.1E-008
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	9.3E-008	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-63
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_IUWs2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	5.2E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	7.8E-002	kg-day/mg	2.9E-008
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	7.3E-001	kg-day/mg	4.1E-007
	Iron	1.92E+004	mg/kg	NA	NA	M	7.7E-003	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	7.2E-004	mg/kg-day	9.5E-004	kg-day/mg	6.9E-007
	Lead	1.02E+004	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.60E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	7.5E-003	kg-day/mg	2.1E-007
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	1.2E-001	kg-day/mg	3.0E-006
	Phenol	1.70E+002	mg/kg	NA	NA	M	6.8E-005	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	5.2E-002	kg-day/mg	1.8E-005
	Thallium	1.44E+000	mg/kg	NA	NA	M	5.8E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	5.2E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.1E-002	kg-day/mg	1.5E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	1.9E+000	kg-day/mg	8.4E-006
	Xylenes (total)	3.80E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day		kg-day/mg	
	(Total)										3.19E-003
Dermal	1,1-Dichloroethene	1.30E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	2.9E-001	kg-day/mg	2.08E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	4.3E-003	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	9.1E-002	kg-day/mg	3.32E-005
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	6.8E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	6.8E-002	kg-day/mg	3.72E-006
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	2.4E-002	kg-day/mg	4.43E-007
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	9.1E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	7.3E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	3.6E-003	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	2.4E-001	kg-day/mg	1.61E-005
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	3.4E-001	kg-day/mg	6.06E-006
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	3.4E-001	kg-day/mg	1.17E-005
	Acenaphthene	1.80E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.7E+001	kg-day/mg	2.65E-003
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	6.3E+000	kg-day/mg	4.21E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-63
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_IUWs2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.80E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	2.2E+000	kg-day/mg	1.64E-003
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	6.9E-002	mg/kg-day	2.0E+000	kg-day/mg	1.38E-001
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.6E+000	kg-day/mg	2.49E-004
	Barium	2.89E+003	mg/kg	NA	NA	M	5.5E-002	mg/kg-day		kg-day/mg	
	Benzene	9.80E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	3.2E-002	kg-day/mg	6.27E-005
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	7.3E-001	kg-day/mg	3.99E-005
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	8.8E+000	kg-day/mg	2.61E-004
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	7.3E-001	kg-day/mg	7.84E-005
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	7.3E-002	kg-day/mg	7.84E-006
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	6.9E-004	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	1.8E+000	kg-day/mg	2.92E-005
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	1.1E+000	kg-day/mg	2.45E-003
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	4.7E-002	mg/kg-day	1.4E-002	kg-day/mg	6.53E-004
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	8.5E-003	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	6.4E-003	kg-day/mg	1.81E-005
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	1.8E-002	kg-day/mg	1.37E-006
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	2.7E-002	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	5.3E-003	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	7.9E-003	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	7.8E-002	kg-day/mg	1.47E-006
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	7.3E-001	kg-day/mg	2.07E-005
	Iron	1.92E+004	mg/kg	NA	NA	M	3.9E-001	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	9.5E-004	kg-day/mg	3.47E-005
	Lead	1.02E+004	mg/kg	NA	NA	M	2.1E-001	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	8.1E-003	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.4E-002	kg-day/mg	1.88E-005
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	9.9E-005	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	9.9E-003	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.2E-001	kg-day/mg	1.53E-004
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.4E-003	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	7.1E-004	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	5.2E-002	kg-day/mg	9.27E-004
	Thallium	1.44E+000	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-63
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_ID_IUWo2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	1.30E+003	mg/kg	NA	NA	M	2.6E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	1.1E-002	kg-day/mg	7.96E-005
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	1.9E+000	kg-day/mg	4.24E-006
	Xylenes (total)	3.80E+003	mg/kg	NA	NA	M	7.3E-002	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	(Total)										1.61E-001
										Total Hazard Index Across All Exposure Routes/Pathways	1.6E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-64
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_Inh_SWs2RME.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	3.85E-003	mg/cu. m.	R	2.55E-004	mg/kg-day		mg/kg-day	
	1,1-Dichloroethene	0.00E+000	mg/kg	2.29E-009	mg/cu. m.	R	1.80E-010	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	4.40E-003	mg/cu. m.	R	3.08E-004	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.76E-005	mg/cu. m.	R	1.23E-006	mg/kg-day	5.60E-002	mg/kg-day	6.89E-008
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	1.75E-006	mg/cu. m.	R	1.22E-007	mg/kg-day	2.00E-001	mg/kg-day	2.44E-008
	1,2-Dichlorobenzene	2.10E+002	mg/kg	2.50E-003	mg/cu. m.	R	1.74E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene	1.80E+001	mg/kg	1.25E-003	mg/cu. m.	R	8.72E-005	mg/kg-day	9.10E-002	mg/kg-day	7.94E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	4.20E-003	mg/cu. m.	R	2.94E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	5.35E-004	mg/cu. m.	R	3.74E-005	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.42E-004	mg/cu. m.	R	9.90E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	4.68E-005	mg/cu. m.	R	3.27E-006	mg/kg-day	2.20E-002	mg/kg-day	7.20E-008
	2-Butanone	4.50E+003	mg/kg	1.23E-003	mg/cu. m.	R	8.62E-005	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.17E-002	mg/cu. m.	R	8.15E-004	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	4.91E-004	mg/cu. m.	R	3.43E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.53E-004	mg/cu. m.	R	1.77E-005	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.60E-004	mg/cu. m.	R	1.12E-005	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.05E-005	mg/cu. m.	R	1.43E-006	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.28E-003	mg/cu. m.	R	2.29E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	8.53E-004	mg/cu. m.	R	5.96E-005	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	9.77E-007	mg/cu. m.	R	6.83E-008	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	2.93E-007	mg/cu. m.	R	2.05E-008	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	5.36E-007	mg/cu. m.	R	3.75E-008	mg/kg-day	3.40E-001	mg/kg-day	1.27E-008
	Acenaphthene	1.50E+001	mg/kg	5.08E-005	mg/cu. m.	R	3.55E-006	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	1.13E-002	mg/cu. m.	R	7.91E-004	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	2.46E-006	mg/cu. m.	R	1.72E-007	mg/kg-day	1.70E+001	mg/kg-day	2.92E-006
	alpha-BHC	3.30E-001	mg/kg	1.10E-007	mg/cu. m.	R	7.69E-009	mg/kg-day	6.30E+000	mg/kg-day	4.84E-008
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	1.10E-007	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.81E-005	mg/cu. m.	R	3.36E-006	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	2.32E-006	mg/cu. m.	R	1.62E-007	mg/kg-day	2.00E+000	mg/kg-day	3.24E-007
	Aroclor-1248	0.00E+000	mg/kg	9.13E-005	mg/cu. m.	R	6.38E-006	mg/kg-day	2.00E+000	mg/kg-day	1.28E-005
	Aroclor-1254	3.60E+001	mg/kg	1.20E-005	mg/cu. m.	R	8.39E-007	mg/kg-day	2.00E+000	mg/kg-day	1.68E-006
	Aroclor-1260	3.40E+003	mg/kg	9.30E-004	mg/cu. m.	R	6.50E-005	mg/kg-day	2.00E+000	mg/kg-day	1.30E-004
	Arsenic	7.78E+000	mg/kg	2.40E-006	mg/cu. m.	R	1.68E-007	mg/kg-day	1.51E+001	mg/kg-day	2.53E-006
	Barium	2.89E+003	mg/kg	7.82E-004	mg/cu. m.	R	5.47E-005	mg/kg-day		mg/kg-day	
	Benzene	9.80E+001	mg/kg	4.01E-003	mg/cu. m.	R	2.80E-004	mg/kg-day	2.90E-002	mg/kg-day	8.13E-006
	Benzoic Acid	2.40E+002	mg/kg	2.15E-003	mg/cu. m.	R	1.51E-004	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	9.00E-007	mg/cu. m.	R	6.29E-008	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	3.49E-008	mg/kg-day	3.10E+000	mg/kg-day	1.08E-007
	Benzo(b)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	1.23E-007	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.00E-007	mg/cu. m.	R	3.49E-008	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	1.23E-007	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.08E-005	mg/cu. m.	R	7.57E-007	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	1.12E-007	mg/cu. m.	R	7.80E-009	mg/kg-day	8.40E+000	mg/kg-day	6.55E-008
	beta-BHC	8.00E-001	mg/kg	2.55E-007	mg/cu. m.	R	1.78E-008	mg/kg-day	1.80E+000	mg/kg-day	3.21E-008
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	4.80E-004	mg/cu. m.	R	3.35E-005	mg/kg-day	1.10E+000	mg/kg-day	3.69E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	6.36E-004	mg/cu. m.	R	4.45E-005	mg/kg-day	1.40E-002	mg/kg-day	6.22E-007
	Butylbenzylphthalate	4.20E+002	mg/kg	1.40E-004	mg/cu. m.	R	9.78E-006	mg/kg-day		mg/kg-day	
	Cadmium	1.06E+002	mg/kg	3.53E-005	mg/cu. m.	R	2.47E-006	mg/kg-day	6.30E+000	mg/kg-day	1.56E-005
	Chlorobenzene	0.00E+000	mg/kg	6.67E-006	mg/cu. m.	R	4.66E-007	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	5.13E-003	mg/cu. m.	R	3.58E-004	mg/kg-day	8.10E-002	mg/kg-day	2.90E-005
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	2.96E-005	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	4.93E-006	mg/kg-day	4.10E+001	mg/kg-day	2.02E-004
	Chrysene	3.80E+000	mg/kg	1.27E-006	mg/cu. m.	R	8.85E-008	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	5.75E-005	mg/cu. m.	R	4.02E-006	mg/kg-day		mg/kg-day	
	Cobalt	3.28E+001	mg/kg	9.72E-006	mg/cu. m.	R	6.79E-007	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	3.08E-005	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	8.33E-007	mg/cu. m.	R	5.82E-008	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-64
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 177_Inh_RWs2RME.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	1.30E-009	mg/kg-day		mg/kg-day	
	Diethylphthalate	6.40E+001	mg/kg	1.87E-005	mg/cu. m.	R	1.31E-006	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.80E+002	mg/kg	8.67E-005	mg/cu. m.	R	6.06E-006	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	1.09E-004	mg/cu. m.	R	7.62E-006	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	4.33E-006	mg/cu. m.	R	3.03E-007	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.92E-002	mg/cu. m.	R	1.34E-003	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	1.37E-006	mg/cu. m.	R	9.55E-008	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	2.98E-005	mg/cu. m.	R	2.08E-006	mg/kg-day		mg/kg-day	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-007	mg/cu. m.	R	1.73E-008	mg/kg-day	1.60E+000	mg/kg-day	2.77E-008
	Hexachlorobutadiene	9.30E-001	mg/kg	1.69E-005	mg/cu. m.	R	1.18E-006	mg/kg-day	7.80E-002	mg/kg-day	9.22E-008
	Hexane, n-	0.00E+000	mg/kg	1.00E-006	mg/cu. m.	R	6.99E-010	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	3.26E-008	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	2.88E-003	mg/cu. m.	R	2.01E-004	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	2.38E-004	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.23E-004	mg/cu. m.	R	8.59E-006	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	1.83E-007	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.80E+001	mg/kg	4.65E-003	mg/cu. m.	R	3.25E-004	mg/kg-day	1.65E-003	mg/kg-day	5.36E-007
	m,p-xylene	4.90E+000	mg/kg	1.24E-004	mg/cu. m.	R	8.68E-006	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.33E-003	mg/cu. m.	R	9.33E-005	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.59E-005	mg/cu. m.	R	1.11E-006	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	1.84E-006	mg/cu. m.	R	1.29E-007	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	5.97E-005	mg/cu. m.	R	4.18E-006	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	1.99E-005	mg/cu. m.	R	1.39E-006	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	6.78E-006	mg/cu. m.	R	4.74E-007	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	5.36E-004	mg/cu. m.	R	3.75E-005	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	2.67E-006	mg/cu. m.	R	1.86E-007	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.40E-006	mg/cu. m.	R	1.68E-007	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	9.96E-006	mg/cu. m.	R	6.96E-007	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	5.03E-004	mg/cu. m.	R	3.51E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.80E+002	mg/kg	3.54E-002	mg/cu. m.	R	2.47E-003	mg/kg-day	2.00E-003	mg/kg-day	4.95E-006
	Thallium	1.44E+000	mg/kg	3.15E-007	mg/cu. m.	R	2.20E-008	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.15E-001	mg/cu. m.	R	8.01E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.17E-002	mg/cu. m.	R	8.16E-004	mg/kg-day	6.00E-003	mg/kg-day	4.90E-006
	Vanadium	1.22E+001	mg/kg	3.89E-006	mg/cu. m.	R	2.72E-007	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.34E-005	mg/cu. m.	R	6.53E-006	mg/kg-day	3.00E-001	mg/kg-day	1.96E-006
	Xylenes (total)	3.60E+003	mg/kg	6.44E-002	mg/cu. m.	R	4.50E-003	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.43E-003	mg/cu. m.	R	1.70E-004	mg/kg-day		mg/kg-day	
	(Total)										4.83E-004

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-65
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_fUWe2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	5.7E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.70E-005
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.42E-003
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.6E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.63E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	9.2E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.02E-003
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.63E-004
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.66E-003
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.38E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	4.0E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.33E-005
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.29E-003
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	9.97E-004
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.14E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.05E-003
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.93E-003
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.97E-003
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.58E-002
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	7.5E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.49E-003
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.10E-004
	Acetone	1.20E+003	mg/kg	NA	NA	M	5.3E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.26E-003
	Aldrin	7.70E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	1.13E-001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	3.61E-003
	Anthracene	1.30E+000	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.90E-006
	Antimony	1.64E+002	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.80E-001
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	7.89E-001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.14E-002
	Barium	2.69E+003	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.68E-002
	Benzene	9.60E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.40E-002
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.63E-005
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.97E-005
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	7.45E-005
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	4.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.04E-002
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	9.21E-004
	Cadmium	1.06E+002	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.65E-002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.14E-003
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	6.5E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	4.33E-004
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.01E-005
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.40E-004
	Copper	1.32E+003	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.45E-002
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.74E-004
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.51E-005
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.14E-005
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.71E-003

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-65
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_IO_fUWs2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	5.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.85E-004
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.98E-003
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.49E-005
	Fluorene	1.80E+001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.97E-004
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.04E-003
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	6.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	8.4E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.81E-002
	Isophorone	1.80E+003	mg/kg	NA	NA	M	7.9E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.95E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	4.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.81E-003
	Mercury	7.85E+000	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.97E-004
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.07E-006
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.07E-002
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.21E-003
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	5.48E-007
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	9.21E-004
	Phenol	1.70E+002	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.24E-004
	Pyrene	8.00E+000	mg/kg	NA	NA	M	3.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.17E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.29E-004
	Silver	3.49E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.06E-003
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.14E-004
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.86E-002
	Thallium	1.44E+000	mg/kg	NA	NA	M	6.3E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	9.02E-003
	Toluene	1.30E+003	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.85E-003
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.56E-002
	Vanadium	1.22E+001	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	7.64E-004
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	4.8E-008	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	7.89E-004
	Zinc	8.29E+003	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.21E-002
	(Total)												1.45E+000
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.11E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	5.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.79E-002
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	7.35E-006
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.00E-002
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.14E-003
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.24E-002
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.57E-003
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	7.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.60E-004
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	6.77E-002
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	7.8E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.95E-002
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	4.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.23E-001
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.06E-002
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.77E-002
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.86E-002
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	4.75E-001
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.91E-002
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.14E-003
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	1.31E-001
	Aldrin	7.70E+000	mg/kg	NA	NA	M	6.6E-005	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	2.20E+000
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-65
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_IUWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	8.23E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.05E-002
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.71E-005
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.51E+002
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.73E+001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.34E-001
	Barium	2.69E+003	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.29E-001
	Benzene	9.60E+001	mg/kg	NA	NA	M	8.2E-004	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	3.05E-001
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	5.14E-004
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.71E-004
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.46E-001
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.86E-001
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.80E-002
	Cadmium	1.06E+002	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.63E+001
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	9.8E-003	mg/kg-day	NA	NA	1.26E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.11E+000
	Chrysene	3.60E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.97E-004
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.70E-003
	Copper	1.32E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	4.71E-001
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.36E-003
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	5.5E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	6.86E-004
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.23E-004
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	3.45E-002
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.57E-003
	Ethyl Benzene	6.60E+002	mg/kg	NA	NA	M	5.8E-003	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	6.34E-002
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.79E-004
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.86E-003
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	3.99E-002
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.49E-001
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.71E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	8.7E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E-001
	Mercury	7.85E+000	mg/kg	NA	NA	M	6.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.77E-002
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.33E-005
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.10E-001
	Nickel	5.52E+001	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.73E-001
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.19E-005
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.80E-002
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.43E-003
	Pyrene	8.00E+000	mg/kg	NA	NA	M	6.9E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.29E-003
	Selenium	8.32E+000	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.43E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.85E-001
	Styrene	5.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.23E-003
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	7.5E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.54E-001
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.76E-001

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-65
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_IUWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.57E-002
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	5.10E-001
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.49E-002
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	9.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.72E-002
	Zinc	8.29E+003	mg/kg	NA	NA	M	7.1E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	7.90E-001
	(Total)												4.18E+002
												Total Hazard Index Across All Exposure Routes/Pathways	4.2E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-66
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RWa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	3.65E-003	mg/cu. m.	R	6.25E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	4.47E-003
	1,1-Dichloroethene	0.00E+000	mg/kg	2.29E-009	mg/cu. m.	R	3.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	4.40E-003	mg/cu. m.	R	7.55E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.64E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.76E-005	mg/cu. m.	R	3.02E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	1.75E-006	mg/cu. m.	R	3.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	2.50E-003	mg/cu. m.	R	4.28E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	4.76E-002
	1,2-Dichloroethane	1.80E+001	mg/kg	1.25E-003	mg/cu. m.	R	2.14E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.53E-001
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	4.20E-003	mg/cu. m.	R	7.20E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	5.35E-004	mg/cu. m.	R	9.18E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	8.05E-002
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.42E-004	mg/cu. m.	R	2.43E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	4.26E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	4.68E-005	mg/cu. m.	R	8.02E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	3.50E-005
	2-Butanone	4.50E+003	mg/kg	1.23E-003	mg/cu. m.	R	2.11E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.39E-004
	2-Hexanone	9.10E+001	mg/kg	1.17E-002	mg/cu. m.	R	2.00E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.43E+000
	2-Methylnaphthalene	5.20E+002	mg/kg	4.91E-004	mg/cu. m.	R	8.42E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.53E-004	mg/cu. m.	R	4.33E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.60E-004	mg/cu. m.	R	2.75E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.05E-005	mg/cu. m.	R	3.51E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.28E-003	mg/cu. m.	R	5.62E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	2.81E-002
	4-Methylphenol	1.80E+002	mg/kg	8.53E-004	mg/cu. m.	R	1.46E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	9.77E-007	mg/cu. m.	R	1.67E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	2.93E-007	mg/cu. m.	R	5.03E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	5.36E-007	mg/cu. m.	R	9.20E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	5.08E-005	mg/cu. m.	R	8.71E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	1.13E-002	mg/cu. m.	R	1.94E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	2.46E-006	mg/cu. m.	R	4.21E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	1.10E-007	mg/cu. m.	R	1.89E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	2.71E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.81E-005	mg/cu. m.	R	8.24E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	2.32E-006	mg/cu. m.	R	3.98E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	9.13E-005	mg/cu. m.	R	1.57E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	1.20E-005	mg/cu. m.	R	2.06E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	9.30E-004	mg/cu. m.	R	1.59E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	2.40E-006	mg/cu. m.	R	4.11E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	7.82E-004	mg/cu. m.	R	1.34E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	9.58E-001
	Benzene	9.60E+001	mg/kg	4.01E-003	mg/cu. m.	R	6.88E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	4.05E-001
	Benzoic Acid	2.40E+002	mg/kg	2.15E-003	mg/cu. m.	R	3.69E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	9.00E-007	mg/cu. m.	R	1.54E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	8.57E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	3.03E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.00E-007	mg/cu. m.	R	8.57E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	3.03E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.08E-005	mg/cu. m.	R	1.86E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	3.40E-001	mg/kg	1.12E-007	mg/cu. m.	R	1.91E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	3.36E-003
	beta-BHC	8.00E-001	mg/kg	2.55E-007	mg/cu. m.	R	4.38E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	4.80E-004	mg/cu. m.	R	8.22E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	6.36E-004	mg/cu. m.	R	1.09E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	1.40E-004	mg/cu. m.	R	2.40E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.06E+002	mg/kg	3.53E-005	mg/cu. m.	R	6.06E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chlorobenzene	0.00E+000	mg/kg	6.67E-006	mg/cu. m.	R	1.14E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.29E-004
	Chloroform	1.40E+002	mg/kg	5.13E-003	mg/cu. m.	R	8.79E-004	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.02E+001
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	7.25E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	1.21E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.60E+000	mg/kg	1.27E-006	mg/cu. m.	R	2.17E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	5.75E-005	mg/cu. m.	R	9.86E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	9.72E-006	mg/cu. m.	R	1.67E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	7.54E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	2.50E+000	mg/kg	8.33E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-66
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RfWs2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	3.20E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	6.40E+001	mg/kg	1.87E-005	mg/cu. m.	R	3.21E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.60E+002	mg/kg	8.67E-005	mg/cu. m.	R	1.49E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	1.09E-004	mg/cu. m.	R	1.87E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	4.33E-006	mg/cu. m.	R	7.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.92E-002	mg/cu. m.	R	3.29E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.13E-002
	Fluoranthene	4.10E+000	mg/kg	1.37E-006	mg/cu. m.	R	2.34E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	2.98E-005	mg/cu. m.	R	5.11E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-007	mg/cu. m.	R	4.25E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	1.69E-005	mg/cu. m.	R	2.90E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.00E-008	mg/cu. m.	R	1.71E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	8.00E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.80E+003	mg/kg	2.88E-003	mg/cu. m.	R	4.93E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	5.83E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.23E-004	mg/cu. m.	R	2.11E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.47E+000
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	4.49E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.22E-003
	Methylene Chloride	6.80E+001	mg/kg	4.65E-003	mg/cu. m.	R	7.97E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	9.27E-004
	m,p-xylene	4.90E+000	mg/kg	1.24E-004	mg/cu. m.	R	2.13E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.33E-003	mg/cu. m.	R	2.29E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	2.54E-001
	Nickel	5.52E+001	mg/kg	1.59E-005	mg/cu. m.	R	2.72E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	1.84E-006	mg/cu. m.	R	3.15E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.50E+000	mg/kg	5.97E-005	mg/cu. m.	R	1.02E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	6.30E+001	mg/kg	1.99E-005	mg/cu. m.	R	3.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	6.78E-006	mg/cu. m.	R	1.16E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	5.36E-004	mg/cu. m.	R	9.20E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	2.67E-006	mg/cu. m.	R	4.57E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.40E-006	mg/cu. m.	R	4.12E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	9.96E-006	mg/cu. m.	R	1.71E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	5.03E-004	mg/cu. m.	R	8.62E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.01E-004
	Tetrachloroethene	8.80E+002	mg/kg	3.54E-002	mg/cu. m.	R	6.07E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	4.33E-002
	Thallium	1.44E+000	mg/kg	3.15E-007	mg/cu. m.	R	5.40E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.15E-001	mg/cu. m.	R	1.96E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.72E-001
	Trichloroethene	3.50E+002	mg/kg	1.17E-002	mg/cu. m.	R	2.00E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	3.89E-006	mg/cu. m.	R	6.67E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.34E-005	mg/cu. m.	R	1.60E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.60E+003	mg/kg	6.44E-002	mg/cu. m.	R	1.10E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.43E-003	mg/cu. m.	R	4.17E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.53E+001

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-67
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_IUWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.1E-009	mg/kg-day	2.0E-001	kg-day/mg	2.3E-010
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	6.6E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	9.1E-002	kg-day/mg	5.1E-008
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	8.5E-008	mg/kg-day	6.8E-002	kg-day/mg	5.7E-009
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	2.4E-002	kg-day/mg	6.8E-010
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	2.4E-001	kg-day/mg	2.5E-008
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	3.4E-001	kg-day/mg	9.4E-009
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	5.3E-008	mg/kg-day	3.4E-001	kg-day/mg	1.8E-008
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	4.7E-007	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	3.8E-005	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	1.7E+001	kg-day/mg	4.1E-006
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.0E-008	mg/kg-day	6.3E+000	kg-day/mg	6.5E-008
	Aluminum	8.23E+003	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	4.1E-008	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.3E-006
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E+000	kg-day/mg	2.1E-004
	Arsenic	7.78E+000	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	1.5E+000	kg-day/mg	3.7E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	8.4E-005	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.9E-002	kg-day/mg	8.7E-008
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	8.5E-008	mg/kg-day	7.3E-001	kg-day/mg	6.2E-008
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	4.7E-008	mg/kg-day	7.3E+000	kg-day/mg	3.4E-007
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	7.3E-001	kg-day/mg	1.2E-007
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	7.3E-002	kg-day/mg	1.2E-008
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	1.8E+000	kg-day/mg	4.5E-008
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	1.1E+000	kg-day/mg	3.8E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	1.4E-002	kg-day/mg	1.0E-006
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.08E+002	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	6.1E-003	kg-day/mg	2.7E-008
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	4.6E-005	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-003	kg-day/mg	8.7E-010
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	7.2E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	7.8E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	8.1E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-67
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RAWs2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	5.8E-007	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	2.9E-008	mg/kg-day	7.8E-002	kg-day/mg	2.3E-009
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	4.4E-008	mg/kg-day	7.3E-001	kg-day/mg	3.2E-008
	Iron	1.92E+004	mg/kg	NA	NA	M	6.0E-004	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	9.5E-004	kg-day/mg	5.4E-008
	Lead	1.02E+004	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	7.5E-003	kg-day/mg	1.6E-008
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	7.8E-008	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	1.2E-001	kg-day/mg	2.4E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	5.3E-006	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	5.2E-002	kg-day/mg	1.4E-006
	Thallium	1.44E+000	mg/kg	NA	NA	M	4.5E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	1.1E-002	kg-day/mg	1.2E-007
	Vanadium	1.22E+001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	3.4E-009	mg/kg-day	1.9E+000	kg-day/mg	6.5E-009
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	(Total)										2.48E-004
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	2.9E-001	kg-day/mg	6.30E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	9.1E-002	kg-day/mg	1.00E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	6.8E-002	kg-day/mg	1.12E-007
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	2.4E-002	kg-day/mg	1.34E-008
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	2.4E-001	kg-day/mg	4.85E-007
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day	3.4E-001	kg-day/mg	1.83E-007
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.4E-001	kg-day/mg	3.54E-007
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	9.2E-006	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	1.7E+001	kg-day/mg	8.01E-005
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	6.3E+000	kg-day/mg	1.27E-006

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-67
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RAWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aluminum	8.23E+003	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	8.0E-007	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.2E+000	kg-day/mg	4.95E-005
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	2.0E+000	kg-day/mg	4.16E-003
	Arsenic	7.78E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day	1.6E+000	kg-day/mg	7.52E-006
	Barium	2.69E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	5.9E-005	mg/kg-day	3.2E-002	kg-day/mg	1.89E-006
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	7.3E-001	kg-day/mg	1.21E-006
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day	8.6E+000	kg-day/mg	7.89E-006
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	7.3E-001	kg-day/mg	2.37E-006
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	7.3E-002	kg-day/mg	2.37E-007
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	1.8E+000	kg-day/mg	8.82E-007
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	1.1E+000	kg-day/mg	7.41E-005
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.4E-002	kg-day/mg	1.97E-005
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	6.4E-003	kg-day/mg	5.47E-007
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	9.1E-004	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	1.8E-002	kg-day/mg	4.14E-008
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	8.1E-004	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	7.8E-002	kg-day/mg	4.44E-008
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	7.3E-001	kg-day/mg	6.26E-007
	Iron	1.92E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	9.5E-004	kg-day/mg	1.05E-006
	Lead	1.02E+004	mg/kg	NA	NA	M	6.2E-003	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day		kg-day/mg	
	Mercury	7.65E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	1.4E-002	kg-day/mg	5.68E-007
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	1.2E-001	kg-day/mg	4.63E-006
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	5.4E-004	mg/kg-day	5.2E-002	kg-day/mg	2.80E-005
	Thallium	1.44E+000	mg/kg	NA	NA	M	8.8E-007	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-67
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_RAWa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	1.30E+003	mg/kg	NA	NA	M	8.0E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	1.1E-002	kg-day/mg	2.41E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	1.9E+000	kg-day/mg	1.28E-007
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	5.1E-003	mg/kg-day		kg-day/mg	
	(Total)										4.85E-003
										Total Hazard Index Across All Exposure Routes/Pathways	5.1E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-68
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_IWIs2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	3.65E-003	mg/cu. m.	R	4.47E-005	mg/kg-day		mg/kg-day	
	1,1-Dichloroethene	0.00E+000	mg/kg	2.29E-009	mg/cu. m.	R	2.81E-011	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	4.40E-003	mg/cu. m.	R	5.39E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.76E-005	mg/cu. m.	R	2.16E-007	mg/kg-day	5.60E-002	mg/kg-day	1.21E-008
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	1.75E-006	mg/cu. m.	R	2.14E-008	mg/kg-day	2.00E-001	mg/kg-day	4.28E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	2.50E-003	mg/cu. m.	R	3.06E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	1.80E+001	mg/kg	1.25E-003	mg/cu. m.	R	1.53E-005	mg/kg-day	9.10E-002	mg/kg-day	1.39E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	4.20E-003	mg/cu. m.	R	5.15E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	5.35E-004	mg/cu. m.	R	6.55E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.42E-004	mg/cu. m.	R	1.73E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	4.68E-005	mg/cu. m.	R	5.73E-007	mg/kg-day	2.20E-002	mg/kg-day	1.26E-008
	2-Butanone	4.50E+003	mg/kg	1.23E-003	mg/cu. m.	R	1.51E-005	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.17E-002	mg/cu. m.	R	1.43E-004	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	4.91E-004	mg/cu. m.	R	6.01E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.53E-004	mg/cu. m.	R	3.10E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.60E-004	mg/cu. m.	R	1.97E-006	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.05E-005	mg/cu. m.	R	2.51E-007	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.28E-003	mg/cu. m.	R	4.01E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	8.53E-004	mg/cu. m.	R	1.05E-005	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	9.77E-007	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	2.93E-007	mg/cu. m.	R	3.59E-009	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	5.36E-007	mg/cu. m.	R	6.57E-009	mg/kg-day	3.40E-001	mg/kg-day	2.23E-009
	Acenaphthene	1.50E+001	mg/kg	5.08E-005	mg/cu. m.	R	6.22E-007	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	1.13E-002	mg/cu. m.	R	1.39E-004	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	2.46E-006	mg/cu. m.	R	3.01E-008	mg/kg-day	1.70E+001	mg/kg-day	5.11E-007
	alpha-BHC	3.30E-001	mg/kg	1.10E-007	mg/cu. m.	R	1.35E-009	mg/kg-day	6.30E+000	mg/kg-day	8.49E-009
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	1.93E-008	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.81E-005	mg/cu. m.	R	5.89E-007	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	2.32E-006	mg/cu. m.	R	2.84E-008	mg/kg-day	2.00E+000	mg/kg-day	5.68E-008
	Aroclor-1248	0.00E+000	mg/kg	9.13E-005	mg/cu. m.	R	1.12E-006	mg/kg-day	2.00E+000	mg/kg-day	2.24E-006
	Aroclor-1254	3.60E+001	mg/kg	1.20E-005	mg/cu. m.	R	1.47E-007	mg/kg-day	2.00E+000	mg/kg-day	2.94E-007
	Aroclor-1260	3.40E+003	mg/kg	9.30E-004	mg/cu. m.	R	1.14E-005	mg/kg-day	2.00E+000	mg/kg-day	2.28E-005
	Arsenic	7.78E+000	mg/kg	2.40E-006	mg/cu. m.	R	2.94E-008	mg/kg-day	1.51E+001	mg/kg-day	4.43E-007
	Barium	2.69E+003	mg/kg	7.82E-004	mg/cu. m.	R	9.58E-006	mg/kg-day		mg/kg-day	
	Benzene	9.60E+001	mg/kg	4.01E-003	mg/cu. m.	R	4.91E-005	mg/kg-day	2.90E-002	mg/kg-day	1.42E-006
	Benzoic Acid	2.40E+002	mg/kg	2.15E-003	mg/cu. m.	R	2.64E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	9.00E-007	mg/cu. m.	R	1.10E-008	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	6.12E-009	mg/kg-day	3.10E+000	mg/kg-day	1.90E-008
	Benzo(b)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	2.16E-008	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	5.00E-007	mg/cu. m.	R	6.12E-009	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	1.77E-006	mg/cu. m.	R	2.16E-008	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.08E-005	mg/cu. m.	R	1.33E-007	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	1.12E-007	mg/cu. m.	R	1.37E-009	mg/kg-day	8.40E+000	mg/kg-day	1.15E-008
	beta-BHC	8.00E-001	mg/kg	2.55E-007	mg/cu. m.	R	3.13E-009	mg/kg-day	1.80E+000	mg/kg-day	5.63E-009
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	4.80E-004	mg/cu. m.	R	5.87E-006	mg/kg-day	1.10E+000	mg/kg-day	6.46E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	6.36E-004	mg/cu. m.	R	7.79E-006	mg/kg-day	1.40E-002	mg/kg-day	1.09E-007
	Butylbenzylphthalate	4.20E+002	mg/kg	1.40E-004	mg/cu. m.	R	1.71E-006	mg/kg-day		mg/kg-day	
	Cadmium	1.06E+002	mg/kg	3.53E-005	mg/cu. m.	R	4.33E-007	mg/kg-day	6.30E+000	mg/kg-day	2.73E-006
	Chlorobenzene	0.00E+000	mg/kg	6.67E-006	mg/cu. m.	R	8.16E-008	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	5.13E-003	mg/cu. m.	R	6.28E-005	mg/kg-day	8.10E-002	mg/kg-day	5.08E-006
	Chromium 3+	1.48E+003	mg/kg	4.23E-004	mg/cu. m.	R	5.18E-006	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	7.05E-005	mg/cu. m.	R	8.63E-007	mg/kg-day	4.10E+001	mg/kg-day	3.54E-005
	Chrysene	3.80E+000	mg/kg	1.27E-006	mg/cu. m.	R	1.55E-008	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	5.75E-005	mg/cu. m.	R	7.04E-007	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	9.72E-006	mg/cu. m.	R	1.19E-007	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	4.40E-004	mg/cu. m.	R	5.39E-006	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	8.33E-007	mg/cu. m.	R	1.02E-008	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-68
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RWa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	2.29E-010	mg/kg-day		mg/kg-day	
	Diethylphthalate	6.40E+001	mg/kg	1.87E-005	mg/cu. m.	R	2.29E-007	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.60E+002	mg/kg	8.67E-005	mg/cu. m.	R	1.06E-006	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	1.09E-004	mg/cu. m.	R	1.34E-006	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	4.33E-006	mg/cu. m.	R	5.31E-008	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.92E-002	mg/cu. m.	R	2.35E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	1.37E-006	mg/cu. m.	R	1.67E-008	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	2.98E-005	mg/cu. m.	R	3.65E-007	mg/kg-day		mg/kg-day	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-007	mg/cu. m.	R	3.04E-009	mg/kg-day	1.60E+000	mg/kg-day	4.86E-009
	Hexachlorobutadiene	9.30E-001	mg/kg	1.69E-005	mg/cu. m.	R	2.07E-007	mg/kg-day	7.80E-002	mg/kg-day	1.62E-008
	Hexane, n-	0.00E+000	mg/kg	1.00E-006	mg/cu. m.	R	1.22E-010	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	5.71E-009	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	2.88E-003	mg/cu. m.	R	3.52E-005	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	3.40E-003	mg/cu. m.	R	4.16E-005	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.23E-004	mg/cu. m.	R	1.51E-006	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	2.62E-006	mg/cu. m.	R	3.20E-008	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.80E+001	mg/kg	4.65E-003	mg/cu. m.	R	5.70E-005	mg/kg-day	1.65E-003	mg/kg-day	9.40E-008
	m,p-xylene	4.90E+000	mg/kg	1.24E-004	mg/cu. m.	R	1.52E-006	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.33E-003	mg/cu. m.	R	1.63E-005	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.59E-005	mg/cu. m.	R	1.94E-007	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	1.84E-006	mg/cu. m.	R	2.25E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	5.97E-005	mg/cu. m.	R	7.32E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	1.99E-005	mg/cu. m.	R	2.43E-007	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	6.78E-006	mg/cu. m.	R	8.30E-008	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	5.36E-004	mg/cu. m.	R	6.57E-006	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	2.67E-006	mg/cu. m.	R	3.27E-008	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.40E-006	mg/cu. m.	R	2.94E-008	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	9.96E-006	mg/cu. m.	R	1.22E-007	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	5.03E-004	mg/cu. m.	R	6.16E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	6.80E+002	mg/kg	3.54E-002	mg/cu. m.	R	4.33E-004	mg/kg-day	2.00E-003	mg/kg-day	8.67E-007
	Thallium	1.44E+000	mg/kg	3.15E-007	mg/cu. m.	R	3.86E-009	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.15E-001	mg/cu. m.	R	1.40E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.17E-002	mg/cu. m.	R	1.43E-004	mg/kg-day	6.00E-003	mg/kg-day	8.58E-007
	Vanadium	1.22E+001	mg/kg	3.89E-006	mg/cu. m.	R	4.77E-008	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.34E-005	mg/cu. m.	R	1.14E-006	mg/kg-day	3.00E-001	mg/kg-day	3.43E-007
	Xylenes (total)	3.60E+003	mg/kg	6.44E-002	mg/cu. m.	R	7.88E-004	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.43E-003	mg/cu. m.	R	2.98E-005	mg/kg-day		mg/kg-day	
	(Total)										8.11E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-69
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_ITa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethene	1.30E+001	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	6.59E-005
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.65E-003
	1,1,2,2-Tetrachloroethene	3.60E-002	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.04E-007
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.18E-003
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	9.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.04E-004
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.92E-003
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.07E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	4.6E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.54E-005
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.80E-003
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.15E-003
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.32E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.22E-003
	2,4-Dimethylphenol	6.80E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.23E-003
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	2.28E-003
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	9.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.83E-002
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.72E-003
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	7.6E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.27E-004
	Acetone	1.20E+003	mg/kg	NA	NA	M	6.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	6.09E-003
	Aldrin	7.70E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	1.30E-001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.17E-003
	Anthracene	1.30E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.20E-006
	Antimony	1.64E+002	mg/kg	NA	NA	M	8.3E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.08E-001
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	9.13E-001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.32E-002
	Barium	2.68E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.95E-002
	Benzene	9.80E+001	mg/kg	NA	NA	M	4.9E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.62E-002
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.04E-005
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.75E-005
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	8.62E-005
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.83E-002
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.07E-003
	Cadmium	1.06E+002	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	5.38E-002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	7.10E-003
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	5.00E-004
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.17E-005
	Cobalt	3.28E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.78E-004
	Copper	1.32E+003	mg/kg	NA	NA	M	6.7E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.67E-002
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.17E-004
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.06E-005
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.32E-005
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.98E-003

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-69
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.xls\ TT_ID_IT\2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.30E-004
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.45E-003
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.20E-005
	Fluorene	1.80E+001	mg/kg	NA	NA	M	9.1E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.28E-004
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	4.7E-007	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	2.36E-003
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	7.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	9.7E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.25E-002
	Isophorone	1.80E+003	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.57E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	5.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.02E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.75E-004
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.24E-006
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.24E-002
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.40E-003
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.34E-007
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.07E-003
	Phenol	1.70E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.44E-004
	Pyrene	8.00E+000	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.35E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.44E-004
	Silver	3.49E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.54E-003
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.32E-004
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.46E-002
	Thallium	1.44E+000	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.04E-002
	Toluene	1.30E+003	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.30E-003
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.96E-002
	Vanadium	1.22E+001	mg/kg	NA	NA	M	6.2E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.84E-004
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	5.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	9.13E-004
	Zinc	8.29E+003	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.40E-002
	(Total)												1.66E+000
Dermal	1,1-Dichloroethene	1.30E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.90E-003
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.25E-002
	1,1,2,2-Tetrachloroethane	3.80E-002	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	1.91E-005
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.21E-002
	1,2-Dichloroethene	1.80E+001	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.34E-002
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	8.43E-002
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	6.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.23E-002
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.77E-004
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.0E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.76E-001
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.08E-002
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.80E-001
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	5.36E-002
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.82E-002
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	8.0E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.00E-001
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.24E+000
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	7.59E-002
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.58E-003
	Acetone	1.20E+003	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	3.41E-001
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	5.73E+000
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-69
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.xls\ TT_ID_ITa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.84E-001
	Anthracene	1.30E+000	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.67E-005
	Antimony	1.84E+002	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	9.15E+002
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.80E+001	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	4.51E+001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	7.6E-002	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	6.09E-001
	Barium	2.69E+003	mg/kg	NA	NA	M	6.0E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	8.58E-001
	Benzene	9.60E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	7.94E-001
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.34E-003
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	6.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.53E-003
	Beryllium	3.40E-001	mg/kg	NA	NA	M	7.6E-006	mg/kg-day	2.0E-006	mg/kg-day	NA	NA	3.79E-001
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	2.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	5.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.57E+000
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.69E-002
	Cadmium	1.09E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	9.46E+001
	Chloroform	1.40E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	3.27E-001
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	5.51E+000
	Chrysene	3.80E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.13E-004
	Cobalt	3.29E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.22E-002
	Copper	1.32E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.23E+000
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.39E-002
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.79E-003
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	5.8E-003	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	5.80E-004
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	8.7E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	8.97E-002
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E-002
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.65E-001
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	9.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.29E-003
	Fluorene	1.80E+001	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.00E-002
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	1.04E-001
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	4.3E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.43E+000
	Isophorone	1.80E+003	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.01E-001
	Lead	1.02E+004	mg/kg	NA	NA	M	2.3E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	9.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.49E-001
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	4.60E-002
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	6.08E-005
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.47E-001
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.23E+000
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.10E-005
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.69E-002
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	6.32E-003
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.95E-003
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.71E-002
	Silver	3.49E+001	mg/kg	NA	NA	M	7.8E-004	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	7.42E-001
	Styrene	5.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.80E-003
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.96E+000
	Thallium	1.44E+000	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	4.59E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-69
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \TT_ID_[Te2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	1.30E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.45E-001
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	7.8E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.33E+000
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.89E-002
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	8.0E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	4.49E-002
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.9E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.06E+000
	(Total)												1.09E+003
												Total Hazard Index Across All Exposure Routes/Pathways	1.1E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-70
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_Inh_RMEa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	1.49E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.07E-004
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	6.92E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.42E-004
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	1.16E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	6.90E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	2.66E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.96E-003
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	6.28E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	4.49E-003
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	2.97E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	6.71E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	5.88E-003
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	1.36E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.39E-005
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	2.55E-013	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	1.27E-010
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	6.58E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.88E-006
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	4.54E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.59E-008
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	1.25E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	8.95E-002
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	3.04E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	2.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	1.17E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	8.77E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	1.55E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.42E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	1.39E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	1.52E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	2.59E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.30E-003
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	8.76E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	1.04E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	8.76E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	4.66E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	8.00E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	5.13E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	7.65E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	3.80E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	3.20E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	1.75E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	1.34E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	3.84E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	1.52E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	2.73E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	2.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	1.84E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	2.94E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	5.82E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	4.16E-005
	Benzene	9.60E+001	mg/kg	2.80E-003	mg/cu. m.	R	2.37E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.39E-002
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	2.41E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	1.48E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	8.23E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	2.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	8.16E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	2.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	1.41E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	2.10E-012	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	3.68E-007
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	3.33E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	4.97E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	2.23E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.08E+002	mg/kg	7.75E-008	mg/cu. m.	R	6.55E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	7.05E-012	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	3.53E-011
	Chlorobenzene	0.00E+000	mg/kg	5.96E-004	mg/cu. m.	R	5.04E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	1.01E-003
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	2.40E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.79E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-70
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \ TT_inh_flWa2RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	7.06E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	1.18E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	2.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	1.42E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	9.02E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	7.46E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.06E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	1.46E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	5.25E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	6.95E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	1.37E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	1.40E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	4.38E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	7.50E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	3.48E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	4.64E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	7.97E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	9.95E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	3.43E-004
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.42E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	2.66E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	3.48E-013	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	1.74E-009
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	4.28E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	2.04E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	2.10E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	7.41E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	7.95E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	7.58E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	2.94E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	5.61E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	1.65E-009	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.15E-004
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	4.50E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	5.24E-007
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	1.08E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.26E-004
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	4.11E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	1.39E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.54E-002
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	1.47E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	1.91E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	1.24E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	2.54E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	9.79E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	6.07E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	1.68E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	4.50E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	2.31E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	6.78E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	6.48E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.26E-005
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	2.13E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.52E-003
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	3.98E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	1.01E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	8.89E-003
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	1.21E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	5.99E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	7.73E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	5.56E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	2.15E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												4.25E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-71
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wk4 \TT_ID_\Ta2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethene	1.30E+001	mg/kg	NA	NA	M	5.5E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	1.5E-009	mg/kg-day	2.0E-001	kg-day/mg	3.0E-010
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	9.1E-002	kg-day/mg	6.9E-008
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	6.8E-002	kg-day/mg	7.8E-009
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	4.2E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	3.8E-008	mg/kg-day	2.4E-002	kg-day/mg	9.2E-010
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	7.6E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	2.4E-001	kg-day/mg	3.3E-008
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	3.7E-008	mg/kg-day	3.4E-001	kg-day/mg	1.3E-008
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day	3.4E-001	kg-day/mg	2.4E-008
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	6.3E-007	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	1.7E+001	kg-day/mg	5.5E-006
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	6.3E+000	kg-day/mg	8.8E-008
	Aluminum	8.23E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	5.5E-008	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	2.0E+000	kg-day/mg	3.0E-006
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.0E+000	kg-day/mg	2.9E-004
	Arsenic	7.78E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	1.5E+000	kg-day/mg	4.9E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	2.9E-002	kg-day/mg	1.2E-007
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.3E-001	kg-day/mg	8.3E-008
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day	7.3E+000	kg-day/mg	4.6E-007
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	7.3E-001	kg-day/mg	1.6E-007
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	7.3E-002	kg-day/mg	1.6E-008
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day	1.8E+000	kg-day/mg	6.1E-008
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	1.1E+000	kg-day/mg	5.1E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	9.7E-005	mg/kg-day	1.4E-002	kg-day/mg	1.4E-006
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	6.1E-003	kg-day/mg	3.6E-008
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	7.3E-003	kg-day/mg	1.2E-009
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	9.7E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-71
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_ITa2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	5.5E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	7.6E-007	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	3.9E-008	mg/kg-day	7.8E-002	kg-day/mg	3.1E-009
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	7.3E-001	kg-day/mg	4.3E-008
	Iron	1.92E+004	mg/kg	NA	NA	M	8.1E-004	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	9.5E-004	kg-day/mg	7.2E-008
	Lead	1.02E+004	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	7.5E-003	kg-day/mg	2.2E-008
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	1.2E-001	kg-day/mg	3.2E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	Silver	3.48E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	5.2E-002	kg-day/mg	1.9E-006
	Thallium	1.44E+000	mg/kg	NA	NA	M	6.1E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.1E-002	kg-day/mg	1.6E-007
	Vanadium	1.22E+001	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	4.6E-009	mg/kg-day	1.9E+000	kg-day/mg	8.8E-009
	Xylenes (total)	3.80E+003	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	(Total)										3.35E-004
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.80E-002	mg/kg	NA	NA	M	6.7E-008	mg/kg-day	2.9E-001	kg-day/mg	1.91E-008
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	3.9E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	9.1E-002	kg-day/mg	3.05E-006
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	6.8E-002	kg-day/mg	3.41E-007
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.4E-002	kg-day/mg	4.08E-008
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	8.4E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	9.7E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	3.3E-004	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	2.4E-001	kg-day/mg	1.47E-006
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	3.4E-001	kg-day/mg	5.56E-007
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	3.4E-001	kg-day/mg	1.08E-006
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.7E+001	kg-day/mg	2.43E-004
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	6.1E-007	mg/kg-day	6.3E+000	kg-day/mg	3.87E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-71
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.mbd \ TT_ID_IT\2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Antimony	1.84E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	2.2E+000	kg-day/mg	1.50E-004
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	6.3E-003	mg/kg-day	2.0E+000	kg-day/mg	1.28E-002
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.8E+000	kg-day/mg	2.28E-005
	Barium	2.69E+003	mg/kg	NA	NA	M	5.0E-003	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	3.2E-002	kg-day/mg	5.75E-006
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	7.3E-001	kg-day/mg	3.67E-006
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	8.6E+000	kg-day/mg	2.40E-005
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	9.9E-006	mg/kg-day	7.3E-001	kg-day/mg	7.20E-006
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	9.9E-006	mg/kg-day	7.3E-002	kg-day/mg	7.20E-007
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	6.3E-007	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	1.8E+000	kg-day/mg	2.68E-006
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	1.1E+000	kg-day/mg	2.25E-004
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	4.3E-003	mg/kg-day	1.4E-002	kg-day/mg	5.99E-005
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	7.8E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	6.4E-003	kg-day/mg	1.66E-006
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	7.1E-006	mg/kg-day	1.8E-002	kg-day/mg	1.26E-007
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	4.8E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	7.8E-002	kg-day/mg	1.35E-007
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	7.3E-001	kg-day/mg	1.90E-006
	Iron	1.92E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	9.5E-004	kg-day/mg	3.18E-006
	Lead	1.02E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	7.5E-004	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.4E-002	kg-day/mg	1.72E-006
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	9.1E-006	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	9.1E-004	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.2E-001	kg-day/mg	1.41E-005
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	9.7E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	5.2E-002	kg-day/mg	8.51E-005
	Thallium	1.44E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-71
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb4 \ TT_ID_IT-s2RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	1.30E+003	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	6.5E-004	mg/kg-day	1.1E-002	kg-day/mg	7.31E-006
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	1.9E+000	kg-day/mg	3.89E-007
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	6.7E-003	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	(Total)										1.47E-002
										Total Hazard Index Across All Exposure Routes/Pathways	1.5E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-72
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.xls\ TT_pth_RMe2RME.xls

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethene	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	1.24E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	5.76E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	9.70E-009	mg/kg-day	5.60E-002	mg/kg-day	5.43E-010
	1,1,2,2-Tetrachloroethane	3.80E-002	mg/kg	8.16E-006	mg/cu. m.	R	5.75E-009	mg/kg-day	2.00E-001	mg/kg-day	1.15E-009
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	2.22E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	5.24E-007	mg/kg-day	9.10E-002	mg/kg-day	4.77E-008
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	2.47E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	5.59E-007	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	1.14E-007	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	2.12E-014	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	5.49E-008	mg/kg-day	2.20E-002	mg/kg-day	1.21E-009
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	3.78E-010	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	1.04E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	2.53E-007	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	2.01E-007	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	9.76E-010	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	7.31E-008	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	1.29E-010	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.02E-012	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	1.16E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	1.27E-015	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	2.16E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	7.30E-007	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	8.63E-011	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	7.30E-013	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	3.89E-013	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	6.67E-013	mg/kg-day	3.40E-001	mg/kg-day	2.27E-013
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	4.28E-008	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	6.37E-010	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	3.16E-006	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	2.66E-012	mg/kg-day	1.70E+001	mg/kg-day	4.53E-011
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	1.46E-013	mg/kg-day	6.30E+000	mg/kg-day	9.18E-013
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	1.12E-009	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.54E-006	mg/cu. m.	R	3.20E-011	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	1.27E-012	mg/kg-day	2.00E+000	mg/kg-day	2.53E-012
	Aroclor-1248	0.00E+000	mg/kg	3.22E-006	mg/cu. m.	R	2.27E-011	mg/kg-day	2.00E+000	mg/kg-day	4.54E-011
	Aroclor-1254	3.60E+001	mg/kg	2.41E-006	mg/cu. m.	R	1.70E-011	mg/kg-day	2.00E+000	mg/kg-day	3.39E-011
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	1.53E-010	mg/kg-day	2.00E+000	mg/kg-day	3.06E-010
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	2.45E-012	mg/kg-day	1.51E+001	mg/kg-day	3.70E-011
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	4.85E-010	mg/kg-day		mg/kg-day	
	Benzene	9.80E+001	mg/kg	2.90E-003	mg/cu. m.	R	1.98E-006	mg/kg-day	2.90E-002	mg/kg-day	5.73E-008
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	2.01E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	1.24E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	6.86E-013	mg/kg-day	3.10E+000	mg/kg-day	2.13E-012
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	2.41E-012	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	6.80E-013	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	2.41E-012	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	1.17E-011	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	1.75E-013	mg/kg-day	8.40E+000	mg/kg-day	1.47E-012
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	2.77E-013	mg/kg-day	1.80E+000	mg/kg-day	4.99E-013
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	4.15E-007	mg/kg-day	1.10E+000	mg/kg-day	4.56E-007
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.84E-007	mg/cu. m.	R	1.86E-010	mg/kg-day	1.40E-002	mg/kg-day	2.61E-012
	Butylbenzylphthalate	4.20E+002	mg/kg	2.88E-007	mg/cu. m.	R	1.88E-010	mg/kg-day		mg/kg-day	
	Cadmium	1.08E+002	mg/kg	7.75E-008	mg/cu. m.	R	5.46E-011	mg/kg-day	6.30E+000	mg/kg-day	3.44E-010
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	5.86E-013	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.98E-004	mg/cu. m.	R	4.20E-007	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	2.00E-006	mg/kg-day	8.10E-002	mg/kg-day	1.62E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-72
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area2RME.wb1 | TT_Inh_RMe2RME.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	5.88E-010	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	9.80E-011	mg/kg-day	4.10E+001	mg/kg-day	4.02E-009
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	1.71E-012	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	1.18E-006	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	7.52E-012	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	6.21E-010	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	8.87E-013	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	1.22E-012	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	4.37E-015	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	5.79E-015	mg/kg-day	1.60E+001	mg/kg-day	9.27E-014
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	1.14E-011	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.80E+002	mg/kg	1.65E-007	mg/cu. m.	R	1.16E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	3.65E-011	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	6.25E-012	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	2.90E-014	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	3.86E-014	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	6.64E-017	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	8.30E-006	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	2.02E-012	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	2.21E-008	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	2.90E-014	mg/kg-day	3.50E-001	mg/kg-day	1.01E-014
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	3.56E-016	mg/kg-day	4.50E+000	mg/kg-day	1.60E-015
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	1.70E-016	mg/kg-day	9.10E+000	mg/kg-day	1.55E-015
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	1.75E-016	mg/kg-day	1.60E+000	mg/kg-day	2.80E-016
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	6.18E-012	mg/kg-day	7.80E-002	mg/kg-day	4.82E-013
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	6.62E-014	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	6.32E-013	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	2.45E-006	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	4.68E-009	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	1.38E-010	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	3.75E-012	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	9.00E-006	mg/kg-day	1.65E-003	mg/kg-day	1.49E-008
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	3.43E-006	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	1.16E-006	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	1.22E-011	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	1.59E-010	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	1.03E-006	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	2.11E-011	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	8.16E-012	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	5.06E-007	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	1.40E-013	mg/kg-day		mg/kg-day	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	3.75E-012	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	1.92E-012	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	5.65E-012	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	7.68E-004	mg/cu. m.	R	5.40E-007	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	1.77E-005	mg/kg-day	2.00E-003	mg/kg-day	3.54E-008
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	3.32E-013	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	8.45E-005	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	1.01E-005	mg/kg-day	6.00E-003	mg/kg-day	6.07E-008
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	4.99E-012	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	6.44E-008	mg/kg-day	3.00E-001	mg/kg-day	1.93E-008
	Xylenes (total)	3.80E+003	mg/kg	6.58E-002	mg/cu. m.	R	4.64E-005	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	1.79E-009	mg/kg-day		mg/kg-day	
	(Total)										8.81E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-73
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_TA2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.71E-005
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	8.5E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.27E-004
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	4.7E-009	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.89E-008
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.07E-004
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.89E-005
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	4.97E-004
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.32E-004
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.99E-006
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	9.86E-004
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.99E-004
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.42E-003
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	3.16E-004
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.79E-004
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	4.7E-005	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	5.92E-004
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.73E-003
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	4.3E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	4.47E-004
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.29E-005
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.58E-003
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	3.38E-002
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	4.3E-008	mg/kg-day		mg/kg-day	NA	NA	
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.08E-003
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.70E-007
	Antimony	1.64E+002	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	5.39E-002
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.37E-001
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	3.41E-003
	Barium	2.69E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.05E-003
	Benzene	9.60E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	4.21E-003
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	7.89E-006
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.49E-005
	Beryllium	3.40E-001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	2.24E-005
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.51E-002
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.76E-004
	Cadmium	1.08E+002	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.39E-002
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.84E-003
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.30E-004
	Chrysene	3.80E+000	mg/kg	NA	NA	M	5.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	3.0E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.02E-006
	Cobalt	3.29E+001	mg/kg	NA	NA	M	4.3E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.21E-005
	Copper	1.32E+003	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.34E-003
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	8.22E-005
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.05E-005
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.42E-006
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	5.13E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-73
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_TTa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.55E-005
	Ethyl Benzene	8.80E+002	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.94E-004
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	5.4E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.35E-005
	Fluorene	1.80E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.92E-005
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	6.12E-004
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.42E-003
	Isophorone	1.80E+003	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.18E-003
	Lead	1.02E+004	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.64E-003
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.49E-004
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.22E-007
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.22E-003
	Nickel	5.52E+001	mg/kg	NA	NA	M	7.3E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.63E-004
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.64E-007
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	8.3E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.76E-004
	Phenol	1.70E+002	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.73E-005
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.51E-005
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.19E-004
	Silver	3.49E+001	mg/kg	NA	NA	M	4.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.18E-004
	Styrene	5.20E+001	mg/kg	NA	NA	M	6.8E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.42E-005
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.16E-002
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	2.71E-003
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.55E-004
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	7.67E-003
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.29E-004
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.37E-004
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.63E-003
	(Total)												4.35E-001
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.46E-004
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.15E-003
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	6.8E-008	mg/kg-day	4.2E-002	mg/kg-day	NA	NA	1.62E-006
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	4.42E-003
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.14E-003
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	7.15E-003
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.89E-003
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.74E-005
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	8.5E-003	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.50E-002
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.31E-003
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	9.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.92E-002
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.54E-003
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.33E-003
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	8.52E-003
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.05E-001
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	6.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	6.44E-003
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.73E-004
	Acetone	1.20E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	2.89E-002
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-005	mg/kg-day	NA	NA	4.86E-001
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-73
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_IT\a2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.56E-002
	Anthracene	1.30E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.21E-006
	Antimony	1.64E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	7.76E+001
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	3.83E+000
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	6.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	5.17E-002
	Barium	2.69E+003	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	7.28E-002
	Benzene	9.60E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	6.73E-002
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.14E-004
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.15E-004
	Beryllium	3.40E-001	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	3.22E-002
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	4.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.16E-001
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.98E-003
	Cadmium	1.06E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	8.03E+000
	Chloroform	1.40E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	2.78E-002
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.67E-001
	Chrysene	3.80E+000	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	4.4E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.36E-005
	Cobalt	3.29E+001	mg/kg	NA	NA	M	6.2E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.04E-003
	Copper	1.32E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.04E-001
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.18E-003
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.51E-004
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	4.92E-005
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	7.4E-004	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	7.61E-003
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.23E-003
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.40E-002
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	7.8E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.94E-004
	Fluorene	1.80E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.52E-004
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	2.0E-004	mg/kg-day	NA	NA	8.81E-003
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.92E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.21E-001
	Isophorone	1.80E+003	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.70E-002
	Lead	1.02E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.02E+002	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.81E-002
	Mercury	7.85E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	3.90E-003
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	9.3E-006	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	5.16E-006
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	9.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.64E-002
	Nickel	5.52E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.05E-001
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.63E-006
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.98E-003
	Phenol	1.70E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.37E-004
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.05E-004
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.15E-003
	Silver	3.49E+001	mg/kg	NA	NA	M	6.6E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	6.29E-002
	Styrene	5.20E+001	mg/kg	NA	NA	M	9.8E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.92E-004
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.67E-001
	Thallium	1.44E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	3.90E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-73
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_ITa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	1.30E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.23E-002
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.13E-001
	Vanadium	1.22E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.30E-003
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.81E-003
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.74E-001
	(Total)												9.23E+001
												Total Hazard Index Across All Exposure Routes/Pathways	9.3E+001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-74
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RWa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	3.87E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.76E-005
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	1.79E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	6.27E-005
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	3.02E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	1.79E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	6.91E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	7.67E-004
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	1.63E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.16E-003
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	7.69E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	1.74E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.53E-003
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	3.54E-007	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	6.21E-006
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	6.61E-014	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	3.30E-011
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	1.71E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	7.45E-007
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	1.18E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.12E-009
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	3.25E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.32E-002
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	7.88E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	6.26E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	3.04E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	2.27E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	4.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	6.27E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	3.59E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	3.94E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	6.73E-006	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	3.36E-004
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	2.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	2.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	2.27E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	1.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	2.07E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	1.33E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	1.98E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	9.84E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	8.29E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	4.53E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	3.47E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	9.96E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	3.94E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	7.07E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	5.27E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	4.76E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	7.62E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	1.51E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.08E-005
	Benzene	9.60E+001	mg/kg	2.80E-003	mg/cu. m.	R	6.15E-006	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	3.62E-003
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	6.25E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	3.85E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	2.13E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	7.49E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	2.12E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	7.49E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	3.64E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	5.43E-013	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	9.53E-008
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	8.63E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	1.29E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	5.79E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	5.88E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.06E+002	mg/kg	7.75E-008	mg/cu. m.	R	1.70E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	1.83E-012	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	9.14E-012
	Chlorobenzene	0.00E+000	mg/kg	5.96E-004	mg/cu. m.	R	1.31E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.61E-004
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	6.22E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	7.23E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-74
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RMa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	1.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	3.05E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	5.32E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	3.69E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	2.34E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	1.93E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	2.76E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	3.79E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	1.36E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	1.80E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	3.54E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	3.62E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	1.14E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	1.94E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	9.01E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	1.20E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	2.07E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	2.58E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	8.90E-005
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	6.27E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	6.89E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	9.01E-014	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	4.51E-010
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	1.11E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	5.29E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	5.45E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	1.92E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	2.06E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	1.97E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	7.63E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	1.46E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	4.28E-010	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.99E-005
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	1.17E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.36E-007
	Methylene Chloride	6.80E+001	mg/kg	1.28E-002	mg/cu. m.	R	2.80E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	3.26E-005
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	1.07E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	4.90E+002	mg/kg	1.84E-003	mg/cu. m.	R	3.60E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	4.00E-003
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	3.81E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	4.94E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	3.21E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	6.58E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	2.54E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	1.57E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	4.36E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	8.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	1.17E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	5.98E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	1.76E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	1.68E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.87E-006
	Tetrachloroethene	8.80E+002	mg/kg	2.51E-002	mg/cu. m.	R	5.51E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	3.94E-004
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	1.03E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	2.63E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.31E-003
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	3.15E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	1.55E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	2.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	3.60E+003	mg/kg	6.58E-002	mg/cu. m.	R	1.44E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	5.57E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.10E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-75
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \TT_ID_ITa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	6.1E-008	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	3.4E-011	mg/kg-day	2.0E-001	kg-day/mg	6.8E-012
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.80E+001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	9.1E-002	kg-day/mg	1.5E-009
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	3.2E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	2.5E-009	mg/kg-day	6.8E-002	kg-day/mg	1.7E-010
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	9.4E-009	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	8.5E-010	mg/kg-day	2.4E-002	kg-day/mg	2.1E-011
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	4.2E-006	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	8.5E-008	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	4.9E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.80E+001	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	3.1E-009	mg/kg-day	2.4E-001	kg-day/mg	7.4E-010
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	8.3E-010	mg/kg-day	3.4E-001	kg-day/mg	2.8E-010
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	1.6E-009	mg/kg-day	3.4E-001	kg-day/mg	5.4E-010
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	7.2E-009	mg/kg-day	1.7E+001	kg-day/mg	1.2E-007
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	3.1E-010	mg/kg-day	6.3E+000	kg-day/mg	2.0E-009
	Aluminum	8.23E+003	mg/kg	NA	NA	M	7.7E-006	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day	2.0E+000	kg-day/mg	6.8E-008
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	2.0E+000	kg-day/mg	6.4E-006
	Arsenic	7.78E+000	mg/kg	NA	NA	M	7.3E-009	mg/kg-day	1.5E+000	kg-day/mg	1.1E-008
	Barium	2.69E+003	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	9.0E-008	mg/kg-day	2.9E-002	kg-day/mg	2.6E-009
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	2.5E-009	mg/kg-day	7.3E-001	kg-day/mg	1.9E-009
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day	7.3E+000	kg-day/mg	1.0E-008
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	5.0E-009	mg/kg-day	7.3E-001	kg-day/mg	3.6E-009
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	5.0E-009	mg/kg-day	7.3E-002	kg-day/mg	3.6E-010
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	3.2E-008	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	3.2E-010	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	7.5E-010	mg/kg-day	1.8E+000	kg-day/mg	1.4E-009
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	1.1E+000	kg-day/mg	1.1E-007
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	1.4E-002	kg-day/mg	3.0E-008
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	6.1E-003	kg-day/mg	8.0E-010
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	3.6E-009	mg/kg-day	7.3E-003	kg-day/mg	2.6E-011
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	2.2E-010	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	2.3E-009	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	6.0E-008	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	3.7E-007	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-75
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_ITa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	6.4E-007	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	3.9E-009	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	8.7E-010	mg/kg-day	7.8E-002	kg-day/mg	6.8E-011
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.3E-009	mg/kg-day	7.3E-001	kg-day/mg	9.6E-010
	Iron	1.92E+004	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	9.5E-004	kg-day/mg	1.6E-009
	Lead	1.02E+004	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	Mercury	7.85E+000	mg/kg	NA	NA	M	7.4E-009	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	6.4E-008	mg/kg-day	7.5E-003	kg-day/mg	4.8E-010
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	4.6E-009	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	4.6E-007	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	2.3E-009	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	1.2E-001	kg-day/mg	7.1E-009
	Phenol	1.70E+002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	7.5E-009	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	7.8E-009	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	3.3E-008	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	4.9E-008	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	5.2E-002	kg-day/mg	4.3E-008
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		kg-day/mg	
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	1.1E-002	kg-day/mg	3.6E-009
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	1.0E-010	mg/kg-day	1.9E+000	kg-day/mg	2.0E-010
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	(Total)										7.44E-006
Dermal	1,1-Dichloroethane	1.30E+001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	NA	NA	M	8.8E-007	mg/kg-day		kg-day/mg	
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	NA	NA	M	4.9E-010	mg/kg-day	2.9E-001	kg-day/mg	1.39E-010
	1,2-Dichlorobenzene	2.10E+002	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	1.60E+001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	9.1E-002	kg-day/mg	2.22E-008
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	NA	NA	M	4.6E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	2.70E+000	mg/kg	NA	NA	M	3.7E-008	mg/kg-day	6.8E-002	kg-day/mg	2.48E-009
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	2.4E-002	kg-day/mg	2.95E-010
	2-Butanone	4.50E+003	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	2-Hexanone	9.10E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.20E+002	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.20E+002	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	8.80E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol	1.80E+002	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	3.30E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	2.4E-001	kg-day/mg	1.07E-006
	4,4'-DDE	8.80E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	3.4E-001	kg-day/mg	4.05E-009
	4,4'-DDT	1.70E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	3.4E-001	kg-day/mg	7.82E-009
	Acenaphthene	1.50E+001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Acetone	1.20E+003	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Aldrin	7.70E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	1.7E+001	kg-day/mg	1.77E-006
	alpha-BHC	3.30E-001	mg/kg	NA	NA	M	4.5E-009	mg/kg-day	6.3E+000	kg-day/mg	2.81E-008

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-75
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT wk4 \ TT_ID_ITa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Aluminum	8.23E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.30E+000	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	Antimony	1.64E+002	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1254	3.60E+001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	2.2E+000	kg-day/mg	1.09E-006
	Aroclor-1260	3.40E+003	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	2.0E+000	kg-day/mg	9.20E-005
	Arsenic	7.78E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	1.6E+000	kg-day/mg	1.66E-007
	Barium	2.69E+003	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Benzene	9.60E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	3.2E-002	kg-day/mg	4.18E-008
	Benzoic Acid	2.40E+002	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.70E+000	mg/kg	NA	NA	M	3.7E-008	mg/kg-day	7.3E-001	kg-day/mg	2.67E-008
	Benzo(a)pyrene	1.50E+000	mg/kg	NA	NA	M	2.0E-008	mg/kg-day	8.6E+000	kg-day/mg	1.74E-007
	Benzo(b)fluoranthene	5.30E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day	7.3E-001	kg-day/mg	5.23E-008
	Benzo(k)fluoranthene	5.30E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day	7.3E-002	kg-day/mg	5.23E-009
	Benzyl Alcohol	3.40E+001	mg/kg	NA	NA	M	4.6E-007	mg/kg-day		kg-day/mg	
	Beryllium	3.40E-001	mg/kg	NA	NA	M	4.6E-009	mg/kg-day		kg-day/mg	
	beta-BHC	8.00E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	1.8E+000	kg-day/mg	1.95E-008
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	1.1E+000	kg-day/mg	1.64E-006
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	1.4E-002	kg-day/mg	4.36E-007
	Butylbenzylphthalate	4.20E+002	mg/kg	NA	NA	M	5.7E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.06E+002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.40E+002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	6.4E-003	kg-day/mg	1.21E-008
	Chromium 3+	1.48E+003	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Chrysene	3.80E+000	mg/kg	NA	NA	M	5.1E-008	mg/kg-day	1.8E-002	kg-day/mg	9.15E-010
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	NA	NA	M	3.1E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.29E+001	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		kg-day/mg	
	Copper	1.32E+003	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	2.50E+000	mg/kg	NA	NA	M	3.4E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	6.40E+001	mg/kg	NA	NA	M	8.7E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	2.60E+002	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	3.90E+002	mg/kg	NA	NA	M	5.3E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	6.80E+002	mg/kg	NA	NA	M	9.2E-006	mg/kg-day		kg-day/mg	
	Fluoranthene	4.10E+000	mg/kg	NA	NA	M	5.5E-008	mg/kg-day		kg-day/mg	
	Fluorene	1.80E+001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	Hexachlorobutadiene	9.30E-001	mg/kg	NA	NA	M	1.3E-008	mg/kg-day	7.8E-002	kg-day/mg	9.81E-010
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	NA	NA	M	1.9E-008	mg/kg-day	7.3E-001	kg-day/mg	1.38E-008
	Iron	1.92E+004	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Isophorone	1.80E+003	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	9.5E-004	kg-day/mg	2.31E-008
	Lead	1.02E+004	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Manganese	4.02E+002	mg/kg	NA	NA	M	5.4E-006	mg/kg-day		kg-day/mg	
	Mercury	7.65E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	6.80E+001	mg/kg	NA	NA	M	9.2E-007	mg/kg-day	1.4E-002	kg-day/mg	1.25E-008
	m,p-xylene	4.90E+000	mg/kg	NA	NA	M	6.6E-008	mg/kg-day		kg-day/mg	
	Naphthalene	4.90E+002	mg/kg	NA	NA	M	6.6E-006	mg/kg-day		kg-day/mg	
	Nickel	5.52E+001	mg/kg	NA	NA	M	7.5E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	2.50E+000	mg/kg	NA	NA	M	3.4E-008	mg/kg-day		kg-day/mg	
	Pentachlorophenol	6.30E+001	mg/kg	NA	NA	M	8.5E-007	mg/kg-day	1.2E-001	kg-day/mg	1.02E-007
	Phenol	1.70E+002	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	Pyrene	8.00E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Selenium	8.32E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Silver	3.49E+001	mg/kg	NA	NA	M	4.7E-007	mg/kg-day		kg-day/mg	
	Styrene	5.20E+001	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		kg-day/mg	
	Tetrachloroethene	8.80E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	5.2E-002	kg-day/mg	6.19E-007
	Thallium	1.44E+000	mg/kg	NA	NA	M	1.9E-008	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-75
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_ID_ITa2CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	1.30E+003	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.50E+002	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	1.1E-002	kg-day/mg	5.31E-008
	Vanadium	1.22E+001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.10E-001	mg/kg	NA	NA	M	1.5E-009	mg/kg-day	1.9E+000	kg-day/mg	2.83E-009
	Xylenes (total)	3.60E+003	mg/kg	NA	NA	M	4.9E-005	mg/kg-day		kg-day/mg	
	Zinc	8.29E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	(Total)										1.07E-004
										Total Hazard Index Across All Exposure Routes/Pathways	1.1E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-76
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RMa2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.30E+001	mg/kg	1.77E-003	mg/cu. m.	R	2.76E-008	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	6.50E+001	mg/kg	8.18E-003	mg/cu. m.	R	1.28E-007	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.38E-005	mg/cu. m.	R	2.16E-010	mg/kg-day	5.60E-002	mg/kg-day	1.21E-011
	1,1,2,2-Tetrachloroethane	3.60E-002	mg/kg	8.16E-006	mg/cu. m.	R	1.28E-010	mg/kg-day	2.00E-001	mg/kg-day	2.56E-011
	1,2-Dichlorobenzene	2.10E+002	mg/kg	3.15E-003	mg/cu. m.	R	4.93E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	1.80E+001	mg/kg	7.43E-004	mg/cu. m.	R	1.16E-008	mg/kg-day	9.10E-002	mg/kg-day	1.06E-009
	1,2-Dichloroethene (total)	3.40E+001	mg/kg	3.51E-003	mg/cu. m.	R	5.49E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	2.70E+000	mg/kg	7.93E-004	mg/cu. m.	R	1.24E-008	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	1.00E+001	mg/kg	1.61E-004	mg/cu. m.	R	2.53E-009	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	3.02E-011	mg/cu. m.	R	4.72E-016	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.10E-001	mg/kg	7.79E-005	mg/cu. m.	R	1.22E-009	mg/kg-day	2.20E-002	mg/kg-day	2.68E-011
	2-Butanone	4.50E+003	mg/kg	5.37E-007	mg/cu. m.	R	8.41E-012	mg/kg-day		mg/kg-day	
	2-Hexanone	9.10E+001	mg/kg	1.48E-002	mg/cu. m.	R	2.32E-007	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.20E+002	mg/kg	3.59E-004	mg/cu. m.	R	5.63E-009	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.20E+002	mg/kg	2.86E-004	mg/cu. m.	R	4.47E-009	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	2.17E-011	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	8.80E+001	mg/kg	1.04E-004	mg/cu. m.	R	1.62E-009	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	3.50E+000	mg/kg	1.83E-007	mg/cu. m.	R	2.87E-012	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	2.86E-009	mg/cu. m.	R	4.48E-014	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.64E-005	mg/cu. m.	R	2.57E-010	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	1.80E-012	mg/cu. m.	R	2.82E-017	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	3.60E+002	mg/kg	3.07E-003	mg/cu. m.	R	4.80E-008	mg/kg-day		mg/kg-day	
	4-Methylphenol	1.80E+002	mg/kg	1.04E-003	mg/cu. m.	R	1.62E-008	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	1.22E-007	mg/cu. m.	R	1.92E-012	mg/kg-day		mg/kg-day	
	4,4'-DDD	3.30E+000	mg/kg	1.04E-009	mg/cu. m.	R	1.62E-014	mg/kg-day		mg/kg-day	
	4,4'-DDE	8.80E-001	mg/kg	5.52E-010	mg/cu. m.	R	8.64E-015	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.70E+000	mg/kg	9.46E-010	mg/cu. m.	R	1.48E-014	mg/kg-day	3.40E-001	mg/kg-day	5.04E-015
	Acenaphthene	1.50E+001	mg/kg	6.07E-005	mg/cu. m.	R	9.51E-010	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	9.05E-007	mg/cu. m.	R	1.42E-011	mg/kg-day		mg/kg-day	
	Acetone	1.20E+003	mg/kg	4.49E-003	mg/cu. m.	R	7.03E-008	mg/kg-day		mg/kg-day	
	Aldrin	7.70E+000	mg/kg	3.78E-009	mg/cu. m.	R	5.92E-014	mg/kg-day	1.70E+001	mg/kg-day	1.01E-012
	alpha-BHC	3.30E-001	mg/kg	2.07E-010	mg/cu. m.	R	3.24E-015	mg/kg-day	6.30E+000	mg/kg-day	2.04E-014
	Anthracene	1.30E+000	mg/kg	1.58E-006	mg/cu. m.	R	2.48E-011	mg/kg-day		mg/kg-day	
	Antimony	1.64E+002	mg/kg	4.54E-008	mg/cu. m.	R	7.11E-013	mg/kg-day		mg/kg-day	
	Aroclor-1242	3.30E+002	mg/kg	1.80E-009	mg/cu. m.	R	2.81E-014	mg/kg-day	2.00E+000	mg/kg-day	5.62E-014
	Aroclor-1248	0.00E+000	mg/kg	3.22E-008	mg/cu. m.	R	5.05E-013	mg/kg-day	2.00E+000	mg/kg-day	1.01E-012
	Aroclor-1254	3.60E+001	mg/kg	2.41E-008	mg/cu. m.	R	3.77E-013	mg/kg-day	2.00E+000	mg/kg-day	7.53E-013
	Aroclor-1260	3.40E+003	mg/kg	2.17E-007	mg/cu. m.	R	3.40E-012	mg/kg-day	2.00E+000	mg/kg-day	6.81E-012
	Arsenic	7.78E+000	mg/kg	3.48E-009	mg/cu. m.	R	5.44E-014	mg/kg-day	1.51E+001	mg/kg-day	8.22E-013
	Barium	2.69E+003	mg/kg	6.89E-007	mg/cu. m.	R	1.08E-011	mg/kg-day		mg/kg-day	
	Benzene	9.60E+001	mg/kg	2.80E-003	mg/cu. m.	R	4.39E-008	mg/kg-day	2.90E-002	mg/kg-day	1.27E-009
	Benzoic Acid	2.40E+002	mg/kg	2.85E-003	mg/cu. m.	R	4.46E-008	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.70E+000	mg/kg	1.76E-009	mg/cu. m.	R	2.75E-014	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.50E+000	mg/kg	9.73E-010	mg/cu. m.	R	1.52E-014	mg/kg-day	3.10E+000	mg/kg-day	4.72E-014
	Benzo(b)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	5.35E-014	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	9.66E-010	mg/cu. m.	R	1.51E-014	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	5.30E+000	mg/kg	3.42E-009	mg/cu. m.	R	5.35E-014	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	3.40E+001	mg/kg	1.66E-008	mg/cu. m.	R	2.60E-013	mg/kg-day		mg/kg-day	
	Beryllium	3.40E-001	mg/kg	2.48E-010	mg/cu. m.	R	3.88E-015	mg/kg-day	8.40E+000	mg/kg-day	3.26E-014
	beta-BHC	8.00E-001	mg/kg	3.94E-010	mg/cu. m.	R	6.16E-015	mg/kg-day	1.80E+000	mg/kg-day	1.11E-014
	bis(2-Chloroethyl) ether	1.10E+002	mg/kg	5.88E-004	mg/cu. m.	R	9.21E-009	mg/kg-day	1.10E+000	mg/kg-day	1.01E-008
	bis(2-Ethylhexyl)phthalate	2.30E+003	mg/kg	2.64E-007	mg/cu. m.	R	4.14E-012	mg/kg-day	1.40E-002	mg/kg-day	5.79E-014
	Butylbenzylphthalate	4.20E+002	mg/kg	2.68E-007	mg/cu. m.	R	4.20E-012	mg/kg-day		mg/kg-day	
	Cadmium	1.06E+002	mg/kg	7.75E-006	mg/cu. m.	R	1.21E-012	mg/kg-day	6.30E+000	mg/kg-day	7.64E-012
	Carbon Disulfide	0.00E+000	mg/kg	8.34E-010	mg/cu. m.	R	1.31E-014	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.96E-004	mg/cu. m.	R	9.33E-009	mg/kg-day		mg/kg-day	
	Chloroform	1.40E+002	mg/kg	2.84E-003	mg/cu. m.	R	4.44E-008	mg/kg-day	8.10E-002	mg/kg-day	3.60E-009

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 2, Soil (2' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-76
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area2CT.wk4 \ TT_Inh_RMe2CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	1.48E+003	mg/kg	8.35E-007	mg/cu. m.	R	1.31E-011	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.39E-007	mg/cu. m.	R	2.18E-012	mg/kg-day	4.10E+001	mg/kg-day	8.93E-011
	Chrysene	3.80E+000	mg/kg	2.43E-009	mg/cu. m.	R	3.80E-014	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.30E-001	mg/kg	1.68E-003	mg/cu. m.	R	2.63E-008	mg/kg-day		mg/kg-day	
	Cobalt	3.29E+001	mg/kg	1.07E-008	mg/cu. m.	R	1.67E-013	mg/kg-day		mg/kg-day	
	Copper	1.32E+003	mg/kg	8.82E-007	mg/cu. m.	R	1.38E-011	mg/kg-day		mg/kg-day	
	Cyanide (total)	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.97E-014	mg/kg-day		mg/kg-day	
	Dibenzofuran	2.50E+000	mg/kg	1.73E-009	mg/cu. m.	R	2.71E-014	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	6.21E-012	mg/cu. m.	R	9.72E-017	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	8.22E-012	mg/cu. m.	R	1.29E-016	mg/kg-day	1.60E+001	mg/kg-day	2.06E-015
	Diethylphthalate	6.40E+001	mg/kg	1.62E-008	mg/cu. m.	R	2.53E-013	mg/kg-day		mg/kg-day	
	Dimethylphthalate	2.60E+002	mg/kg	1.65E-007	mg/cu. m.	R	2.58E-012	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	3.90E+002	mg/kg	5.18E-008	mg/cu. m.	R	8.11E-013	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+001	mg/kg	8.87E-009	mg/cu. m.	R	1.39E-013	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	6.44E-016	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	5.48E-011	mg/cu. m.	R	8.58E-016	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	9.42E-014	mg/cu. m.	R	1.48E-018	mg/kg-day		mg/kg-day	
	Ethyl Benzene	6.80E+002	mg/kg	1.18E-002	mg/cu. m.	R	1.84E-007	mg/kg-day		mg/kg-day	
	Fluoranthene	4.10E+000	mg/kg	2.86E-009	mg/cu. m.	R	4.48E-014	mg/kg-day		mg/kg-day	
	Fluorene	1.80E+001	mg/kg	3.14E-005	mg/cu. m.	R	4.92E-010	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	4.11E-011	mg/cu. m.	R	6.44E-016	mg/kg-day	3.50E-001	mg/kg-day	2.25E-016
	Heptachlor	0.00E+000	mg/kg	5.06E-013	mg/cu. m.	R	7.92E-018	mg/kg-day	4.50E+000	mg/kg-day	3.56E-017
	Heptachlor epoxide	0.00E+000	mg/kg	2.41E-013	mg/cu. m.	R	3.78E-018	mg/kg-day	9.10E+000	mg/kg-day	3.44E-017
	Hexachlorobenzene	0.00E+000	mg/kg	2.48E-013	mg/cu. m.	R	3.89E-018	mg/kg-day	1.60E+000	mg/kg-day	6.22E-018
	Hexachlorobutadiene	9.30E-001	mg/kg	8.77E-009	mg/cu. m.	R	1.37E-013	mg/kg-day	7.80E-002	mg/kg-day	1.07E-014
	Hexane, n-	0.00E+000	mg/kg	9.40E-011	mg/cu. m.	R	1.47E-015	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	1.40E+000	mg/kg	8.97E-010	mg/cu. m.	R	1.40E-014	mg/kg-day		mg/kg-day	
	Isophorone	1.80E+003	mg/kg	3.48E-003	mg/cu. m.	R	5.45E-008	mg/kg-day		mg/kg-day	
	Lead	1.02E+004	mg/kg	6.64E-006	mg/cu. m.	R	1.04E-010	mg/kg-day		mg/kg-day	
	Manganese	4.02E+002	mg/kg	1.95E-007	mg/cu. m.	R	3.06E-012	mg/kg-day		mg/kg-day	
	Mercury	7.85E+000	mg/kg	5.33E-009	mg/cu. m.	R	8.34E-014	mg/kg-day		mg/kg-day	
	Methylene Chloride	6.60E+001	mg/kg	1.28E-002	mg/cu. m.	R	2.00E-007	mg/kg-day	1.65E-003	mg/kg-day	3.30E-010
	m,p-xylene	4.90E+000	mg/kg	4.86E-003	mg/cu. m.	R	7.61E-008	mg/kg-day		mg/kg-day	
	Naphthalene	4.90E+002	mg/kg	1.64E-003	mg/cu. m.	R	2.57E-008	mg/kg-day		mg/kg-day	
	Nickel	5.52E+001	mg/kg	1.74E-008	mg/cu. m.	R	2.72E-013	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	2.25E-007	mg/cu. m.	R	3.53E-012	mg/kg-day		mg/kg-day	
	ortho-xylene	2.50E+000	mg/kg	1.46E-003	mg/cu. m.	R	2.29E-008	mg/kg-day		mg/kg-day	
	Pentachlorophenol	6.30E+001	mg/kg	3.00E-008	mg/cu. m.	R	4.70E-013	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.16E-008	mg/cu. m.	R	1.81E-013	mg/kg-day		mg/kg-day	
	Phenol	1.70E+002	mg/kg	7.18E-004	mg/cu. m.	R	1.12E-008	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	1.99E-010	mg/cu. m.	R	3.11E-015	mg/kg-day		mg/kg-day	
	Pyrene	6.00E+000	mg/kg	5.33E-009	mg/cu. m.	R	8.34E-014	mg/kg-day		mg/kg-day	
	Selenium	8.32E+000	mg/kg	2.73E-009	mg/cu. m.	R	4.27E-014	mg/kg-day		mg/kg-day	
	Silver	3.49E+001	mg/kg	8.02E-009	mg/cu. m.	R	1.25E-013	mg/kg-day		mg/kg-day	
	Styrene	5.20E+001	mg/kg	7.66E-004	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day	
	Tetrachloroethene	8.60E+002	mg/kg	2.51E-002	mg/cu. m.	R	3.94E-007	mg/kg-day	2.00E-003	mg/kg-day	7.87E-010
	Thallium	1.44E+000	mg/kg	4.71E-010	mg/cu. m.	R	7.38E-015	mg/kg-day		mg/kg-day	
	Toluene	1.30E+003	mg/kg	1.20E-001	mg/cu. m.	R	1.88E-006	mg/kg-day		mg/kg-day	
	Trichloroethene	3.50E+002	mg/kg	1.44E-002	mg/cu. m.	R	2.25E-007	mg/kg-day	6.00E-003	mg/kg-day	1.35E-009
	Vanadium	1.22E+001	mg/kg	7.08E-009	mg/cu. m.	R	1.11E-013	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.10E-001	mg/kg	9.14E-005	mg/cu. m.	R	1.43E-009	mg/kg-day	3.00E-001	mg/kg-day	4.29E-010
	Xylenes (total)	3.60E+003	mg/kg	6.56E-002	mg/cu. m.	R	1.03E-006	mg/kg-day		mg/kg-day	
	Zinc	8.29E+003	mg/kg	2.54E-006	mg/cu. m.	R	3.98E-011	mg/kg-day		mg/kg-day	
	(Total)										1.91E-008

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-77
Calculation of Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_cTe3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	8.60E-002	mg/kg	NA	NA	M	4.4E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.36E-007
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	4.6E-009	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.28E-007
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.33E-006
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	4.28E-004
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	9.6E-009	mg/kg-day		mg/kg-day	NA	NA	
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	8.6E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.31E-004
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.77E-005
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.24E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	8.6E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.62E-007
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.67E-004
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	7.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.04E-006
	Acetone	1.30E-001	mg/kg	NA	NA	M	6.6E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	6.59E-007
	Aluminum	9.52E+003	mg/kg	NA	NA	M	4.8E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.83E-003
	Anthracene	6.60E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.12E-006
	Antimony	6.76E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	8.57E-002
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	5.58E-001
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	5.17E-002
	Barium	2.46E+003	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.78E-002
	Benzene	3.20E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	5.41E-004
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.80E-004
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.09E-002
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	8.6E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.31E-005
	Cadmium	1.59E+002	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	8.07E-002
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.57E-004
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.1E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.07E-007
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	4.40E-004
	Chrysene	1.30E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.69E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.81E-004
	Copper	1.19E+003	mg/kg	NA	NA	M	6.0E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.51E-002
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.22E-003
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.45E-005
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	7.6E-008	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	9.51E-008
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	7.1E-007	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	7.10E-008
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	7.6E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.61E-005
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.30E-005
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.10E-004
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.31E-005
	Fluorene	6.10E-001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	7.74E-006
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	4.5E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	8.93E-005
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	2.1E-008	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	1.64E-003
	Iron	1.27E+004	mg/kg	NA	NA	M	6.4E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.15E-002
	Isophorone	4.00E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.01E-004
	Lead	1.07E+004	mg/kg	NA	NA	M	5.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	7.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.91E-002
	Mercury	9.50E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.69E-006
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.10E-004
	Nickel	5.32E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.35E-003
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-77
Calculation of Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_cTa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.54E-005
	Phenol	6.40E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	5.41E-006
	Pyrene	2.30E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.89E-005
	Selenium	1.72E+001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.74E-003
	Styrene	2.30E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.83E-005
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.27E-002
	Toluene	6.40E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.62E-003
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	8.45E-003
	Vanadium	2.62E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.90E-003
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.45E-004
	Zinc	1.52E+004	mg/kg	NA	NA	M	7.7E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.57E-002
Dermal	1,1-Dichloroethane	8.60E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.92E-005
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.00E-005
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.46E-004
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.88E-002
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	4.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.90E-002
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.10E-003
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.47E-003
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	4.68E-005
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.16E-002
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.34E-004
	Acetone	1.30E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	3.70E-005
	Aluminum	9.52E+003	mg/kg	NA	NA	M	2.1E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	2.12E-001
	Anthracene	6.60E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.91E-005
	Antimony	6.76E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.77E+002
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	6.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.78E+001
	Arsenic	3.06E+001	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.40E+000
	Barium	2.46E+003	mg/kg	NA	NA	M	5.5E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	7.84E-001
	Benzene	3.20E+000	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	2.65E-002
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.67E+000
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	9.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.80E-001
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.90E-003
	Cadmium	1.59E+002	mg/kg	NA	NA	M	3.5E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.42E+002
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	2.23E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	2.34E-005
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.84E+000
	Chrysene	1.30E+000	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.69E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.12E-002
	Copper	1.19E+003	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.11E+000
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.07E-001
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.40E-003
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	4.18E-006
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.12E-006
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	3.45E-003
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E-003
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	3.40E-002
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.90E-003
	Fluorene	6.10E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.40E-004

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-77
Calculation of Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_cTa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.93E-003
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	7.21E-002
	Iron	1.27E+004	mg/kg	NA	NA	M	2.8E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	9.45E-001
	Isophorone	4.00E+001	mg/kg	NA	NA	M	8.9E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.46E-003
	Lead	1.07E+004	mg/kg	NA	NA	M	2.4E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	3.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E+000
	Mercury	9.50E+000	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.35E-004
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.12E-002
	Nickel	5.32E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.19E+000
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.12E-003
	Phenol	6.40E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.38E-004
	Pyrene	2.30E+000	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.71E-003
	Selenium	1.72E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.68E-002
	Styrene	2.30E+001	mg/kg	NA	NA	M	5.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.57E-003
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	5.6E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.58E-001
	Toluene	6.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.14E-002
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	3.80E-001
	Vanadium	2.62E+001	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.35E-002
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.11E-003
	Zinc	1.52E+004	mg/kg	NA	NA	M	3.4E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.77E+000
	(Total)												5.67E+002
												Total Hazard Index Across All Exposure Routes/Pathways	5.7E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-78
Calculation of Non-Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_cTa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	8.60E-002	mg/kg	2.41E-004	mg/cu. m.	R	4.08E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.92E-005
	1,1,1-Trichloroethane	9.00E-003	mg/kg	2.67E-004	mg/cu. m.	R	4.52E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.58E-005
	1,1,2-Trichloroethane	0.00E+000	mg/kg	9.43E-009	mg/cu. m.	R	1.59E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.95E-007	mg/cu. m.	R	4.98E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.48E-004	mg/cu. m.	R	7.57E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	8.41E-004
	1,2-Dichloroethane	0.00E+000	mg/kg	9.17E-005	mg/cu. m.	R	1.55E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.11E-003
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	1.65E-003	mg/cu. m.	R	2.78E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	1.90E-002	mg/kg	9.55E-005	mg/cu. m.	R	1.61E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.42E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.13E-005	mg/cu. m.	R	3.61E-007	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	6.33E-006
	1,4-Dichlorobenzene	0.00E+000	mg/kg	7.89E-006	mg/cu. m.	R	1.33E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	5.83E-007
	2-Butanone	0.00E+000	mg/kg	4.15E-008	mg/cu. m.	R	7.01E-010	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.45E-009
	2-Hexanone	0.00E+000	mg/kg	1.98E-003	mg/cu. m.	R	3.34E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.39E-002
	2-Methylnaphthalene	1.70E+001	mg/kg	3.82E-004	mg/cu. m.	R	6.47E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	4.70E+000	mg/kg	7.15E-005	mg/cu. m.	R	1.21E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	4.90E+000	mg/kg	2.86E-005	mg/cu. m.	R	4.84E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	3.12E-007	mg/cu. m.	R	5.28E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	3.70E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.07E-012	mg/cu. m.	R	5.19E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	2.34E-004	mg/cu. m.	R	3.96E-006	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.98E-004
	4-Methylphenol	4.60E+000	mg/kg	2.25E-004	mg/cu. m.	R	3.80E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	2.16E-010	mg/cu. m.	R	3.65E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	1.24E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	1.04E-010	mg/cu. m.	R	1.76E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	3.60E-001	mg/kg	9.17E-006	mg/cu. m.	R	1.55E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	2.55E-008	mg/cu. m.	R	4.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.30E-001	mg/kg	3.41E-004	mg/cu. m.	R	5.77E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	8.53E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	4.66E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	6.60E-001	mg/kg	9.38E-007	mg/cu. m.	R	1.59E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	6.76E+001	mg/kg	4.79E-008	mg/cu. m.	R	8.09E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	4.20E+001	mg/kg	7.62E-009	mg/cu. m.	R	1.29E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	2.70E+001	mg/kg	8.53E-009	mg/cu. m.	R	1.44E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	2.20E+001	mg/kg	8.81E-009	mg/cu. m.	R	1.49E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	0.00E+000	mg/kg	2.89E-008	mg/cu. m.	R	4.88E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	1.96E-008	mg/cu. m.	R	3.32E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.46E+003	mg/kg	1.63E-006	mg/cu. m.	R	2.75E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.96E-004
	Benzene	3.20E+000	mg/kg	5.98E-004	mg/cu. m.	R	1.01E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	5.95E-003
	Benzoic Acid	0.00E+000	mg/kg	3.53E-004	mg/cu. m.	R	5.97E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.73E-009	mg/cu. m.	R	2.93E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	0.00E+000	mg/kg	1.27E-010	mg/cu. m.	R	2.14E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	1.21E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	1.25E-010	mg/cu. m.	R	2.12E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	1.21E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	3.75E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	1.01E-009	mg/cu. m.	R	1.71E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	3.00E-006
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	8.88E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	7.62E-005	mg/cu. m.	R	1.29E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	2.98E-007	mg/cu. m.	R	5.04E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	1.70E+001	mg/kg	4.58E-006	mg/cu. m.	R	7.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.59E+002	mg/kg	1.09E-007	mg/cu. m.	R	1.84E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	2.41E-011	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.20E-010
	Chlorobenzene	6.20E+000	mg/kg	8.46E-004	mg/cu. m.	R	1.43E-005	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.86E-003
	Chloroform	1.00E-002	mg/kg	3.21E-004	mg/cu. m.	R	5.43E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	6.31E-002
	Chromium 3+	1.30E+003	mg/kg	8.05E-007	mg/cu. m.	R	1.36E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.34E-007	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.30E+000	mg/kg	1.13E-009	mg/cu. m.	R	1.92E-011	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-78
Calculation of Non-Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_cTa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	3.61E-006	mg/cu. m.	R	6.10E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	5.69E+001	mg/kg	3.69E-008	mg/cu. m.	R	6.24E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.19E+003	mg/kg	8.57E-007	mg/cu. m.	R	1.45E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	4.81E+001	mg/kg	3.02E-008	mg/cu. m.	R	5.10E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.30E-001	mg/kg	4.79E-010	mg/cu. m.	R	8.09E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	1.50E-001	mg/kg	2.16E-009	mg/cu. m.	R	3.65E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.40E+000	mg/kg	2.26E-008	mg/cu. m.	R	3.82E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	1.50E+001	mg/kg	1.57E-008	mg/cu. m.	R	2.66E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+000	mg/kg	1.90E-009	mg/cu. m.	R	3.22E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.61E-013	mg/cu. m.	R	2.72E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	1.40E+002	mg/kg	1.05E-002	mg/cu. m.	R	1.78E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	6.15E-004
	Fluoranthene	3.40E+000	mg/kg	2.48E-009	mg/cu. m.	R	4.19E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	6.10E-001	mg/kg	5.09E-008	mg/cu. m.	R	8.61E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	8.80E-002	mg/kg	5.52E-011	mg/cu. m.	R	9.33E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.20E-002	mg/kg	2.63E-011	mg/cu. m.	R	4.45E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	4.24E-013	mg/cu. m.	R	7.17E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	1.14E-009	mg/cu. m.	R	1.93E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	2.12E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	1.18E-010	mg/cu. m.	R	1.99E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	4.00E+001	mg/kg	9.30E-004	mg/cu. m.	R	1.57E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.07E+004	mg/kg	7.56E-006	mg/cu. m.	R	1.28E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	1.00E-006	mg/cu. m.	R	1.70E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.19E-003
	Mercury	9.50E+000	mg/kg	6.67E-009	mg/cu. m.	R	1.13E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.31E-006
	Methylene Chloride	2.00E-001	mg/kg	8.65E-004	mg/cu. m.	R	1.46E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.70E-005
	m,p-xylene	0.00E+000	mg/kg	2.08E-005	mg/cu. m.	R	3.53E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	2.80E+001	mg/kg	6.24E-004	mg/cu. m.	R	1.06E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.17E-002
	Nickel	5.32E+001	mg/kg	3.55E-006	mg/cu. m.	R	6.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	8.89E-006	mg/cu. m.	R	1.50E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	1.00E-005	mg/cu. m.	R	1.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.50E+000	mg/kg	4.80E-009	mg/cu. m.	R	8.12E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	3.42E-009	mg/cu. m.	R	5.79E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	6.40E+000	mg/kg	1.55E-004	mg/cu. m.	R	2.62E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	2.30E+000	mg/kg	2.11E-009	mg/cu. m.	R	3.57E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.72E+001	mg/kg	1.10E-006	mg/cu. m.	R	1.86E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	0.00E+000	mg/kg	8.25E-010	mg/cu. m.	R	1.40E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	2.30E+001	mg/kg	8.98E-004	mg/cu. m.	R	1.52E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.31E-005
	Tetrachloroethene	2.50E+002	mg/kg	4.66E-002	mg/cu. m.	R	7.88E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	5.63E-003
	Thallium	0.00E+000	mg/kg	6.04E-011	mg/cu. m.	R	1.02E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	6.40E+002	mg/kg	1.22E-001	mg/cu. m.	R	2.06E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.80E-002
	Trichloroethene	1.00E+002	mg/kg	1.30E-002	mg/cu. m.	R	2.21E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	2.62E+001	mg/kg	1.74E-008	mg/cu. m.	R	2.94E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	2.06E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	5.70E+002	mg/kg	7.02E-002	mg/cu. m.	R	1.19E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.52E+004	mg/kg	9.81E-006	mg/cu. m.	R	1.66E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.37E-001

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-79
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_cTa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	6.60E-002	mg/kg	NA	NA	M	3.6E-009	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	3.8E-010	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	8.0E-010	mg/kg-day	6.8E-002	kg-day/mg	5.5E-011
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	7.2E-009	mg/kg-day		kg-day/mg	
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	6.3E-009	mg/kg-day	2.4E-001	kg-day/mg	1.5E-009
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	1.5E-008	mg/kg-day		kg-day/mg	
	Acetone	1.30E-001	mg/kg	NA	NA	M	5.5E-009	mg/kg-day		kg-day/mg	
	Aluminum	9.52E+003	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	Anthracene	6.60E-001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day		kg-day/mg	
	Antimony	6.76E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	2.0E+000	kg-day/mg	3.6E-006
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.3E-006
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	9.3E-007	mg/kg-day	2.0E+000	kg-day/mg	1.9E-006
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.5E+000	kg-day/mg	1.9E-006
	Barium	2.46E+003	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Benzene	3.20E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	2.9E-002	kg-day/mg	3.9E-009
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	7.3E-001	kg-day/mg	7.4E-008
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	7.3E-001	kg-day/mg	1.3E-008
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	7.3E-002	kg-day/mg	1.3E-009
	Beryllium	1.50E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.4E-002	kg-day/mg	2.5E-007
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.59E+002	mg/kg	NA	NA	M	6.7E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.2E-010	mg/kg-day	6.1E-003	kg-day/mg	2.6E-012
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	Chrysene	1.30E+000	mg/kg	NA	NA	M	5.5E-008	mg/kg-day	7.3E-003	kg-day/mg	4.0E-010
	Cobalt	5.69E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Copper	1.19E+003	mg/kg	NA	NA	M	5.0E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	6.3E-009	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	5.9E-008	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	6.3E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	5.5E-008	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	5.9E-006	mg/kg-day		kg-day/mg	
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Fluorene	6.10E-001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		kg-day/mg	
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	3.7E-009	mg/kg-day	4.5E+000	kg-day/mg	1.7E-008
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	1.8E-009	mg/kg-day	9.1E+000	kg-day/mg	1.6E-008
	Iron	1.27E+004	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Isophorone	4.00E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	9.5E-004	kg-day/mg	1.6E-009
	Lead	1.07E+004	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Mercury	9.50E+000	mg/kg	NA	NA	M	4.0E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	8.5E-009	mg/kg-day	7.5E-003	kg-day/mg	6.3E-011
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Nickel	5.32E+001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-79
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_cTa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day	1.2E-001	kg-day/mg	7.6E-009
	Phenol	6.40E+000	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	Pyrene	2.30E+000	mg/kg	NA	NA	M	9.7E-008	mg/kg-day		kg-day/mg	
	Selenium	1.72E+001	mg/kg	NA	NA	M	7.3E-007	mg/kg-day		kg-day/mg	
	Styrene	2.30E+001	mg/kg	NA	NA	M	9.7E-007	mg/kg-day		kg-day/mg	
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	5.2E-002	kg-day/mg	5.5E-007
	Toluene	6.40E+002	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	4.2E-006	mg/kg-day	1.1E-002	kg-day/mg	4.6E-008
	Vanadium	2.62E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Zinc	1.52E+004	mg/kg	NA	NA	M	6.4E-004	mg/kg-day		kg-day/mg	
Dermal	1,1-Dichloroethane	8.60E-002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	1.7E-008	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	3.5E-008	mg/kg-day	6.8E-002	kg-day/mg	2.40E-009
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	9.1E-006	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	8.6E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	2.4E-001	kg-day/mg	6.70E-008
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	6.7E-007	mg/kg-day		kg-day/mg	
	Acetone	1.30E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	Aluminum	9.52E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day		kg-day/mg	
	Anthracene	6.60E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Antimony	6.76E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	7.8E-005	mg/kg-day	2.0E+000	kg-day/mg	1.56E-004
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	2.0E+000	kg-day/mg	1.00E-004
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	2.2E+000	kg-day/mg	9.19E-005
	Arsenic	3.06E+001	mg/kg	NA	NA	M	5.7E-005	mg/kg-day	1.6E+000	kg-day/mg	8.99E-005
	Barium	2.46E+003	mg/kg	NA	NA	M	4.6E-003	mg/kg-day		kg-day/mg	
	Benzene	3.20E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day	3.2E-002	kg-day/mg	1.92E-007
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	7.3E-001	kg-day/mg	3.26E-006
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	7.3E-001	kg-day/mg	5.84E-007
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	7.3E-002	kg-day/mg	5.84E-008
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	1.4E-002	kg-day/mg	1.12E-005
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.59E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	6.4E-003	kg-day/mg	1.19E-010
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.30E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	1.8E-002	kg-day/mg	4.30E-008
	Cobalt	5.69E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Copper	1.19E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	8.9E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day		kg-day/mg	
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	6.3E-006	mg/kg-day		kg-day/mg	
	Fluorene	6.10E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-79
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_c7a3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	4.5E+000	kg-day/mg	7.37E-007
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	7.8E-008	mg/kg-day	9.1E+000	kg-day/mg	7.11E-007
	Iron	1.27E+004	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		kg-day/mg	
	Isophorone	4.00E+001	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	9.5E-004	kg-day/mg	7.07E-008
	Lead	1.07E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day		kg-day/mg	
	Mercury	9.50E+000	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	1.4E-002	kg-day/mg	5.07E-009
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	5.2E-005	mg/kg-day		kg-day/mg	
	Nickel	5.32E+001	mg/kg	NA	NA	M	9.9E-005	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	1.2E-001	kg-day/mg	3.35E-007
	Phenol	6.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Pyrene	2.30E+000	mg/kg	NA	NA	M	4.3E-006	mg/kg-day		kg-day/mg	
	Selenium	1.72E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Styrene	2.30E+001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	5.2E-002	kg-day/mg	2.42E-005
	Toluene	6.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	1.1E-002	kg-day/mg	2.09E-006
	Vanadium	2.62E+001	mg/kg	NA	NA	M	4.9E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Zinc	1.52E+004	mg/kg	NA	NA	M	2.8E-002	mg/kg-day		kg-day/mg	
	(Total)										4.82E-004
										Total Hazard Index Across All Exposure Routes/Pathways	4.9E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-80
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_cTa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	8.60E-002	mg/kg	2.41E-004	mg/cu. m.	R	1.11E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	2.67E-004	mg/cu. m.	R	1.23E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	9.43E-009	mg/cu. m.	R	4.34E-011	mg/kg-day	5.60E-002	mg/kg-day	2.43E-012
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.95E-007	mg/cu. m.	R	1.36E-009	mg/kg-day	2.00E-001	mg/kg-day	2.71E-010
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.48E-004	mg/cu. m.	R	2.06E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	9.17E-005	mg/cu. m.	R	4.22E-007	mg/kg-day	9.10E-002	mg/kg-day	3.84E-008
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	1.65E-003	mg/cu. m.	R	7.58E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	1.90E-002	mg/kg	9.55E-005	mg/cu. m.	R	4.39E-007	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.13E-005	mg/cu. m.	R	9.82E-008	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	7.89E-006	mg/cu. m.	R	3.63E-008	mg/kg-day	2.20E-002	mg/kg-day	7.99E-010
	2-Butanone	0.00E+000	mg/kg	4.15E-006	mg/cu. m.	R	1.91E-010	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	1.98E-003	mg/cu. m.	R	9.09E-006	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	1.70E+001	mg/kg	3.82E-004	mg/cu. m.	R	1.76E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	4.70E+000	mg/kg	7.15E-005	mg/cu. m.	R	3.29E-007	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	4.90E+000	mg/kg	2.86E-005	mg/cu. m.	R	1.32E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	3.12E-007	mg/cu. m.	R	1.44E-009	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	1.01E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.07E-012	mg/cu. m.	R	1.41E-014	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	2.34E-004	mg/cu. m.	R	1.08E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	4.60E+000	mg/kg	2.25E-004	mg/cu. m.	R	1.03E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	2.16E-010	mg/cu. m.	R	9.93E-013	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	3.39E-013	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	1.04E-010	mg/cu. m.	R	4.80E-013	mg/kg-day	3.40E-001	mg/kg-day	1.63E-013
	Acenaphthene	3.60E-001	mg/kg	9.17E-006	mg/cu. m.	R	4.22E-008	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	2.55E-008	mg/cu. m.	R	1.17E-010	mg/kg-day		mg/kg-day	
	Acetone	1.30E-001	mg/kg	3.41E-004	mg/cu. m.	R	1.57E-006	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	2.32E-012	mg/kg-day	1.70E+001	mg/kg-day	3.95E-011
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	1.27E-013	mg/kg-day	6.30E+000	mg/kg-day	8.00E-013
	Anthracene	6.60E-001	mg/kg	9.38E-007	mg/cu. m.	R	4.32E-009	mg/kg-day		mg/kg-day	
	Antimony	6.76E+001	mg/kg	4.79E-008	mg/cu. m.	R	2.20E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	4.20E+001	mg/kg	7.62E-009	mg/cu. m.	R	3.51E-011	mg/kg-day	2.00E+000	mg/kg-day	7.01E-011
	Aroclor-1248	2.70E+001	mg/kg	8.53E-009	mg/cu. m.	R	3.93E-011	mg/kg-day	2.00E+000	mg/kg-day	7.86E-011
	Aroclor-1254	2.20E+001	mg/kg	8.81E-009	mg/cu. m.	R	4.05E-011	mg/kg-day	2.00E+000	mg/kg-day	8.11E-011
	Aroclor-1260	0.00E+000	mg/kg	2.89E-008	mg/cu. m.	R	1.33E-010	mg/kg-day	2.00E+000	mg/kg-day	2.66E-010
	Arsenic	3.06E+001	mg/kg	1.96E-008	mg/cu. m.	R	9.03E-011	mg/kg-day	1.51E+001	mg/kg-day	1.36E-009
	Barium	2.46E+003	mg/kg	1.63E-006	mg/cu. m.	R	7.48E-009	mg/kg-day		mg/kg-day	
	Benzene	3.20E+000	mg/kg	5.98E-004	mg/cu. m.	R	2.75E-006	mg/kg-day	2.90E-002	mg/kg-day	7.98E-008
	Benzoic Acid	0.00E+000	mg/kg	3.53E-004	mg/cu. m.	R	1.63E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.73E-009	mg/cu. m.	R	7.97E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	0.00E+000	mg/kg	1.27E-010	mg/cu. m.	R	5.83E-013	mg/kg-day	3.10E+000	mg/kg-day	1.81E-012
	Benzo(b)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	3.29E-012	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	1.25E-010	mg/cu. m.	R	5.77E-013	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	3.28E-012	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	1.02E-011	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	1.01E-009	mg/cu. m.	R	4.66E-012	mg/kg-day	8.40E+000	mg/kg-day	3.91E-011
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	2.42E-013	mg/kg-day	1.80E+000	mg/kg-day	4.35E-013
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	7.62E-005	mg/cu. m.	R	3.51E-007	mg/kg-day	1.10E+000	mg/kg-day	3.86E-007
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	2.98E-007	mg/cu. m.	R	1.37E-009	mg/kg-day	1.40E-002	mg/kg-day	1.92E-011
	Butylbenzylphthalate	1.70E+001	mg/kg	4.58E-008	mg/cu. m.	R	2.11E-010	mg/kg-day		mg/kg-day	
	Cadmium	1.59E+002	mg/kg	1.09E-007	mg/cu. m.	R	5.00E-010	mg/kg-day	6.30E+000	mg/kg-day	3.15E-009
	Carbon Disulfide	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	6.55E-012	mg/kg-day		mg/kg-day	
	Chlorobenzene	8.20E+000	mg/kg	8.46E-004	mg/cu. m.	R	3.89E-006	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	3.21E-004	mg/cu. m.	R	1.48E-006	mg/kg-day	8.10E-002	mg/kg-day	1.20E-007
	Chromium 3+	1.30E+003	mg/kg	8.05E-007	mg/cu. m.	R	3.70E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.34E-007	mg/cu. m.	R	6.17E-010	mg/kg-day	4.10E+001	mg/kg-day	2.53E-008
	Chrysene	1.30E+000	mg/kg	1.13E-009	mg/cu. m.	R	5.22E-012	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-80
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \TT_Inh_cTa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	3.61E-006	mg/cu. m.	R	1.66E-008	mg/kg-day		mg/kg-day	
	Cobalt	5.69E+001	mg/kg	3.69E-008	mg/cu. m.	R	1.70E-010	mg/kg-day		mg/kg-day	
	Copper	1.19E+003	mg/kg	8.57E-007	mg/cu. m.	R	3.94E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	4.81E+001	mg/kg	3.02E-008	mg/cu. m.	R	1.39E-010	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.30E-001	mg/kg	4.79E-010	mg/cu. m.	R	2.20E-012	mg/kg-day		mg/kg-day	
	Diethylphthalate	1.50E-001	mg/kg	2.16E-009	mg/cu. m.	R	9.95E-012	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.40E+000	mg/kg	2.26E-008	mg/cu. m.	R	1.04E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	1.50E+001	mg/kg	1.57E-008	mg/cu. m.	R	7.23E-011	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+000	mg/kg	1.90E-009	mg/cu. m.	R	8.76E-012	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.61E-013	mg/cu. m.	R	7.41E-016	mg/kg-day		mg/kg-day	
	Ethyl Benzene	1.40E+002	mg/kg	1.05E-002	mg/cu. m.	R	4.85E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	3.40E+000	mg/kg	2.48E-009	mg/cu. m.	R	1.14E-011	mg/kg-day		mg/kg-day	
	Fluorene	6.10E-001	mg/kg	5.09E-006	mg/cu. m.	R	2.34E-008	mg/kg-day		mg/kg-day	
	Heptachlor	8.80E-002	mg/kg	5.52E-011	mg/cu. m.	R	2.54E-013	mg/kg-day	4.50E+000	mg/kg-day	1.14E-012
	Heptachlor epoxide	4.20E-002	mg/kg	2.63E-011	mg/cu. m.	R	1.21E-013	mg/kg-day	9.10E+000	mg/kg-day	1.10E-012
	Hexachlorobenzene	0.00E+000	mg/kg	4.24E-013	mg/cu. m.	R	1.95E-015	mg/kg-day	1.60E+000	mg/kg-day	3.12E-015
	Hexachlorobutadiene	0.00E+000	mg/kg	1.14E-009	mg/cu. m.	R	5.26E-012	mg/kg-day	7.80E-002	mg/kg-day	4.10E-013
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	5.77E-014	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	1.18E-010	mg/cu. m.	R	5.42E-013	mg/kg-day		mg/kg-day	
	Isophorone	4.00E+001	mg/kg	9.30E-004	mg/cu. m.	R	4.28E-006	mg/kg-day		mg/kg-day	
	Lead	1.07E+004	mg/kg	7.56E-006	mg/cu. m.	R	3.48E-008	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	1.00E-006	mg/cu. m.	R	4.62E-009	mg/kg-day		mg/kg-day	
	Mercury	9.50E+000	mg/kg	6.67E-009	mg/cu. m.	R	3.07E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-001	mg/kg	8.65E-004	mg/cu. m.	R	3.98E-006	mg/kg-day	1.65E-003	mg/kg-day	6.57E-009
	m,p-xylene	0.00E+000	mg/kg	2.08E-005	mg/cu. m.	R	9.60E-008	mg/kg-day		mg/kg-day	
	Naphthalene	2.80E+001	mg/kg	6.24E-004	mg/cu. m.	R	2.87E-006	mg/kg-day		mg/kg-day	
	Nickel	5.32E+001	mg/kg	3.55E-008	mg/cu. m.	R	1.63E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	8.89E-006	mg/cu. m.	R	4.09E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	1.00E-005	mg/cu. m.	R	4.61E-008	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.50E+000	mg/kg	4.80E-009	mg/cu. m.	R	2.21E-011	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	3.42E-009	mg/cu. m.	R	1.58E-011	mg/kg-day		mg/kg-day	
	Phenol	6.40E+000	mg/kg	1.55E-004	mg/cu. m.	R	7.13E-007	mg/kg-day		mg/kg-day	
	Pyrene	2.30E+000	mg/kg	2.11E-009	mg/cu. m.	R	9.72E-012	mg/kg-day		mg/kg-day	
	Selenium	1.72E+001	mg/kg	1.10E-008	mg/cu. m.	R	5.07E-011	mg/kg-day		mg/kg-day	
	Silver	0.00E+000	mg/kg	8.25E-010	mg/cu. m.	R	3.80E-012	mg/kg-day		mg/kg-day	
	Styrene	2.30E+001	mg/kg	8.98E-004	mg/cu. m.	R	4.13E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	2.50E+002	mg/kg	4.66E-002	mg/cu. m.	R	2.15E-004	mg/kg-day	2.00E-003	mg/kg-day	4.29E-007
	Thallium	0.00E+000	mg/kg	6.04E-011	mg/cu. m.	R	2.78E-013	mg/kg-day		mg/kg-day	
	Toluene	6.40E+002	mg/kg	1.22E-001	mg/cu. m.	R	5.60E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	1.00E+002	mg/kg	1.30E-002	mg/cu. m.	R	6.01E-005	mg/kg-day	6.00E-003	mg/kg-day	3.60E-007
	Vanadium	2.62E+001	mg/kg	1.74E-008	mg/cu. m.	R	8.01E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	5.61E-008	mg/kg-day	3.00E-001	mg/kg-day	1.68E-008
	Xylenes (total)	5.70E+002	mg/kg	7.02E-002	mg/cu. m.	R	3.23E-004	mg/kg-day		mg/kg-day	
	Zinc	1.52E+004	mg/kg	9.81E-006	mg/cu. m.	R	4.51E-008	mg/kg-day		mg/kg-day	
	(Total)										1.47E-006

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-81
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \TT_ID_cTa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethene	8.60E-002	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.13E-007
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	1.2E-009	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.92E-008
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	7.8E-008	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	8.62E-007
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.11E-004
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	2.5E-009	mg/kg-day		mg/kg-day	NA	NA	
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.12E-004
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	6.2E-007	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.24E-005
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.22E-005
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.24E-007
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	6.0E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.21E-004
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	4.7E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.89E-007
	Acetone	1.30E-001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.71E-007
	Aluminum	9.52E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.25E-003
	Anthracene	6.60E-001	mg/kg	NA	NA	M	8.7E-008	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.89E-007
	Antimony	6.76E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.22E-002
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.45E-001
	Arsenic	3.08E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.34E-002
	Barium	2.46E+003	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.62E-003
	Benzene	3.20E+000	mg/kg	NA	NA	M	4.2E-007	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	1.40E-004
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	5.7E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	5.7E-008	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	9.86E-005
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	5.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.83E-003
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.12E-005
	Cadmium	1.59E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	2.09E-002
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	8.2E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.08E-005
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.3E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.32E-007
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.14E-004
	Chrysene	1.30E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.69E+001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.25E-004
	Copper	1.19E+003	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.91E-003
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.16E-004
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	5.7E-008	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.41E-005
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	2.47E-008
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.84E-008
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.97E-005
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.55E-006
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.84E-004
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	4.5E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.12E-005
	Fluorene	6.10E-001	mg/kg	NA	NA	M	8.0E-008	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.01E-006
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.31E-005
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	5.5E-009	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	4.25E-004
	Iron	1.27E+004	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.57E-003
	Isophorone	4.00E+001	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.63E-005
	Lead	1.07E+004	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.01E-002
	Mercury	9.50E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.38E-007
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.84E-004
	Nickel	5.32E+001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.50E-004
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	5.7E-007	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-81
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_10_cTa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.58E-006
	Phenol	6.40E+000	mg/kg	NA	NA	M	8.4E-007	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.40E-006
	Pyrene	2.30E+000	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.01E-005
	Selenium	1.72E+001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.52E-004
	Styrene	2.30E+001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.51E-005
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.29E-003
	Toluene	6.40E+002	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.21E-004
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	2.19E-003
	Vanadium	2.62E+001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	4.92E-004
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.75E-005
	Zinc	1.52E+004	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.66E-003
	(Total)												2.46E-001
Dermal	1,1-Dichloroethane	6.60E-002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.63E-006
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.52E-007
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.24E-005
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.60E-003
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	3.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.61E-003
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.78E-004
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	9.3E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.64E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	3.97E-006
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	2.68E-003
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.14E-005
	Acetone	1.30E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	3.14E-006
	Aluminum	9.52E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.80E-002
	Anthracene	6.60E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.17E-006
	Antimony	6.76E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.20E+001
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	8.0E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.34E+000
	Arsenic	3.06E+001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.03E-001
	Barium	2.46E+003	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	6.65E-002
	Benzene	3.20E+000	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	2.24E-003
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.42E-001
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	8.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.07E-002
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.61E-004
	Cadmium	1.59E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.20E+001
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	1.89E-003
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.9E-008	mg/kg-day	9.8E-003	mg/kg-day	NA	NA	1.98E-006
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.10E-001
	Chrysene	1.30E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.69E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.80E-003
	Copper	1.19E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	9.39E-002
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	9.1E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.11E-003
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	8.1E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.04E-004
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.55E-007
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.65E-007
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.93E-004
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.23E-004
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	2.88E-003
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	6.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.61E-004

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-81
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_cTa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Fluorene	8.10E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.89E-005
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.33E-004
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	8.0E-008	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	6.12E-003
	Iron	1.27E+004	mg/kg	NA	NA	M	2.4E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.02E-002
	Isophorone	4.00E+001	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.79E-004
	Lead	1.07E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.46E-001
	Mercury	9.50E+000	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.15E-005
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.65E-003
	Nickel	5.32E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.01E-001
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	8.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	9.47E-005
	Phenol	6.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.02E-005
	Pyrene	2.30E+000	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.45E-004
	Selenium	1.72E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	6.51E-003
	Styrene	2.30E+001	mg/kg	NA	NA	M	4.4E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.18E-004
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.73E-002
	Toluene	6.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.06E-003
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	3.22E-002
	Vanadium	2.62E+001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	7.09E-003
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	6.03E-004
	Zinc	1.52E+004	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.20E-001
	(Total)												4.81E+001
												Total Hazard Index Across All Exposure Routes/Pathways	4.8E+001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-82
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_inh_cTa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	6.60E-002	mg/kg	2.41E-004	mg/cu. m.	R	1.06E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	7.56E-006
	1,1,1-Trichloroethane	9.00E-003	mg/kg	2.67E-004	mg/cu. m.	R	1.17E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.09E-006
	1,1,2-Trichloroethane	0.00E+000	mg/kg	9.43E-009	mg/cu. m.	R	4.13E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.95E-007	mg/cu. m.	R	1.29E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.48E-004	mg/cu. m.	R	1.96E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.18E-004
	1,2-Dichloroethane	0.00E+000	mg/kg	9.17E-005	mg/cu. m.	R	4.02E-007	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.87E-004
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	1.65E-003	mg/cu. m.	R	7.22E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	1.90E-002	mg/kg	9.55E-005	mg/cu. m.	R	4.18E-007	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	3.67E-004
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.13E-005	mg/cu. m.	R	9.36E-008	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	1.64E-006
	1,4-Dichlorobenzene	0.00E+000	mg/kg	7.89E-006	mg/cu. m.	R	3.46E-008	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	1.51E-007
	2-Butanone	0.00E+000	mg/kg	4.15E-008	mg/cu. m.	R	1.82E-010	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	6.35E-010
	2-Hexanone	0.00E+000	mg/kg	1.98E-003	mg/cu. m.	R	8.66E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	6.18E-003
	2-Methylnaphthalene	1.70E+001	mg/kg	3.82E-004	mg/cu. m.	R	1.68E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	4.70E+000	mg/kg	7.15E-005	mg/cu. m.	R	3.13E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	4.90E+000	mg/kg	2.86E-005	mg/cu. m.	R	1.26E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	3.12E-007	mg/cu. m.	R	1.37E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	9.59E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.07E-012	mg/cu. m.	R	1.35E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	2.34E-004	mg/cu. m.	R	1.03E-006	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	5.14E-005
	4-Methylphenol	4.60E+000	mg/kg	2.25E-004	mg/cu. m.	R	9.85E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	2.16E-010	mg/cu. m.	R	9.46E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	3.22E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	1.04E-010	mg/cu. m.	R	4.57E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	3.60E-001	mg/kg	9.17E-008	mg/cu. m.	R	4.02E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	2.55E-008	mg/cu. m.	R	1.12E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	1.30E-001	mg/kg	3.41E-004	mg/cu. m.	R	1.50E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	2.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	1.21E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	6.60E-001	mg/kg	9.38E-007	mg/cu. m.	R	4.11E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	6.76E+001	mg/kg	4.79E-008	mg/cu. m.	R	2.10E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	4.20E+001	mg/kg	7.62E-009	mg/cu. m.	R	3.34E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	2.70E+001	mg/kg	8.53E-009	mg/cu. m.	R	3.74E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	2.20E+001	mg/kg	8.81E-009	mg/cu. m.	R	3.86E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	0.00E+000	mg/kg	2.89E-008	mg/cu. m.	R	1.27E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	1.96E-008	mg/cu. m.	R	8.60E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	2.46E+003	mg/kg	1.63E-006	mg/cu. m.	R	7.13E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	5.09E-005
	Benzene	3.20E+000	mg/kg	5.98E-004	mg/cu. m.	R	2.62E-006	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.54E-003
	Benzoic Acid	0.00E+000	mg/kg	3.53E-004	mg/cu. m.	R	1.55E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.73E-009	mg/cu. m.	R	7.59E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	0.00E+000	mg/kg	1.27E-010	mg/cu. m.	R	5.55E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	3.13E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	1.25E-010	mg/cu. m.	R	5.50E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	3.13E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	9.72E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	1.01E-009	mg/cu. m.	R	4.44E-012	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	7.78E-007
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	2.30E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	7.62E-005	mg/cu. m.	R	3.34E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	2.98E-007	mg/cu. m.	R	1.31E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	1.70E+001	mg/kg	4.58E-008	mg/cu. m.	R	2.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.58E+002	mg/kg	1.09E-007	mg/cu. m.	R	4.76E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	6.24E-012	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	3.12E-011
	Chlorobenzene	6.20E+000	mg/kg	8.46E-004	mg/cu. m.	R	3.71E-006	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	7.41E-004
	Chloroform	1.00E-002	mg/kg	3.21E-004	mg/cu. m.	R	1.41E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.64E-002
	Chromium 3+	1.30E+003	mg/kg	8.05E-007	mg/cu. m.	R	3.53E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.34E-007	mg/cu. m.	R	5.88E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.30E+000	mg/kg	1.13E-009	mg/cu. m.	R	4.97E-012	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-82
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_eTa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	3.61E-006	mg/cu. m.	R	1.58E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	5.69E+001	mg/kg	3.69E-008	mg/cu. m.	R	1.62E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.19E+003	mg/kg	8.57E-007	mg/cu. m.	R	3.76E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	4.81E+001	mg/kg	3.02E-008	mg/cu. m.	R	1.32E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.30E-001	mg/kg	4.79E-010	mg/cu. m.	R	2.10E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	1.50E-001	mg/kg	2.16E-009	mg/cu. m.	R	9.47E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.40E+000	mg/kg	2.26E-008	mg/cu. m.	R	9.91E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	1.50E+001	mg/kg	1.57E-008	mg/cu. m.	R	6.88E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	1.30E+000	mg/kg	1.90E-009	mg/cu. m.	R	8.34E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.61E-013	mg/cu. m.	R	7.05E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	1.40E+002	mg/kg	1.05E-002	mg/cu. m.	R	4.62E-005	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.59E-004
	Fluoranthene	3.40E+000	mg/kg	2.48E-009	mg/cu. m.	R	1.09E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	6.10E-001	mg/kg	5.09E-006	mg/cu. m.	R	2.23E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	8.80E-002	mg/kg	5.52E-011	mg/cu. m.	R	2.42E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.20E-002	mg/kg	2.63E-011	mg/cu. m.	R	1.15E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	4.24E-013	mg/cu. m.	R	1.86E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	1.14E-009	mg/cu. m.	R	5.01E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	5.50E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	1.18E-010	mg/cu. m.	R	5.16E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	4.00E+001	mg/kg	9.30E-004	mg/cu. m.	R	4.08E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.07E+004	mg/kg	7.56E-006	mg/cu. m.	R	3.31E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	1.00E-006	mg/cu. m.	R	4.40E-009	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	3.08E-004
	Mercury	9.50E+000	mg/kg	6.67E-009	mg/cu. m.	R	2.92E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.40E-007
	Methylene Chloride	2.00E-001	mg/kg	8.65E-004	mg/cu. m.	R	3.79E-006	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	4.41E-006
	m,p-xylene	0.00E+000	mg/kg	2.08E-005	mg/cu. m.	R	9.14E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	2.80E+001	mg/kg	6.24E-004	mg/cu. m.	R	2.74E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.04E-003
	Nickel	5.32E+001	mg/kg	3.55E-008	mg/cu. m.	R	1.56E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	8.89E-006	mg/cu. m.	R	3.90E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	1.00E-005	mg/cu. m.	R	4.39E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.50E+000	mg/kg	4.80E-009	mg/cu. m.	R	2.10E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	3.42E-009	mg/cu. m.	R	1.50E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	6.40E+000	mg/kg	1.55E-004	mg/cu. m.	R	6.79E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	2.30E+000	mg/kg	2.11E-009	mg/cu. m.	R	9.26E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.72E+001	mg/kg	1.10E-006	mg/cu. m.	R	4.83E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	0.00E+000	mg/kg	8.25E-010	mg/cu. m.	R	3.62E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	2.30E+001	mg/kg	8.98E-004	mg/cu. m.	R	3.94E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.38E-005
	Tetrachloroethene	2.50E+002	mg/kg	4.66E-002	mg/cu. m.	R	2.04E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.46E-003
	Thallium	0.00E+000	mg/kg	6.04E-011	mg/cu. m.	R	2.65E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	6.40E+002	mg/kg	1.22E-001	mg/cu. m.	R	5.33E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	4.68E-003
	Trichloroethene	1.00E+002	mg/kg	1.30E-002	mg/cu. m.	R	5.72E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	2.62E+001	mg/kg	1.74E-006	mg/cu. m.	R	7.63E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	5.34E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	5.70E+002	mg/kg	7.02E-002	mg/cu. m.	R	3.08E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.52E+004	mg/kg	9.81E-006	mg/cu. m.	R	4.30E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												3.55E-002

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-83
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb1\TT_ID_cTa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethene	8.80E-002	mg/kg	NA	NA	M	8.1E-011	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	8.5E-012	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.5E-010	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	7.1E-009	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	1.8E-011	mg/kg-day	6.8E-002	kg-day/mg	1.2E-012
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		kg-day/mg	
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	4.4E-009	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	4.6E-009	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.6E-010	mg/kg-day		kg-day/mg	
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	4.3E-009	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	1.4E-010	mg/kg-day	2.4E-001	kg-day/mg	3.4E-011
	Acenaphthene	3.80E-001	mg/kg	NA	NA	M	3.4E-010	mg/kg-day		kg-day/mg	
	Acetone	1.30E-001	mg/kg	NA	NA	M	1.2E-010	mg/kg-day		kg-day/mg	
	Aluminum	9.52E+003	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	Anthracene	6.60E-001	mg/kg	NA	NA	M	6.2E-010	mg/kg-day		kg-day/mg	
	Antimony	6.76E+001	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	3.9E-008	mg/kg-day	2.0E+000	kg-day/mg	7.9E-008
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	2.0E+000	kg-day/mg	5.1E-008
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	2.1E-008	mg/kg-day	2.0E+000	kg-day/mg	4.1E-008
	Arsenic	3.08E+001	mg/kg	NA	NA	M	2.9E-008	mg/kg-day	1.5E+000	kg-day/mg	4.3E-008
	Barium	2.46E+003	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		kg-day/mg	
	Benzene	3.20E+000	mg/kg	NA	NA	M	3.0E-009	mg/kg-day	2.9E-002	kg-day/mg	8.7E-011
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	2.3E-009	mg/kg-day	7.3E-001	kg-day/mg	1.6E-009
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	4.0E-010	mg/kg-day	7.3E-001	kg-day/mg	2.9E-010
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	4.0E-010	mg/kg-day	7.3E-002	kg-day/mg	2.9E-011
	Beryllium	1.50E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	4.0E-007	mg/kg-day	1.4E-002	kg-day/mg	5.7E-009
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		kg-day/mg	
	Cadmium	1.59E+002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	5.8E-009	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	9.4E-012	mg/kg-day	6.1E-003	kg-day/mg	5.7E-014
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Chrysene	1.30E+000	mg/kg	NA	NA	M	1.2E-009	mg/kg-day	7.3E-003	kg-day/mg	8.9E-012
	Cobalt	5.69E+001	mg/kg	NA	NA	M	5.3E-008	mg/kg-day		kg-day/mg	
	Copper	1.19E+003	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	4.5E-008	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	4.0E-010	mg/kg-day		kg-day/mg	
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	1.4E-010	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	1.3E-009	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	3.2E-009	mg/kg-day		kg-day/mg	
	Fluorene	6.10E-001	mg/kg	NA	NA	M	5.7E-010	mg/kg-day		kg-day/mg	
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	8.3E-011	mg/kg-day	4.5E+000	kg-day/mg	3.7E-010
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	3.9E-011	mg/kg-day	9.1E+000	kg-day/mg	3.6E-010
	Iron	1.27E+004	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Isophorone	4.00E+001	mg/kg	NA	NA	M	3.8E-008	mg/kg-day	9.5E-004	kg-day/mg	3.6E-011
	Lead	1.07E+004	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Mercury	9.50E+000	mg/kg	NA	NA	M	8.9E-009	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	1.9E-010	mg/kg-day	7.5E-003	kg-day/mg	1.4E-012
	Naphthalene	2.90E+001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day		kg-day/mg	
	Nickel	5.32E+001	mg/kg	NA	NA	M	5.0E-008	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	4.0E-009	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-83
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_cTe3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day	1.2E-001	kg-day/mg	1.7E-010
	Phenol	6.40E+000	mg/kg	NA	NA	M	6.0E-009	mg/kg-day		kg-day/mg	
	Pyrene	2.30E+000	mg/kg	NA	NA	M	2.2E-009	mg/kg-day		kg-day/mg	
	Selenium	1.72E+001	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		kg-day/mg	
	Styrene	2.30E+001	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		kg-day/mg	
	Tetrachloroethene	2.50E+002	mg/kg	NA	NA	M	2.3E-007	mg/kg-day	5.2E-002	kg-day/mg	1.2E-008
	Toluene	6.40E+002	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		kg-day/mg	
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	9.4E-008	mg/kg-day	1.1E-002	kg-day/mg	1.0E-009
	Vanadium	2.62E+001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	5.4E-007	mg/kg-day		kg-day/mg	
	Zinc	1.52E+004	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	(Total)										2.36E-007
Dermal	1,1-Dichloroethene	8.60E-002	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethene	9.00E-003	mg/kg	NA	NA	M	1.2E-010	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.0E-009	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	2.6E-010	mg/kg-day	6.8E-002	kg-day/mg	1.75E-011
	2-Methylnaphthalene	1.70E+001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	6.4E-008	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	6.6E-008	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	2.3E-009	mg/kg-day		kg-day/mg	
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	6.2E-008	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.0E-009	mg/kg-day	2.4E-001	kg-day/mg	4.87E-010
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	4.9E-009	mg/kg-day		kg-day/mg	
	Acetone	1.30E-001	mg/kg	NA	NA	M	1.8E-009	mg/kg-day		kg-day/mg	
	Aluminum	9.52E+003	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	Anthracene	6.60E-001	mg/kg	NA	NA	M	8.9E-009	mg/kg-day		kg-day/mg	
	Antimony	6.78E+001	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	4.20E+001	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	2.0E+000	kg-day/mg	1.14E-006
	Aroclor-1248	2.70E+001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	2.0E+000	kg-day/mg	7.30E-007
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	2.2E+000	kg-day/mg	6.69E-007
	Arsenic	3.06E+001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	1.6E+000	kg-day/mg	6.54E-007
	Barium	2.48E+003	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		kg-day/mg	
	Benzene	3.20E+000	mg/kg	NA	NA	M	4.3E-008	mg/kg-day	3.2E-002	kg-day/mg	1.39E-009
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	3.2E-008	mg/kg-day	7.3E-001	kg-day/mg	2.37E-008
	Benzo(b)fluoranthene	4.30E-001	mg/kg	NA	NA	M	5.8E-009	mg/kg-day	7.3E-001	kg-day/mg	4.25E-009
	Benzo(k)fluoranthene	4.30E-001	mg/kg	NA	NA	M	5.8E-009	mg/kg-day	7.3E-002	kg-day/mg	4.25E-010
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	NA	NA	M	5.8E-006	mg/kg-day	1.4E-002	kg-day/mg	8.14E-008
	Butylbenzylphthalate	1.70E+001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.59E+002	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	8.4E-008	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.4E-010	mg/kg-day	6.4E-003	kg-day/mg	8.64E-013
	Chromium 3+	1.30E+003	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Chrysene	1.30E+000	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	1.8E-002	kg-day/mg	3.13E-010
	Cobalt	5.69E+001	mg/kg	NA	NA	M	7.7E-007	mg/kg-day		kg-day/mg	
	Copper	1.19E+003	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	4.81E+001	mg/kg	NA	NA	M	6.5E-007	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	5.8E-009	mg/kg-day		kg-day/mg	
	Diethylphthalate	1.50E-001	mg/kg	NA	NA	M	2.0E-009	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	1.9E-008	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.50E+001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	1.30E+000	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.40E+002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	4.6E-008	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-83
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \TT_ID_c7a3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Fluorene	6.10E-001	mg/kg	NA	NA	M	8.3E-009	mg/kg-day		kg-day/mg	
	Heptachlor	8.60E-002	mg/kg	NA	NA	M	1.2E-009	mg/kg-day	4.5E+000	kg-day/mg	5.36E-009
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	5.7E-010	mg/kg-day	9.1E+000	kg-day/mg	5.17E-009
	Iron	1.27E+004	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Isophorone	4.00E+001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day	9.5E-004	kg-day/mg	5.14E-010
	Lead	1.07E+004	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Mercury	9.50E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	2.7E-009	mg/kg-day	1.4E-002	kg-day/mg	3.69E-011
	Naphthalene	2.80E+001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	Nickel	5.32E+001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	5.8E-008	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	2.0E-008	mg/kg-day	1.2E-001	kg-day/mg	2.43E-009
	Phenol	6.40E+000	mg/kg	NA	NA	M	8.7E-008	mg/kg-day		kg-day/mg	
	Pyrene	2.30E+000	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	Selenium	1.72E+001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Styrene	2.30E+001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	Tetrachloroethane	2.50E+002	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	5.2E-002	kg-day/mg	1.76E-007
	Toluene	6.40E+002	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		kg-day/mg	
	Trichloroethene	1.00E+002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	1.1E-002	kg-day/mg	1.52E-008
	Vanadium	2.82E+001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	5.70E+002	mg/kg	NA	NA	M	7.7E-006	mg/kg-day		kg-day/mg	
	Zinc	1.52E+004	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	(Total)										3.51E-006
										Total Hazard Index Across All Exposure Routes/Pathways	3.7E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-84
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_cTa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	8.60E-002	mg/kg	2.41E-004	mg/cu. m.	R	7.56E-009	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	2.67E-004	mg/cu. m.	R	8.36E-009	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	9.43E-009	mg/cu. m.	R	2.95E-013	mg/kg-day	5.60E-002	mg/kg-day	1.65E-014
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.95E-007	mg/cu. m.	R	9.23E-012	mg/kg-day	2.00E-001	mg/kg-day	1.85E-012
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.48E-004	mg/cu. m.	R	1.40E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	9.17E-005	mg/cu. m.	R	2.87E-009	mg/kg-day	9.10E-002	mg/kg-day	2.61E-010
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	1.65E-003	mg/cu. m.	R	5.15E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	1.90E-002	mg/kg	9.55E-005	mg/cu. m.	R	2.99E-009	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.13E-005	mg/cu. m.	R	6.68E-010	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	7.89E-006	mg/cu. m.	R	2.47E-010	mg/kg-day	2.20E-002	mg/kg-day	5.44E-012
	2-Butanone	0.00E+000	mg/kg	4.15E-008	mg/cu. m.	R	1.30E-012	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	1.98E-003	mg/cu. m.	R	6.18E-008	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	1.70E+001	mg/kg	3.82E-004	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day	
	2-Methylphenol	4.70E+000	mg/kg	7.15E-005	mg/cu. m.	R	2.24E-009	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	4.90E+000	mg/kg	2.86E-005	mg/cu. m.	R	8.97E-010	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	3.12E-007	mg/cu. m.	R	9.77E-012	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	6.85E-011	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.07E-012	mg/cu. m.	R	9.62E-017	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	2.34E-004	mg/cu. m.	R	7.34E-009	mg/kg-day		mg/kg-day	
	4-Methylphenol	4.60E+000	mg/kg	2.25E-004	mg/cu. m.	R	7.04E-009	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	2.16E-010	mg/cu. m.	R	6.75E-015	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	2.30E-015	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	1.04E-010	mg/cu. m.	R	3.26E-015	mg/kg-day	3.40E-001	mg/kg-day	1.11E-015
	Acenaphthene	3.60E-001	mg/kg	9.17E-006	mg/cu. m.	R	2.87E-010	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	2.55E-006	mg/cu. m.	R	7.98E-013	mg/kg-day		mg/kg-day	
	Acetone	1.30E-001	mg/kg	3.41E-004	mg/cu. m.	R	1.07E-008	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	1.58E-014	mg/kg-day	1.70E+001	mg/kg-day	2.68E-013
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	8.64E-016	mg/kg-day	6.30E+000	mg/kg-day	5.44E-015
	Anthracene	6.60E-001	mg/kg	9.38E-007	mg/cu. m.	R	2.94E-011	mg/kg-day		mg/kg-day	
	Antimony	6.76E+001	mg/kg	4.79E-008	mg/cu. m.	R	1.50E-012	mg/kg-day		mg/kg-day	
	Aroclor-1242	4.20E+001	mg/kg	7.62E-009	mg/cu. m.	R	2.39E-013	mg/kg-day	2.00E+000	mg/kg-day	4.77E-013
	Aroclor-1248	2.70E+001	mg/kg	8.53E-009	mg/cu. m.	R	2.67E-013	mg/kg-day	2.00E+000	mg/kg-day	5.34E-013
	Aroclor-1254	2.20E+001	mg/kg	8.81E-009	mg/cu. m.	R	2.76E-013	mg/kg-day	2.00E+000	mg/kg-day	5.52E-013
	Aroclor-1260	0.00E+000	mg/kg	2.89E-008	mg/cu. m.	R	9.04E-013	mg/kg-day	2.00E+000	mg/kg-day	1.81E-012
	Arsenic	3.06E+001	mg/kg	1.96E-008	mg/cu. m.	R	6.15E-013	mg/kg-day	1.51E+001	mg/kg-day	9.28E-012
	Barium	2.46E+003	mg/kg	1.63E-006	mg/cu. m.	R	5.09E-011	mg/kg-day		mg/kg-day	
	Benzene	3.20E+000	mg/kg	5.98E-004	mg/cu. m.	R	1.87E-008	mg/kg-day	2.90E-002	mg/kg-day	5.43E-010
	Benzoic Acid	0.00E+000	mg/kg	3.53E-004	mg/cu. m.	R	1.11E-008	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.73E-009	mg/cu. m.	R	5.42E-014	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	0.00E+000	mg/kg	1.27E-010	mg/cu. m.	R	3.96E-015	mg/kg-day	3.10E+000	mg/kg-day	1.23E-014
	Benzo(b)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	2.24E-014	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	1.25E-010	mg/cu. m.	R	3.93E-015	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	4.30E-001	mg/kg	7.14E-010	mg/cu. m.	R	2.23E-014	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	6.94E-014	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	1.01E-009	mg/cu. m.	R	3.17E-014	mg/kg-day	8.40E+000	mg/kg-day	2.66E-013
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	1.64E-015	mg/kg-day	1.80E+000	mg/kg-day	2.96E-015
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	7.62E-005	mg/cu. m.	R	2.39E-009	mg/kg-day	1.10E+000	mg/kg-day	2.63E-009
	bis(2-Ethylhexyl)phthalate	4.30E+002	mg/kg	2.98E-007	mg/cu. m.	R	9.34E-012	mg/kg-day	1.40E-002	mg/kg-day	1.31E-013
	Butylbenzylphthalate	1.70E+001	mg/kg	4.58E-008	mg/cu. m.	R	1.43E-012	mg/kg-day		mg/kg-day	
	Cadmium	1.59E+002	mg/kg	1.09E-007	mg/cu. m.	R	3.40E-012	mg/kg-day	6.30E+000	mg/kg-day	2.14E-011
	Carbon Disulfide	0.00E+000	mg/kg	1.42E-009	mg/cu. m.	R	4.46E-014	mg/kg-day		mg/kg-day	
	Chlorobenzene	6.20E+000	mg/kg	8.46E-004	mg/cu. m.	R	2.65E-008	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	3.21E-004	mg/cu. m.	R	1.01E-008	mg/kg-day	8.10E-002	mg/kg-day	8.14E-010
	Chromium 3+	1.30E+003	mg/kg	8.05E-007	mg/cu. m.	R	2.52E-011	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.34E-007	mg/cu. m.	R	4.20E-012	mg/kg-day	4.10E+001	mg/kg-day	1.72E-010
	Chrysene	1.30E+000	mg/kg	1.13E-009	mg/cu. m.	R	3.55E-014	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Surface Soil (0' to 2')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-84
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_cTa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	3.61E-006	mg/cu. m.	R	1.13E-010	mg/kg-day		mg/kg-day	
	Cobalt	5.69E+001	mg/kg	3.69E-008	mg/cu. m.	R	1.16E-012	mg/kg-day		mg/kg-day	
	Copper	1.19E+003	mg/kg	8.57E-007	mg/cu. m.	R	2.68E-011	mg/kg-day		mg/kg-day	
	Cyanide (total)	4.61E+001	mg/kg	3.02E-008	mg/cu. m.	R	9.44E-013	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.30E-001	mg/kg	4.79E-010	mg/cu. m.	R	1.50E-014	mg/kg-day		mg/kg-day	
	Diethylphthalate	1.50E-001	mg/kg	2.16E-009	mg/cu. m.	R	6.77E-014	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.40E+000	mg/kg	2.26E-008	mg/cu. m.	R	7.08E-013	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	1.50E+001	mg/kg	1.57E-008	mg/cu. m.	R	4.92E-013	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	1.30E+000	mg/kg	1.90E-009	mg/cu. m.	R	5.96E-014	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.61E-013	mg/cu. m.	R	5.04E-018	mg/kg-day		mg/kg-day	
	Ethyl Benzene	1.40E+002	mg/kg	1.05E-002	mg/cu. m.	R	3.30E-007	mg/kg-day		mg/kg-day	
	Fluoranthene	3.40E+000	mg/kg	2.48E-009	mg/cu. m.	R	7.75E-014	mg/kg-day		mg/kg-day	
	Fluorene	6.10E-001	mg/kg	5.09E-006	mg/cu. m.	R	1.59E-010	mg/kg-day		mg/kg-day	
	Heptachlor	8.80E-002	mg/kg	5.52E-011	mg/cu. m.	R	1.73E-015	mg/kg-day	4.50E+000	mg/kg-day	7.77E-015
	Heptachlor epoxide	4.20E-002	mg/kg	2.63E-011	mg/cu. m.	R	8.24E-016	mg/kg-day	9.10E+000	mg/kg-day	7.50E-015
	Hexachlorobenzene	0.00E+000	mg/kg	4.24E-013	mg/cu. m.	R	1.33E-017	mg/kg-day	1.60E+000	mg/kg-day	2.13E-017
	Hexachlorobutadiene	0.00E+000	mg/kg	1.14E-009	mg/cu. m.	R	3.58E-014	mg/kg-day	7.80E-002	mg/kg-day	2.79E-015
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	3.93E-016	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	0.00E+000	mg/kg	1.18E-010	mg/cu. m.	R	3.68E-015	mg/kg-day		mg/kg-day	
	Isophorone	4.00E+001	mg/kg	9.30E-004	mg/cu. m.	R	2.91E-008	mg/kg-day		mg/kg-day	
	Lead	1.07E+004	mg/kg	7.56E-006	mg/cu. m.	R	2.37E-010	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	1.00E-006	mg/cu. m.	R	3.14E-011	mg/kg-day		mg/kg-day	
	Mercury	9.50E+000	mg/kg	6.67E-009	mg/cu. m.	R	2.09E-013	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-001	mg/kg	8.65E-004	mg/cu. m.	R	2.71E-008	mg/kg-day	1.65E-003	mg/kg-day	4.47E-011
	m,p-xylene	0.00E+000	mg/kg	2.08E-005	mg/cu. m.	R	6.53E-010	mg/kg-day		mg/kg-day	
	Naphthalene	2.80E+001	mg/kg	6.24E-004	mg/cu. m.	R	1.95E-008	mg/kg-day		mg/kg-day	
	Nickel	5.32E+001	mg/kg	3.55E-008	mg/cu. m.	R	1.11E-012	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	8.89E-006	mg/cu. m.	R	2.78E-010	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	1.00E-005	mg/cu. m.	R	3.14E-010	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.50E+000	mg/kg	4.80E-009	mg/cu. m.	R	1.50E-013	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	3.42E-009	mg/cu. m.	R	1.07E-013	mg/kg-day		mg/kg-day	
	Phenol	6.40E+000	mg/kg	1.55E-004	mg/cu. m.	R	4.85E-009	mg/kg-day		mg/kg-day	
	Pyrene	2.30E+000	mg/kg	2.11E-009	mg/cu. m.	R	6.61E-014	mg/kg-day		mg/kg-day	
	Selenium	1.72E+001	mg/kg	1.10E-006	mg/cu. m.	R	3.45E-013	mg/kg-day		mg/kg-day	
	Silver	0.00E+000	mg/kg	8.25E-010	mg/cu. m.	R	2.58E-014	mg/kg-day		mg/kg-day	
	Styrene	2.30E+001	mg/kg	8.98E-004	mg/cu. m.	R	2.81E-008	mg/kg-day		mg/kg-day	
	Tetrachloroethene	2.50E+002	mg/kg	4.66E-002	mg/cu. m.	R	1.46E-006	mg/kg-day	2.00E-003	mg/kg-day	2.92E-009
	Thallium	0.00E+000	mg/kg	6.04E-011	mg/cu. m.	R	1.89E-015	mg/kg-day		mg/kg-day	
	Toluene	6.40E+002	mg/kg	1.22E-001	mg/cu. m.	R	3.81E-006	mg/kg-day		mg/kg-day	
	Trichloroethene	1.00E+002	mg/kg	1.30E-002	mg/cu. m.	R	4.09E-007	mg/kg-day	6.00E-003	mg/kg-day	2.45E-009
	Vanadium	2.62E+001	mg/kg	1.74E-008	mg/cu. m.	R	5.45E-013	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	3.82E-010	mg/kg-day	3.00E-001	mg/kg-day	1.14E-010
	Xylenes (total)	5.70E+002	mg/kg	7.02E-002	mg/cu. m.	R	2.20E-006	mg/kg-day		mg/kg-day	
	Zinc	1.52E+004	mg/kg	9.81E-006	mg/cu. m.	R	3.07E-010	mg/kg-day		mg/kg-day	
	(Total)										9.99E-009

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-85
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RCWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.50E-001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.36E-006
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	4.4E-008	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.21E-006
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.22E-005
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	4.15E-003
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	9.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	2-Butanone	2.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.98E-003
	2-Methylnaphthalene	5.60E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.37E-002
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.62E-004
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.20E-003
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.35E-006
	4-Methyl-2-pentanone	5.00E+002	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.07E-002
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.52E-003
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.95E-005
	Acetone	9.70E-001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.76E-005
	Aluminum	1.32E+004	mg/kg	NA	NA	M	6.5E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	6.48E-002
	Anthracene	6.60E-001	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.08E-005
	Antimony	8.48E+001	mg/kg	NA	NA	M	4.2E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.04E+000
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	6.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	5.40E+000
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	5.01E-001
	Barium	5.73E+003	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.02E-001
	Benzene	3.20E+000	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	5.24E-003
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.68E-003
	bis(2-Ethylhexyl)phthalate	5.40E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.33E-001
	Butylbenzylphthalate	5.10E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.25E-003
	Cadmium	1.74E+002	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	8.54E-001
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.52E-003
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.9E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.91E-006
	Chromium 3+	3.08E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.01E-002
	Chrysene	1.30E+000	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.21E-002
	Copper	4.47E+003	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.49E-001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.63E-002
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	5.28E-004
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.07E-005
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	6.87E-007
	Di-n-butylphthalate	9.40E+001	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.62E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.33E-003
	Ethyl Benzene	4.30E+003	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.11E-001
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.17E-004
	Fluorene	6.20E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	7.61E-005
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	4.3E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	8.64E-004
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	1.59E-002
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	3.4E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.15E+000
	Isophorone	1.90E+002	mg/kg	NA	NA	M	9.3E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.66E-003
	Lead	1.62E+004	mg/kg	NA	NA	M	8.0E-002	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-85
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ICWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Manganese	1.54E+003	mg/kg	NA	NA	M	7.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.78E-001
	Mercury	9.50E+000	mg/kg	NA	NA	M	4.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	9.8E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.64E-005
	Naphthalene	9.70E+001	mg/kg	NA	NA	M	4.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.38E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	9.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.84E-002
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	2.30E-002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	5.65E-008
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.45E-004
	Phenol	2.80E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.29E-004
	Pyrene	2.30E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.76E-004
	Selenium	1.72E+001	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.69E-002
	Silver	2.48E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.44E-002
	Styrene	2.30E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.65E-004
	Tetrachloroethene	7.90E+002	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.88E-001
	Toluene	1.90E+004	mg/kg	NA	NA	M	9.3E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.66E-001
	Trichloroethene	1.70E+002	mg/kg	NA	NA	M	8.3E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.39E-001
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.35E-002
	Xylenes (total)	2.30E+004	mg/kg	NA	NA	M	1.1E-001	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	5.65E-002
	Zinc	1.58E+004	mg/kg	NA	NA	M	7.8E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.59E-001
	(Total)												1.23E+001
Dermal	1,1-Dichloroethane	1.50E-001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.90E-005
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	5.3E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.67E-005
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.89E-004
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	5.01E-002
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	2-Butanone	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	2.50E-002
	2-Methylnaphthalene	5.60E+001	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.66E-001
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	5.58E-003
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E-002
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	1.25E-004
	4-Methyl-2-pentanone	5.00E+002	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.71E-001
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	8.40E-002
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.56E-004
	Acetone	9.70E-001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	7.33E-004
	Aluminum	1.32E+004	mg/kg	NA	NA	M	7.8E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.83E-001
	Anthracene	6.60E-001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.31E-004
	Antimony	8.48E+001	mg/kg	NA	NA	M	5.0E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	1.26E+003
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.7E-002	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	7.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	7.33E+001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	6.37E+000
	Barium	5.73E+003	mg/kg	NA	NA	M	3.4E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.86E+000
	Benzene	3.20E+000	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	7.03E-002
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.45E+000
	bis(2-Ethylhexyl)phthalate	5.40E+002	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.60E+000
	Butylbenzylphthalate	5.10E+001	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.51E-002
	Cadmium	1.74E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	4.13E+002
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	3.7E-004	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	5.93E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.9E-007	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	6.21E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-85
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME wk4 \ TT_ID_ICWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	3.08E+003	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.05E+001
	Chrysene	1.30E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	8.8E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.46E-001
	Copper	4.47E+003	mg/kg	NA	NA	M	2.7E-001	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.10E+001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.93E-001
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	6.38E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.71E-004
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	8.31E-006
	Di-n-butylphthalate	9.40E+001	mg/kg	NA	NA	M	5.6E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	5.75E-002
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.13E-001
	Ethyl Benzene	4.30E+003	mg/kg	NA	NA	M	2.6E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	2.77E+000
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.04E-003
	Fluorene	6.20E-001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	9.20E-004
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	5.2E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.04E-002
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	1.92E-001
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	4.2E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.39E+001
	Isophorone	1.90E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.64E-002
	Lead	1.62E+004	mg/kg	NA	NA	M	9.6E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	9.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.57E+000
	Mercury	9.50E+000	mg/kg	NA	NA	M	5.6E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	3.60E-004
	Naphthalene	9.70E+001	mg/kg	NA	NA	M	5.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.88E-001
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.17E+001
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	2.30E-002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.58E-007
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.97E-003
	Phenol	2.80E+001	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.77E-003
	Pyrene	2.30E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.55E-003
	Selenium	1.72E+001	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.04E-001
	Silver	2.48E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.40E+000
	Styrene	2.30E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.82E-003
	Tetrachloroethene	7.90E+002	mg/kg	NA	NA	M	4.7E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.69E+000
	Toluene	1.90E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.64E+000
	Trichloroethene	1.70E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.72E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	4.04E-001
	Xylenes (total)	2.30E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.62E-001
	Zinc	1.58E+004	mg/kg	NA	NA	M	9.4E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.04E+001
	(Total)												1.86E+003
												Total Hazard Index Across All Exposure Routes/Pathways	1.9E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-86
Calculation of Non Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_ICWs3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.50E-001	mg/kg	4.38E-005	mg/cu. m.	R	1.35E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	9.61E-005
	1,1,1-Trichloroethane	9.00E-003	mg/kg	2.90E-006	mg/cu. m.	R	8.89E-007	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.11E-006
	1,2-Dichlorobenzene	5.90E-001	mg/kg	2.51E-005	mg/cu. m.	R	7.70E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	8.55E-004
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	1.90E-003	mg/cu. m.	R	5.83E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	1.90E-002	mg/kg	3.77E-006	mg/cu. m.	R	1.16E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.01E-003
	2-Butanone	2.40E+002	mg/kg	3.37E-003	mg/cu. m.	R	1.03E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.62E-003
	2-Methylnaphthalene	5.60E+001	mg/kg	3.35E-004	mg/cu. m.	R	1.03E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	4.70E+000	mg/kg	2.86E-005	mg/cu. m.	R	8.79E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	4.90E+000	mg/kg	2.19E-005	mg/cu. m.	R	6.72E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	3.02E-007	mg/cu. m.	R	9.26E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	5.00E+002	mg/kg	1.08E-002	mg/cu. m.	R	3.26E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.63E-001
	4-Methylphenol	4.60E+000	mg/kg	6.44E-005	mg/cu. m.	R	1.98E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	5.00E-008	mg/cu. m.	R	1.53E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	3.60E-001	mg/kg	1.22E-006	mg/cu. m.	R	3.74E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	9.70E-001	mg/kg	6.15E-005	mg/cu. m.	R	1.89E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	6.60E-001	mg/kg	8.02E-007	mg/cu. m.	R	2.46E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	8.48E+001	mg/kg	2.77E-005	mg/cu. m.	R	8.50E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	8.44E-005	mg/cu. m.	R	2.59E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	3.66E-005	mg/cu. m.	R	1.12E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	2.20E+001	mg/kg	6.64E-006	mg/cu. m.	R	2.04E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.60E+001	mg/kg	1.08E-005	mg/cu. m.	R	3.24E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.08E+001	mg/kg	9.34E-006	mg/cu. m.	R	2.87E-006	mg/kg-day		mg/kg-day		mg/cu. m.	3.80E+000
	Barium	5.73E+003	mg/kg	1.73E-003	mg/cu. m.	R	5.32E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.50E-001
	Benzene	3.20E+000	mg/kg	8.31E-004	mg/cu. m.	R	2.55E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.48E-007	mg/cu. m.	R	2.30E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.18E-006	mg/cu. m.	R	3.63E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	1.13E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.18E-006	mg/cu. m.	R	3.63E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	4.59E-007	mg/cu. m.	R	1.41E-007	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	2.47E-002
	bis(2-Ethylhexyl)phthalate	5.40E+002	mg/kg	1.70E-004	mg/cu. m.	R	5.21E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	5.10E+001	mg/kg	1.57E-005	mg/cu. m.	R	4.82E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.74E+002	mg/kg	5.74E-005	mg/cu. m.	R	1.76E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chlorobenzene	6.20E+000	mg/kg	6.66E-004	mg/cu. m.	R	2.04E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.09E-002
	Chloroform	1.00E-002	mg/kg	2.70E-006	mg/cu. m.	R	8.28E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	9.63E-003
	Chromium 3+	3.08E+003	mg/kg	7.98E-004	mg/cu. m.	R	2.45E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.33E-004	mg/cu. m.	R	4.08E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.30E+000	mg/kg	4.33E-007	mg/cu. m.	R	1.33E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	4.46E-005	mg/cu. m.	R	1.37E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	4.47E+003	mg/kg	1.33E-003	mg/cu. m.	R	4.08E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.62E+001	mg/kg	2.15E-005	mg/cu. m.	R	6.58E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	4.30E-001	mg/kg	1.41E-007	mg/cu. m.	R	4.33E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	2.76E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	1.51E-006	mg/cu. m.	R	4.62E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	9.40E+001	mg/kg	2.79E-005	mg/cu. m.	R	8.56E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.80E+001	mg/kg	1.11E-005	mg/cu. m.	R	3.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	4.30E+003	mg/kg	6.42E-002	mg/cu. m.	R	1.97E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	6.79E-002
	Fluoranthene	3.40E+000	mg/kg	1.05E-006	mg/cu. m.	R	3.21E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	6.20E-001	mg/kg	1.04E-006	mg/cu. m.	R	3.18E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	8.80E-002	mg/kg	2.93E-008	mg/cu. m.	R	9.00E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.20E-002	mg/kg	1.40E-008	mg/cu. m.	R	4.30E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	8.39E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	1.90E+002	mg/kg	1.87E-003	mg/cu. m.	R	5.73E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.62E+004	mg/kg	5.04E-003	mg/cu. m.	R	1.55E-003	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.03E+001
	Manganese	1.54E+003	mg/kg	4.82E-004	mg/cu. m.	R	1.48E-004	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.11E-002
	Mercury	9.50E+000	mg/kg	3.11E-006	mg/cu. m.	R	9.54E-007	mg/kg-day					

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-86
Calculation of Non Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ IT_Inh_RCWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Methylene Chloride	2.00E-001	mg/kg	5.66E-005	mg/cu. m.	R	1.74E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.02E-005
	Naphthalene	9.70E+001	mg/kg	1.08E-003	mg/cu. m.	R	3.24E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.60E-001
	Nickel	1.97E+002	mg/kg	5.86E-005	mg/cu. m.	R	1.80E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	7.94E-006	mg/cu. m.	R	2.44E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	2.30E-002	mg/kg	2.25E-006	mg/cu. m.	R	6.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	1.53E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	4.28E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	2.80E+001	mg/kg	1.47E-004	mg/cu. m.	R	4.53E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	2.30E+000	mg/kg	7.33E-007	mg/cu. m.	R	2.25E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.72E+001	mg/kg	5.32E-006	mg/cu. m.	R	1.63E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	2.48E+001	mg/kg	7.41E-006	mg/cu. m.	R	2.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	2.30E+001	mg/kg	1.14E-003	mg/cu. m.	R	3.50E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.22E-003
	Tetrachloroethene	7.90E+002	mg/kg	7.57E-002	mg/cu. m.	R	2.32E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.66E-001
	Toluene	1.90E+004	mg/kg	1.45E-001	mg/cu. m.	R	4.44E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.90E-001
	Trichloroethene	1.70E+002	mg/kg	1.84E-002	mg/cu. m.	R	5.64E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.52E-005	mg/cu. m.	R	4.66E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	2.30E+004	mg/kg	7.00E-002	mg/cu. m.	R	2.15E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	5.05E-003	mg/cu. m.	R	1.55E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.55E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-87
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ICWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.50E-001	mg/kg	NA	NA	M	7.9E-009	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	4.7E-010	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	4.0E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	1.0E-009	mg/kg-day	6.8E-002	kg-day/mg	6.8E-011
	2-Butanone	2.40E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.60E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	8.9E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	5.00E+002	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	7.9E-009	mg/kg-day	2.4E-001	kg-day/mg	1.9E-009
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	1.9E-008	mg/kg-day		kg-day/mg	
	Acetone	9.70E-001	mg/kg	NA	NA	M	5.1E-008	mg/kg-day		kg-day/mg	
	Aluminum	1.32E+004	mg/kg	NA	NA	M	6.9E-004	mg/kg-day		kg-day/mg	
	Anthracene	6.60E-001	mg/kg	NA	NA	M	3.5E-008	mg/kg-day		kg-day/mg	
	Antimony	8.48E+001	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.0E+000	kg-day/mg	2.9E-005
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	2.0E+000	kg-day/mg	1.3E-005
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	2.0E+000	kg-day/mg	2.3E-006
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	2.0E+000	kg-day/mg	3.8E-006
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	1.5E+000	kg-day/mg	2.4E-006
	Barium	5.73E+003	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Benzene	3.20E+000	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	2.9E-002	kg-day/mg	4.9E-009
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	7.3E-001	kg-day/mg	9.2E-008
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	7.4E-008	mg/kg-day	7.3E+000	kg-day/mg	5.4E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	7.3E-001	kg-day/mg	1.5E-007
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	7.3E-002	kg-day/mg	1.5E-008
	Beryllium	1.50E+000	mg/kg	NA	NA	M	7.9E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	5.40E+002	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	1.4E-002	kg-day/mg	4.0E-007
	Butylbenzylphthalate	5.10E+001	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.74E+002	mg/kg	NA	NA	M	9.2E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	3.3E-007	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.3E-010	mg/kg-day	6.1E-003	kg-day/mg	3.2E-012
	Chromium 3+	3.08E+003	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Chrysene	1.30E+000	mg/kg	NA	NA	M	6.8E-008	mg/kg-day	7.3E-003	kg-day/mg	5.0E-010
	Cobalt	1.48E+002	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Copper	4.47E+003	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	7.3E+000	kg-day/mg	1.0E-007
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	7.4E-008	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	9.40E+001	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	4.30E+003	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Fluorene	6.20E-001	mg/kg	NA	NA	M	3.3E-008	mg/kg-day		kg-day/mg	
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	4.6E-009	mg/kg-day	4.5E+000	kg-day/mg	2.1E-008
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	2.2E-009	mg/kg-day	9.1E+000	kg-day/mg	2.0E-008
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.3E-008	mg/kg-day	7.3E-001	kg-day/mg	3.1E-008
	Iron	7.01E+004	mg/kg	NA	NA	M	3.7E-003	mg/kg-day		kg-day/mg	
	Isophorone	1.90E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	9.5E-004	kg-day/mg	9.5E-009
	Lead	1.62E+004	mg/kg	NA	NA	M	8.5E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-87
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ICWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Manganese	1.54E+003	mg/kg	NA	NA	M	8.1E-005	mg/kg-day		kg-day/mg	
	Mercury	9.50E+000	mg/kg	NA	NA	M	5.0E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	7.5E-003	kg-day/mg	7.9E-011
	Naphthalene	9.70E+001	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	2.30E-002	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	7.9E-008	mg/kg-day	1.2E-001	kg-day/mg	9.5E-009
	Phenol	2.80E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Pyrene	2.30E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	Selenium	1.72E+001	mg/kg	NA	NA	M	9.0E-007	mg/kg-day		kg-day/mg	
	Silver	2.48E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Styrene	2.30E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	7.90E+002	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	5.2E-002	kg-day/mg	2.2E-006
	Toluene	1.90E+004	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.70E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day	1.1E-002	kg-day/mg	9.8E-008
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.30E+004	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	8.3E-004	mg/kg-day		kg-day/mg	
	(Total)										5.50E-005
Dermal	1,1-Dichloroethane	1.50E-001	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	NA	NA	M	5.7E-009	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	1.90E-002	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	6.8E-002	kg-day/mg	8.21E-010
	2-Butanone	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	5.60E+001	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	4.70E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	4.90E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	5.00E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	4.60E+000	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	9.5E-006	mg/kg-day	2.4E-001	kg-day/mg	2.29E-006
	Acenaphthene	3.60E-001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Acetone	9.70E-001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		kg-day/mg	
	Aluminum	1.32E+004	mg/kg	NA	NA	M	8.4E-003	mg/kg-day		kg-day/mg	
	Anthracene	6.60E-001	mg/kg	NA	NA	M	4.2E-007	mg/kg-day		kg-day/mg	
	Antimony	8.48E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E+000	kg-day/mg	3.56E-004
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	2.0E+000	kg-day/mg	1.61E-004
	Aroclor-1254	2.20E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.2E+000	kg-day/mg	3.14E-005
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E+000	kg-day/mg	4.58E-005
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.5E+000	kg-day/mg	3.07E-005
	Barium	5.73E+003	mg/kg	NA	NA	M	3.6E-003	mg/kg-day		kg-day/mg	
	Benzene	3.20E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	3.2E-002	kg-day/mg	6.55E-008
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.11E-006
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	8.9E-007	mg/kg-day	8.6E+000	kg-day/mg	7.64E-006
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.81E-006
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	7.3E-002	kg-day/mg	1.81E-007
	Beryllium	1.50E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	5.40E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	1.4E-002	kg-day/mg	4.81E-006
	Butylbenzylphthalate	5.10E+001	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.74E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	6.20E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	6.4E-009	mg/kg-day	6.4E-003	kg-day/mg	4.06E-011

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-87
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ICWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chromium 3+	3.08E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.30E+000	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	1.8E-002	kg-day/mg	1.47E-008
	Cobalt	1.48E+002	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		kg-day/mg	
	Copper	4.47E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	4.30E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	8.1E+000	kg-day/mg	1.39E-006
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.40E+000	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	9.40E+001	mg/kg	NA	NA	M	6.0E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	4.30E+003	mg/kg	NA	NA	M	2.7E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	3.40E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Fluorene	6.20E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		kg-day/mg	
	Heptachlor	8.80E-002	mg/kg	NA	NA	M	5.6E-008	mg/kg-day	4.5E+000	kg-day/mg	2.52E-007
	Heptachlor epoxide	4.20E-002	mg/kg	NA	NA	M	2.7E-008	mg/kg-day	9.1E+000	kg-day/mg	2.43E-007
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	5.2E-007	mg/kg-day	7.3E-001	kg-day/mg	3.80E-007
	Iron	7.01E+004	mg/kg	NA	NA	M	4.5E-002	mg/kg-day		kg-day/mg	
	Isophorone	1.90E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	9.5E-004	kg-day/mg	1.15E-007
	Lead	1.62E+004	mg/kg	NA	NA	M	1.0E-002	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	9.8E-004	mg/kg-day		kg-day/mg	
	Mercury	9.50E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	1.4E-002	kg-day/mg	1.73E-009
	Naphthalene	9.70E+001	mg/kg	NA	NA	M	6.2E-005	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	2.30E-002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.50E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day	1.2E-001	kg-day/mg	1.14E-007
	Phenol	2.80E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		kg-day/mg	
	Pyrene	2.30E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Selenium	1.72E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Silver	2.48E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Styrene	2.30E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	7.90E+002	mg/kg	NA	NA	M	5.0E-004	mg/kg-day	5.2E-002	kg-day/mg	2.61E-005
	Toluene	1.90E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	1.70E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.1E-002	kg-day/mg	1.21E-006
	Vanadium	4.77E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	2.30E+004	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.0E-002	mg/kg-day		kg-day/mg	
	(Total)										6.71E-004
										Total Hazard Index Across All Exposure Routes/Pathways	7.3E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-88
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_ICWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.50E-001	mg/kg	4.38E-005	mg/cu. m.	R	1.44E-007	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	9.00E-003	mg/kg	2.90E-006	mg/cu. m.	R	9.53E-009	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	2.51E-005	mg/cu. m.	R	8.25E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene (total)	7.60E+000	mg/kg	1.90E-003	mg/cu. m.	R	6.25E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	1.90E-002	mg/kg	3.77E-006	mg/cu. m.	R	1.24E-008	mg/kg-day		mg/kg-day	
	2-Butanone	2.40E+002	mg/kg	3.37E-003	mg/cu. m.	R	1.11E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	5.60E+001	mg/kg	3.35E-004	mg/cu. m.	R	1.10E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	4.70E+000	mg/kg	2.86E-005	mg/cu. m.	R	9.41E-008	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	4.90E+000	mg/kg	2.19E-005	mg/cu. m.	R	7.20E-008	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	3.02E-007	mg/cu. m.	R	9.92E-010	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	5.00E+002	mg/kg	1.06E-002	mg/cu. m.	R	3.50E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	4.60E+000	mg/kg	6.44E-005	mg/cu. m.	R	2.12E-007	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	5.00E-008	mg/cu. m.	R	1.64E-010	mg/kg-day		mg/kg-day	
	Acenaphthene	3.60E-001	mg/kg	1.22E-006	mg/cu. m.	R	4.01E-009	mg/kg-day		mg/kg-day	
	Acetone	9.70E-001	mg/kg	6.15E-005	mg/cu. m.	R	2.02E-007	mg/kg-day		mg/kg-day	
	Anthracene	6.60E-001	mg/kg	8.02E-007	mg/cu. m.	R	2.64E-009	mg/kg-day		mg/kg-day	
	Antimony	8.48E+001	mg/kg	2.77E-005	mg/cu. m.	R	9.10E-008	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	8.44E-005	mg/cu. m.	R	2.77E-007	mg/kg-day	2.00E+000	mg/kg-day	5.55E-007
	Aroclor-1248	1.27E+002	mg/kg	3.66E-005	mg/cu. m.	R	1.20E-007	mg/kg-day	2.00E+000	mg/kg-day	2.41E-007
	Aroclor-1254	2.20E+001	mg/kg	6.64E-006	mg/cu. m.	R	2.18E-008	mg/kg-day	2.00E+000	mg/kg-day	4.37E-008
	Aroclor-1260	3.60E+001	mg/kg	1.06E-005	mg/cu. m.	R	3.48E-008	mg/kg-day	2.00E+000	mg/kg-day	6.95E-008
	Arsenic	3.06E+001	mg/kg	9.34E-006	mg/cu. m.	R	3.07E-008	mg/kg-day	1.51E+001	mg/kg-day	4.64E-007
	Barium	5.73E+003	mg/kg	1.73E-003	mg/cu. m.	R	5.70E-006	mg/kg-day		mg/kg-day	
	Benzene	3.20E+000	mg/kg	8.31E-004	mg/cu. m.	R	2.73E-006	mg/kg-day	2.90E-002	mg/kg-day	7.93E-008
	Benzo(a)anthracene	2.40E+000	mg/kg	7.48E-007	mg/cu. m.	R	2.46E-009	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.53E-009	mg/kg-day	3.10E+000	mg/kg-day	4.76E-009
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.18E-006	mg/cu. m.	R	3.89E-009	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.18E-006	mg/cu. m.	R	3.89E-009	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	4.59E-007	mg/cu. m.	R	1.51E-009	mg/kg-day	8.40E+000	mg/kg-day	1.27E-008
	bis(2-Ethylhexyl)phthalate	5.40E+002	mg/kg	1.70E-004	mg/cu. m.	R	5.58E-007	mg/kg-day	1.40E-002	mg/kg-day	7.81E-009
	Butylbenzylphthalate	5.10E+001	mg/kg	1.57E-005	mg/cu. m.	R	5.16E-008	mg/kg-day		mg/kg-day	
	Cadmium	1.74E+002	mg/kg	5.74E-005	mg/cu. m.	R	1.89E-007	mg/kg-day	6.30E+000	mg/kg-day	1.19E-006
	Chlorobenzene	6.20E+000	mg/kg	6.66E-004	mg/cu. m.	R	2.19E-006	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	2.70E-006	mg/cu. m.	R	8.87E-009	mg/kg-day	8.10E-002	mg/kg-day	7.19E-010
	Chromium 3+	3.08E+003	mg/kg	7.98E-004	mg/cu. m.	R	2.62E-006	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.33E-004	mg/cu. m.	R	4.37E-007	mg/kg-day	4.10E+001	mg/kg-day	1.79E-005
	Chrysene	1.30E+000	mg/kg	4.33E-007	mg/cu. m.	R	1.42E-009	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	4.46E-005	mg/cu. m.	R	1.47E-007	mg/kg-day		mg/kg-day	
	Copper	4.47E+003	mg/kg	1.33E-003	mg/cu. m.	R	4.37E-006	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	2.15E-005	mg/cu. m.	R	7.05E-008	mg/kg-day		mg/kg-day	
	Dibenzofuran	4.30E-001	mg/kg	1.41E-007	mg/cu. m.	R	4.64E-010	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	2.96E-010	mg/kg-day		mg/kg-day	
	Diethylphthalate	5.00E+000	mg/kg	1.51E-006	mg/cu. m.	R	4.95E-009	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.53E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	9.40E+001	mg/kg	2.79E-005	mg/cu. m.	R	9.17E-008	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	1.11E-005	mg/cu. m.	R	3.65E-008	mg/kg-day		mg/kg-day	
	Ethyl Benzene	4.30E+003	mg/kg	6.42E-002	mg/cu. m.	R	2.11E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	3.40E+000	mg/kg	1.05E-006	mg/cu. m.	R	3.44E-009	mg/kg-day		mg/kg-day	
	Fluorene	6.20E-001	mg/kg	1.04E-006	mg/cu. m.	R	3.41E-009	mg/kg-day		mg/kg-day	
	Heptachlor	8.80E-002	mg/kg	2.93E-008	mg/cu. m.	R	9.64E-011	mg/kg-day	4.50E+000	mg/kg-day	4.34E-010
	Heptachlor epoxide	4.20E-002	mg/kg	1.40E-008	mg/cu. m.	R	4.60E-011	mg/kg-day	9.10E+000	mg/kg-day	4.19E-010
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	8.99E-010	mg/kg-day		mg/kg-day	
	Isophorone	1.90E+002	mg/kg	1.87E-003	mg/cu. m.	R	6.14E-006	mg/kg-day		mg/kg-day	
	Lead	1.62E+004	mg/kg	5.04E-003	mg/cu. m.	R	1.66E-005	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	4.82E-004	mg/cu. m.	R	1.58E-006	mg/kg-day		mg/kg-day	
	Mercury	9.50E+000	mg/kg	3.11E-006	mg/cu. m.	R	1.02E-008	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 4')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-88
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_CWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Methylene Chloride	2.00E-001	mg/kg	5.66E-005	mg/cu. m.	R	1.86E-007	mg/kg-day	1.65E-003	mg/kg-day	3.07E-010
	Naphthalene	9.70E+001	mg/kg	1.06E-003	mg/cu. m.	R	3.47E-006	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	5.86E-005	mg/cu. m.	R	1.93E-007	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	7.94E-006	mg/cu. m.	R	2.61E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	2.30E-002	mg/kg	2.25E-006	mg/cu. m.	R	7.41E-009	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.50E+000	mg/kg	5.00E-007	mg/cu. m.	R	1.64E-009	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.39E-006	mg/cu. m.	R	4.58E-009	mg/kg-day		mg/kg-day	
	Phenol	2.80E+001	mg/kg	1.47E-004	mg/cu. m.	R	4.85E-007	mg/kg-day		mg/kg-day	
	Pyrene	2.30E+000	mg/kg	7.33E-007	mg/cu. m.	R	2.41E-009	mg/kg-day		mg/kg-day	
	Selenium	1.72E+001	mg/kg	5.32E-006	mg/cu. m.	R	1.75E-008	mg/kg-day		mg/kg-day	
	Silver	2.48E+001	mg/kg	7.41E-006	mg/cu. m.	R	2.44E-008	mg/kg-day		mg/kg-day	
	Styrene	2.30E+001	mg/kg	1.14E-003	mg/cu. m.	R	3.75E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	7.90E+002	mg/kg	7.57E-002	mg/cu. m.	R	2.49E-004	mg/kg-day	2.00E-003	mg/kg-day	4.98E-007
	Toluene	1.90E+004	mg/kg	1.45E-001	mg/cu. m.	R	4.76E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	1.70E+002	mg/kg	1.84E-002	mg/cu. m.	R	6.05E-005	mg/kg-day	6.00E-003	mg/kg-day	3.63E-007
	Vanadium	4.77E+001	mg/kg	1.52E-005	mg/cu. m.	R	4.99E-008	mg/kg-day		mg/kg-day	
	Xylenes (total)	2.30E+004	mg/kg	7.00E-002	mg/cu. m.	R	2.30E-004	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	5.05E-003	mg/cu. m.	R	1.66E-005	mg/kg-day		mg/kg-day	
	(Total)										2.15E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-89
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	8.3E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.35E-005
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	3.7E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.87E+000
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.22E-005
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.33E-004
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.42E-002
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	4.6E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.52E-005
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	8.10E-001
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.79E-005
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.16E-002
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.06E-003
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.52E-002
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	2.06E-003
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.35E-006
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.0E-001	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.74E+000
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.16E-002
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	4.05E-005
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.81E-005
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.67E+000
	Aluminum	1.80E+004	mg/kg	NA	NA	M	8.8E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	8.84E-002
	Anthracene	1.20E+000	mg/kg	NA	NA	M	5.9E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.96E-005
	Antimony	1.52E+002	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.87E+000
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	6.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.08E+001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	5.01E-001
	Barium	6.40E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.49E-001
	Benzene	1.50E+003	mg/kg	NA	NA	M	7.4E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.45E+000
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.82E-004
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.68E-003
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	4.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.18E+000
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.62E-003
	Cadmium	1.70E+003	mg/kg	NA	NA	M	8.3E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	8.35E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-89
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	4.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.45E-001
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.9E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.91E-006
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.23E-002
	Chrysene	1.60E+000	mg/kg	NA	NA	M	7.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.08E-005
	Cobalt	1.48E+002	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.21E-002
	Copper	5.79E+003	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	7.11E-001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.63E-002
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	7.86E-004
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.07E-005
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	7.86E-006
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.18E-002
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.33E-003
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.1E-001	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.13E+000
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	7.49E-004
	Fluorene	9.80E-001	mg/kg	NA	NA	M	4.8E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.20E-004
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	3.4E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.15E+000
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.84E-002
	Lead	1.72E+004	mg/kg	NA	NA	M	8.4E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	7.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.78E-001
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.21E-004
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.95E-004
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.67E-001
	Nickel	1.97E+002	mg/kg	NA	NA	M	9.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.84E-002
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.64E-004
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.62E-003
	Phenol	8.60E+002	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	7.04E-003
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.87E-004
	Selenium	1.57E+002	mg/kg	NA	NA	M	7.7E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.54E-001
	Silver	3.12E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.06E-001
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.61E-003
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.3E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.26E+001
	Thallium	1.50E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.05E-001
	Toluene	1.30E+005	mg/kg	NA	NA	M	6.4E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.19E+000
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	9.3E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.55E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-89
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.35E-002
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.45E-001
	Zinc	1.58E+004	mg/kg	NA	NA	M	7.8E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.59E-001
	(Total)												8.13E+001
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.01E-003
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	4.5E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.25E+001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.89E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	4.8E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.60E-003
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.71E-001
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.84E-004
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	5.9E+000	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.03E+001
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.78E-004
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.23E-001
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.49E-002
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.84E-001
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	3.56E-002
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	1.25E-004
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.6E+000	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.52E+001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	4.02E-001
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	4.89E-004
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.02E-004
	Acetone	3.40E+004	mg/kg	NA	NA	M	2.0E+000	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	2.57E+001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.07E+000
	Anthracene	1.20E+000	mg/kg	NA	NA	M	7.1E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.37E-004
	Antimony	1.52E+002	mg/kg	NA	NA	M	9.0E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.25E+003
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.7E-002	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	7.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.47E+002
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	6.37E+000
	Barium	6.40E+003	mg/kg	NA	NA	M	3.8E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.42E+000
	Benzene	1.50E+003	mg/kg	NA	NA	M	8.9E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	3.30E+001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.41E-003
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	8.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-89
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Beryllium	1.50E+000	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.45E+000
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	5.3E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.64E+001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.96E-002
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.0E-001	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	4.03E+003
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	5.9E-002	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	9.57E+000
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.9E-007	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	6.21E-005
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.2E-001	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.71E+001
	Chrysene	1.60E+000	mg/kg	NA	NA	M	9.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.31E-004
	Cobalt	1.48E+002	mg/kg	NA	NA	M	8.8E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.46E-001
	Copper	5.79E+003	mg/kg	NA	NA	M	3.4E-001	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.43E+001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.93E-001
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	9.49E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.71E-004
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	9.5E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	9.49E-005
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.47E-001
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.13E-001
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.48E+001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	9.05E-003
	Fluorene	9.80E-001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.45E-003
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	4.2E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.39E+001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	2.1E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.07E+000
	Lead	1.72E+004	mg/kg	NA	NA	M	1.0E+000	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	9.1E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.57E+000
	Mercury	3.60E+001	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	4.85E-003
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.95E-003
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	4.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.02E+000
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.17E+001
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.6E-004	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	4.0E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.21E-003
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	9.5E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.16E-002
	Phenol	8.60E+002	mg/kg	NA	NA	M	5.1E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	8.50E-002
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	8.31E-003
	Selenium	1.57E+002	mg/kg	NA	NA	M	9.3E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.86E+000
	Silver	3.12E+002	mg/kg	NA	NA	M	1.9E-002	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.76E+001
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	9.20E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5 1-89
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ICW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.7E+000	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.73E+002
	Thallium	1.50E+000	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.27E+000
	Toluene	1.30E+005	mg/kg	NA	NA	M	7.7E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.86E+001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.92E+002
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	4.04E-001
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	5.9E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.31E+000
	Zinc	1.58E+004	mg/kg	NA	NA	M	9.4E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.04E+001
	(Total)												7.27E+003
												Total Hazard Index Across All Exposure Routes/Pathways	7.3E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-90
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_ICW10a3R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.99E-004	mg/cu. m.	R	1.53E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.09E-003
	1,1,1-Trichloroethane	7.60E+003	mg/kg	2.24E-001	mg/cu. m.	R	6.87E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.40E-001
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.68E-007	mg/cu. m.	R	5.16E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	1.24E-005	mg/cu. m.	R	3.82E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	4.24E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	1.50E-004	mg/cu. m.	R	4.62E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	3.30E-002
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	6.32E-003	mg/cu. m.	R	1.94E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	1.05E-004	mg/cu. m.	R	3.22E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	2.82E-002
	1,4-Dichlorobenzene	9.30E-002	mg/kg	4.78E-006	mg/cu. m.	R	1.47E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	6.41E-006
	2-Butanone	9.90E+004	mg/kg	2.82E-002	mg/cu. m.	R	8.66E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.03E-002
	2-Hexanone	3.90E-001	mg/kg	1.44E-004	mg/cu. m.	R	4.41E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	3.15E-002
	2-Methylnaphthalene	2.10E+002	mg/kg	3.77E-004	mg/cu. m.	R	1.16E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	6.78E-005	mg/cu. m.	R	2.08E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	9.46E-005	mg/cu. m.	R	2.90E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	4.20E-006	mg/cu. m.	R	1.29E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	2.56E-007	mg/cu. m.	R	7.87E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	7.57E-002	mg/cu. m.	R	2.32E-002	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.16E+000
	4-Methylphenol	2.20E+001	mg/kg	1.57E-004	mg/cu. m.	R	4.81E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	6.60E-002	mg/kg	2.65E-006	mg/cu. m.	R	8.12E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.00E-008	mg/cu. m.	R	3.07E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	2.36E-006	mg/cu. m.	R	7.23E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	2.22E-001	mg/cu. m.	R	6.81E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.43E-006	mg/cu. m.	R	4.39E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	4.95E-005	mg/cu. m.	R	1.52E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	7.64E-005	mg/cu. m.	R	2.34E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	3.48E-005	mg/cu. m.	R	1.07E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	1.24E-005	mg/cu. m.	R	3.79E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.60E+001	mg/kg	9.99E-006	mg/cu. m.	R	3.07E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	2.05E-006	mg/cu. m.	R	6.28E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.87E-003	mg/cu. m.	R	5.73E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	4.10E+000
	Benzene	1.50E+003	mg/kg	3.80E-002	mg/cu. m.	R	1.17E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	6.85E+000
	Benzoic Acid	2.30E+002	mg/kg	3.93E-003	mg/cu. m.	R	1.21E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.04E-007	mg/cu. m.	R	2.16E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	3.85E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	1.13E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	3.85E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	2.54E-007	mg/cu. m.	R	7.80E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.37E-002
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	2.46E-003	mg/cu. m.	R	7.55E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	6.60E+001	mg/kg	1.96E-005	mg/cu. m.	R	6.02E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	4.78E-004	mg/cu. m.	R	1.47E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.00E-010	mg/cu. m.	R	2.45E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.23E-009
	Chlorobenzene	1.00E+003	mg/kg	1.10E-002	mg/cu. m.	R	3.38E-003	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	6.76E-001
	Chloroethane	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	9.82E-010	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu. m.	3.39E-010
	Chloroform	1.00E-002	mg/kg	8.85E-007	mg/cu. m.	R	2.72E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.16E-003
	Chromium 3+	3.75E+003	mg/kg	9.36E-004	mg/cu. m.	R	2.87E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.56E-004	mg/cu. m.	R	4.79E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.60E+000	mg/kg	5.29E-007	mg/cu. m.	R	1.62E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.28E-006	mg/cu. m.	R	1.62E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	4.27E-005	mg/cu. m.	R	1.31E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.66E-003	mg/cu. m.	R	5.11E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.62E+001	mg/kg	1.96E-005	mg/cu. m.	R	6.06E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	2.11E-007	mg/cu. m.	R	6.46E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	2.76E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	1.60E-006	mg/cu. m.	R	4.92E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.60E+001	mg/kg	4.84E-006	mg/cu. m.	R	1.48E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	6.78E-005	mg/cu. m.	R	2.08E-005	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-90
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_KCW10a3R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Di-n-octylphthalate	3.80E+001	mg/kg	1.10E-005	mg/cu. m.	R	3.37E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	2.30E+004	mg/kg	6.92E-002	mg/cu. m.	R	2.12E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	7.33E-002
	Fluoranthene	6.10E+000	mg/kg	2.00E-006	mg/cu. m.	R	6.13E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	1.62E-006	mg/cu. m.	R	4.97E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	5.87E-009	mg/cu. m.	R	1.80E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.80E-009	mg/cu. m.	R	8.59E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	8.39E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	7.00E-003	mg/cu. m.	R	2.15E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.09E-003	mg/cu. m.	R	1.56E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	2.50E-004	mg/cu. m.	R	7.66E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	5.36E+000
	Mercury	3.60E+001	mg/kg	1.03E-005	mg/cu. m.	R	3.15E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.67E-002
	Methylene Chloride	2.70E+000	mg/kg	8.07E-004	mg/cu. m.	R	2.48E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.88E-004
	m,p-xylene	1.20E+002	mg/kg	1.22E-002	mg/cu. m.	R	3.74E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.64E-003	mg/cu. m.	R	5.04E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	5.60E-001
	Nickel	1.97E+002	mg/kg	5.62E-005	mg/cu. m.	R	1.72E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	3.91E-006	mg/cu. m.	R	1.20E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	4.42E-003	mg/cu. m.	R	1.36E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	5.14E-006	mg/cu. m.	R	1.58E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	2.09E-006	mg/cu. m.	R	6.41E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.60E+002	mg/kg	1.99E-003	mg/cu. m.	R	6.11E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	1.37E-006	mg/cu. m.	R	4.22E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	4.41E-005	mg/cu. m.	R	1.35E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	8.76E-005	mg/cu. m.	R	2.69E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	1.23E-002	mg/cu. m.	R	3.77E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.32E-002
	Tetrachloroethene	4.60E+004	mg/kg	8.80E-002	mg/cu. m.	R	2.70E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.93E-001
	Thallium	1.50E+000	mg/kg	4.50E-007	mg/cu. m.	R	1.38E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.75E-001	mg/cu. m.	R	5.37E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	4.71E-001
	Trichloroethene	1.90E+004	mg/kg	3.32E-001	mg/cu. m.	R	1.02E-001	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.41E-005	mg/cu. m.	R	4.32E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	9.82E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	9.07E-002	mg/cu. m.	R	2.78E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	5.26E-003	mg/cu. m.	R	1.61E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.99E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-91
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	8.9E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	4.3E-008	mg/kg-day	9.1E-002	kg-day/mg	3.9E-009
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.9E-008	mg/kg-day	6.8E-002	kg-day/mg	2.0E-009
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	4.9E-009	mg/kg-day	2.4E-002	kg-day/mg	1.2E-010
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	5.2E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.1E-008	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	4.4E-008	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	8.9E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	3.5E-009	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	7.9E-009	mg/kg-day	2.4E-001	kg-day/mg	1.9E-009
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	3.7E-008	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	9.5E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.0E+000	kg-day/mg	2.9E-005
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	2.0E+000	kg-day/mg	1.3E-005
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	2.0E+000	kg-day/mg	4.6E-006
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	2.0E+000	kg-day/mg	3.8E-006
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	1.5E+000	kg-day/mg	2.4E-006
	Barium	6.40E+003	mg/kg	NA	NA	M	3.4E-004	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	2.9E-002	kg-day/mg	2.3E-006
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	7.3E-001	kg-day/mg	9.2E-008
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	7.4E-008	mg/kg-day	7.3E+000	kg-day/mg	5.4E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	7.3E-001	kg-day/mg	1.5E-007
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	7.3E-002	kg-day/mg	1.5E-008
	Beryllium	1.50E+000	mg/kg	NA	NA	M	7.9E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	1.4E-002	kg-day/mg	6.6E-006
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	8.9E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-91
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	5.3E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.3E-010	mg/kg-day	6.1E-003	kg-day/mg	3.2E-012
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	8.4E-008	mg/kg-day	7.3E-003	kg-day/mg	6.1E-010
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.2E-009	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	7.3E+000	kg-day/mg	1.0E-007
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	8.4E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.2E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.3E-008	mg/kg-day	7.3E-001	kg-day/mg	3.1E-008
	Iron	7.01E+004	mg/kg	NA	NA	M	3.7E-003	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	9.5E-004	kg-day/mg	1.8E-007
	Lead	1.72E+004	mg/kg	NA	NA	M	9.0E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	8.1E-005	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	7.5E-003	kg-day/mg	1.1E-009
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	6.3E-006	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	8.4E-007	mg/kg-day	1.2E-001	kg-day/mg	1.0E-007
	Phenol	8.60E+002	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	5.2E-002	kg-day/mg	1.3E-004
	Thallium	1.50E+000	mg/kg	NA	NA	M	7.9E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	6.8E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.1E-002	kg-day/mg	1.1E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-91
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	5.3E-003	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	8.3E-004	mg/kg-day		kg-day/mg	
	(Total)										2.01E-004
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	4.8E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day	9.1E-002	kg-day/mg	4.69E-008
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	6.8E-002	kg-day/mg	2.38E-008
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	2.4E-002	kg-day/mg	1.42E-009
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	6.3E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	5.3E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.9E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	9.5E-008	mg/kg-day	2.4E-001	kg-day/mg	2.29E-008
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	2.2E-002	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	9.7E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	2.0E+000	kg-day/mg	3.56E-004
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	2.0E+000	kg-day/mg	1.61E-004
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.2E+000	kg-day/mg	6.28E-005
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E+000	kg-day/mg	4.58E-005
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.6E+000	kg-day/mg	3.07E-005
	Barium	6.40E+003	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	9.5E-004	mg/kg-day	3.2E-002	kg-day/mg	3.07E-005
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.11E-006
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	8.9E-007	mg/kg-day	8.6E+000	kg-day/mg	7.64E-006
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.81E-006
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	7.3E-002	kg-day/mg	1.81E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-91
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Beryllium	1.50E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	1.4E-002	kg-day/mg	7.92E-005
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	6.4E-004	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	6.4E-009	mg/kg-day	6.4E-003	kg-day/mg	4.06E-011
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	1.8E-002	kg-day/mg	1.81E-008
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	3.7E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	8.1E+000	kg-day/mg	1.39E-006
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.5E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.9E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	5.2E-007	mg/kg-day	7.3E-001	kg-day/mg	3.80E-007
	Iron	7.01E+004	mg/kg	NA	NA	M	4.5E-002	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	9.5E-004	kg-day/mg	2.17E-006
	Lead	1.72E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	9.8E-004	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.4E-002	kg-day/mg	2.34E-008
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	7.6E-005	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	1.2E-001	kg-day/mg	1.22E-006
	Phenol	8.60E+002	mg/kg	NA	NA	M	5.5E-004	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-91
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fCW10a3R

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.9E-002	mg/kg-day	5.2E-002	kg-day/mg	1.52E-003
	Thallium	1.50E+000	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	8.3E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.1E-002	kg-day/mg	1.36E-004
	Vanadium	4.77E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	6.4E-002	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.0E-002	mg/kg-day		kg-day/mg	
	(Total)										2.44E-003
										Total Hazard Index Across All Exposure Routes/Pathways	2.6E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-92
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_ICW10a3R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.99E-004	mg/cu. m.	R	1.64E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	2.24E-001	mg/cu. m.	R	7.36E-004	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.68E-007	mg/cu. m.	R	5.52E-010	mg/kg-day	5.60E-002	mg/kg-day	3.09E-011
	1,2-Dichlorobenzene	5.90E-001	mg/kg	1.24E-005	mg/cu. m.	R	4.09E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.50E-004	mg/cu. m.	R	4.95E-007	mg/kg-day	9.10E-002	mg/kg-day	4.50E-008
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	6.32E-003	mg/cu. m.	R	2.08E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	1.05E-004	mg/cu. m.	R	3.45E-007	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	4.78E-006	mg/cu. m.	R	1.57E-008	mg/kg-day	2.20E-002	mg/kg-day	3.46E-010
	2-Butanone	9.90E+004	mg/kg	2.82E-002	mg/cu. m.	R	9.28E-005	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	1.44E-004	mg/cu. m.	R	4.73E-007	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.77E-004	mg/cu. m.	R	1.24E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	6.78E-005	mg/cu. m.	R	2.23E-007	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	9.46E-005	mg/cu. m.	R	3.11E-007	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	4.20E-006	mg/cu. m.	R	1.38E-008	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	2.56E-007	mg/cu. m.	R	8.43E-010	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	7.57E-002	mg/cu. m.	R	2.49E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	1.57E-004	mg/cu. m.	R	5.15E-007	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.60E-002	mg/kg	2.65E-006	mg/cu. m.	R	8.70E-009	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.00E-006	mg/cu. m.	R	3.29E-011	mg/kg-day		mg/kg-day	
	Acenaphthene	7.10E-001	mg/kg	2.36E-006	mg/cu. m.	R	7.75E-009	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	2.22E-001	mg/cu. m.	R	7.29E-004	mg/kg-day		mg/kg-day	
	Anthracene	1.20E+000	mg/kg	1.43E-006	mg/cu. m.	R	4.71E-009	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	4.95E-005	mg/cu. m.	R	1.63E-007	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	7.64E-005	mg/cu. m.	R	2.51E-007	mg/kg-day	2.00E+000	mg/kg-day	5.02E-007
	Aroclor-1248	1.27E+002	mg/kg	3.48E-005	mg/cu. m.	R	1.14E-007	mg/kg-day	2.00E+000	mg/kg-day	2.29E-007
	Aroclor-1254	4.40E+001	mg/kg	1.24E-005	mg/cu. m.	R	4.07E-008	mg/kg-day	2.00E+000	mg/kg-day	8.13E-008
	Aroclor-1260	3.60E+001	mg/kg	9.99E-006	mg/cu. m.	R	3.28E-008	mg/kg-day	2.00E+000	mg/kg-day	6.57E-008
	Arsenic	3.06E+001	mg/kg	2.05E-006	mg/cu. m.	R	6.73E-009	mg/kg-day	1.51E+001	mg/kg-day	1.02E-007
	Barium	6.40E+003	mg/kg	1.87E-003	mg/cu. m.	R	6.14E-006	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	3.80E-002	mg/cu. m.	R	1.25E-004	mg/kg-day	2.90E-002	mg/kg-day	3.62E-006
	Benzoic Acid	2.30E+002	mg/kg	3.93E-003	mg/cu. m.	R	1.29E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.04E-007	mg/cu. m.	R	2.31E-009	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	1.53E-009	mg/kg-day	3.10E+000	mg/kg-day	4.76E-009
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	4.12E-009	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	4.12E-009	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	2.54E-007	mg/cu. m.	R	8.36E-010	mg/kg-day	8.40E+000	mg/kg-day	7.02E-009
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	2.46E-003	mg/cu. m.	R	8.09E-006	mg/kg-day	1.40E-002	mg/kg-day	1.13E-007
	Butylbenzylphthalate	6.60E+001	mg/kg	1.96E-005	mg/cu. m.	R	6.45E-008	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	4.78E-004	mg/cu. m.	R	1.57E-006	mg/kg-day	6.30E+000	mg/kg-day	9.89E-006
	Carbon Disulfide	0.00E+000	mg/kg	8.00E-010	mg/cu. m.	R	2.63E-012	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.10E-002	mg/cu. m.	R	3.62E-005	mg/kg-day		mg/kg-day	
	Chloroethane	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	1.05E-011	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	8.85E-007	mg/cu. m.	R	2.91E-009	mg/kg-day	8.10E-002	mg/kg-day	2.36E-010
	Chromium 3+	3.75E+003	mg/kg	9.36E-004	mg/cu. m.	R	3.08E-006	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.56E-004	mg/cu. m.	R	5.13E-007	mg/kg-day	4.10E+001	mg/kg-day	2.10E-005
	Chrysene	1.60E+000	mg/kg	5.29E-007	mg/cu. m.	R	1.74E-009	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.28E-006	mg/cu. m.	R	1.74E-008	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	4.27E-005	mg/cu. m.	R	1.41E-007	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.66E-003	mg/cu. m.	R	5.47E-006	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	1.98E-005	mg/cu. m.	R	6.51E-008	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	2.11E-007	mg/cu. m.	R	6.92E-010	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-006	mg/cu. m.	R	2.96E-010	mg/kg-day		mg/kg-day	
	Diethylphthalate	5.00E+000	mg/kg	1.60E-006	mg/cu. m.	R	5.27E-009	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.60E+001	mg/kg	4.84E-006	mg/cu. m.	R	1.59E-008	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	6.78E-005	mg/cu. m.	R	2.23E-007	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Construction Worker
Receptor Age:	Adult

Table 5-1-92
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_fCW10a3R.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Di-n-octylphthalate	3.80E+001	mg/kg	1.10E-005	mg/cu. m.	R	3.61E-008	mg/kg-day		mg/kg-day	
	Ethyl Benzene	2.30E+004	mg/kg	6.92E-002	mg/cu. m.	R	2.28E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	2.00E-006	mg/cu. m.	R	6.57E-009	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	1.62E-006	mg/cu. m.	R	5.32E-009	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	5.87E-009	mg/cu. m.	R	1.93E-011	mg/kg-day	4.50E+000	mg/kg-day	8.68E-011
	Heptachlor epoxide	0.00E+000	mg/kg	2.80E-009	mg/cu. m.	R	9.21E-012	mg/kg-day	9.10E+000	mg/kg-day	8.38E-011
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	8.99E-010	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	7.00E-003	mg/cu. m.	R	2.30E-005	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.09E-003	mg/cu. m.	R	1.67E-005	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	2.50E-004	mg/cu. m.	R	8.21E-007	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	1.03E-005	mg/cu. m.	R	3.38E-008	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	8.07E-004	mg/cu. m.	R	2.65E-006	mg/kg-day	1.65E-003	mg/kg-day	4.38E-009
	m,p-xylene	1.20E+002	mg/kg	1.22E-002	mg/cu. m.	R	4.01E-005	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.64E-003	mg/cu. m.	R	5.40E-006	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	5.62E-005	mg/cu. m.	R	1.85E-007	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	3.91E-006	mg/cu. m.	R	1.28E-006	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	4.42E-003	mg/cu. m.	R	1.45E-005	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	5.14E-006	mg/cu. m.	R	1.69E-006	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	2.09E-006	mg/cu. m.	R	6.87E-009	mg/kg-day		mg/kg-day	
	Phenol	8.60E+002	mg/kg	1.99E-003	mg/cu. m.	R	6.55E-006	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	1.37E-006	mg/cu. m.	R	4.52E-009	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	4.41E-005	mg/cu. m.	R	1.45E-007	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	8.76E-005	mg/cu. m.	R	2.88E-007	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	1.23E-002	mg/cu. m.	R	4.04E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	8.80E-002	mg/cu. m.	R	2.89E-004	mg/kg-day	2.00E-003	mg/kg-day	5.78E-007
	Thallium	1.50E+000	mg/kg	4.50E-007	mg/cu. m.	R	1.48E-009	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.75E-001	mg/cu. m.	R	5.75E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	3.32E-001	mg/cu. m.	R	1.09E-003	mg/kg-day	6.00E-003	mg/kg-day	6.55E-006
	Vanadium	4.77E+001	mg/kg	1.41E-005	mg/cu. m.	R	4.63E-008	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	1.05E-011	mg/kg-day	3.00E-001	mg/kg-day	3.16E-012
	Xylenes (total)	1.00E+005	mg/kg	9.07E-002	mg/cu. m.	R	2.98E-004	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	5.26E-003	mg/cu. m.	R	1.73E-005	mg/kg-day		mg/kg-day	
	(Total)										4.28E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-93
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_IO_RWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.66E-005
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	7.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.72E-001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.8E-007	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	6.41E-006
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	7.9E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.64E-005
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.83E-003
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	5.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	9.1E-008	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.03E-006
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	9.7E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.61E-001
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	3.8E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	9.54E-006
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.03E-002
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.11E-004
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.03E-003
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	8.2E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	4.11E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.66E-006
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	6.0E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	7.46E-001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.31E-003
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	6.5E-008	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	8.07E-006
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	6.9E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.16E-005
	Acetone	3.40E+004	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.33E-001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.76E-002
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.91E-006
	Antimony	1.52E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	3.72E-001
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.15E+000
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	9.98E-002
	Barium	6.40E+003	mg/kg	NA	NA	M	6.3E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	8.95E-002
	Benzene	1.50E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	4.89E-001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	5.63E-005
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	7.34E-004
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	8.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.35E-001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	6.5E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.23E-004
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.66E+000
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	9.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.89E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	9.8E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.78E-007
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	2.45E-003
	Chrysene	1.60E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.15E-006
	Cobalt	1.48E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.41E-003
	Copper	5.79E+003	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.42E-001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	6.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.24E-003
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	6.3E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.57E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-93
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Dibenzo(a,h)enthracene	2.70E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	4.9E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	6.12E-006
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.57E-006
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.35E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	3.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.86E-003
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.25E-001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.49E-004
	Fluorene	9.80E-001	mg/kg	NA	NA	M	9.6E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.40E-005
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	6.9E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.29E-001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	3.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.76E-002
	Lead	1.72E+004	mg/kg	NA	NA	M	1.7E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.53E-002
	Mercury	3.60E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.40E-005
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	5.87E-005
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	6.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.33E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.64E-003
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	4.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	6.6E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.28E-005
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.22E-004
	Phenol	8.60E+002	mg/kg	NA	NA	M	8.4E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.40E-003
	Pyrene	4.20E+000	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.37E-004
	Selenium	1.57E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.07E-002
	Silver	3.12E+002	mg/kg	NA	NA	M	3.1E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	6.11E-002
	Styrene	3.10E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.52E-003
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	4.5E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.50E+000
	Thallium	1.50E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	2.10E-002
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.36E-001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.10E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	4.7E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	6.67E-003
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	9.8E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	4.89E-002
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.15E-002
	(Total)												1.62E+001
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.85E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	4.3E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.16E+001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.72E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.53E-003
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.64E-001
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.76E-004
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	5.6E+000	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	9.86E+000
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.53E-004
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.96E-001
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.38E-002
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.76E-001
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	4.8E-005	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	3.41E-002
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	1.19E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-93
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RWs3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.5E+000	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.33E+001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.84E-001
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	4.68E-004
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	8.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.72E-004
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.9E+000	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	2.46E+001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.0E+000	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.02E+000
	Anthracene	1.20E+000	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.27E-004
	Antimony	1.52E+002	mg/kg	NA	NA	M	8.6E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.16E+003
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.6E-002	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	7.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.40E+002
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	6.09E+000
	Barium	6.40E+003	mg/kg	NA	NA	M	3.6E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.19E+000
	Benzene	1.50E+003	mg/kg	NA	NA	M	8.5E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	3.15E+001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.26E-003
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.26E+000
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	5.1E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.53E+001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.87E-002
	Cadmium	1.70E+003	mg/kg	NA	NA	M	9.6E-002	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.86E+003
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	9.15E+000
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	9.8E-003	mg/kg-day	NA	NA	5.94E-005
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.1E-001	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.55E+001
	Chrysene	1.60E+000	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.25E-004
	Cobalt	1.48E+002	mg/kg	NA	NA	M	8.4E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.40E-001
	Copper	5.79E+003	mg/kg	NA	NA	M	3.3E-001	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.37E+001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.76E-001
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	9.08E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.55E-004
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	9.08E-005
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.40E-001
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.08E-001
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.3E+000	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.42E+001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.65E-003
	Fluorene	9.80E-001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.39E-003
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	4.0E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.33E+001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.02E+000
	Lead	1.72E+004	mg/kg	NA	NA	M	9.8E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	8.7E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.37E+000
	Mercury	3.60E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-93
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	4.64E-003
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.78E-003
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.93E+000
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.12E+001
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.11E-003
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.03E-002
	Phenol	8.60E+002	mg/kg	NA	NA	M	4.9E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	8.13E-002
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.95E-003
	Selenium	1.57E+002	mg/kg	NA	NA	M	8.9E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.78E+000
	Silver	3.12E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.69E+001
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.80E-002
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.6E+000	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.61E+002
	Thallium	1.50E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.22E+000
	Toluene	1.30E+005	mg/kg	NA	NA	M	7.4E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.69E+001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.83E+002
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.87E-001
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	5.7E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.17E+000
	Zinc	1.58E+004	mg/kg	NA	NA	M	9.0E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	9.96E+000
	(Total)												6.95E+003
												Total Hazard Index Across All Exposure Routes/Pathways	7.0E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-94
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \\ IT_Info_fRWe3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	8.61E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.15E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	8.51E-002	mg/cu. m.	R	1.67E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.83E-002
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	9.20E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	4.55E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	8.78E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	9.76E-003
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	3.48E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.48E-002
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	8.39E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	4.69E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	4.11E-002
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	4.27E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	7.49E-005
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	2.02E-012	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	1.01E-009
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	3.73E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	1.63E-005
	2-Butanone	9.90E+004	mg/kg	4.68E-006	mg/cu. m.	R	9.17E-007	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.20E-006
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	4.15E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.97E-001
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	7.52E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	2.14E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	9.26E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	1.26E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	7.82E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-008	mg/cu. m.	R	1.22E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	4.28E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	1.20E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	5.18E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	2.59E-001
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	6.12E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	6.60E-002	mg/kg	2.67E-006	mg/cu. m.	R	5.23E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	3.57E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	1.44E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	3.14E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	2.16E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	6.05E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	8.09E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	9.87E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	5.40E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	2.83E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	9.04E-008	mg/cu. m.	R	1.77E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-008	mg/cu. m.	R	3.24E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	1.32E-008	mg/cu. m.	R	2.59E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	1.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.60E+001	mg/kg	3.24E-008	mg/cu. m.	R	6.34E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	6.16E-009	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	3.15E-007	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.25E-003
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	2.77E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.63E+000
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	8.67E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	3.09E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	1.62E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	4.80E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	1.32E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	4.80E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	4.34E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	8.26E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.45E-005
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	1.03E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	1.60E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	1.68E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-94
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 | TT_Inh_RWs3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Butylbenzylphthalate	6.60E+001	mg/kg	5.55E-008	mg/cu. m.	R	1.09E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	4.66E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	5.57E-011	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	2.79E-010
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	2.26E-003	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.52E-001
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	9.21E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.07E+000
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	1.66E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	2.77E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	2.51E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	1.12E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	3.22E-008	mg/cu. m.	R	6.30E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	2.44E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.62E+001	mg/kg	2.03E-008	mg/cu. m.	R	3.98E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	1.24E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	2.65E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	5.50E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	9.35E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.60E+001	mg/kg	2.77E-008	mg/cu. m.	R	5.43E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	8.38E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	1.82E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	2.75E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	3.66E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	6.30E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	5.88E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	2.03E-002
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	7.58E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	5.93E-006	mg/cu. m.	R	1.16E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	2.75E-012	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	1.37E-008
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	2.16E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	1.03E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	1.66E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	2.37E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	2.45E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	1.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	1.35E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	1.09E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	1.08E-007	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	7.55E-003
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	1.39E-009	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.61E-005
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	7.81E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	9.08E-004
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	2.80E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	3.58E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.98E-001
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	7.15E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	9.63E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	5.06E-003	mg/cu. m.	R	9.93E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-008	mg/cu. m.	R	2.41E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	1.01E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.60E+002	mg/kg	1.96E-003	mg/cu. m.	R	3.83E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	1.33E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	6.13E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	2.13E-008	mg/cu. m.	R	4.18E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	4.13E-008	mg/cu. m.	R	8.09E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	1.53E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.35E-003
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	9.85E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	7.04E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-94
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ T7 inh RWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	9.00E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	2.86E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.51E-001
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	3.08E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.37E-008	mg/cu. m.	R	2.69E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	2.38E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	1.38E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	1.98E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												4.60E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-95
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	5.9E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	2.7E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	9.1E-002	kg-day/mg	2.6E-008
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	9.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	6.8E-002	kg-day/mg	1.3E-008
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	3.2E-008	mg/kg-day	2.4E-002	kg-day/mg	7.8E-010
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	3.5E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	7.3E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	5.9E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	2.1E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	7.7E-006	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day	2.4E-001	kg-day/mg	1.3E-008
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	6.3E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	4.2E-007	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	5.3E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	9.8E-005	mg/kg-day	2.0E+000	kg-day/mg	2.0E-004
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	4.4E-005	mg/kg-day	2.0E+000	kg-day/mg	8.9E-005
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	2.0E+000	kg-day/mg	3.1E-005
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	2.0E+000	kg-day/mg	2.5E-005
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	1.5E+000	kg-day/mg	1.6E-005
	Barium	6.40E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	5.2E-004	mg/kg-day	2.9E-002	kg-day/mg	1.5E-005
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	8.0E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	8.4E-007	mg/kg-day	7.3E-001	kg-day/mg	6.1E-007
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	7.3E+000	kg-day/mg	3.6E-006
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	7.3E-001	kg-day/mg	9.9E-007
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	7.3E-002	kg-day/mg	9.9E-008
	Beryllium	1.50E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day	1.4E-002	kg-day/mg	4.4E-005
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	5.9E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	3.5E-009	mg/kg-day	6.1E-003	kg-day/mg	2.1E-011
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	7.3E-003	kg-day/mg	4.1E-009
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	7.7E-009	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	5.2E-005	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-95
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	7.3E+000	kg-day/mg	6.9E-007
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	8.4E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	8.0E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day	7.3E-001	kg-day/mg	2.1E-007
	Iron	7.01E+004	mg/kg	NA	NA	M	2.4E-002	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	9.5E-004	kg-day/mg	1.2E-006
	Lead	1.72E+004	mg/kg	NA	NA	M	6.0E-003	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	7.5E-003	kg-day/mg	7.1E-009
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	6.9E-005	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day	1.2E-001	kg-day/mg	6.7E-007
	Phenol	8.60E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	5.2E-002	kg-day/mg	8.4E-004
	Thallium	1.50E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	4.5E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	6.6E-003	mg/kg-day	1.1E-002	kg-day/mg	7.3E-005
	Vanadium	4.77E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	3.5E-002	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	5.5E-003	mg/kg-day		kg-day/mg	
	(Total)										1.33E-003
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	9.1E-002	kg-day/mg	1.49E-006
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	6.8E-002	kg-day/mg	7.58E-007
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	2.4E-002	kg-day/mg	4.52E-008
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	2.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	4.3E-003	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-95
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.2E+000	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.4E-001	kg-day/mg	7.30E-007
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	6.9E-001	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	3.6E-001	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	2.0E+000	kg-day/mg	1.14E-002
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	2.0E+000	kg-day/mg	5.15E-003
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	8.9E-004	mg/kg-day	2.2E+000	kg-day/mg	2.00E-003
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	2.0E+000	kg-day/mg	1.46E-003
	Arsenic	3.06E+001	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	1.6E+000	kg-day/mg	9.79E-004
	Barium	6.40E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	3.2E-002	kg-day/mg	9.80E-004
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	4.9E-005	mg/kg-day	7.3E-001	kg-day/mg	3.55E-005
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	8.8E+000	kg-day/mg	2.44E-004
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	7.3E-001	kg-day/mg	5.77E-005
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	7.3E-002	kg-day/mg	5.77E-006
	Beryllium	1.50E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	1.4E-002	kg-day/mg	2.53E-003
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	3.4E-002	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	2.0E-002	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	6.4E-003	kg-day/mg	1.29E-009
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	7.6E-002	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	1.8E-002	kg-day/mg	5.77E-007
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	3.0E-003	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	8.1E+000	kg-day/mg	4.44E-005
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	7.7E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	4.7E-001	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	7.3E-001	kg-day/mg	1.21E-005
	Iron	7.01E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	7.3E-002	mg/kg-day	9.5E-004	kg-day/mg	6.93E-005
	Lead	1.72E+004	mg/kg	NA	NA	M	3.5E-001	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-95
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RVIe3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	1.4E-002	kg-day/mg	7.46E-007
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	4.0E-003	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	1.2E-001	kg-day/mg	3.89E-005
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.7E-002	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	6.3E-003	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	6.3E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	9.3E-001	mg/kg-day	5.2E-002	kg-day/mg	4.85E-002
	Thallium	1.50E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	2.6E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	3.9E-001	mg/kg-day	1.1E-002	kg-day/mg	4.32E-003
	Vanadium	4.77E+001	mg/kg	NA	NA	M	9.7E-004	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	2.0E+000	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	3.2E-001	mg/kg-day		kg-day/mg	
	(Total)										7.78E-002
										Total Hazard Index Across All Exposure Routes/Pathways	7.9E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-96
Calculation of Cancer Risks
easonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_inh_RWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	3.08E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	8.51E-002	mg/cu. m.	R	5.95E-003	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	3.29E-007	mg/kg-day	5.60E-002	mg/kg-day	1.84E-008
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	1.63E-007	mg/kg-day	2.00E-001	mg/kg-day	3.25E-008
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	3.14E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	1.24E-005	mg/kg-day	9.10E-002	mg/kg-day	1.13E-006
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	3.00E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	1.67E-005	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	1.52E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	7.20E-013	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	1.33E-006	mg/kg-day	2.20E-002	mg/kg-day	2.93E-008
	2-Butanone	9.90E+004	mg/kg	4.68E-006	mg/cu. m.	R	3.27E-007	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	1.48E-004	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	2.69E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	7.68E-006	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	3.31E-008	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	4.49E-006	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	2.79E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-006	mg/cu. m.	R	4.36E-009	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	1.53E-007	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	4.29E-014	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	1.85E-003	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	2.18E-005	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.60E-002	mg/kg	2.67E-006	mg/cu. m.	R	1.87E-007	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	1.28E-011	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	5.14E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	1.12E-011	mg/kg-day	3.40E-001	mg/kg-day	3.81E-012
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	7.73E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	2.16E-008	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	2.89E-003	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	3.52E-011	mg/kg-day	1.70E+001	mg/kg-day	5.99E-010
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	1.93E-012	mg/kg-day	6.30E+000	mg/kg-day	1.21E-011
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	1.01E-007	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	9.04E-006	mg/cu. m.	R	6.32E-009	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-006	mg/cu. m.	R	1.16E-009	mg/kg-day	2.00E+000	mg/kg-day	2.31E-009
	Aroclor-1248	1.27E+002	mg/kg	1.32E-006	mg/cu. m.	R	9.24E-010	mg/kg-day	2.00E+000	mg/kg-day	1.85E-009
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	6.55E-010	mg/kg-day	2.00E+000	mg/kg-day	1.31E-009
	Aroclor-1260	3.60E+001	mg/kg	3.24E-006	mg/cu. m.	R	2.26E-009	mg/kg-day	2.00E+000	mg/kg-day	4.53E-009
	Arsenic	3.06E+001	mg/kg	6.16E-009	mg/cu. m.	R	4.31E-010	mg/kg-day	1.51E+001	mg/kg-day	6.51E-009
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	1.12E-007	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	9.91E-004	mg/kg-day	2.90E-002	mg/kg-day	2.87E-005
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	3.10E-004	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	1.10E-010	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	5.78E-011	mg/kg-day	3.10E+000	mg/kg-day	1.79E-010
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	1.71E-010	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	4.73E-011	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	1.71E-010	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	1.55E-010	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	2.95E-011	mg/kg-day	8.40E+000	mg/kg-day	2.48E-010
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	3.67E-012	mg/kg-day	1.80E+000	mg/kg-day	6.60E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	5.73E-006	mg/kg-day	1.10E+000	mg/kg-day	6.30E-006
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	6.00E-008	mg/kg-day	1.40E-002	mg/kg-day	8.40E-010

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-96
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_RWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Butylbenzylphthalate	6.60E+001	mg/kg	5.55E-008	mg/cu. m.	R	3.88E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	1.66E-008	mg/kg-day	6.30E+000	mg/kg-day	1.05E-007
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	1.99E-011	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	8.08E-004	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	3.29E-005	mg/kg-day	8.10E-002	mg/kg-day	2.66E-006
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	5.93E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	9.88E-009	mg/kg-day	4.10E+001	mg/kg-day	4.05E-007
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	8.97E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	3.99E-005	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	3.22E-008	mg/cu. m.	R	2.25E-009	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	8.73E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	8.62E+001	mg/kg	2.03E-008	mg/cu. m.	R	1.42E-009	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	4.42E-011	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	9.46E-012	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	1.96E-013	mg/kg-day	1.60E+001	mg/kg-day	3.14E-012
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	3.34E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.80E+001	mg/kg	2.77E-008	mg/cu. m.	R	1.94E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	2.99E-009	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	6.51E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	9.81E-013	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	1.31E-012	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	2.25E-015	mg/kg-day		mg/kg-day	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	2.10E-003	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	2.71E-010	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	5.93E-006	mg/cu. m.	R	4.15E-007	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	9.81E-013	mg/kg-day	3.50E-001	mg/kg-day	3.43E-013
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	7.71E-013	mg/kg-day	4.50E+000	mg/kg-day	3.47E-012
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	3.68E-013	mg/kg-day	9.10E+000	mg/kg-day	3.35E-012
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	5.93E-015	mg/kg-day	1.60E+000	mg/kg-day	9.49E-015
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	8.47E-011	mg/kg-day	7.80E-002	mg/kg-day	6.61E-012
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	8.76E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	3.69E-011	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	4.84E-004	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	3.90E-007	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	3.86E-008	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	4.96E-010	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	2.79E-004	mg/kg-day	1.65E-003	mg/kg-day	4.60E-007
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	1.00E-003	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	1.28E-004	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	3.65E-006	mg/cu. m.	R	2.55E-009	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	3.44E-007	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	3.55E-004	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-006	mg/cu. m.	R	8.60E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	3.62E-010	mg/kg-day		mg/kg-day	
	Phenol	8.60E+002	mg/kg	1.96E-003	mg/cu. m.	R	1.37E-004	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	4.74E-012	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	2.19E-010	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	2.13E-006	mg/cu. m.	R	1.49E-009	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	4.13E-006	mg/cu. m.	R	2.89E-009	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	5.46E-004	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	3.52E-003	mg/kg-day	2.00E-003	mg/kg-day	7.04E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-96
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_IRWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	3.22E-011	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	1.02E-002	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	1.10E-002	mg/kg-day	6.00E-003	mg/kg-day	6.60E-005
	Vanadium	4.77E+001	mg/kg	1.37E-008	mg/cu. m.	R	9.59E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	8.52E-007	mg/kg-day	3.00E-001	mg/kg-day	2.56E-007
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	4.93E-003	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	7.07E-007	mg/kg-day		mg/kg-day	
	(Total)										1.13E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-97
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_IRWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	7.3E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.29E-006
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.63E-001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.81E-006
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.16E-005
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.24E-003
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	4.0E-008	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.33E-006
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	4.2E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	7.07E-002
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.18E-006
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	9.0E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.50E-003
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	9.0E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.80E-004
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.33E-003
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.80E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	7.3E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.29E-007
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	2.6E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.27E-001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	9.4E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.89E-003
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	3.54E-006
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	6.4E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.07E-006
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.46E-001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	7.7E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.71E-003
	Anthracene	1.20E+000	mg/kg	NA	NA	M	5.1E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.71E-006
	Antimony	1.52E+002	mg/kg	NA	NA	M	6.5E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.63E-001
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	9.43E-001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	4.37E-002
	Barium	6.40E+003	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.92E-002
	Benzene	1.50E+003	mg/kg	NA	NA	M	6.4E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.14E-001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	9.9E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.46E-005
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.21E-004
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.91E-001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.41E-004
	Cadmium	1.70E+003	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	7.29E-001
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	4.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.14E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.3E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.29E-007
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.07E-003
	Chrysene	1.60E+000	mg/kg	NA	NA	M	6.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	9.4E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.43E-007
	Cobalt	1.48E+002	mg/kg	NA	NA	M	6.3E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.06E-003

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-97
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_RfWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Copper	5.79E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.20E-002
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.42E-003
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	6.86E-005
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	2.68E-006
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	6.86E-007
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.03E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.14E-004
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	9.9E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.86E-002
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.54E-005
	Fluorene	9.80E-001	mg/kg	NA	NA	M	4.2E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.05E-005
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.00E-001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.71E-003
	Lead	1.72E+004	mg/kg	NA	NA	M	7.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.30E-002
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.93E-005
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.57E-005
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.46E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	8.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.22E-003
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.44E-005
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.29E-004
	Phenol	8.60E+002	mg/kg	NA	NA	M	3.7E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	6.14E-004
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.00E-005
	Selenium	1.57E+002	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.35E-002
	Silver	3.12E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.67E-002
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.64E-004
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.97E+000
	Thallium	1.50E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	9.18E-003
	Toluene	1.30E+005	mg/kg	NA	NA	M	5.6E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.79E-001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	8.1E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.36E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.92E-003
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	4.3E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.14E-002
	Zinc	1.58E+004	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.26E-002
	(Total)												7.10E+000
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.46E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	6.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.26E+000
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.62E-005
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.31E-004
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.48E-002
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.66E-005
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	8.5E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.49E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-97
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_RWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.36E-005
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.00E-002
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	3.60E-003
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	5.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.66E-002
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	5.14E-003
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	1.80E-005
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	5.2E-001	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	6.54E+000
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	5.80E-002
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	7.07E-005
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.01E-004
	Acetone	3.40E+004	mg/kg	NA	NA	M	2.9E-001	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	3.71E+000
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.54E-001
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.43E-005
	Antimony	1.52E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.26E+002
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.12E+001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.08E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	9.20E-001
	Barium	6.40E+003	mg/kg	NA	NA	M	5.5E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	7.84E-001
	Benzene	1.50E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	4.76E+000
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	4.93E-004
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	6.43E-001
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	7.6E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.81E+000
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.83E-003
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	5.83E+002
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	8.6E-003	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	1.38E+000
	Chloroform	1.00E-002	mg/kg	NA	NA	M	8.6E-008	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	8.98E-006
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	5.36E+000
	Chrysene	1.60E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.89E-005
	Cobalt	1.48E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.11E-002
	Copper	5.79E+003	mg/kg	NA	NA	M	5.0E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	2.07E+000
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.67E-002
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.37E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	5.36E-005
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.37E-005
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.12E-002
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.63E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-97
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_fRWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	2.14E+000
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	5.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.31E-003
	Fluorene	9.80E-001	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.10E-004
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	6.0E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.00E+000
	Isophorone	3.60E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.54E-001
	Lead	1.72E+004	mg/kg	NA	NA	M	1.5E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.60E-001
	Mercury	3.60E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	7.01E-004
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	5.71E-004
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	5.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.91E-001
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.69E+000
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.19E-004
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.57E-003
	Phenol	8.60E+002	mg/kg	NA	NA	M	7.4E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.23E-002
	Pyrene	4.20E+000	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.20E-003
	Selenium	1.57E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.69E-001
	Silver	3.12E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.55E+000
	Styrene	3.10E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.33E-002
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	3.9E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.94E+001
	Thallium	1.50E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.84E-001
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.57E+000
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	2.77E+001
	Vanadium	4.77E+001	mg/kg	NA	NA	M	4.1E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	5.84E-002
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	8.6E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	4.79E-001
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.50E+000
	(Total)												1.05E+003
												Total Hazard Index Across All Exposure Routes/Pathways	1.1E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-98
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT Inh ffWa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	7.55E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	5.39E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	8.51E-002	mg/cu. m.	R	1.46E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.10E-002
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	8.06E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	3.99E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	7.69E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	8.55E-003
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	3.04E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.17E-002
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	7.35E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	4.10E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	3.60E-002
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	3.74E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	6.56E-005
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	1.77E-012	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	8.83E-010
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	3.26E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	1.43E-005
	2-Butanone	9.90E+004	mg/kg	4.68E-006	mg/cu. m.	R	8.03E-007	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.81E-006
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	3.64E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.60E-001
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	6.59E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	1.88E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	8.11E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	1.10E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	6.85E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-008	mg/cu. m.	R	1.07E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	3.75E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	1.05E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	4.54E-003	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	2.27E-001
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	5.36E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	6.60E-002	mg/kg	2.67E-006	mg/cu. m.	R	4.58E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	3.13E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	1.26E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	2.75E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	1.90E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	5.30E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	7.09E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	8.64E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	4.73E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	2.47E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	9.04E-008	mg/cu. m.	R	1.55E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-008	mg/cu. m.	R	2.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	1.32E-008	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	1.61E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.60E+001	mg/kg	3.24E-008	mg/cu. m.	R	5.55E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.08E+001	mg/kg	6.16E-009	mg/cu. m.	R	1.06E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	2.76E-007	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.97E-003
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	2.43E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.43E+000
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	7.59E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	2.71E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	1.42E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	4.21E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	1.16E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	4.21E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	3.80E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	7.23E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.27E-005
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	9.00E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	1.40E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	1.47E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	6.60E+001	mg/kg	5.55E-008	mg/cu. m.	R	9.52E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	4.08E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	4.88E-011	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	2.44E-010
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	1.98E-003	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	3.96E-001
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	8.07E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	9.38E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-98
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_RWa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	1.45E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	2.42E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	2.20E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	9.78E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	3.22E-008	mg/cu. m.	R	5.51E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	2.14E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.62E+001	mg/kg	2.03E-008	mg/cu. m.	R	3.48E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	1.09E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	2.32E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	4.81E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	8.19E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.60E+001	mg/kg	2.77E-008	mg/cu. m.	R	4.75E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	7.34E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	1.60E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	2.41E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	3.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	5.52E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	5.15E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.78E-002
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	6.64E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	5.93E-006	mg/cu. m.	R	1.02E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	2.41E-012	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	1.20E-008
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	1.89E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	9.03E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	1.45E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	2.08E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	2.15E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	9.06E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	1.19E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	9.56E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	9.46E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	6.61E-003
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	1.22E-009	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.41E-005
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	6.84E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	7.96E-004
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	2.46E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	3.14E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.49E-001
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	6.26E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	8.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	8.70E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-008	mg/cu. m.	R	2.11E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	8.89E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.60E+002	mg/kg	1.96E-003	mg/cu. m.	R	3.35E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	1.16E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	5.37E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	2.13E-008	mg/cu. m.	R	3.66E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	4.13E-008	mg/cu. m.	R	7.09E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	1.34E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.69E-003
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	8.63E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.16E-002
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	7.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	2.50E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.20E-001
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	2.70E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.37E-006	mg/cu. m.	R	2.35E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	2.09E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	1.21E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	1.73E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												4.03E+000

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-99
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_RWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	5.2E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	9.1E-002	kg-day/mg	2.3E-009
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	6.8E-002	kg-day/mg	1.1E-009
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	2.8E-009	mg/kg-day	2.4E-002	kg-day/mg	6.8E-011
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	3.0E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	6.4E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	5.2E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.9E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	6.7E-007	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	2.0E-009	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	4.6E-009	mg/kg-day	2.4E-001	kg-day/mg	1.1E-009
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	5.5E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	3.7E-008	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	8.6E-006	mg/kg-day	2.0E+000	kg-day/mg	1.7E-005
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	3.9E-006	mg/kg-day	2.0E+000	kg-day/mg	7.8E-006
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	2.0E+000	kg-day/mg	2.7E-006
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.2E-006
	Arsenic	3.06E+001	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	1.5E+000	kg-day/mg	1.4E-006
	Barium	6.40E+003	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	2.9E-002	kg-day/mg	1.3E-006
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	7.3E-008	mg/kg-day	7.3E-001	kg-day/mg	5.4E-008
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	4.3E-008	mg/kg-day	7.3E+000	kg-day/mg	3.1E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.7E-008
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-002	kg-day/mg	8.7E-009
	Beryllium	1.50E+000	mg/kg	NA	NA	M	4.6E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	1.4E-002	kg-day/mg	3.8E-006
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	5.2E-005	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	3.1E-010	mg/kg-day	6.1E-003	kg-day/mg	1.9E-012
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	4.9E-008	mg/kg-day	7.3E-003	kg-day/mg	3.6E-010
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	6.7E-010	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-99
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_RWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Copper	5.79E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	8.3E-009	mg/kg-day	7.3E+000	kg-day/mg	6.0E-008
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	7.3E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	7.0E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	3.0E-008	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	6.20E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	7.3E-001	kg-day/mg	1.8E-008
	Iron	7.01E+004	mg/kg	NA	NA	M	2.1E-003	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	9.5E-004	kg-day/mg	1.0E-007
	Lead	1.72E+004	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	4.7E-005	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	8.3E-008	mg/kg-day	7.5E-003	kg-day/mg	6.2E-010
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	1.2E-001	kg-day/mg	5.9E-008
	Phenol	8.60E+002	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	9.6E-006	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	5.2E-002	kg-day/mg	7.3E-005
	Thallium	1.50E+000	mg/kg	NA	NA	M	4.6E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	4.0E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	1.1E-002	kg-day/mg	6.4E-006
	Vanadium	4.77E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	4.8E-004	mg/kg-day		kg-day/mg	
	(Total)										1.17E-004
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	4.7E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	9.1E-002	kg-day/mg	4.51E-008
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day	6.8E-002	kg-day/mg	2.29E-008
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	5.7E-008	mg/kg-day	2.4E-002	kg-day/mg	1.37E-009
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	6.1E-002	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-99
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_RWa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.7E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	4.0E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	9.2E-008	mg/kg-day	2.4E-001	kg-day/mg	2.20E-008
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	2.1E-002	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	7.3E-007	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	9.3E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E+000	kg-day/mg	3.43E-004
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	7.8E-005	mg/kg-day	2.0E+000	kg-day/mg	1.56E-004
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.2E+000	kg-day/mg	6.05E-005
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.0E+000	kg-day/mg	4.41E-005
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.6E+000	kg-day/mg	2.96E-005
	Barium	6.40E+003	mg/kg	NA	NA	M	3.9E-003	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	9.2E-004	mg/kg-day	3.2E-002	kg-day/mg	2.96E-005
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.07E-006
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	8.6E+000	kg-day/mg	7.36E-006
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-001	kg-day/mg	1.74E-006
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-002	kg-day/mg	1.74E-007
	Beryllium	1.50E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	1.4E-002	kg-day/mg	7.63E-005
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	6.1E-004	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	6.1E-009	mg/kg-day	6.4E-003	kg-day/mg	3.91E-011
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	9.8E-007	mg/kg-day	1.8E-002	kg-day/mg	1.74E-008
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	3.5E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	8.1E+000	kg-day/mg	1.34E-006
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	9.8E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.60E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-99
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_IO_RWs3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	7.3E-001	kg-day/mg	3.66E-007
	Iron	7.01E+004	mg/kg	NA	NA	M	4.3E-002	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	9.5E-004	kg-day/mg	2.09E-006
	Lead	1.72E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.4E-002	kg-day/mg	2.25E-008
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	9.8E-006	mg/kg-day	1.2E-001	kg-day/mg	1.18E-006
	Phenol	8.60E+002	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	9.6E-005	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	5.2E-002	kg-day/mg	1.46E-003
	Thallium	1.50E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	8.0E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.1E-002	kg-day/mg	1.31E-004
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	6.1E-002	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	9.7E-003	mg/kg-day		kg-day/mg	
	(Total)										2.35E-003
										Total Hazard Index Across All Exposure Routes/Pathways	2.5E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-100
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_RWa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	5.39E-006	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	8.51E-002	mg/cu. m.	R	1.04E-003	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	5.76E-008	mg/kg-day	5.60E-002	mg/kg-day	3.22E-009
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	2.85E-008	mg/kg-day	2.00E-001	mg/kg-day	5.70E-009
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	5.49E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	2.17E-006	mg/kg-day	9.10E-002	mg/kg-day	1.98E-007
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	5.25E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	2.93E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	2.67E-007	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	1.26E-013	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	2.33E-007	mg/kg-day	2.20E-002	mg/kg-day	5.13E-009
	2-Butanone	9.90E+004	mg/kg	4.68E-006	mg/cu. m.	R	5.73E-008	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	2.60E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	4.71E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	1.34E-006	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	5.79E-009	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	7.86E-007	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	4.89E-008	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-008	mg/cu. m.	R	7.64E-010	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	2.68E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	7.52E-015	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	3.24E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	3.83E-006	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.60E-002	mg/kg	2.67E-006	mg/cu. m.	R	3.27E-008	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	2.24E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	9.01E-013	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	1.96E-012	mg/kg-day	3.40E-001	mg/kg-day	6.68E-013
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	1.35E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	3.78E-009	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	5.06E-004	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	6.17E-012	mg/kg-day	1.70E+001	mg/kg-day	1.05E-010
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	3.38E-013	mg/kg-day	6.30E+000	mg/kg-day	2.13E-012
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	1.77E-008	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	9.04E-008	mg/cu. m.	R	1.11E-009	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-008	mg/cu. m.	R	2.02E-010	mg/kg-day	2.00E+000	mg/kg-day	4.05E-010
	Aroclor-1248	1.27E+002	mg/kg	1.32E-008	mg/cu. m.	R	1.62E-010	mg/kg-day	2.00E+000	mg/kg-day	3.24E-010
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	1.15E-010	mg/kg-day	2.00E+000	mg/kg-day	2.29E-010
	Aroclor-1260	3.60E+001	mg/kg	3.24E-008	mg/cu. m.	R	3.97E-010	mg/kg-day	2.00E+000	mg/kg-day	7.93E-010
	Arsenic	3.08E+001	mg/kg	6.16E-009	mg/cu. m.	R	7.55E-011	mg/kg-day	1.51E+001	mg/kg-day	1.14E-009
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	1.97E-008	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	1.74E-004	mg/kg-day	2.90E-002	mg/kg-day	5.03E-006
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	5.42E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	1.93E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	1.01E-011	mg/kg-day	3.10E+000	mg/kg-day	3.14E-011
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	3.00E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	8.29E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	3.00E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	2.71E-011	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	5.17E-012	mg/kg-day	8.40E+000	mg/kg-day	4.34E-011
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	6.43E-013	mg/kg-day	1.80E+000	mg/kg-day	1.16E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	1.00E-006	mg/kg-day	1.10E+000	mg/kg-day	1.10E-006
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	1.05E-008	mg/kg-day	1.40E-002	mg/kg-day	1.47E-010
	Butylbenzylphthalate	6.60E+001	mg/kg	5.55E-008	mg/cu. m.	R	6.80E-010	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	2.92E-009	mg/kg-day	6.30E+000	mg/kg-day	1.84E-008
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	3.49E-012	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	1.41E-004	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	5.76E-006	mg/kg-day	8.10E-002	mg/kg-day	4.67E-007

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Routine Worker
Receptor Age:	Adult

Table 5-1-100
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_RWa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	1.04E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	1.73E-009	mg/kg-day	4.10E+001	mg/kg-day	7.10E-008
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	1.57E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	6.99E-006	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	3.22E-008	mg/cu. m.	R	3.94E-010	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	1.53E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	2.03E-008	mg/cu. m.	R	2.49E-010	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	7.75E-012	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	1.66E-012	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	3.44E-014	mg/kg-day	1.60E+001	mg/kg-day	5.50E-013
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	5.85E-011	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.60E+001	mg/kg	2.77E-008	mg/cu. m.	R	3.40E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	5.24E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	1.14E-010	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	1.72E-013	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	2.29E-013	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	3.94E-016	mg/kg-day		mg/kg-day	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	3.68E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	4.74E-011	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	5.93E-006	mg/cu. m.	R	7.27E-008	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	1.72E-013	mg/kg-day	3.50E-001	mg/kg-day	6.02E-014
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	1.35E-013	mg/kg-day	4.50E+000	mg/kg-day	6.08E-013
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	6.45E-014	mg/kg-day	9.10E+000	mg/kg-day	5.87E-013
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	1.04E-015	mg/kg-day	1.60E+000	mg/kg-day	1.66E-015
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	1.48E-011	mg/kg-day	7.80E-002	mg/kg-day	1.16E-012
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	1.54E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	6.47E-012	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	8.48E-005	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	6.83E-008	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	6.76E-009	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	8.68E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	4.89E-005	mg/kg-day	1.65E-003	mg/kg-day	8.06E-008
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	1.75E-004	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	2.24E-005	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	4.47E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	6.02E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	6.22E-005	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-008	mg/cu. m.	R	1.51E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	6.35E-011	mg/kg-day		mg/kg-day	
	Phenol	8.60E+002	mg/kg	1.96E-003	mg/cu. m.	R	2.40E-005	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	8.31E-013	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	3.84E-011	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	2.13E-008	mg/cu. m.	R	2.61E-010	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	4.13E-008	mg/cu. m.	R	5.06E-010	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	9.57E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	6.16E-004	mg/kg-day	2.00E-003	mg/kg-day	1.23E-006
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	5.63E-012	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	1.79E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	1.93E-003	mg/kg-day	6.00E-003	mg/kg-day	1.16E-005
	Vanadium	4.77E+001	mg/kg	1.37E-008	mg/cu. m.	R	1.68E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	1.49E-007	mg/kg-day	3.00E-001	mg/kg-day	4.48E-008
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	8.64E-004	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	1.24E-007	mg/kg-day		mg/kg-day	
	(Total)										1.98E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-101
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_IO_IUWs3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.92E-005
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	8.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.28E-001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	6.7E-007	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	7.39E-006
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	9.1E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.04E-005
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.26E-003
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.49E-006
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	1.1E-001	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.86E-001
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	4.4E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.10E-005
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.18E-002
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	4.73E-004
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	7.0E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.49E-003
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	9.5E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	4.73E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.92E-006
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	6.9E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	8.59E-001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.98E-003
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	7.4E-008	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	9.30E-006
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.33E-005
	Acetone	3.40E+004	mg/kg	NA	NA	M	3.8E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.83E-001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	2.03E-002
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.51E-006
	Antimony	1.52E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	4.28E-001
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.48E+000
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.15E-001
	Barium	6.40E+003	mg/kg	NA	NA	M	7.2E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.03E-001
	Benzene	1.50E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	5.64E-001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	6.48E-005
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	8.45E-004
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.02E-001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	7.4E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.72E-004
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.92E+000
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.64E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.13E-006
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	2.82E-003
	Chrysene	1.60E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.48E-006
	Cobalt	1.48E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.78E-003
	Copper	5.79E+003	mg/kg	NA	NA	M	6.5E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.63E-001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.73E-003
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	7.2E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.80E-004
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	5.6E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	7.05E-006
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.80E-006
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.71E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.14E-003
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	2.6E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.59E-001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.72E-004
	Fluorene	9.80E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.76E-005
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-101
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RAWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Iron	7.01E+004	mg/kg	NA	NA	M	7.9E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.63E-001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	4.1E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.03E-002
	Lead	1.72E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.68E-002
	Mercury	3.60E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.07E-005
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.76E-005
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	7.7E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.83E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.11E-002
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	7.6E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.78E-005
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.01E-004
	Phenol	8.60E+002	mg/kg	NA	NA	M	9.7E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.62E-003
	Pyrene	4.20E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.58E-004
	Selenium	1.57E+002	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.54E-002
	Silver	3.12E+002	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.03E-002
	Styrene	3.10E+002	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.75E-003
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	5.2E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.19E+000
	Thallium	1.50E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	2.42E-002
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.33E-001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	2.1E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.57E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	7.68E-003
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	1.1E-001	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	5.64E-002
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.94E-002
	(Total)												1.87E+001
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	9.65E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	4.3E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.16E+001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.72E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	4.6E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.53E-003
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.64E-001
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	5.3E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.76E-004
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	5.6E+000	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	9.86E+000
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.53E-004
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.96E-001
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.38E-002
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.76E-001
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	4.8E-005	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	3.41E-002
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	1.19E-004
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.5E+000	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	4.33E+001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	3.84E-001
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	4.68E-004
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	8.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.72E-004
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.9E+000	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	2.46E+001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.0E+000	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.02E+000
	Anthracene	1.20E+000	mg/kg	NA	NA	M	6.8E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.27E-004
	Antimony	1.52E+002	mg/kg	NA	NA	M	8.6E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.16E+003
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.6E-002	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	7.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.40E+002
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	6.09E+000
	Barium	6.40E+003	mg/kg	NA	NA	M	3.6E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	5.19E+000
	Benzene	1.50E+003	mg/kg	NA	NA	M	8.5E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	3.15E+001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	3.26E-003
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-101
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_R/Wa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	4.26E+000
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	5.1E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.53E+001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.87E-002
	Cadmium	1.70E+003	mg/kg	NA	NA	M	9.6E-002	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	3.86E+003
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	9.15E+000
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	5.94E-005
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.1E-001	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.55E+001
	Chrysene	1.60E+000	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.25E-004
	Cobalt	1.48E+002	mg/kg	NA	NA	M	8.4E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.40E-001
	Copper	5.79E+003	mg/kg	NA	NA	M	3.3E-001	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.37E+001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.76E-001
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	9.08E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.55E-004
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	9.08E-005
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.40E-001
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.08E-001
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.3E+000	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	1.42E+001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.65E-003
	Fluorene	9.80E-001	mg/kg	NA	NA	M	5.6E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.39E-003
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	4.0E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.33E+001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.02E+000
	Lead	1.72E+004	mg/kg	NA	NA	M	9.8E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	8.7E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.37E+000
	Mercury	3.60E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	4.64E-003
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.78E-003
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.93E+000
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.12E+001
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	3.8E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	2.11E-003
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	9.1E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.03E-002
	Phenol	8.60E+002	mg/kg	NA	NA	M	4.9E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	8.13E-002
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.95E-003
	Selenium	1.57E+002	mg/kg	NA	NA	M	8.9E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.78E+000
	Silver	3.12E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.69E+001
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.8E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.80E-002
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.6E+000	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.61E+002
	Thallium	1.50E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.22E+000
	Toluene	1.30E+005	mg/kg	NA	NA	M	7.4E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.69E+001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	1.83E+002
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.87E-001
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	5.7E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.17E+000
	Zinc	1.58E+004	mg/kg	NA	NA	M	9.0E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	9.96E+000
	(Total)												8.95E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Total Hazard Index Across All Exposure Routes/Pathways: 7.0E+003

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-102
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_inh_fWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.99E-004	mg/cu. m.	R	9.77E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.98E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	2.24E-001	mg/cu. m.	R	4.38E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.53E-001
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.68E-007	mg/cu. m.	R	3.29E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	1.24E-005	mg/cu. m.	R	2.43E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.70E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	1.50E-004	mg/cu. m.	R	2.94E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.10E-002
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	6.32E-003	mg/cu. m.	R	1.24E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	1.05E-004	mg/cu. m.	R	2.05E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.80E-002
	1,4-Dichlorobenzene	9.30E-002	mg/kg	4.78E-006	mg/cu. m.	R	9.36E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	4.09E-006
	2-Butanone	9.90E+004	mg/kg	2.82E-002	mg/cu. m.	R	5.52E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.93E-002
	2-Hexanone	3.90E-001	mg/kg	1.44E-004	mg/cu. m.	R	2.81E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.01E-002
	2-Methylnaphthalene	2.10E+002	mg/kg	3.77E-004	mg/cu. m.	R	7.38E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	6.78E-005	mg/cu. m.	R	1.33E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	9.46E-005	mg/cu. m.	R	1.85E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	4.20E-006	mg/cu. m.	R	8.22E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	2.58E-007	mg/cu. m.	R	5.02E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	7.57E-002	mg/cu. m.	R	1.48E-002	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	7.41E-001
	4-Methylphenol	2.20E+001	mg/kg	1.57E-004	mg/cu. m.	R	3.07E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	6.60E-002	mg/kg	2.65E-006	mg/cu. m.	R	5.18E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.00E-008	mg/cu. m.	R	1.96E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	2.36E-006	mg/cu. m.	R	4.61E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	2.22E-001	mg/cu. m.	R	4.34E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.43E-006	mg/cu. m.	R	2.80E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	4.95E-005	mg/cu. m.	R	9.69E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	7.64E-005	mg/cu. m.	R	1.49E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	3.48E-005	mg/cu. m.	R	6.81E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	1.24E-005	mg/cu. m.	R	2.42E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.60E+001	mg/kg	9.99E-006	mg/cu. m.	R	1.95E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	2.05E-006	mg/cu. m.	R	4.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.87E-003	mg/cu. m.	R	3.66E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.61E+000
	Benzene	1.50E+003	mg/kg	3.80E-002	mg/cu. m.	R	7.43E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	4.37E+000
	Benzoic Acid	2.30E+002	mg/kg	3.93E-003	mg/cu. m.	R	7.70E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.04E-007	mg/cu. m.	R	1.38E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	9.13E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	2.45E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	7.18E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	2.45E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	2.54E-007	mg/cu. m.	R	4.97E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	8.73E-003
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	2.46E-003	mg/cu. m.	R	4.82E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	6.60E+001	mg/kg	1.96E-005	mg/cu. m.	R	3.84E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	4.78E-004	mg/cu. m.	R	9.35E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.00E-010	mg/cu. m.	R	1.57E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	7.83E-010
	Chlorobenzene	1.00E+003	mg/kg	1.10E-002	mg/cu. m.	R	2.15E-003	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	4.31E-001
	Chloroethane	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	6.26E-010	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu. m.	2.16E-010
	Chloroform	1.00E-002	mg/kg	8.85E-007	mg/cu. m.	R	1.73E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.01E-003
	Chromium 3+	3.75E+003	mg/kg	9.36E-004	mg/cu. m.	R	1.83E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.56E-004	mg/cu. m.	R	3.05E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.60E+000	mg/kg	5.29E-007	mg/cu. m.	R	1.04E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.28E-006	mg/cu. m.	R	1.03E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	4.27E-005	mg/cu. m.	R	8.37E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.66E-003	mg/cu. m.	R	3.26E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.62E+001	mg/kg	1.98E-005	mg/cu. m.	R	3.88E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	2.11E-007	mg/cu. m.	R	4.12E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	1.76E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	1.60E-006	mg/cu. m.	R	3.14E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.60E+001	mg/kg	4.84E-006	mg/cu. m.	R	9.47E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	6.78E-005	mg/cu. m.	R	1.33E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.80E+001	mg/kg	1.10E-005	mg/cu. m.	R	2.15E-006	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-102
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_RMe3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Ethyl Benzene	2.30E+004	mg/kg	6.92E-002	mg/cu. m.	R	1.36E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.67E-002
	Fluoranthene	6.10E+000	mg/kg	2.00E-006	mg/cu. m.	R	3.91E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	1.62E-006	mg/cu. m.	R	3.17E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	5.87E-009	mg/cu. m.	R	1.15E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.80E-009	mg/cu. m.	R	5.48E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	5.35E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	7.00E-003	mg/cu. m.	R	1.37E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.09E-003	mg/cu. m.	R	9.96E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	2.50E-004	mg/cu. m.	R	4.88E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	3.42E+000
	Mercury	3.60E+001	mg/kg	1.03E-005	mg/cu. m.	R	2.01E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.34E-002
	Methylene Chloride	2.70E+000	mg/kg	8.07E-004	mg/cu. m.	R	1.58E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.84E-004
	m,p-xylene	1.20E+002	mg/kg	1.22E-002	mg/cu. m.	R	2.39E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.64E-003	mg/cu. m.	R	3.21E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.57E-001
	Nickel	1.97E+002	mg/kg	5.62E-005	mg/cu. m.	R	1.10E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	3.91E-006	mg/cu. m.	R	7.64E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	4.42E-003	mg/cu. m.	R	8.65E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	5.14E-006	mg/cu. m.	R	1.01E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	2.09E-006	mg/cu. m.	R	4.09E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.60E+002	mg/kg	1.99E-003	mg/cu. m.	R	3.90E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	1.37E-006	mg/cu. m.	R	2.69E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	4.41E-005	mg/cu. m.	R	8.63E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	8.76E-005	mg/cu. m.	R	1.71E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	1.23E-002	mg/cu. m.	R	2.41E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	8.41E-003
	Tetrachloroethene	4.60E+004	mg/kg	8.80E-002	mg/cu. m.	R	1.72E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.23E-001
	Thallium	1.50E+000	mg/kg	4.50E-007	mg/cu. m.	R	8.82E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.75E-001	mg/cu. m.	R	3.42E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.00E-001
	Trichloroethene	1.90E+004	mg/kg	3.32E-001	mg/cu. m.	R	6.50E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.41E-005	mg/cu. m.	R	2.75E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	6.26E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	9.07E-002	mg/cu. m.	R	1.77E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	5.26E-003	mg/cu. m.	R	1.03E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.27E+001

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-103
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_fUWa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	6.8E-007	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	9.1E-002	kg-day/mg	3.0E-008
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	6.8E-002	kg-day/mg	1.5E-008
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	3.7E-008	mg/kg-day	2.4E-002	kg-day/mg	9.0E-010
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	4.0E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	8.5E-006	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	6.8E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	2.5E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	2.7E-008	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	6.0E-008	mg/kg-day	2.4E-001	kg-day/mg	1.4E-008
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	7.2E-003	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	4.8E-007	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E+000	kg-day/mg	2.3E-004
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	5.1E-005	mg/kg-day	2.0E+000	kg-day/mg	1.0E-004
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	2.0E+000	kg-day/mg	3.5E-005
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E+000	kg-day/mg	2.9E-005
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	1.5E+000	kg-day/mg	1.8E-005
	Barium	6.40E+003	mg/kg	NA	NA	M	2.6E-003	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	6.0E-004	mg/kg-day	2.9E-002	kg-day/mg	1.8E-005
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	9.3E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	9.7E-007	mg/kg-day	7.3E-001	kg-day/mg	7.1E-007
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	7.3E+000	kg-day/mg	4.1E-006
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.3E-001	kg-day/mg	1.1E-006
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	7.3E-002	kg-day/mg	1.1E-007
	Beryllium	1.50E+000	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	3.6E-003	mg/kg-day	1.4E-002	kg-day/mg	5.0E-005
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	6.8E-004	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.0E-009	mg/kg-day	6.1E-003	kg-day/mg	2.5E-011
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.5E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	6.4E-007	mg/kg-day	7.3E-003	kg-day/mg	4.7E-009
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	8.9E-009	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	6.0E-005	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.3E+000	kg-day/mg	7.9E-007
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	9.7E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	9.3E-003	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	7.3E-001	kg-day/mg	2.4E-007

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-103
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_RAVe3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Iron	7.01E+004	mg/kg	NA	NA	M	2.8E-002	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	9.5E-004	kg-day/mg	1.4E-006
	Lead	1.72E+004	mg/kg	NA	NA	M	6.9E-003	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	6.2E-004	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	7.5E-003	kg-day/mg	8.2E-009
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	4.8E-005	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	7.9E-005	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	6.4E-006	mg/kg-day	1.2E-001	kg-day/mg	7.7E-007
	Phenol	8.80E+002	mg/kg	NA	NA	M	3.5E-004	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	6.3E-005	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	1.9E-002	mg/kg-day	5.2E-002	kg-day/mg	9.6E-004
	Thallium	1.50E+000	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	5.2E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	7.6E-003	mg/kg-day	1.1E-002	kg-day/mg	8.4E-005
	Vanadium	4.77E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	4.0E-002	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	6.4E-003	mg/kg-day		kg-day/mg	
	(Total)										1.53E-003
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	1.5E-001	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	9.1E-002	kg-day/mg	1.49E-006
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	6.8E-002	kg-day/mg	7.58E-007
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	2.4E-002	kg-day/mg	4.52E-008
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	2.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	7.9E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	4.3E-003	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.2E+000	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	2.4E-001	kg-day/mg	7.30E-007
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	6.9E-001	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	3.6E-001	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	5.7E-003	mg/kg-day	2.0E+000	kg-day/mg	1.14E-002
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	2.0E+000	kg-day/mg	5.15E-003
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	8.9E-004	mg/kg-day	2.2E+000	kg-day/mg	2.00E-003
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day	2.0E+000	kg-day/mg	1.46E-003
	Arsenic	3.06E+001	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	1.6E+000	kg-day/mg	9.79E-004
	Barium	6.40E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	3.2E-002	kg-day/mg	9.80E-004
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	4.9E-005	mg/kg-day	7.3E-001	kg-day/mg	3.55E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-103
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_IO_IUWs3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	8.6E+000	kg-day/mg	2.44E-004
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	7.3E-001	kg-day/mg	5.77E-005
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.9E-005	mg/kg-day	7.3E-002	kg-day/mg	5.77E-006
	Beryllium	1.50E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.8E-001	mg/kg-day	1.4E-002	kg-day/mg	2.53E-003
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	3.4E-002	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	2.0E-002	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	6.4E-003	kg-day/mg	1.29E-009
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	7.6E-002	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	1.8E-002	kg-day/mg	5.77E-007
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	3.0E-003	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	1.2E-001	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	8.1E+000	kg-day/mg	4.44E-005
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	4.9E-003	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	7.7E-004	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	4.7E-001	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	7.3E-001	kg-day/mg	1.21E-005
	Iron	7.01E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	7.3E-002	mg/kg-day	9.5E-004	kg-day/mg	6.93E-005
	Lead	1.72E+004	mg/kg	NA	NA	M	3.5E-001	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	5.5E-005	mg/kg-day	1.4E-002	kg-day/mg	7.46E-007
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	4.0E-003	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day	1.2E-001	kg-day/mg	3.89E-005
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.7E-002	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	8.5E-005	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	6.3E-003	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	6.3E-003	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	9.3E-001	mg/kg-day	5.2E-002	kg-day/mg	4.85E-002
	Thallium	1.50E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	2.6E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	3.9E-001	mg/kg-day	1.1E-002	kg-day/mg	4.32E-003
	Vanadium	4.77E+001	mg/kg	NA	NA	M	9.7E-004	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	2.0E+000	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	3.2E-001	mg/kg-day		kg-day/mg	
	(Total)										7.78E-002
										Total Hazard Index Across All Exposure Routes/Pathways	7.9E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-104
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wb4 \ TT_Inh_RMe3RME.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.99E-004	mg/cu. m.	R	3.49E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	2.24E-001	mg/cu. m.	R	1.57E-002	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.68E-007	mg/cu. m.	R	1.17E-008	mg/kg-day	5.60E-002	mg/kg-day	6.58E-010
	1,2-Dichlorobenzene	5.90E-001	mg/kg	1.24E-005	mg/cu. m.	R	8.69E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.50E-004	mg/cu. m.	R	1.05E-005	mg/kg-day	9.10E-002	mg/kg-day	9.57E-007
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	6.32E-003	mg/cu. m.	R	4.42E-004	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	1.05E-004	mg/cu. m.	R	7.33E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	4.78E-006	mg/cu. m.	R	3.34E-007	mg/kg-day	2.20E-002	mg/kg-day	7.35E-009
	2-Butanone	9.90E+004	mg/kg	2.82E-002	mg/cu. m.	R	1.97E-003	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	1.44E-004	mg/cu. m.	R	1.01E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.77E-004	mg/cu. m.	R	2.64E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	6.78E-005	mg/cu. m.	R	4.74E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	9.46E-005	mg/cu. m.	R	6.61E-006	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	4.20E-006	mg/cu. m.	R	2.94E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	2.56E-007	mg/cu. m.	R	1.79E-008	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	7.57E-002	mg/cu. m.	R	5.29E-003	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	1.57E-004	mg/cu. m.	R	1.10E-005	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.60E-002	mg/kg	2.65E-006	mg/cu. m.	R	1.85E-007	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.00E-006	mg/cu. m.	R	6.99E-010	mg/kg-day		mg/kg-day	
	Acenaphthene	7.10E-001	mg/kg	2.36E-006	mg/cu. m.	R	1.65E-007	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	2.22E-001	mg/cu. m.	R	1.55E-002	mg/kg-day		mg/kg-day	
	Anthracene	1.20E+000	mg/kg	1.43E-006	mg/cu. m.	R	1.00E-007	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	4.95E-005	mg/cu. m.	R	3.46E-006	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	7.64E-005	mg/cu. m.	R	5.34E-006	mg/kg-day	2.00E+000	mg/kg-day	1.07E-005
	Aroclor-1248	1.27E+002	mg/kg	3.48E-005	mg/cu. m.	R	2.43E-006	mg/kg-day	2.00E+000	mg/kg-day	4.87E-006
	Aroclor-1254	4.40E+001	mg/kg	1.24E-005	mg/cu. m.	R	8.64E-007	mg/kg-day	2.00E+000	mg/kg-day	1.73E-006
	Aroclor-1260	3.60E+001	mg/kg	9.99E-006	mg/cu. m.	R	6.98E-007	mg/kg-day	2.00E+000	mg/kg-day	1.40E-006
	Arsenic	3.06E+001	mg/kg	2.05E-006	mg/cu. m.	R	1.43E-007	mg/kg-day	1.51E+001	mg/kg-day	2.16E-006
	Barium	6.40E+003	mg/kg	1.87E-003	mg/cu. m.	R	1.31E-004	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	3.80E-002	mg/cu. m.	R	2.65E-003	mg/kg-day	2.90E-002	mg/kg-day	7.70E-005
	Benzoic Acid	2.30E+002	mg/kg	3.93E-003	mg/cu. m.	R	2.75E-004	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.04E-007	mg/cu. m.	R	4.92E-008	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	3.26E-008	mg/kg-day	3.10E+000	mg/kg-day	1.01E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	8.76E-008	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	2.56E-008	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	8.76E-008	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	2.54E-007	mg/cu. m.	R	1.78E-008	mg/kg-day	8.40E+000	mg/kg-day	1.49E-007
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	2.46E-003	mg/cu. m.	R	1.72E-004	mg/kg-day	1.40E-002	mg/kg-day	2.41E-006
	Butylbenzylphthalate	6.60E+001	mg/kg	1.96E-005	mg/cu. m.	R	1.37E-006	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	4.78E-004	mg/cu. m.	R	3.34E-005	mg/kg-day	6.30E+000	mg/kg-day	2.10E-004
	Carbon Disulfide	0.00E+000	mg/kg	8.00E-010	mg/cu. m.	R	5.59E-011	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.10E-002	mg/cu. m.	R	7.70E-004	mg/kg-day		mg/kg-day	
	Chloroethane	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	2.24E-010	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	8.85E-007	mg/cu. m.	R	6.19E-008	mg/kg-day	8.10E-002	mg/kg-day	5.01E-009
	Chromium 3+	3.75E+003	mg/kg	9.36E-004	mg/cu. m.	R	6.54E-005	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.56E-004	mg/cu. m.	R	1.09E-005	mg/kg-day	4.10E+001	mg/kg-day	4.47E-004
	Chrysene	1.60E+000	mg/kg	5.29E-007	mg/cu. m.	R	3.70E-008	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.28E-006	mg/cu. m.	R	3.69E-007	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	4.27E-005	mg/cu. m.	R	2.99E-006	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.66E-003	mg/cu. m.	R	1.16E-004	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	1.98E-005	mg/cu. m.	R	1.38E-006	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	2.11E-007	mg/cu. m.	R	1.47E-008	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	6.29E-009	mg/kg-day		mg/kg-day	
	Diethylphthalate	5.00E+000	mg/kg	1.60E-006	mg/cu. m.	R	1.12E-007	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.60E+001	mg/kg	4.84E-006	mg/cu. m.	R	3.38E-007	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	6.78E-005	mg/cu. m.	R	4.74E-006	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	1.10E-005	mg/cu. m.	R	7.68E-007	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-104
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_RWIa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Ethyl Benzene	2.30E+004	mg/kg	6.92E-002	mg/cu. m.	R	4.84E-003	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	2.00E-006	mg/cu. m.	R	1.40E-007	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	1.62E-006	mg/cu. m.	R	1.13E-007	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	5.87E-009	mg/cu. m.	R	4.10E-010	mg/kg-day	4.50E+000	mg/kg-day	1.85E-009
	Heptachlor epoxide	0.00E+000	mg/kg	2.80E-009	mg/cu. m.	R	1.96E-010	mg/kg-day	9.10E+000	mg/kg-day	1.78E-009
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	1.91E-008	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	7.00E-003	mg/cu. m.	R	4.90E-004	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.09E-003	mg/cu. m.	R	3.56E-004	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	2.50E-004	mg/cu. m.	R	1.74E-005	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	1.03E-005	mg/cu. m.	R	7.19E-007	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	8.07E-004	mg/cu. m.	R	5.64E-005	mg/kg-day	1.65E-003	mg/kg-day	9.31E-008
	m,p-xylene	1.20E+002	mg/kg	1.22E-002	mg/cu. m.	R	8.52E-004	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.64E-003	mg/cu. m.	R	1.15E-004	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	5.62E-005	mg/cu. m.	R	3.93E-006	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	3.91E-006	mg/cu. m.	R	2.73E-007	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	4.42E-003	mg/cu. m.	R	3.09E-004	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	5.14E-006	mg/cu. m.	R	3.59E-007	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	2.09E-006	mg/cu. m.	R	1.46E-007	mg/kg-day		mg/kg-day	
	Phenol	8.60E+002	mg/kg	1.99E-003	mg/cu. m.	R	1.39E-004	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	1.37E-006	mg/cu. m.	R	9.61E-008	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	4.41E-005	mg/cu. m.	R	3.08E-006	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	8.76E-005	mg/cu. m.	R	6.12E-006	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	1.23E-002	mg/cu. m.	R	8.59E-004	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	8.80E-002	mg/cu. m.	R	6.15E-003	mg/kg-day	2.00E-003	mg/kg-day	1.23E-005
	Thallium	1.50E+000	mg/kg	4.50E-007	mg/cu. m.	R	3.15E-008	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.75E-001	mg/cu. m.	R	1.22E-002	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	3.32E-001	mg/cu. m.	R	2.32E-002	mg/kg-day	6.00E-003	mg/kg-day	1.39E-004
	Vanadium	4.77E+001	mg/kg	1.41E-005	mg/cu. m.	R	9.84E-007	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	2.24E-010	mg/kg-day	3.00E-001	mg/kg-day	6.71E-011
	Xylenes (total)	1.00E+005	mg/kg	9.07E-002	mg/cu. m.	R	6.34E-003	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	5.26E-003	mg/cu. m.	R	3.68E-004	mg/kg-day		mg/kg-day	
	(Total)										9.10E-004

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-105
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_EAVa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	7.5E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.45E-006
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.67E-001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	2.87E-006
	1,2-Dichloroethene	8.10E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.18E-005
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.27E-003
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	4.1E-008	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.36E-006
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	4.3E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	7.23E-002
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.27E-006
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	9.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.60E-003
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	9.2E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	1.84E-004
	2,4-Dimethylphenol	8.20E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.36E-003
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.84E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	7.5E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.45E-007
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	2.7E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.34E-001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	9.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.93E-003
	4-Nitrophenol	6.80E-002	mg/kg	NA	NA	M	2.9E-008	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	3.62E-006
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	6.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.19E-006
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.49E-001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	7.9E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.89E-003
	Anthracene	1.20E+000	mg/kg	NA	NA	M	5.3E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.75E-006
	Antimony	1.52E+002	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.67E-001
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	5.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	9.84E-001
	Aroclor-1260	3.80E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	4.47E-002
	Barium	6.40E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.01E-002
	Benzene	1.50E+003	mg/kg	NA	NA	M	6.6E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.19E-001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.52E-005
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	6.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.29E-004
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.95E-001
	Butylbenzylphthalate	6.80E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.45E-004
	Cadmium	1.70E+003	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	7.45E-001
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.19E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.4E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.38E-007
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.10E-003
	Chrysene	1.80E+000	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	9.6E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	9.64E-007
	Cobalt	1.48E+002	mg/kg	NA	NA	M	6.5E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.08E-003
	Copper	5.79E+003	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.35E-002
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.45E-003
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	7.01E-005
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	2.74E-006
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	7.01E-007
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.05E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.33E-004
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.01E-001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.68E-005
	Fluorene	9.80E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.07E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-105
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_RAWs3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.02E-001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.89E-003
	Lead	1.72E+004	mg/kg	NA	NA	M	7.5E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.38E-002
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.97E-005
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	5.3E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.63E-005
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.49E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	8.6E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.32E-003
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.47E-005
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.34E-004
	Phenol	8.60E+002	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	6.28E-004
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.14E-005
	Selenium	1.57E+002	mg/kg	NA	NA	M	6.9E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.38E-002
	Silver	3.12E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.74E-002
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.79E-004
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.02E+000
	Thallium	1.50E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	9.39E-003
	Toluene	1.30E+005	mg/kg	NA	NA	M	5.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.85E-001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	8.3E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.39E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.99E-003
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	4.4E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.19E-002
	Zinc	1.58E+004	mg/kg	NA	NA	M	6.9E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.31E-002
	(Total)												7.26E+000
Dermal	1,1-Dichloroethene	1.70E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.46E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	6.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.26E+000
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	5.62E-005
	1,2-Dichloroethene	8.10E-001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.31E-004
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	2.48E-002
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.66E-005
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	8.5E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	1.49E+000
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.36E-005
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.00E-002
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	3.60E-003
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	5.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.66E-002
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	5.14E-003
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	1.80E-005
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	5.2E-001	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	6.54E+000
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	5.80E-002
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	5.7E-007	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	7.07E-005
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.01E-004
	Acetone	3.40E+004	mg/kg	NA	NA	M	2.9E-001	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	3.71E+000
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.5E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.54E-001
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.43E-005
	Antimony	1.52E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	3.26E+002
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	2.4E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.12E+001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.08E+001	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	9.20E-001
	Barium	6.40E+003	mg/kg	NA	NA	M	5.5E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	7.84E-001
	Benzene	1.50E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	4.76E+000

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-105
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_RAWs3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	4.93E-004
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	6.43E-001
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	7.6E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.81E+000
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.83E-003
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	5.83E+002
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	8.6E-003	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	1.38E+000
	Chloroform	1.00E-002	mg/kg	NA	NA	M	8.6E-008	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	8.98E-006
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	3.2E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	5.36E+000
	Chrysene	1.60E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.89E-005
	Cobalt	1.48E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.11E-002
	Copper	5.79E+003	mg/kg	NA	NA	M	5.0E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	2.07E+000
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.67E-002
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	1.37E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	2.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	5.36E-005
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	1.37E-005
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.12E-002
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.63E-002
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	2.14E+000
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	5.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.31E-003
	Fluorene	9.80E-001	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.10E-004
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	7.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	6.0E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.00E+000
	Isophorone	3.60E+003	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.54E-001
	Lead	1.72E+004	mg/kg	NA	NA	M	1.5E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.60E-001
	Mercury	3.60E+001	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	7.01E-004
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	5.71E-004
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	5.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.91E-001
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.7E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.69E+000
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	8.70E+001	mg/kg	NA	NA	M	5.7E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	3.19E-004
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.57E-003
	Phenol	8.60E+002	mg/kg	NA	NA	M	7.4E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.23E-002
	Pyrene	4.20E+000	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.20E-003
	Selenium	1.57E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.69E-001
	Silver	3.12E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.55E+000
	Styrene	3.10E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.33E-002
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	3.9E-001	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	3.94E+001
	Thallium	1.50E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.84E-001
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.1E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	5.57E+000
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.6E-001	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	2.77E+001
	Vanadium	4.77E+001	mg/kg	NA	NA	M	4.1E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	5.84E-002
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	8.6E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	4.79E-001
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.50E+000
	(Total)												1.05E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Total Hazard Index Across All Exposure Routes/Pathways: 1.1E+003

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-106
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \TT_Inh_SWa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.99E-004	mg/cu. m.	R	8.56E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.12E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	2.24E-001	mg/cu. m.	R	3.84E-002	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.34E-001
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.68E-007	mg/cu. m.	R	2.88E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	1.24E-005	mg/cu. m.	R	2.13E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.37E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	1.50E-004	mg/cu. m.	R	2.58E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.84E-002
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	6.32E-003	mg/cu. m.	R	1.08E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	1.05E-004	mg/cu. m.	R	1.80E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.58E-002
	1,4-Dichlorobenzene	9.30E-002	mg/kg	4.78E-006	mg/cu. m.	R	8.20E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	3.58E-006
	2-Butanone	9.90E+004	mg/kg	2.82E-002	mg/cu. m.	R	4.84E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.69E-002
	2-Hexanone	3.90E-001	mg/kg	1.44E-004	mg/cu. m.	R	2.47E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.76E-002
	2-Methylnaphthalene	2.10E+002	mg/kg	3.77E-004	mg/cu. m.	R	6.47E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	6.78E-005	mg/cu. m.	R	1.16E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	9.46E-005	mg/cu. m.	R	1.62E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	4.20E-006	mg/cu. m.	R	7.20E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	2.56E-007	mg/cu. m.	R	4.40E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	7.57E-002	mg/cu. m.	R	1.30E-002	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	6.49E-001
	4-Methylphenol	2.20E+001	mg/kg	1.57E-004	mg/cu. m.	R	2.69E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	8.60E-002	mg/kg	2.65E-006	mg/cu. m.	R	4.54E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.00E-006	mg/cu. m.	R	1.71E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	2.36E-006	mg/cu. m.	R	4.04E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	2.22E-001	mg/cu. m.	R	3.80E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.43E-006	mg/cu. m.	R	2.45E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	4.95E-005	mg/cu. m.	R	8.49E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	7.64E-005	mg/cu. m.	R	1.31E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	3.48E-005	mg/cu. m.	R	5.97E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	1.24E-005	mg/cu. m.	R	2.12E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.80E+001	mg/kg	9.99E-006	mg/cu. m.	R	1.71E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	2.05E-006	mg/cu. m.	R	3.51E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.87E-003	mg/cu. m.	R	3.20E-004	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.29E+000
	Benzene	1.50E+003	mg/kg	3.80E-002	mg/cu. m.	R	6.51E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	3.83E+000
	Benzoic Acid	2.30E+002	mg/kg	3.93E-003	mg/cu. m.	R	6.74E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.04E-007	mg/cu. m.	R	1.21E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	8.00E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	2.15E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	6.29E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	2.15E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	2.54E-007	mg/cu. m.	R	4.36E-008	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	7.65E-003
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	2.46E-003	mg/cu. m.	R	4.22E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	6.60E+001	mg/kg	1.96E-005	mg/cu. m.	R	3.36E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	4.78E-004	mg/cu. m.	R	8.19E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	8.00E-010	mg/cu. m.	R	1.37E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	6.86E-010
	Chlorobenzene	1.00E+003	mg/kg	1.10E-002	mg/cu. m.	R	1.89E-003	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	3.78E-001
	Chloroethane	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	5.49E-010	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu. m.	1.89E-010
	Chloroform	1.00E-002	mg/kg	8.85E-007	mg/cu. m.	R	1.52E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.76E-003
	Chromium 3+	3.75E+003	mg/kg	9.36E-004	mg/cu. m.	R	1.60E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.56E-004	mg/cu. m.	R	2.67E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.80E+000	mg/kg	5.29E-007	mg/cu. m.	R	9.07E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.28E-006	mg/cu. m.	R	9.05E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	4.27E-005	mg/cu. m.	R	7.33E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.66E-003	mg/cu. m.	R	2.85E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.82E+001	mg/kg	1.98E-005	mg/cu. m.	R	3.39E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	2.11E-007	mg/cu. m.	R	3.61E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	1.54E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	1.60E-006	mg/cu. m.	R	2.75E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.80E+001	mg/kg	4.84E-006	mg/cu. m.	R	8.29E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	6.78E-005	mg/cu. m.	R	1.16E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.80E+001	mg/kg	1.10E-005	mg/cu. m.	R	1.88E-006	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-106
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \TT_Ink_RWa3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Ethyl Benzene	2.30E+004	mg/kg	6.92E-002	mg/cu. m.	R	1.19E-002	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.09E-002
	Fluoranthene	6.10E+000	mg/kg	2.00E-006	mg/cu. m.	R	3.42E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	1.62E-006	mg/cu. m.	R	2.77E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	0.00E+000	mg/kg	5.87E-009	mg/cu. m.	R	1.01E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	2.80E-009	mg/cu. m.	R	4.80E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	4.69E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	7.00E-003	mg/cu. m.	R	1.20E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.09E-003	mg/cu. m.	R	8.72E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	2.50E-004	mg/cu. m.	R	4.28E-005	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	2.99E+000
	Mercury	3.60E+001	mg/kg	1.03E-005	mg/cu. m.	R	1.76E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.05E-002
	Methylene Chloride	2.70E+000	mg/kg	8.07E-004	mg/cu. m.	R	1.38E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.61E-004
	m,p-xylene	1.20E+002	mg/kg	1.22E-002	mg/cu. m.	R	2.09E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.64E-003	mg/cu. m.	R	2.81E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.13E-001
	Nickel	1.97E+002	mg/kg	5.62E-005	mg/cu. m.	R	9.63E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	3.91E-006	mg/cu. m.	R	6.70E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	4.42E-003	mg/cu. m.	R	7.57E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	5.14E-006	mg/cu. m.	R	8.81E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	2.09E-006	mg/cu. m.	R	3.58E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.80E+002	mg/kg	1.99E-003	mg/cu. m.	R	3.41E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	1.37E-006	mg/cu. m.	R	2.36E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	4.41E-005	mg/cu. m.	R	7.56E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	8.76E-005	mg/cu. m.	R	1.50E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	1.23E-002	mg/cu. m.	R	2.11E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.37E-003
	Tetrachloroethene	4.60E+004	mg/kg	8.80E-002	mg/cu. m.	R	1.51E-002	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.08E-001
	Thallium	1.50E+000	mg/kg	4.50E-007	mg/cu. m.	R	7.72E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.75E-001	mg/cu. m.	R	3.00E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.63E-001
	Trichloroethene	1.90E+004	mg/kg	3.32E-001	mg/cu. m.	R	5.69E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.41E-005	mg/cu. m.	R	2.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	5.49E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	9.07E-002	mg/cu. m.	R	1.55E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	5.26E-003	mg/cu. m.	R	9.01E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.11E+001

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-107
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_RAWe3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	5.3E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.8E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene	8.10E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day	9.1E-002	kg-day/mg	2.3E-009
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	6.8E-002	kg-day/mg	1.2E-009
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	2.9E-009	mg/kg-day	2.4E-002	kg-day/mg	7.0E-011
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	6.6E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	6.6E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	5.3E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.9E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	6.9E-007	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	2.1E-009	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	4.7E-009	mg/kg-day	2.4E-001	kg-day/mg	1.1E-009
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	2.2E-008	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	5.6E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	3.8E-008	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	8.8E-006	mg/kg-day	2.0E+000	kg-day/mg	1.8E-005
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	2.0E+000	kg-day/mg	8.0E-006
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	2.0E+000	kg-day/mg	2.8E-006
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	2.0E+000	kg-day/mg	2.3E-006
	Arsenic	3.06E+001	mg/kg	NA	NA	M	9.6E-007	mg/kg-day	1.5E+000	kg-day/mg	1.4E-006
	Barium	6.40E+003	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	4.7E-005	mg/kg-day	2.9E-002	kg-day/mg	1.4E-006
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	7.2E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	7.5E-008	mg/kg-day	7.3E-001	kg-day/mg	5.5E-008
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	4.4E-008	mg/kg-day	7.3E+000	kg-day/mg	3.2E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.9E-008
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-002	kg-day/mg	8.9E-009
	Beryllium	1.50E+000	mg/kg	NA	NA	M	4.7E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	1.4E-002	kg-day/mg	3.9E-006
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	5.3E-005	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	3.1E-010	mg/kg-day	6.1E-003	kg-day/mg	1.9E-012
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	5.0E-008	mg/kg-day	7.3E-003	kg-day/mg	3.7E-010
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	6.9E-010	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	4.6E-006	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	1.8E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	8.5E-009	mg/kg-day	7.3E+000	kg-day/mg	6.2E-008
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	7.2E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-107
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3CT.xls\ TT_ID_ILWks3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	7.3E-001	kg-day/mg	1.9E-006
	Iron	7.01E+004	mg/kg	NA	NA	M	2.2E-003	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	9.5E-004	kg-day/mg	1.1E-007
	Lead	1.72E+004	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	4.8E-005	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	8.5E-008	mg/kg-day	7.5E-003	kg-day/mg	6.3E-010
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	3.8E-006	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	6.2E-006	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	1.2E-001	kg-day/mg	6.0E-008
	Phenol	8.60E+002	mg/kg	NA	NA	M	2.7E-005	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	4.9E-006	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	9.8E-006	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	9.7E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	5.2E-002	kg-day/mg	7.5E-005
	Thallium	1.50E+000	mg/kg	NA	NA	M	4.7E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	4.1E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	1.1E-002	kg-day/mg	6.5E-006
	Vanadium	4.77E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	3.1E-003	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	4.9E-004	mg/kg-day		kg-day/mg	
	(Total)										1.19E-004
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.80E+003	mg/kg	NA	NA	M	4.7E-003	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	9.1E-002	kg-day/mg	4.51E-008
	1,2-Dichloroethane (total)	2.60E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	3.4E-007	mg/kg-day	6.8E-002	kg-day/mg	2.29E-008
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	5.7E-008	mg/kg-day	2.4E-002	kg-day/mg	1.37E-009
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	6.1E-002	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.7E-002	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	4.0E-008	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	9.2E-008	mg/kg-day	2.4E-001	kg-day/mg	2.20E-008
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	2.1E-002	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	7.3E-007	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	9.3E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.7E-004	mg/kg-day	2.0E+000	kg-day/mg	3.43E-004
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	7.8E-005	mg/kg-day	2.0E+000	kg-day/mg	1.56E-004
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	2.2E+000	kg-day/mg	6.05E-005
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.0E+000	kg-day/mg	4.41E-005
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.5E+000	kg-day/mg	2.96E-005
	Barium	6.40E+003	mg/kg	NA	NA	M	3.9E-003	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	9.2E-004	mg/kg-day	3.2E-002	kg-day/mg	2.96E-005

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-107
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3CT.wb4) TT_ID_ILAVa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.07E-006
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	8.6E+000	kg-day/mg	7.36E-006
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-001	kg-day/mg	1.74E-006
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-002	kg-day/mg	1.74E-007
	Beryllium	1.50E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	1.4E-002	kg-day/mg	7.63E-005
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	6.1E-004	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	6.1E-009	mg/kg-day	6.4E-003	kg-day/mg	3.91E-011
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	9.8E-007	mg/kg-day	1.8E-002	kg-day/mg	1.74E-008
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	3.5E-003	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	8.1E+000	kg-day/mg	1.34E-006
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	9.8E-006	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	7.3E-001	kg-day/mg	3.66E-007
	Iron	7.01E+004	mg/kg	NA	NA	M	4.3E-002	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	9.5E-004	kg-day/mg	2.09E-006
	Lead	1.72E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	9.4E-004	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	1.4E-002	kg-day/mg	2.25E-008
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	7.3E-005	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	4.2E-004	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	9.8E-006	mg/kg-day	1.2E-001	kg-day/mg	1.18E-006
	Phenol	8.60E+002	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	9.6E-005	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.9E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.8E-002	mg/kg-day	5.2E-002	kg-day/mg	1.46E-003
	Thallium	1.50E+000	mg/kg	NA	NA	M	9.2E-007	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	8.0E-002	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.1E-002	kg-day/mg	1.31E-004
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	6.1E-002	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	9.7E-003	mg/kg-day		kg-day/mg	
	(Total)										2.35E-003
										Total Hazard Index Across All Exposure Routes/Pathways	2.5E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-108
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_Inh_SWe3CT.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethene	1.70E+000	mg/kg	4.99E-004	mg/cu. m.	R	6.12E-008	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	2.24E-001	mg/cu. m.	R	2.74E-003	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.68E-007	mg/cu. m.	R	2.06E-009	mg/kg-day	5.60E-002	mg/kg-day	1.15E-010
	1,2-Dichlorobenzene	5.90E-001	mg/kg	1.24E-005	mg/cu. m.	R	1.52E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.50E-004	mg/cu. m.	R	1.84E-006	mg/kg-day	9.10E-002	mg/kg-day	1.68E-007
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	6.32E-003	mg/cu. m.	R	7.74E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	1.05E-004	mg/cu. m.	R	1.28E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	4.78E-006	mg/cu. m.	R	5.86E-008	mg/kg-day	2.20E-002	mg/kg-day	1.29E-009
	2-Butanone	9.90E+004	mg/kg	2.82E-002	mg/cu. m.	R	3.45E-004	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	1.44E-004	mg/cu. m.	R	1.76E-006	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.77E-004	mg/cu. m.	R	4.62E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	6.78E-005	mg/cu. m.	R	8.30E-007	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	9.46E-005	mg/cu. m.	R	1.16E-006	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	4.20E-006	mg/cu. m.	R	5.15E-008	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	2.56E-007	mg/cu. m.	R	3.14E-009	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	7.57E-002	mg/cu. m.	R	9.27E-004	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	1.57E-004	mg/cu. m.	R	1.92E-006	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.60E-002	mg/kg	2.65E-006	mg/cu. m.	R	3.24E-008	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.00E-008	mg/cu. m.	R	1.22E-010	mg/kg-day		mg/kg-day	
	Acenaphthene	7.10E-001	mg/kg	2.36E-006	mg/cu. m.	R	2.89E-008	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	2.22E-001	mg/cu. m.	R	2.72E-003	mg/kg-day		mg/kg-day	
	Anthracene	1.20E+000	mg/kg	1.43E-006	mg/cu. m.	R	1.75E-008	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	4.95E-005	mg/cu. m.	R	6.07E-007	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	7.64E-005	mg/cu. m.	R	9.35E-007	mg/kg-day	2.00E+000	mg/kg-day	1.87E-006
	Aroclor-1248	1.27E+002	mg/kg	3.48E-005	mg/cu. m.	R	4.26E-007	mg/kg-day	2.00E+000	mg/kg-day	8.52E-007
	Aroclor-1254	4.40E+001	mg/kg	1.24E-005	mg/cu. m.	R	1.51E-007	mg/kg-day	2.00E+000	mg/kg-day	3.03E-007
	Aroclor-1260	3.60E+001	mg/kg	9.99E-006	mg/cu. m.	R	1.22E-007	mg/kg-day	2.00E+000	mg/kg-day	2.45E-007
	Arsenic	3.06E+001	mg/kg	2.05E-006	mg/cu. m.	R	2.51E-008	mg/kg-day	1.51E+001	mg/kg-day	3.78E-007
	Barium	6.40E+003	mg/kg	1.87E-003	mg/cu. m.	R	2.29E-005	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	3.80E-002	mg/cu. m.	R	4.65E-004	mg/kg-day	2.90E-002	mg/kg-day	1.35E-005
	Benzoic Acid	2.30E+002	mg/kg	3.93E-003	mg/cu. m.	R	4.82E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	7.04E-007	mg/cu. m.	R	8.62E-009	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	4.67E-007	mg/cu. m.	R	5.71E-009	mg/kg-day	3.10E+000	mg/kg-day	1.77E-008
	Benzo(b)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	1.54E-008	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	3.67E-007	mg/cu. m.	R	4.49E-009	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	1.25E-006	mg/cu. m.	R	1.54E-008	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	2.54E-007	mg/cu. m.	R	3.11E-009	mg/kg-day	8.40E+000	mg/kg-day	2.61E-008
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	2.46E-003	mg/cu. m.	R	3.01E-005	mg/kg-day	1.40E-002	mg/kg-day	4.22E-007
	Butylbenzylphthalate	6.60E+001	mg/kg	1.96E-005	mg/cu. m.	R	2.40E-007	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	4.78E-004	mg/cu. m.	R	5.85E-006	mg/kg-day	6.30E+000	mg/kg-day	3.69E-005
	Carbon Disulfide	0.00E+000	mg/kg	8.00E-010	mg/cu. m.	R	9.80E-012	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.10E-002	mg/cu. m.	R	1.35E-004	mg/kg-day		mg/kg-day	
	Chloroethane	0.00E+000	mg/kg	3.20E-008	mg/cu. m.	R	3.92E-011	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	8.85E-007	mg/cu. m.	R	1.08E-008	mg/kg-day	8.10E-002	mg/kg-day	8.78E-010
	Chromium 3+	3.75E+003	mg/kg	9.36E-004	mg/cu. m.	R	1.15E-005	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.56E-004	mg/cu. m.	R	1.91E-006	mg/kg-day	4.10E+001	mg/kg-day	7.83E-005
	Chrysene	1.80E+000	mg/kg	5.29E-007	mg/cu. m.	R	6.48E-009	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.26E-006	mg/cu. m.	R	6.46E-008	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	4.27E-005	mg/cu. m.	R	5.23E-007	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.66E-003	mg/cu. m.	R	2.04E-005	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	1.98E-005	mg/cu. m.	R	2.42E-007	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	2.11E-007	mg/cu. m.	R	2.58E-009	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	9.00E-008	mg/cu. m.	R	1.10E-009	mg/kg-day		mg/kg-day	
	Diethylphthalate	5.00E+000	mg/kg	1.60E-006	mg/cu. m.	R	1.96E-008	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.60E+001	mg/kg	4.84E-006	mg/cu. m.	R	5.92E-008	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	6.78E-005	mg/cu. m.	R	8.30E-007	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	1.10E-005	mg/cu. m.	R	1.35E-007	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Utility Worker
Receptor Age:	Adult

Table 5-1-108
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 1TT_Ish_RWs3CT.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Ethyl Benzene	2.30E+004	mg/kg	6.92E-002	mg/cu. m.	R	8.48E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	2.00E-006	mg/cu. m.	R	2.45E-008	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	1.62E-006	mg/cu. m.	R	1.98E-008	mg/kg-day		mg/kg-day	
	Heptachlor	0.00E+000	mg/kg	5.87E-009	mg/cu. m.	R	7.18E-011	mg/kg-day	4.50E+000	mg/kg-day	3.23E-010
	Heptachlor epoxide	0.00E+000	mg/kg	2.80E-009	mg/cu. m.	R	3.43E-011	mg/kg-day	9.10E+000	mg/kg-day	3.12E-010
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	2.73E-007	mg/cu. m.	R	3.35E-009	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	7.00E-003	mg/cu. m.	R	8.58E-005	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.09E-003	mg/cu. m.	R	6.23E-005	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	2.50E-004	mg/cu. m.	R	3.06E-006	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	1.03E-005	mg/cu. m.	R	1.26E-007	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	8.07E-004	mg/cu. m.	R	9.88E-006	mg/kg-day	1.65E-003	mg/kg-day	1.63E-008
	m,p-xylene	1.20E+002	mg/kg	1.22E-002	mg/cu. m.	R	1.49E-004	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.64E-003	mg/cu. m.	R	2.01E-005	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	5.62E-005	mg/cu. m.	R	6.88E-007	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	3.91E-006	mg/cu. m.	R	4.78E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	4.42E-003	mg/cu. m.	R	5.41E-005	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	5.14E-006	mg/cu. m.	R	6.29E-008	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	2.09E-006	mg/cu. m.	R	2.56E-008	mg/kg-day		mg/kg-day	
	Phenol	8.60E+002	mg/kg	1.99E-003	mg/cu. m.	R	2.44E-005	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	1.37E-006	mg/cu. m.	R	1.68E-008	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	4.41E-005	mg/cu. m.	R	5.40E-007	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	8.76E-005	mg/cu. m.	R	1.07E-006	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	1.23E-002	mg/cu. m.	R	1.51E-004	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	8.80E-002	mg/cu. m.	R	1.08E-003	mg/kg-day	2.00E-003	mg/kg-day	2.15E-006
	Thallium	1.50E+000	mg/kg	4.50E-007	mg/cu. m.	R	5.52E-009	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.75E-001	mg/cu. m.	R	2.14E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	3.32E-001	mg/cu. m.	R	4.07E-003	mg/kg-day	6.00E-003	mg/kg-day	2.44E-005
	Vanadium	4.77E+001	mg/kg	1.41E-005	mg/cu. m.	R	1.72E-007	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	3.20E-009	mg/cu. m.	R	3.92E-011	mg/kg-day	3.00E-001	mg/kg-day	1.18E-011
	Xylenes (total)	1.00E+005	mg/kg	9.07E-002	mg/cu. m.	R	1.11E-003	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	5.26E-003	mg/cu. m.	R	6.44E-005	mg/kg-day		mg/kg-day	
	(Total)										1.60E-004

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-109
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ITa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.62E-006
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	3.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.93E-001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.33E-006
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.37E-005
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	1.47E-003
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	4.7E-008	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.57E-006
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	5.0E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	8.37E-002
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.95E-006
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.33E-003
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	2.13E-004
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.57E-003
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	2.13E-004
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	8.6E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.62E-007
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	3.1E-002	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	3.87E-001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.23E-003
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	3.3E-008	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	4.18E-006
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	7.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	3.6E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.00E-006
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.72E-001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	9.1E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	9.13E-003
	Anthracene	1.20E+000	mg/kg	NA	NA	M	6.1E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.03E-006
	Antimony	1.52E+002	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	1.93E-001
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	6.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.12E+000
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	5.17E-002
	Barium	6.40E+003	mg/kg	NA	NA	M	3.2E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	4.64E-002
	Benzene	1.50E+003	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	2.54E-001
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	2.92E-005
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	7.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.80E-004
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	4.5E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.26E-001
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.67E-004
	Cadmium	1.70E+003	mg/kg	NA	NA	M	8.6E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	8.62E-001
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	5.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.54E-002
	Chloroform	1.00E-002	mg/kg	NA	NA	M	5.1E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	5.07E-007
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.27E-003
	Chrysene	1.60E+000	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.12E-006
	Cobalt	1.48E+002	mg/kg	NA	NA	M	7.5E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.25E-003
	Copper	5.79E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	7.34E-002
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.68E-003
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	8.12E-005
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	3.17E-006
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	8.1E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	8.12E-007
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.22E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.64E-004
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.17E-001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	7.74E-005
	Fluorene	9.80E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.24E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-109
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_IO_ITa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	4.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	1.19E-001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.8E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	9.13E-003
	Lead	1.72E+004	mg/kg	NA	NA	M	8.7E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	7.8E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.91E-002
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.28E-005
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	6.1E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	3.04E-005
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.00E-003
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	1.70E-005
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	8.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.71E-004
	Phenol	8.60E+002	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	7.27E-004
	Pyrene	4.20E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.10E-005
	Selenium	1.57E+002	mg/kg	NA	NA	M	8.0E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.59E-002
	Silver	3.12E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.17E-002
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.86E-004
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	2.3E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.33E+000
	Thallium	1.50E+000	mg/kg	NA	NA	M	7.6E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	1.09E-002
	Toluene	1.30E+005	mg/kg	NA	NA	M	6.6E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.30E-001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	9.6E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.61E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.46E-003
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	5.1E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	2.54E-002
	Zinc	1.58E+004	mg/kg	NA	NA	M	8.0E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.67E-002
	(Total)												8.40E+000
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.79E-004
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.48E+000
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.46E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.03E-004
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	5.8E-004	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	6.45E-002
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.92E-005
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	2.2E+000	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	3.88E+000
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.18E-004
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	4.7E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.34E-001
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	9.37E-003
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.92E-002
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	1.34E-002
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	4.68E-005
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.70E+001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.51E-001
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	1.84E-004
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.64E-004
	Acetone	3.40E+004	mg/kg	NA	NA	M	7.6E-001	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	9.67E+000
	Aluminum	1.80E+004	mg/kg	NA	NA	M	4.0E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.02E-001
	Anthracene	1.20E+000	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	8.93E-005
	Antimony	1.52E+002	mg/kg	NA	NA	M	3.4E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	8.48E+002
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	6.2E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	2.8E-003	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	9.8E-004	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	5.52E+001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	8.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.08E+001	mg/kg	NA	NA	M	6.8E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.40E+000
	Barium	6.40E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.04E+000
	Benzene	1.50E+003	mg/kg	NA	NA	M	3.3E-002	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	1.24E+001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-109
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_IT\a3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	5.1E-003	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.28E-003
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.67E+000
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	2.0E-001	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	9.93E+000
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.37E-003
	Cadmium	1.70E+003	mg/kg	NA	NA	M	3.8E-002	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.52E+003
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	2.2E-002	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	3.60E+000
	Chloroform	1.00E-002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	9.6E-003	mg/kg-day	NA	NA	2.34E-005
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	8.4E-002	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.39E+001
	Chrysene	1.60E+000	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.91E-005
	Cobalt	1.48E+002	mg/kg	NA	NA	M	3.3E-003	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.51E-002
	Copper	5.79E+003	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	5.38E+000
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.48E-001
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.57E-003
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.39E-004
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.57E-005
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	5.4E-003	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	5.52E-002
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	8.5E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.24E-002
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	5.1E-001	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	5.58E+000
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.4E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.40E-003
	Fluorene	9.80E-001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.47E-004
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	1.6E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.22E+000
	Isophorone	3.60E+003	mg/kg	NA	NA	M	8.0E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.02E-001
	Lead	1.72E+004	mg/kg	NA	NA	M	3.8E-001	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	3.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.72E+000
	Mercury	3.60E+001	mg/kg	NA	NA	M	8.0E-004	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	6.0E-005	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.83E-003
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.49E-003
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	1.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.59E-001
	Nickel	1.97E+002	mg/kg	NA	NA	M	4.4E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	4.40E+000
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	9.6E-005	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	8.31E-004
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	3.6E-004	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.19E-002
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.9E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	3.20E-002
	Pyrene	4.20E+000	mg/kg	NA	NA	M	9.4E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.12E-003
	Selenium	1.57E+002	mg/kg	NA	NA	M	3.5E-003	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.01E-001
	Silver	3.12E+002	mg/kg	NA	NA	M	7.0E-003	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	6.63E+000
	Styrene	3.10E+002	mg/kg	NA	NA	M	6.9E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.46E-002
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	1.0E+000	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.03E+002
	Thallium	1.50E+000	mg/kg	NA	NA	M	3.3E-005	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	4.78E-001
	Toluene	1.30E+005	mg/kg	NA	NA	M	2.9E+000	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.45E+001
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	4.2E-001	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	7.21E+001
	Vanadium	4.77E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.52E-001
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	2.2E+000	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.25E+000
	Zinc	1.58E+004	mg/kg	NA	NA	M	3.5E-001	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.92E+000
	(Total)												2.73E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Total Hazard Index Across All Exposure Routes/Pathways **2.7E+003**

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-110
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_RMEa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	7.44E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	5.32E-005
	1,1,1-Trichloroethane	7.60E+003	mg/kg	8.51E-002	mg/cu. m.	R	1.44E-003	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.03E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	7.95E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	3.93E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	7.59E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	8.43E-004
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	3.00E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.15E-003
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	7.25E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	4.05E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	3.55E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	3.69E-007	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	6.47E-006
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	1.74E-013	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	8.71E-011
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	3.22E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	1.41E-006
	2-Butanone	9.90E+004	mg/kg	4.66E-006	mg/cu. m.	R	7.92E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.77E-007
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	3.59E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.56E-002
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	6.50E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	1.85E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	8.00E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	1.09E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-008	mg/cu. m.	R	6.75E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-008	mg/cu. m.	R	1.06E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	3.70E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	1.04E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	4.48E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	2.24E-002
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	5.29E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	6.60E-002	mg/kg	2.67E-006	mg/cu. m.	R	4.52E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	3.09E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	1.24E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	2.71E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	1.87E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	5.22E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	6.99E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	8.53E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	4.66E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	2.44E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	9.04E-006	mg/cu. m.	R	1.53E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-006	mg/cu. m.	R	2.80E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	1.32E-006	mg/cu. m.	R	2.23E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	1.58E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.60E+001	mg/kg	3.24E-006	mg/cu. m.	R	5.48E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.06E+001	mg/kg	6.16E-009	mg/cu. m.	R	1.04E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	2.72E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.94E-004
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	2.40E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.41E-001
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	7.49E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	2.67E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	1.40E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	4.15E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	1.14E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	4.15E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	3.75E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	7.14E-012	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	1.25E-006
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	8.88E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	1.39E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	1.45E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	6.60E+001	mg/kg	5.55E-008	mg/cu. m.	R	9.39E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	4.03E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	4.81E-012	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	2.41E-011
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	1.95E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	3.91E-002
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	7.96E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	9.25E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-110
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wb4 \ TT_Inh_RMe3RME.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	1.43E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	2.39E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	2.17E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	9.65E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	3.22E-006	mg/cu. m.	R	5.44E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	2.11E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.62E+001	mg/kg	2.03E-008	mg/cu. m.	R	3.44E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	1.07E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	2.29E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	4.75E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	8.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.60E+001	mg/kg	2.77E-008	mg/cu. m.	R	4.69E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	7.24E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	1.57E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	2.37E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	3.17E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	5.44E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	5.08E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.75E-003
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	6.55E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	5.93E-008	mg/cu. m.	R	1.00E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	2.37E-013	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	1.19E-009
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	1.87E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	8.90E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	1.43E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	2.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	2.12E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	8.93E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	1.17E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	9.43E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	9.33E-009	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	6.52E-004
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	1.20E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.39E-006
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	6.75E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	7.85E-005
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	2.42E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	3.09E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.44E-002
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	6.18E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	8.32E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	8.58E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-008	mg/cu. m.	R	2.08E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	8.77E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.60E+002	mg/kg	1.96E-003	mg/cu. m.	R	3.31E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	1.15E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	5.30E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	2.13E-008	mg/cu. m.	R	3.61E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	4.13E-008	mg/cu. m.	R	6.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	1.32E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	4.62E-004
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	8.51E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.08E-003
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	7.78E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	2.47E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.17E-002
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	2.66E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.37E-008	mg/cu. m.	R	2.32E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	2.06E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	1.19E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	1.71E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												3.98E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-111
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_IO_ITa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	7.2E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	2.5E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day	9.1E-002	kg-day/mg	3.1E-009
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	2.3E-008	mg/kg-day	6.8E-002	kg-day/mg	1.6E-009
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	3.9E-009	mg/kg-day	2.4E-002	kg-day/mg	9.4E-011
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	4.2E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	8.9E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	3.6E-008	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	7.2E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	2.6E-003	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	9.3E-007	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	2.8E-009	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	6.3E-009	mg/kg-day	2.4E-001	kg-day/mg	1.5E-009
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	3.0E-008	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	7.6E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	5.1E-008	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	6.4E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E+000	kg-day/mg	2.4E-005
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	5.4E-006	mg/kg-day	2.0E+000	kg-day/mg	1.1E-005
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	2.0E+000	kg-day/mg	3.7E-006
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	2.0E+000	kg-day/mg	3.0E-006
	Arsenic	3.08E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.5E+000	kg-day/mg	1.9E-006
	Barium	6.40E+003	mg/kg	NA	NA	M	2.7E-004	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	6.3E-005	mg/kg-day	2.9E-002	kg-day/mg	1.8E-006
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	9.7E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	7.3E-001	kg-day/mg	7.4E-008
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	7.3E+000	kg-day/mg	4.3E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	7.3E-001	kg-day/mg	1.2E-007
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	7.3E-002	kg-day/mg	1.2E-008
	Beryllium	1.50E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	1.4E-002	kg-day/mg	5.3E-006
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	7.2E-005	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	4.2E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	4.2E-010	mg/kg-day	6.1E-003	kg-day/mg	2.6E-012
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	6.8E-008	mg/kg-day	7.3E-003	kg-day/mg	4.9E-010
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	9.3E-010	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	6.3E-006	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	2.7E-008	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	7.3E+000	kg-day/mg	8.3E-008
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	9.7E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	4.1E-008	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-111
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ITa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	3.5E-008	mg/kg-day	7.3E-001	kg-day/mg	2.5E-008
	Iron	7.01E+004	mg/kg	NA	NA	M	3.0E-003	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	9.5E-004	kg-day/mg	1.4E-007
	Lead	1.72E+004	mg/kg	NA	NA	M	7.3E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	7.5E-003	kg-day/mg	8.6E-010
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	5.1E-006	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	8.3E-006	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	6.8E-007	mg/kg-day	1.2E-001	kg-day/mg	8.1E-008
	Phenol	8.60E+002	mg/kg	NA	NA	M	3.6E-005	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	6.6E-006	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	5.2E-002	kg-day/mg	1.0E-004
	Thallium	1.50E+000	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	5.5E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	8.0E-004	mg/kg-day	1.1E-002	kg-day/mg	8.8E-006
	Vanadium	4.77E+001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	4.2E-003	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	6.7E-004	mg/kg-day		kg-day/mg	
	(Total)										1.61E-004
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	1.4E-002	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene	8.10E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	9.1E-002	kg-day/mg	1.37E-007
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	4.8E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	6.8E-002	kg-day/mg	6.96E-008
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	2.4E-002	kg-day/mg	4.15E-009
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	1.8E-001	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	7.3E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	3.9E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.1E-001	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	2.4E-001	kg-day/mg	6.70E-008
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	6.3E-002	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	3.3E-002	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	2.8E-004	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	5.2E-004	mg/kg-day	2.0E+000	kg-day/mg	1.04E-003
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day	2.0E+000	kg-day/mg	4.72E-004
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	8.2E-005	mg/kg-day	2.2E+000	kg-day/mg	1.84E-004
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	6.7E-005	mg/kg-day	2.0E+000	kg-day/mg	1.34E-004
	Arsenic	3.08E+001	mg/kg	NA	NA	M	5.7E-006	mg/kg-day	1.6E+000	kg-day/mg	8.99E-005
	Barium	6.40E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	3.2E-002	kg-day/mg	8.99E-005

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-111
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_ID_ITa3RME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	4.3E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day	7.3E-001	kg-day/mg	3.26E-006
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	8.6E+000	kg-day/mg	2.24E-005
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.3E-006	mg/kg-day	7.3E-001	kg-day/mg	5.30E-006
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.3E-006	mg/kg-day	7.3E-002	kg-day/mg	5.30E-007
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	1.4E-002	kg-day/mg	2.32E-004
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	1.9E-003	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.9E-008	mg/kg-day	6.4E-003	kg-day/mg	1.19E-010
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	7.0E-003	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	1.8E-002	kg-day/mg	5.30E-008
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	4.1E-008	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	2.8E-004	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	5.0E-007	mg/kg-day	8.1E+000	kg-day/mg	4.07E-006
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	9.3E-006	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	7.1E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	4.3E-002	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	7.3E-001	kg-day/mg	1.11E-006
	Iron	7.01E+004	mg/kg	NA	NA	M	1.3E-001	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	6.7E-003	mg/kg-day	9.5E-004	kg-day/mg	6.36E-006
	Lead	1.72E+004	mg/kg	NA	NA	M	3.2E-002	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	6.7E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	1.4E-002	kg-day/mg	6.85E-008
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	2.2E-004	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	3.7E-004	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	1.2E-001	kg-day/mg	3.57E-006
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	7.8E-006	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	2.9E-004	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	5.8E-004	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	5.8E-004	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	8.6E-002	mg/kg-day	5.2E-002	kg-day/mg	4.45E-003
	Thallium	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	2.4E-001	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	3.5E-002	mg/kg-day	1.1E-002	kg-day/mg	3.97E-004
	Vanadium	4.77E+001	mg/kg	NA	NA	M	8.9E-005	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	1.9E-001	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	2.9E-002	mg/kg-day		kg-day/mg	
	(Total)										7.14E-003
										Total Hazard Index Across All Exposure Routes/Pathways	7.3E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-112
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_RMe3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	6.20E-007	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.60E+003	mg/kg	8.51E-002	mg/cu. m.	R	1.20E-004	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	6.62E-009	mg/kg-day	5.60E-002	mg/kg-day	3.71E-010
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	3.28E-009	mg/kg-day	2.00E-001	mg/kg-day	6.56E-010
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	6.32E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	2.50E-007	mg/kg-day	9.10E-002	mg/kg-day	2.28E-008
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	6.04E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	3.37E-007	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	3.07E-008	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	1.45E-014	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	2.68E-008	mg/kg-day	2.20E-002	mg/kg-day	5.90E-010
	2-Butanone	9.90E+004	mg/kg	4.68E-006	mg/cu. m.	R	6.60E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	2.99E-006	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	5.42E-007	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	1.54E-007	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	6.66E-010	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	9.04E-008	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	5.63E-009	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-006	mg/cu. m.	R	8.79E-011	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	3.08E-009	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	8.66E-016	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	3.73E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	4.40E-007	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.60E-002	mg/kg	2.67E-006	mg/cu. m.	R	3.77E-009	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	2.57E-013	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	1.04E-013	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	2.26E-013	mg/kg-day	3.40E-001	mg/kg-day	7.68E-014
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	1.56E-008	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	4.35E-010	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	5.83E-005	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	7.10E-013	mg/kg-day	1.70E+001	mg/kg-day	1.21E-011
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	3.89E-014	mg/kg-day	6.30E+000	mg/kg-day	2.45E-013
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	2.03E-009	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	9.04E-006	mg/cu. m.	R	1.27E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-006	mg/cu. m.	R	2.33E-011	mg/kg-day	2.00E+000	mg/kg-day	4.66E-011
	Aroclor-1248	1.27E+002	mg/kg	1.32E-006	mg/cu. m.	R	1.86E-011	mg/kg-day	2.00E+000	mg/kg-day	3.72E-011
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	1.32E-011	mg/kg-day	2.00E+000	mg/kg-day	2.64E-011
	Aroclor-1260	3.60E+001	mg/kg	3.24E-006	mg/cu. m.	R	4.56E-011	mg/kg-day	2.00E+000	mg/kg-day	9.13E-011
	Arsenic	3.06E+001	mg/kg	6.16E-009	mg/cu. m.	R	8.69E-012	mg/kg-day	1.51E+001	mg/kg-day	1.31E-010
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	2.27E-009	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	2.00E-005	mg/kg-day	2.90E-002	mg/kg-day	5.79E-007
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	6.24E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	2.23E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.26E-010	mg/cu. m.	R	1.17E-012	mg/kg-day	3.10E+000	mg/kg-day	3.62E-012
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	3.46E-012	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	9.54E-013	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	3.46E-012	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	3.12E-012	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	5.96E-013	mg/kg-day	8.40E+000	mg/kg-day	4.99E-012
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	7.40E-014	mg/kg-day	1.80E+000	mg/kg-day	1.33E-013
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	1.15E-007	mg/kg-day	1.10E+000	mg/kg-day	1.27E-007
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	1.21E-009	mg/kg-day	1.40E-002	mg/kg-day	1.69E-011
	Butylbenzylphthalate	6.60E+001	mg/kg	5.56E-006	mg/cu. m.	R	7.83E-011	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	3.36E-010	mg/kg-day	6.30E+000	mg/kg-day	2.11E-009
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	4.01E-013	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	1.63E-005	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	6.63E-007	mg/kg-day	8.10E-002	mg/kg-day	5.37E-008

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-112
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area3RME.wk4 \ TT_Inh_RWa3RME.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	1.20E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	1.99E-010	mg/kg-day	4.10E+001	mg/kg-day	8.17E-009
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	1.81E-012	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	8.04E-007	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	3.22E-008	mg/cu. m.	R	4.53E-011	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	1.76E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	2.03E-008	mg/cu. m.	R	2.86E-011	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	8.92E-013	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	1.91E-013	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	3.96E-015	mg/kg-day	1.60E+001	mg/kg-day	6.33E-014
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	6.73E-012	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.60E+001	mg/kg	2.77E-008	mg/cu. m.	R	3.91E-011	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	6.03E-011	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	1.31E-011	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	1.98E-014	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	2.64E-014	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	4.53E-017	mg/kg-day		mg/kg-day	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	4.23E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	5.46E-012	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	5.93E-008	mg/cu. m.	R	8.36E-009	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	1.98E-014	mg/kg-day	3.50E-001	mg/kg-day	6.92E-015
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	1.55E-014	mg/kg-day	4.50E+000	mg/kg-day	7.00E-014
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	7.42E-015	mg/kg-day	9.10E+000	mg/kg-day	6.75E-014
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	1.20E-016	mg/kg-day	1.60E+000	mg/kg-day	1.91E-016
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	1.71E-012	mg/kg-day	7.80E-002	mg/kg-day	1.33E-013
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	1.77E-014	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	7.44E-013	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	9.75E-006	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	7.86E-009	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	7.77E-010	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	9.99E-012	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	5.62E-006	mg/kg-day	1.65E-003	mg/kg-day	9.28E-009
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	2.02E-005	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	2.58E-006	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	5.15E-011	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	6.93E-009	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	7.15E-006	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-006	mg/cu. m.	R	1.73E-011	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	7.31E-012	mg/kg-day		mg/kg-day	
	Phenol	8.60E+002	mg/kg	1.96E-003	mg/cu. m.	R	2.76E-006	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	9.56E-014	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	4.41E-012	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	2.13E-008	mg/cu. m.	R	3.01E-011	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	4.13E-008	mg/cu. m.	R	5.83E-011	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	1.10E-005	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	7.09E-005	mg/kg-day	2.00E-003	mg/kg-day	1.42E-007
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	6.48E-013	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	2.06E-004	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	2.22E-004	mg/kg-day	6.00E-003	mg/kg-day	1.33E-006
	Vanadium	4.77E+001	mg/kg	1.37E-008	mg/cu. m.	R	1.93E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	1.72E-008	mg/kg-day	3.00E-001	mg/kg-day	5.15E-009
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	9.95E-005	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	1.42E-008	mg/kg-day		mg/kg-day	
	(Total)										2.28E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-113
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \TT_ID_IT\3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethene	1.70E+000	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.24E-006
	1,1,1-Trichloroethane	7.80E+003	mg/kg	NA	NA	M	1.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.00E-002
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	7.8E-008	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	8.62E-007
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.55E-006
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	3.80E-004
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	7.2E-008	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.08E-007
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.17E-002
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	5.1E-008	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.28E-006
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	2.8E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.38E-003
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	5.52E-005
	2,4-Dimethylphenol	8.20E+001	mg/kg	NA	NA	M	8.2E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.08E-004
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	5.52E-005
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	2.24E-007
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	8.0E-003	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.00E-001
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	5.79E-004
	4-Nitrophenol	6.80E-002	mg/kg	NA	NA	M	8.7E-009	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	1.08E-006
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	9.3E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.56E-006
	Acetone	3.40E+004	mg/kg	NA	NA	M	4.5E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	4.47E-002
	Aluminum	1.80E+004	mg/kg	NA	NA	M	2.4E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	2.37E-003
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.26E-007
	Antimony	1.52E+002	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	5.00E-002
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	3.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	5.8E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.89E-001
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.34E-002
	Barium	6.40E+003	mg/kg	NA	NA	M	8.4E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.20E-002
	Benzene	1.50E+003	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	3.0E-003	mg/kg-day	NA	NA	6.58E-002
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	7.56E-006
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	9.86E-005
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.85E-002
	Butylbenzylphthalate	6.60E+001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	4.34E-005
	Cadmium	1.70E+003	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	2.24E-001
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.58E-003
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.3E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.32E-007
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	4.9E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	3.29E-004
	Chrysene	1.60E+000	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	2.9E-009	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.89E-007
	Cobalt	1.48E+002	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	3.24E-004
	Copper	5.79E+003	mg/kg	NA	NA	M	7.6E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.90E-002
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.35E-004
	Dibenzofuran	8.40E-001	mg/kg	NA	NA	M	8.4E-008	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	2.10E-005
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	3.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	8.22E-007
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	2.10E-007
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	3.2E-005	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.16E-004
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	5.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.50E-004
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	3.0E-003	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.02E-002
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	8.0E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.01E-005
	Fluorene	9.80E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.22E-006
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	9.2E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	3.07E-002
	Isophorone	3.60E+003	mg/kg	NA	NA	M	4.7E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.37E-003
	Lead	1.72E+004	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.01E-002
	Mercury	3.60E+001	mg/kg	NA	NA	M	4.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	3.6E-007	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.92E-006

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-113
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \TT_ID_IT\3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	7.89E-006
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	8.9E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.47E-003
	Nickel	1.97E+002	mg/kg	NA	NA	M	2.6E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.30E-003
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	5.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	8.8E-006	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	4.41E-006
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.01E-005
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	1.88E-004
	Pyrene	4.20E+000	mg/kg	NA	NA	M	5.5E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.84E-005
	Selenium	1.57E+002	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.13E-003
	Silver	3.12E+002	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	8.21E-003
	Styrene	3.10E+002	mg/kg	NA	NA	M	4.1E-005	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.04E-004
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	6.0E-003	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	6.05E-001
	Thallium	1.50E+000	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	2.82E-003
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	8.55E-002
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	2.5E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.18E-001
	Vanadium	4.77E+001	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	8.96E-004
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	1.3E-002	mg/kg-day	2.0E+000	mg/kg-day	NA	NA	6.58E-003
	Zinc	1.58E+004	mg/kg	NA	NA	M	2.1E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	6.93E-003
	(Total)												2.18E+000
Dermal	1,1-Dichloroethene	1.70E+000	mg/kg	NA	NA	M	3.2E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	3.22E-005
	1,1,1-Trichloroethane	7.60E+003	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.20E-001
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.24E-005
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.11E-005
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	4.9E-005	mg/kg-day	9.0E-003	mg/kg-day	NA	NA	5.47E-003
	1,2-Dichloropropene	5.50E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	5.87E-006
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	1.9E-001	mg/kg-day	5.7E-001	mg/kg-day	NA	NA	3.29E-001
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	7.4E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	1.85E-005
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	4.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.99E-002
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	4.0E-005	mg/kg-day	5.0E-002	mg/kg-day	NA	NA	7.95E-004
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.87E-003
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	1.4E-003	mg/kg-day	NA	NA	1.14E-003
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	8.1E-002	mg/kg-day	NA	NA	3.97E-006
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	1.2E-001	mg/kg-day	8.0E-002	mg/kg-day	NA	NA	1.44E+000
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	4.2E-005	mg/kg-day	3.3E-003	mg/kg-day	NA	NA	1.28E-002
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	8.0E-003	mg/kg-day	NA	NA	1.56E-005
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		mg/kg-day	NA	NA	
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.24E-005
	Acetone	3.40E+004	mg/kg	NA	NA	M	6.4E-002	mg/kg-day	7.9E-002	mg/kg-day	NA	NA	8.20E-001
	Aluminum	1.80E+004	mg/kg	NA	NA	M	3.4E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	3.41E-002
	Anthracene	1.20E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	7.57E-006
	Antimony	1.52E+002	mg/kg	NA	NA	M	2.9E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	7.20E+001
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	8.3E-005	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	4.68E+000
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	6.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.06E+001	mg/kg	NA	NA	M	5.8E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.03E-001
	Barium	6.40E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.73E-001
	Benzene	1.50E+003	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	2.7E-003	mg/kg-day	NA	NA	1.05E+000
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	4.0E+000	mg/kg-day	NA	NA	1.09E-004
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	4.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	7.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.42E-001
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.7E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.43E-001
	Butylbenzylphthalate	6.80E+001	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.25E-004
	Cadmium	1.70E+003	mg/kg	NA	NA	M	3.2E-003	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.29E+002
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	1.9E-003	mg/kg-day	6.2E-003	mg/kg-day	NA	NA	3.05E-001
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	9.8E-003	mg/kg-day	NA	NA	1.98E-006
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.18E+000
	Chrysene	1.60E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		mg/kg-day	NA	NA	

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-113
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_ITa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	4.2E-008	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	4.17E-006
	Cobalt	1.48E+002	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	4.67E-003
	Copper	5.79E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	4.57E-001
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.25E-002
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	4.0E-003	mg/kg-day	NA	NA	3.03E-004
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		mg/kg-day	NA	NA	
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	9.5E-006	mg/kg-day	8.0E-001	mg/kg-day	NA	NA	1.18E-005
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	1.0E+001	mg/kg-day	NA	NA	3.03E-006
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	4.69E-003
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.60E-003
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	4.4E-002	mg/kg-day	9.2E-002	mg/kg-day	NA	NA	4.73E-001
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.89E-004
	Fluorene	9.80E-001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.64E-005
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	7.01E+004	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.42E-001
	Isophorone	3.60E+003	mg/kg	NA	NA	M	6.8E-003	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.41E-002
	Lead	1.72E+004	mg/kg	NA	NA	M	3.3E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.46E-001
	Mercury	3.80E+001	mg/kg	NA	NA	M	6.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	5.1E-006	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.55E-004
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.26E-004
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	1.3E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	6.44E-002
	Nickel	1.97E+002	mg/kg	NA	NA	M	3.7E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.73E-001
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	8.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	7.05E-005
	Pentachlorophenol	1.90E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.01E-003
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	6.0E-001	mg/kg-day	NA	NA	2.71E-003
	Pyrene	4.20E+000	mg/kg	NA	NA	M	8.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	2.65E-004
	Selenium	1.57E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	5.95E-002
	Silver	3.12E+002	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	5.83E-001
	Styrene	3.10E+002	mg/kg	NA	NA	M	5.9E-004	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.94E-003
	Tetrachloroethene	4.60E+004	mg/kg	NA	NA	M	8.7E-002	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	8.71E+000
	Thallium	1.50E+000	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	7.0E-005	mg/kg-day	NA	NA	4.06E-002
	Toluene	1.30E+005	mg/kg	NA	NA	M	2.5E-001	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.23E+000
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	3.6E-002	mg/kg-day	5.9E-003	mg/kg-day	NA	NA	6.12E+000
	Vanadium	4.77E+001	mg/kg	NA	NA	M	9.0E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.29E-002
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	1.9E-001	mg/kg-day	1.8E+000	mg/kg-day	NA	NA	1.06E-001
	Zinc	1.58E+004	mg/kg	NA	NA	M	3.0E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.32E-001
	(Total)												2.32E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Total Hazard Index Across All Exposure Routes/Pathways: 2.3E+002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-114
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_Inh_RMs3CT.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	1.93E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.38E-005
	1,1,1-Trichloroethane	7.80E+003	mg/kg	8.51E-002	mg/cu. m.	R	3.73E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.30E-003
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	2.06E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	1.02E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	1.97E-006	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.19E-004
	1,2-Dichloroethene	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	7.79E-007	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	5.56E-004
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	1.88E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	1.05E-006	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	9.21E-004
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	9.56E-008	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	1.68E-006
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	4.51E-014	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu. m.	2.26E-011
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	8.35E-008	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	3.64E-007
	2-Butanone	9.90E+004	mg/kg	4.68E-008	mg/cu. m.	R	2.05E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.18E-008
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	9.30E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	6.64E-003
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	1.68E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	4.80E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	2.07E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	2.81E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	1.75E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-006	mg/cu. m.	R	2.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-005	mg/cu. m.	R	9.59E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	2.69E-015	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	8.10E+004	mg/kg	2.65E-002	mg/cu. m.	R	1.16E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	5.80E-003
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	1.37E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Nitrophenol	6.80E-002	mg/kg	2.67E-006	mg/cu. m.	R	1.17E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	8.00E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	3.22E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	7.03E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	4.85E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	1.35E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	1.81E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	2.21E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	1.21E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	6.33E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.52E+002	mg/kg	9.04E-006	mg/cu. m.	R	3.96E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-006	mg/cu. m.	R	7.25E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.27E+002	mg/kg	1.32E-006	mg/cu. m.	R	5.79E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	4.11E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	3.80E+001	mg/kg	3.24E-006	mg/cu. m.	R	1.42E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.08E+001	mg/kg	6.16E-009	mg/cu. m.	R	2.70E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	7.05E-009	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	5.04E-005
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	6.21E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	3.66E-002
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	1.94E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	6.93E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	3.63E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	1.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	2.97E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	1.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	9.72E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	1.85E-012	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	3.25E-007
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	2.30E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	3.59E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	3.76E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	6.60E+001	mg/kg	5.56E-006	mg/cu. m.	R	2.43E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.70E+003	mg/kg	2.38E-007	mg/cu. m.	R	1.04E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	1.25E-012	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	6.24E-012
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	5.08E-005	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	1.01E-002
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	2.06E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.40E-002

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-114
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_Inh_SWe3CT.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (Z)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	3.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	6.20E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.60E+000	mg/kg	1.28E-009	mg/cu. m.	R	5.63E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	2.50E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	1.48E+002	mg/kg	3.22E-008	mg/cu. m.	R	1.41E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	5.47E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	6.82E+001	mg/kg	2.03E-008	mg/cu. m.	R	8.91E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	2.77E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	5.94E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	1.23E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	2.09E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	1.60E+001	mg/kg	2.77E-008	mg/cu. m.	R	1.22E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	1.88E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	3.90E+001	mg/kg	9.31E-009	mg/cu. m.	R	4.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	6.16E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	8.21E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	1.41E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	1.32E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.54E-004
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	1.70E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	9.80E-001	mg/kg	5.93E-008	mg/cu. m.	R	2.60E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	6.16E-014	mg/kg-day	2.00E-004	mg/kg-day	7.00E-004	mg/cu. m.	3.08E-010
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	4.84E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	2.31E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	3.72E-016	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	5.31E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	5.50E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	2.32E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	3.03E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	2.44E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	2.42E-009	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.69E-004
	Mercury	3.80E+001	mg/kg	7.09E-009	mg/cu. m.	R	3.11E-011	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	3.61E-007
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	1.75E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	2.03E-005
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	6.28E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	8.02E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	8.91E-003
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	1.60E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	2.16E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	2.23E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-008	mg/cu. m.	R	5.38E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	5.18E-008	mg/cu. m.	R	2.27E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	8.80E+002	mg/kg	1.96E-003	mg/cu. m.	R	8.58E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	2.98E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	1.37E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	1.57E+002	mg/kg	2.13E-008	mg/cu. m.	R	9.35E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	3.12E+002	mg/kg	4.13E-008	mg/cu. m.	R	1.81E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	3.43E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.20E-004
	Tetrachloroethene	4.80E+004	mg/kg	5.03E-002	mg/cu. m.	R	2.21E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.58E-003
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	2.02E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	6.41E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	5.62E-003
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	6.90E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	4.77E+001	mg/kg	1.37E-008	mg/cu. m.	R	6.02E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	5.34E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	1.00E+005	mg/kg	7.06E-002	mg/cu. m.	R	3.09E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.58E+004	mg/kg	1.01E-006	mg/cu. m.	R	4.43E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.03E-001

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-115
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \ TT_ID_ITa3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethene	1.70E+000	mg/kg	NA	NA	M	1.6E-009	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.80E+003	mg/kg	NA	NA	M	7.1E-006	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	5.5E-010	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	8.10E-001	mg/kg	NA	NA	M	7.6E-010	mg/kg-day	9.1E-002	kg-day/mg	6.9E-011
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	2.4E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	5.2E-010	mg/kg-day	6.8E-002	kg-day/mg	3.5E-011
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	8.7E-011	mg/kg-day	2.4E-002	kg-day/mg	2.1E-012
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	9.3E-005	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	3.7E-010	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	5.8E-008	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	7.9E-010	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	1.6E-010	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	NA	NA	M	5.7E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	2.1E-008	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	6.2E-011	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	1.4E-010	mg/kg-day	2.4E-001	kg-day/mg	3.4E-011
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	6.7E-010	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	3.2E-005	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.1E-009	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	2.6E-007	mg/kg-day	2.0E+000	kg-day/mg	5.3E-007
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	2.0E+000	kg-day/mg	2.4E-007
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	4.1E-008	mg/kg-day	2.0E+000	kg-day/mg	8.3E-008
	Aroclor-1260	3.60E+001	mg/kg	NA	NA	M	3.4E-008	mg/kg-day	2.0E+000	kg-day/mg	6.8E-008
	Arsenic	3.06E+001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day	1.5E+000	kg-day/mg	4.3E-006
	Barium	6.40E+003	mg/kg	NA	NA	M	6.0E-006	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	2.9E-002	kg-day/mg	4.1E-008
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	2.3E-009	mg/kg-day	7.3E-001	kg-day/mg	1.6E-009
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.3E-009	mg/kg-day	7.3E+000	kg-day/mg	9.6E-009
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.7E-009	mg/kg-day	7.3E-001	kg-day/mg	2.7E-009
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	3.7E-009	mg/kg-day	7.3E-002	kg-day/mg	2.7E-010
	Beryllium	1.50E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	8.4E-006	mg/kg-day	1.4E-002	kg-day/mg	1.2E-007
	Butylbenzylphthalate	6.80E+001	mg/kg	NA	NA	M	6.2E-008	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	9.4E-007	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	9.4E-012	mg/kg-day	6.1E-003	kg-day/mg	5.7E-014
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Chrysene	1.60E+000	mg/kg	NA	NA	M	1.5E-009	mg/kg-day	7.3E-003	kg-day/mg	1.1E-011
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	2.1E-011	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	5.4E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.62E+001	mg/kg	NA	NA	M	6.2E-008	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	6.0E-010	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	2.5E-010	mg/kg-day	7.3E+000	kg-day/mg	1.9E-009
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	4.7E-009	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.60E+001	mg/kg	NA	NA	M	1.5E-008	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	3.6E-008	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	5.7E-009	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	9.2E-010	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	7.7E-010	mg/kg-day	7.3E-001	kg-day/mg	5.6E-010
	Iron	7.01E+004	mg/kg	NA	NA	M	6.6E-005	mg/kg-day		kg-day/mg	
	Isophorone	3.60E+003	mg/kg	NA	NA	M	3.4E-006	mg/kg-day	9.5E-004	kg-day/mg	3.2E-009
	Lead	1.72E+004	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	3.4E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	2.5E-009	mg/kg-day	7.5E-003	kg-day/mg	1.9E-011

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-115
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wk4 \ TT_ID_\Ta3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	6.4E-007	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	4.0E-009	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	1.5E-008	mg/kg-day	1.2E-001	kg-day/mg	1.8E-009
	Phenol	8.60E+002	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	3.9E-009	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	2.9E-007	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.80E+004	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	5.2E-002	kg-day/mg	2.2E-006
	Thallium	1.50E+000	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.2E-004	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	1.8E-005	mg/kg-day	1.1E-002	kg-day/mg	2.0E-007
	Vanadium	4.77E+001	mg/kg	NA	NA	M	4.5E-008	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	9.4E-005	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	(Total)										3.58E-006
Dermal	1,1-Dichloroethane	1.70E+000	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	7.80E+003	mg/kg	NA	NA	M	1.0E-004	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.90E-001	mg/kg	NA	NA	M	8.0E-009	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene	8.10E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	9.1E-002	kg-day/mg	9.97E-010
	1,2-Dichloroethene (total)	2.60E+001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	5.50E-001	mg/kg	NA	NA	M	7.4E-009	mg/kg-day	6.8E-002	kg-day/mg	5.06E-010
	1,4-Dichlorobenzene	9.30E-002	mg/kg	NA	NA	M	1.3E-009	mg/kg-day	2.4E-002	kg-day/mg	3.02E-011
	2-Butanone	9.90E+004	mg/kg	NA	NA	M	1.3E-003	mg/kg-day		kg-day/mg	
	2-Hexanone	3.90E-001	mg/kg	NA	NA	M	5.3E-009	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.10E+002	mg/kg	NA	NA	M	2.8E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol	2.10E+001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	6.20E+001	mg/kg	NA	NA	M	8.4E-007	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	NA	NA	M	2.3E-009	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	8.10E+004	mg/kg	NA	NA	M	8.3E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol	2.20E+001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		kg-day/mg	
	4-Nitrophenol	6.60E-002	mg/kg	NA	NA	M	8.9E-010	mg/kg-day		kg-day/mg	
	4,4'-DDD	1.50E-001	mg/kg	NA	NA	M	2.0E-009	mg/kg-day	2.4E-001	kg-day/mg	4.87E-010
	Acenaphthene	7.10E-001	mg/kg	NA	NA	M	9.6E-009	mg/kg-day		kg-day/mg	
	Acetone	3.40E+004	mg/kg	NA	NA	M	4.6E-004	mg/kg-day		kg-day/mg	
	Aluminum	1.80E+004	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Anthracene	1.20E+000	mg/kg	NA	NA	M	1.6E-008	mg/kg-day		kg-day/mg	
	Antimony	1.52E+002	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	2.80E+002	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	2.0E+000	kg-day/mg	7.57E-006
	Aroclor-1248	1.27E+002	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E+000	kg-day/mg	3.44E-006
	Aroclor-1254	4.40E+001	mg/kg	NA	NA	M	6.0E-007	mg/kg-day	2.2E+000	kg-day/mg	1.34E-006
	Aroclor-1260	3.80E+001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day	2.0E+000	kg-day/mg	9.74E-007
	Arsenic	3.08E+001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	1.5E+000	kg-day/mg	6.54E-007
	Barium	6.40E+003	mg/kg	NA	NA	M	8.7E-005	mg/kg-day		kg-day/mg	
	Benzene	1.50E+003	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	3.2E-002	kg-day/mg	6.54E-007
	Benzoic Acid	2.30E+002	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	2.40E+000	mg/kg	NA	NA	M	3.2E-008	mg/kg-day	7.3E-001	kg-day/mg	2.37E-008
	Benzo(a)pyrene	1.40E+000	mg/kg	NA	NA	M	1.9E-008	mg/kg-day	8.6E+000	kg-day/mg	1.63E-007
	Benzo(b)fluoranthene	3.90E+000	mg/kg	NA	NA	M	5.3E-008	mg/kg-day	7.3E-001	kg-day/mg	3.85E-008
	Benzo(k)fluoranthene	3.90E+000	mg/kg	NA	NA	M	5.3E-008	mg/kg-day	7.3E-002	kg-day/mg	3.85E-009
	Beryllium	1.50E+000	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	1.4E-002	kg-day/mg	1.69E-006
	Butylbenzylphthalate	6.80E+001	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.70E+003	mg/kg	NA	NA	M	2.3E-005	mg/kg-day		kg-day/mg	
	Chlorobenzene	1.00E+003	mg/kg	NA	NA	M	1.4E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-002	mg/kg	NA	NA	M	1.4E-010	mg/kg-day	6.4E-003	kg-day/mg	8.84E-013
	Chromium 3+	3.75E+003	mg/kg	NA	NA	M	5.1E-005	mg/kg-day		kg-day/mg	
	Chrysene	1.80E+000	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	1.8E-002	kg-day/mg	3.85E-010

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-115
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.xls\4 \TT_ID_\Ta3CT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	NA	NA	M	3.0E-010	mg/kg-day		kg-day/mg	
	Cobalt	1.48E+002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		kg-day/mg	
	Copper	5.79E+003	mg/kg	NA	NA	M	7.8E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	6.82E+001	mg/kg	NA	NA	M	9.0E-007	mg/kg-day		kg-day/mg	
	Dibenzofuran	6.40E-001	mg/kg	NA	NA	M	8.7E-009	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	NA	NA	M	3.7E-009	mg/kg-day	8.1E+000	kg-day/mg	2.96E-008
	Diethylphthalate	5.00E+000	mg/kg	NA	NA	M	6.8E-008	mg/kg-day		kg-day/mg	
	Dimethylphthalate	1.80E+001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	2.40E+002	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	3.80E+001	mg/kg	NA	NA	M	5.1E-007	mg/kg-day		kg-day/mg	
	Ethyl Benzene	2.30E+004	mg/kg	NA	NA	M	3.1E-004	mg/kg-day		kg-day/mg	
	Fluoranthene	6.10E+000	mg/kg	NA	NA	M	8.3E-008	mg/kg-day		kg-day/mg	
	Fluorene	9.80E-001	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	7.3E-001	kg-day/mg	8.10E-009
	Iron	7.01E+004	mg/kg	NA	NA	M	9.5E-004	mg/kg-day		kg-day/mg	
	Isophorone	3.80E+003	mg/kg	NA	NA	M	4.9E-005	mg/kg-day	9.5E-004	kg-day/mg	4.63E-008
	Lead	1.72E+004	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	Manganese	1.54E+003	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Mercury	3.60E+001	mg/kg	NA	NA	M	4.9E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.70E+000	mg/kg	NA	NA	M	3.7E-008	mg/kg-day	1.4E-002	kg-day/mg	4.96E-010
	m,p-xylene	1.20E+002	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Naphthalene	6.80E+002	mg/kg	NA	NA	M	9.2E-006	mg/kg-day		kg-day/mg	
	Nickel	1.97E+002	mg/kg	NA	NA	M	2.7E-006	mg/kg-day		kg-day/mg	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	NA	NA	M	5.8E-008	mg/kg-day		kg-day/mg	
	ortho-xylene	6.70E+001	mg/kg	NA	NA	M	9.1E-007	mg/kg-day		kg-day/mg	
	Pentachlorophenol	1.60E+001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	1.2E-001	kg-day/mg	2.60E-008
	Phenol	8.60E+002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		kg-day/mg	
	Pyrene	4.20E+000	mg/kg	NA	NA	M	5.7E-008	mg/kg-day		kg-day/mg	
	Selenium	1.57E+002	mg/kg	NA	NA	M	2.1E-006	mg/kg-day		kg-day/mg	
	Silver	3.12E+002	mg/kg	NA	NA	M	4.2E-006	mg/kg-day		kg-day/mg	
	Styrene	3.10E+002	mg/kg	NA	NA	M	4.2E-006	mg/kg-day		kg-day/mg	
	Tetrachloroethene	4.80E+004	mg/kg	NA	NA	M	6.2E-004	mg/kg-day	5.2E-002	kg-day/mg	3.24E-005
	Thallium	1.50E+000	mg/kg	NA	NA	M	2.0E-008	mg/kg-day		kg-day/mg	
	Toluene	1.30E+005	mg/kg	NA	NA	M	1.8E-003	mg/kg-day		kg-day/mg	
	Trichloroethene	1.90E+004	mg/kg	NA	NA	M	2.6E-004	mg/kg-day	1.1E-002	kg-day/mg	2.86E-006
	Vanadium	4.77E+001	mg/kg	NA	NA	M	6.5E-007	mg/kg-day		kg-day/mg	
	Xylenes (total)	1.00E+005	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Zinc	1.58E+004	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	(Total)										5.19E-005
										Total Hazard Index Across All Exposure Routes/Pathways	5.5E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-116
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Arpa3CT.wb4 \ T7_Inh_RMa2CT.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	1.70E+000	mg/kg	4.40E-004	mg/cu. m.	R	1.38E-008	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	7.90E+003	mg/kg	8.51E-002	mg/cu. m.	R	2.67E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	4.70E-006	mg/cu. m.	R	1.47E-010	mg/kg-day	5.60E-002	mg/kg-day	8.24E-012
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	2.33E-006	mg/cu. m.	R	7.29E-011	mg/kg-day	2.00E-001	mg/kg-day	1.46E-011
	1,2-Dichlorobenzene	5.90E-001	mg/kg	4.49E-004	mg/cu. m.	R	1.40E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	8.10E-001	mg/kg	1.78E-004	mg/cu. m.	R	5.56E-009	mg/kg-day	9.10E-002	mg/kg-day	5.06E-010
	1,2-Dichloroethane (total)	2.60E+001	mg/kg	4.29E-003	mg/cu. m.	R	1.34E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	5.50E-001	mg/kg	2.39E-004	mg/cu. m.	R	7.50E-009	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	2.18E-005	mg/cu. m.	R	6.83E-010	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	1.03E-011	mg/cu. m.	R	3.22E-016	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	9.30E-002	mg/kg	1.90E-005	mg/cu. m.	R	5.96E-010	mg/kg-day	2.20E-002	mg/kg-day	1.31E-011
	2-Butanone	9.90E+004	mg/kg	4.68E-006	mg/cu. m.	R	1.47E-010	mg/kg-day		mg/kg-day	
	2-Hexanone	3.90E-001	mg/kg	2.12E-003	mg/cu. m.	R	6.64E-008	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.10E+002	mg/kg	3.84E-004	mg/cu. m.	R	1.20E-008	mg/kg-day		mg/kg-day	
	2-Methylphenol	2.10E+001	mg/kg	1.10E-004	mg/cu. m.	R	3.43E-009	mg/kg-day		mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	4.73E-007	mg/cu. m.	R	1.48E-011	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	6.20E+001	mg/kg	6.42E-005	mg/cu. m.	R	2.01E-009	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	8.40E-001	mg/kg	3.99E-006	mg/cu. m.	R	1.25E-010	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	1.70E-001	mg/kg	6.24E-008	mg/cu. m.	R	1.95E-012	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	6.85E-011	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	6.14E-013	mg/cu. m.	R	1.92E-017	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	6.10E+004	mg/kg	2.85E-002	mg/cu. m.	R	8.29E-007	mg/kg-day		mg/kg-day	
	4-Methylphenol	2.20E+001	mg/kg	3.13E-004	mg/cu. m.	R	9.79E-009	mg/kg-day		mg/kg-day	
	4-Nitrophenol	6.80E-002	mg/kg	2.67E-006	mg/cu. m.	R	8.37E-011	mg/kg-day		mg/kg-day	
	4,4'-DDD	1.50E-001	mg/kg	1.83E-010	mg/cu. m.	R	5.72E-015	mg/kg-day		mg/kg-day	
	4,4'-DDE	0.00E+000	mg/kg	7.36E-011	mg/cu. m.	R	2.30E-015	mg/kg-day		mg/kg-day	
	4,4'-DDT	0.00E+000	mg/kg	1.60E-010	mg/cu. m.	R	5.02E-015	mg/kg-day	3.40E-001	mg/kg-day	1.71E-015
	Acenaphthene	7.10E-001	mg/kg	1.11E-005	mg/cu. m.	R	3.46E-010	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	3.09E-007	mg/cu. m.	R	9.67E-012	mg/kg-day		mg/kg-day	
	Acetone	3.40E+004	mg/kg	4.14E-002	mg/cu. m.	R	1.30E-006	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	5.04E-010	mg/cu. m.	R	1.58E-014	mg/kg-day	1.70E+001	mg/kg-day	2.68E-013
	alpha-BHC	0.00E+000	mg/kg	2.76E-011	mg/cu. m.	R	8.64E-016	mg/kg-day	6.30E+000	mg/kg-day	5.44E-015
	Anthracene	1.20E+000	mg/kg	1.44E-006	mg/cu. m.	R	4.52E-011	mg/kg-day		mg/kg-day	
	Antimony	1.52E+002	mg/kg	9.04E-008	mg/cu. m.	R	2.83E-012	mg/kg-day		mg/kg-day	
	Aroclor-1242	2.80E+002	mg/kg	1.65E-008	mg/cu. m.	R	5.18E-013	mg/kg-day	2.00E+000	mg/kg-day	1.04E-012
	Aroclor-1248	1.27E+002	mg/kg	1.32E-008	mg/cu. m.	R	4.14E-013	mg/kg-day	2.00E+000	mg/kg-day	8.28E-013
	Aroclor-1254	4.40E+001	mg/kg	9.37E-009	mg/cu. m.	R	2.93E-013	mg/kg-day	2.00E+000	mg/kg-day	5.87E-013
	Aroclor-1260	3.80E+001	mg/kg	3.24E-008	mg/cu. m.	R	1.01E-012	mg/kg-day	2.00E+000	mg/kg-day	2.03E-012
	Arsenic	3.08E+001	mg/kg	6.16E-009	mg/cu. m.	R	1.93E-013	mg/kg-day	1.51E+001	mg/kg-day	2.91E-012
	Barium	6.40E+003	mg/kg	1.61E-006	mg/cu. m.	R	5.04E-011	mg/kg-day		mg/kg-day	
	Benzene	1.50E+003	mg/kg	1.42E-002	mg/cu. m.	R	4.44E-007	mg/kg-day	2.90E-002	mg/kg-day	1.29E-008
	Benzoic Acid	2.30E+002	mg/kg	4.43E-003	mg/cu. m.	R	1.39E-007	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	2.40E+000	mg/kg	1.58E-009	mg/cu. m.	R	4.95E-014	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.40E+000	mg/kg	8.28E-010	mg/cu. m.	R	2.59E-014	mg/kg-day	3.10E+000	mg/kg-day	8.03E-014
	Benzo(b)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	7.68E-014	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	6.77E-010	mg/cu. m.	R	2.12E-014	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	3.90E+000	mg/kg	2.45E-009	mg/cu. m.	R	7.68E-014	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	2.22E-009	mg/cu. m.	R	6.94E-014	mg/kg-day		mg/kg-day	
	Beryllium	1.50E+000	mg/kg	4.22E-010	mg/cu. m.	R	1.32E-014	mg/kg-day	8.40E+000	mg/kg-day	1.11E-013
	beta-BHC	0.00E+000	mg/kg	5.25E-011	mg/cu. m.	R	1.64E-015	mg/kg-day	1.80E+000	mg/kg-day	2.96E-015
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	8.20E-005	mg/cu. m.	R	2.57E-009	mg/kg-day	1.10E+000	mg/kg-day	2.82E-009
	bis(2-Ethylhexyl)phthalate	8.90E+003	mg/kg	8.58E-007	mg/cu. m.	R	2.68E-011	mg/kg-day	1.40E-002	mg/kg-day	3.76E-013
	Butylbenzylphthalate	6.80E+001	mg/kg	5.56E-006	mg/cu. m.	R	1.74E-012	mg/kg-day		mg/kg-day	
	Cadmium	1.70E+003	mg/kg	2.36E-007	mg/cu. m.	R	7.48E-012	mg/kg-day	6.30E+000	mg/kg-day	4.70E-011
	Carbon Disulfide	0.00E+000	mg/kg	2.85E-010	mg/cu. m.	R	8.92E-015	mg/kg-day		mg/kg-day	
	Chlorobenzene	1.00E+003	mg/kg	1.16E-002	mg/cu. m.	R	3.62E-007	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-002	mg/kg	4.71E-004	mg/cu. m.	R	1.47E-008	mg/kg-day	8.10E-002	mg/kg-day	1.19E-009

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	Area 3, Soil (0' to 10')
Receptor Population:	Trespasser
Receptor Age:	Adolescent

Table 5-1-116
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area3CT.wb4 \TT_bch_RWs3CT.wb4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Chromium 3+	3.75E+003	mg/kg	8.48E-007	mg/cu. m.	R	2.66E-011	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.41E-007	mg/cu. m.	R	4.43E-012	mg/kg-day	4.10E+001	mg/kg-day	1.82E-010
	Chrysene	1.60E+000	mg/kg	1.26E-009	mg/cu. m.	R	4.02E-014	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	2.20E-002	mg/kg	5.71E-004	mg/cu. m.	R	1.79E-008	mg/kg-day		mg/kg-day	
	Cobalt	1.48E+002	mg/kg	3.22E-006	mg/cu. m.	R	1.01E-012	mg/kg-day		mg/kg-day	
	Copper	5.79E+003	mg/kg	1.25E-006	mg/cu. m.	R	3.91E-011	mg/kg-day		mg/kg-day	
	Cyanide (total)	6.62E+001	mg/kg	2.03E-006	mg/cu. m.	R	6.36E-013	mg/kg-day		mg/kg-day	
	Dibenzofuran	6.40E-001	mg/kg	6.33E-010	mg/cu. m.	R	1.98E-014	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	2.70E-001	mg/kg	1.35E-010	mg/cu. m.	R	4.24E-015	mg/kg-day		mg/kg-day	
	Dieldrin	0.00E+000	mg/kg	2.81E-012	mg/cu. m.	R	8.79E-017	mg/kg-day	1.60E+001	mg/kg-day	1.41E-015
	Diethylphthalate	5.00E+000	mg/kg	4.78E-009	mg/cu. m.	R	1.50E-013	mg/kg-day		mg/kg-day	
	Dimethylphthalate	1.80E+001	mg/kg	2.77E-008	mg/cu. m.	R	8.68E-013	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	2.40E+002	mg/kg	4.28E-008	mg/cu. m.	R	1.34E-012	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	3.80E+001	mg/kg	9.31E-009	mg/cu. m.	R	2.92E-013	mg/kg-day		mg/kg-day	
	Endosulfan I	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	4.40E-016	mg/kg-day		mg/kg-day	
	Endrin	0.00E+000	mg/kg	1.87E-011	mg/cu. m.	R	5.86E-016	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	3.22E-014	mg/cu. m.	R	1.01E-018	mg/kg-day		mg/kg-day	
	Ethyl Benzene	2.30E+004	mg/kg	3.00E-002	mg/cu. m.	R	9.41E-007	mg/kg-day		mg/kg-day	
	Fluoranthene	6.10E+000	mg/kg	3.87E-009	mg/cu. m.	R	1.21E-013	mg/kg-day		mg/kg-day	
	Fluorene	9.80E-001	mg/kg	5.93E-008	mg/cu. m.	R	1.86E-010	mg/kg-day		mg/kg-day	
	gamma-Chlordane	0.00E+000	mg/kg	1.40E-011	mg/cu. m.	R	4.40E-016	mg/kg-day	3.50E-001	mg/kg-day	1.54E-016
	Heptachlor	0.00E+000	mg/kg	1.10E-011	mg/cu. m.	R	3.45E-016	mg/kg-day	4.50E+000	mg/kg-day	1.55E-015
	Heptachlor epoxide	0.00E+000	mg/kg	5.27E-012	mg/cu. m.	R	1.65E-016	mg/kg-day	9.10E+000	mg/kg-day	1.50E-015
	Hexachlorobenzene	0.00E+000	mg/kg	8.48E-014	mg/cu. m.	R	2.66E-018	mg/kg-day	1.60E+000	mg/kg-day	4.25E-018
	Hexachlorobutadiene	0.00E+000	mg/kg	1.21E-009	mg/cu. m.	R	3.80E-014	mg/kg-day	7.80E-002	mg/kg-day	2.96E-015
	Hexane, n-	0.00E+000	mg/kg	1.25E-011	mg/cu. m.	R	3.93E-016	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.20E-001	mg/kg	5.28E-010	mg/cu. m.	R	1.65E-014	mg/kg-day		mg/kg-day	
	Isophorone	3.60E+003	mg/kg	6.92E-003	mg/cu. m.	R	2.17E-007	mg/kg-day		mg/kg-day	
	Lead	1.72E+004	mg/kg	5.58E-006	mg/cu. m.	R	1.75E-010	mg/kg-day		mg/kg-day	
	Manganese	1.54E+003	mg/kg	5.52E-007	mg/cu. m.	R	1.73E-011	mg/kg-day		mg/kg-day	
	Mercury	3.60E+001	mg/kg	7.09E-009	mg/cu. m.	R	2.22E-013	mg/kg-day		mg/kg-day	
	Methylene Chloride	2.70E+000	mg/kg	3.99E-003	mg/cu. m.	R	1.25E-007	mg/kg-day	1.65E-003	mg/kg-day	2.06E-010
	m,p-xylene	1.20E+002	mg/kg	1.43E-002	mg/cu. m.	R	4.48E-007	mg/kg-day		mg/kg-day	
	Naphthalene	6.80E+002	mg/kg	1.83E-003	mg/cu. m.	R	5.73E-008	mg/kg-day		mg/kg-day	
	Nickel	1.97E+002	mg/kg	3.65E-008	mg/cu. m.	R	1.14E-012	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	4.30E+000	mg/kg	4.92E-006	mg/cu. m.	R	1.54E-010	mg/kg-day		mg/kg-day	
	ortho-xylene	6.70E+001	mg/kg	5.08E-003	mg/cu. m.	R	1.59E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	1.60E+001	mg/kg	1.23E-008	mg/cu. m.	R	3.85E-013	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	5.18E-009	mg/cu. m.	R	1.62E-013	mg/kg-day		mg/kg-day	
	Phenol	8.80E+002	mg/kg	1.96E-003	mg/cu. m.	R	6.13E-008	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	6.79E-011	mg/cu. m.	R	2.13E-015	mg/kg-day		mg/kg-day	
	Pyrene	4.20E+000	mg/kg	3.13E-009	mg/cu. m.	R	9.81E-014	mg/kg-day		mg/kg-day	
	Selenium	1.57E+002	mg/kg	2.13E-006	mg/cu. m.	R	6.68E-013	mg/kg-day		mg/kg-day	
	Silver	3.12E+002	mg/kg	4.13E-006	mg/cu. m.	R	1.29E-012	mg/kg-day		mg/kg-day	
	Styrene	3.10E+002	mg/kg	7.82E-003	mg/cu. m.	R	2.45E-007	mg/kg-day		mg/kg-day	
	Tetrachloroethene	4.60E+004	mg/kg	5.03E-002	mg/cu. m.	R	1.58E-006	mg/kg-day	2.00E-003	mg/kg-day	3.15E-009
	Thallium	1.50E+000	mg/kg	4.60E-010	mg/cu. m.	R	1.44E-014	mg/kg-day		mg/kg-day	
	Toluene	1.30E+005	mg/kg	1.46E-001	mg/cu. m.	R	4.58E-006	mg/kg-day		mg/kg-day	
	Trichloroethene	1.90E+004	mg/kg	1.57E-001	mg/cu. m.	R	4.93E-006	mg/kg-day	6.00E-003	mg/kg-day	2.96E-008
	Vanadium	4.77E+001	mg/kg	1.37E-006	mg/cu. m.	R	4.30E-013	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	1.22E-005	mg/cu. m.	R	3.82E-010	mg/kg-day	3.00E-001	mg/kg-day	1.14E-010
	Xylenes (total)	1.00E+005	mg/kg	7.08E-002	mg/cu. m.	R	2.21E-006	mg/kg-day		mg/kg-day	
	Zinc	1.58E+004	mg/kg	1.01E-005	mg/cu. m.	R	3.17E-010	mg/kg-day		mg/kg-day	
	(Total)										5.07E-008

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-117
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aRME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.58E-004
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.67E-004
	Aluminum	6.12E+003	mg/kg	NA	NA	M	7.8E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	7.82E-002
	Antimony	1.47E+001	mg/kg	NA	NA	M	1.9E-004	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	4.70E-001
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.05E-001
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	2.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.45E-001
	Barium	1.18E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.16E-002
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	6.1E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.07E-003
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	8.1E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.03E-004
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	7.2E-007	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.58E-006
	Cadmium	1.50E+000	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.92E-002
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	3.5E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	2.34E-004
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	7.2E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.19E-003
	Copper	1.97E+001	mg/kg	NA	NA	M	2.5E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.30E-003
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.31E-005
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	6.3E-008	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	1.27E-003
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.53E-005
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	4.5E-008	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	7.46E-006
	Endrin	5.50E-003	mg/kg	NA	NA	M	7.0E-008	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.34E-004
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	4.79E-005
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	6.3E-009	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.11E-005
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.17E-004
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.34E-005
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	5.9E-008	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	4.52E-003
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	1.3E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.39E-001
	Lead	8.27E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	5.6E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.81E-001
	Mercury	7.00E-002	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.35E-005

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-117
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRE85aRME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	8.9E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.49E-006
	Nickel	1.71E+001	mg/kg	NA	NA	M	2.2E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.09E-002
	Pyrene	1.60E-001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	6.82E-005
	Selenium	5.70E-001	mg/kg	NA	NA	M	7.3E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.46E-003
	Silver	1.10E+000	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.81E-003
	Toluene	2.00E-003	mg/kg	NA	NA	M	2.6E-008	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.28E-007
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.19E-002
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.5E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.03E-003
	(Total)												1.72E+000
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.76E-003
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.81E-003
	Aluminum	6.12E+003	mg/kg	NA	NA	M	8.2E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	8.22E-001
	Antimony	1.47E+001	mg/kg	NA	NA	M	2.0E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	4.93E+002
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	4.3E-005	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.41E+000
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	3.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	4.6E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.60E+000
	Barium	1.18E+002	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.26E-001
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	6.4E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	3.22E+000
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	8.5E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.23E-003
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	7.5E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.76E-005
	Cadmium	1.50E+000	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	8.05E+000
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	3.7E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	6.15E-001
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.25E-002
	Copper	1.97E+001	mg/kg	NA	NA	M	2.6E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.10E-001
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.75E-003
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	1.33E-002
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.66E-004
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	4.7E-007	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	7.83E-005
	Endrin	5.50E-003	mg/kg	NA	NA	M	7.4E-007	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.46E-003
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.03E-004
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	6.6E-008	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.22E-004

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-117
Calculation of Non - Cancer Hazards
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aRME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.28E-003
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.50E-004
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	6.2E-007	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	4.75E-002
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.2E-005	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	1.4E+000	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.61E+000
	Lead	8.27E+001	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	5.9E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.95E+000
	Mercury	7.00E-002	mg/kg	NA	NA	M	9.4E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.56E-004
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	9.4E-007	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	2.85E-005
	Nickel	1.71E+001	mg/kg	NA	NA	M	2.3E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	2.30E+000
	Pyrene	1.60E-001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.16E-004
	Selenium	5.70E-001	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.53E-002
	Silver	1.10E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.41E-001
	Toluene	2.00E-003	mg/kg	NA	NA	M	2.7E-007	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.34E-006
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.30E-001
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.6E-002	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.76E-001
	(Total)												5.21E+002
												Total Hazard Index Across All Exposure Routes/Pathways	5.2E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-118
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures

File: Area5aRM.wk4 \ TT_Inh_CRE55aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	1.78E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	1.27E-003
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	2.06E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.20E-004
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	1.38E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	2.29E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	3.23E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	3.59E-002
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	7.11E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	5.08E-002
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	3.88E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	7.07E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	6.20E-002
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	1.65E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.90E-004
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	6.12E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.67E-005
	2-Butanone	0.00E+000	mg/kg	2.51E-006	mg/cu. m.	R	3.21E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.12E-007
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	1.53E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.09E+000
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	6.14E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	3.14E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	1.16E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-006	mg/cu. m.	R	2.39E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	1.70E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	4.49E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	1.82E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	9.08E-003
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	1.12E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	1.02E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	5.70E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	8.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	6.13E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-006	mg/cu. m.	R	3.72E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	2.63E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	3.91E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	2.14E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	2.11E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	7.50E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	5.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	3.56E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	2.83E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	2.24E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	1.85E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	1.84E-007	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	1.32E-003
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	2.09E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.23E-001
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	2.74E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	6.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	2.92E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	9.89E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	3.66E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	9.72E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	3.66E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	1.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	1.59E-010	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	2.79E-005
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	4.07E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	5.91E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-006	mg/cu. m.	R	4.31E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-006	mg/cu. m.	R	2.80E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	1.45E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	2.08E-009	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.04E-008
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	6.49E-005	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	1.30E-002
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	2.48E-004	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.88E+000
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	1.36E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.78E-006	mg/cu. m.	R	2.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	3.10E-010	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-118
Calculation of Non-Cancer Hazards
Reasonable Maximum Exposures

File: Area5aRM.wk4 \ TT_Inh_CRE5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-008	mg/cu. m.	R	2.80E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	3.73E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	1.43E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	2.33E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	1.83E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.61E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	1.69E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	5.61E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	9.07E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	2.35E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	1.75E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	6.02E-003
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	4.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	3.22E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	4.23E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	2.02E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	6.20E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	8.85E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	9.72E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	9.16E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	3.54E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	6.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	1.18E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	1.16E-007	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	8.10E-003
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	1.05E-009	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.22E-005
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	6.15E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	7.16E-004
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	1.62E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	1.90E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	2.11E-001
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	4.32E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	6.82E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	7.77E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	3.07E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	1.30E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	6.97E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	6.31E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	1.02E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	6.42E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	1.03E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	3.60E-004
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	5.66E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	4.04E-002
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	4.68E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	1.97E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.73E-001
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	1.63E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	2.13E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	9.45E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	1.12E-002	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	9.48E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												4.71E+000

Scenario Timeframe:	*Current/Future*
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-119
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRE55aRME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	3.4E-001	kg-day/mg	4.1E-009
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.5E-008	mg/kg-day	3.4E-001	kg-day/mg	5.2E-009
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.2E-009	mg/kg-day	6.3E+000	kg-day/mg	7.2E-009
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	3.5E-001	kg-day/mg	4.0E-009
	Aluminum	6.12E+003	mg/kg	NA	NA	M	6.7E-003	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	2.0E+000	kg-day/mg	3.1E-007
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	2.0E+000	kg-day/mg	7.0E-007
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	2.0E+000	kg-day/mg	5.0E-007
	Arsenic	3.40E+000	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	1.5E+000	kg-day/mg	5.6E-006
	Barium	1.18E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	9.8E-008	mg/kg-day	7.3E-001	kg-day/mg	7.1E-008
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E+000	kg-day/mg	8.8E-007
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.8E-008
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	9.5E-008	mg/kg-day	7.3E-002	kg-day/mg	7.0E-009
	Beryllium	4.80E-001	mg/kg	NA	NA	M	5.3E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	6.9E-007	mg/kg-day	1.4E-002	kg-day/mg	9.7E-009
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	6.1E-008	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	7.3E-003	kg-day/mg	8.8E-010
	Cobalt	5.60E+000	mg/kg	NA	NA	M	6.1E-006	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	2.2E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	5.4E-009	mg/kg-day	1.6E+001	kg-day/mg	8.7E-008
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	3.8E-009	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	6.0E-009	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	5.4E-010	mg/kg-day	1.3E+000	kg-day/mg	7.1E-010
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	9.3E-009	mg/kg-day	3.5E-001	kg-day/mg	3.3E-009
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.4E-009	mg/kg-day	4.5E+000	kg-day/mg	6.4E-009
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	5.0E-009	mg/kg-day	9.1E+000	kg-day/mg	4.6E-008
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	9.5E-008	mg/kg-day	7.3E-001	kg-day/mg	7.0E-008
	Iron	1.03E+004	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	9.1E-005	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	4.8E-004	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	7.7E-008	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	1.9E-008	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-119
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRE85aRME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	7.7E-009	mg/kg-day	7.5E-003	kg-day/mg	5.8E-011
	Nickel	1.71E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	6.2E-007	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	2.2E-009	mg/kg-day		kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.3E-004	mg/kg-day		kg-day/mg	
	(Total)										8.39E-006
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	3.4E-001	kg-day/mg	4.30E-008
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	3.4E-001	kg-day/mg	5.48E-008
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	6.3E+000	kg-day/mg	7.61E-008
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	3.5E-001	kg-day/mg	4.21E-008
	Aluminum	6.12E+003	mg/kg	NA	NA	M	7.0E-002	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	1.7E-004	mg/kg-day		kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	2.0E+000	kg-day/mg	3.22E-006
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	2.2E+000	kg-day/mg	8.27E-006
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	2.6E-006	mg/kg-day	2.0E+000	kg-day/mg	5.29E-006
	Arsenic	3.40E+000	mg/kg	NA	NA	M	3.9E-005	mg/kg-day	1.6E+000	kg-day/mg	6.18E-005
	Barium	1.18E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	7.3E-001	kg-day/mg	7.48E-007
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	8.6E+000	kg-day/mg	1.09E-005
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	7.3E-001	kg-day/mg	9.24E-007
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	7.3E-002	kg-day/mg	7.31E-008
	Beryllium	4.80E-001	mg/kg	NA	NA	M	5.5E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	7.2E-006	mg/kg-day	1.4E-002	kg-day/mg	1.01E-007
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	6.4E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	1.7E-005	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	3.2E-004	mg/kg-day		kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.8E-002	kg-day/mg	2.25E-008
	Cobalt	5.60E+000	mg/kg	NA	NA	M	6.4E-005	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	5.7E-008	mg/kg-day	1.6E+001	kg-day/mg	9.11E-007
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	4.0E-008	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	6.3E-008	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	5.7E-009	mg/kg-day	1.3E+000	kg-day/mg	7.40E-009

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-119
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRE85aRME

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	9.8E-008	mg/kg-day	3.5E-001	kg-day/mg	3.42E-008
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.5E-008	mg/kg-day	4.5E+000	kg-day/mg	6.76E-008
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	5.3E-008	mg/kg-day	9.1E+000	kg-day/mg	4.82E-007
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	7.3E-001	kg-day/mg	7.31E-007
	Iron	1.03E+004	mg/kg	NA	NA	M	1.2E-001	mg/kg-day		kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	9.5E-004	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	5.1E-003	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	8.1E-007	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	2.0E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	8.1E-008	mg/kg-day	1.4E-002	kg-day/mg	1.10E-009
	Nickel	1.71E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	6.6E-006	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	2.3E-008	mg/kg-day		kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.4E-004	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.4E-003	mg/kg-day		kg-day/mg	
	(Total)										9.38E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.0E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-120
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_CRE95aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	1.53E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	1.77E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	1.18E-009	mg/kg-day	5.60E-002	mg/kg-day	6.61E-011
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	1.96E-008	mg/kg-day	2.00E-001	mg/kg-day	3.92E-009
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	2.77E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	6.09E-006	mg/kg-day	9.10E-002	mg/kg-day	5.54E-007
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	3.32E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	6.06E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	1.42E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	5.24E-007	mg/kg-day	2.20E-002	mg/kg-day	1.15E-008
	2-Butanone	0.00E+000	mg/kg	2.51E-008	mg/cu. m.	R	2.75E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	1.31E-004	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	5.26E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	2.69E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	9.94E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	2.05E-009	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	1.45E-007	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	3.85E-013	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	1.56E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	9.62E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	8.70E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	4.89E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	6.92E-012	mg/kg-day	3.40E-001	mg/kg-day	2.35E-012
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	5.26E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-006	mg/cu. m.	R	3.19E-009	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	2.25E-005	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	3.35E-011	mg/kg-day	1.70E+001	mg/kg-day	5.70E-010
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	1.83E-012	mg/kg-day	6.30E+000	mg/kg-day	1.15E-011
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	1.81E-008	mg/kg-day		mg/kg-day	
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	6.43E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	5.08E-011	mg/kg-day	2.00E+000	mg/kg-day	1.02E-010
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	3.05E-010	mg/kg-day	2.00E+000	mg/kg-day	6.11E-010
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	2.42E-010	mg/kg-day	2.00E+000	mg/kg-day	4.84E-010
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	1.92E-009	mg/kg-day	2.00E+000	mg/kg-day	3.84E-009
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	1.58E-010	mg/kg-day	1.51E+001	mg/kg-day	2.39E-009
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	1.58E-008	mg/kg-day		mg/kg-day	
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	1.79E-005	mg/kg-day	2.90E-002	mg/kg-day	5.19E-007
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	2.35E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	2.50E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	8.48E-012	mg/kg-day	3.10E+000	mg/kg-day	2.63E-011
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	3.14E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	8.33E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	3.13E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	1.47E-010	mg/kg-day		mg/kg-day	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	1.36E-011	mg/kg-day	8.40E+000	mg/kg-day	1.15E-010
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	3.49E-012	mg/kg-day	1.80E+000	mg/kg-day	6.28E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	5.06E-006	mg/kg-day	1.10E+000	mg/kg-day	5.57E-006
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	3.69E-009	mg/kg-day	1.40E-002	mg/kg-day	5.17E-011
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-008	mg/cu. m.	R	2.40E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	1.25E-009	mg/kg-day	6.30E+000	mg/kg-day	7.86E-009
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	1.78E-010	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	5.56E-006	mg/kg-day		mg/kg-day	
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	2.13E-005	mg/kg-day	8.10E-002	mg/kg-day	1.72E-006
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	1.17E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.78E-008	mg/cu. m.	R	1.95E-009	mg/kg-day	4.10E+001	mg/kg-day	7.99E-008
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	2.66E-011	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-120
Calculation of Cancer Risks
Reasonable Maximum Exposures
American Chemical Service Site

File: AreaSeRM.wk4 \ TT_Inh_CRESSeRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	2.40E-007	mg/kg-day		mg/kg-day	
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	3.20E-010	mg/kg-day		mg/kg-day	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	1.23E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	2.00E-010	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	1.57E-011	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.38E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	1.45E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	4.81E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	7.78E-011	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	2.02E-014	mg/kg-day		mg/kg-day	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	1.50E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	3.70E-011	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	2.76E-007	mg/kg-day		mg/kg-day	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	3.63E-013	mg/kg-day	4.50E+000	mg/kg-day	1.63E-012
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	1.73E-013	mg/kg-day	9.10E+000	mg/kg-day	1.58E-012
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	5.31E-014	mg/kg-day	1.60E+000	mg/kg-day	8.50E-014
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	7.59E-011	mg/kg-day	7.80E-002	mg/kg-day	5.92E-012
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	8.33E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	6.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	7.85E-012	mg/kg-day		mg/kg-day	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	3.03E-005	mg/kg-day		mg/kg-day	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	1.01E-007	mg/kg-day		mg/kg-day	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	9.93E-009	mg/kg-day		mg/kg-day	
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	8.98E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	5.28E-005	mg/kg-day	1.65E-003	mg/kg-day	8.70E-008
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	1.39E-006	mg/kg-day		mg/kg-day	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	1.63E-005	mg/kg-day		mg/kg-day	
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	3.70E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	5.84E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	6.66E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	2.63E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	1.11E-010	mg/kg-day		mg/kg-day	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	5.97E-006	mg/kg-day		mg/kg-day	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	5.41E-011	mg/kg-day		mg/kg-day	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	8.71E-011	mg/kg-day		mg/kg-day	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	5.51E-011	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	8.82E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	4.85E-004	mg/kg-day	2.00E-003	mg/kg-day	9.70E-007
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	4.01E-012	mg/kg-day		mg/kg-day	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	1.69E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	1.39E-004	mg/kg-day	6.00E-003	mg/kg-day	8.36E-007
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	1.83E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	8.10E-007	mg/kg-day	3.00E-001	mg/kg-day	2.43E-007
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	9.57E-004	mg/kg-day		mg/kg-day	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	8.12E-006	mg/kg-day		mg/kg-day	
	(Total)										1.06E-005

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-121
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	7.0E-008	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	8.9E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.79E-004
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	6.7E-009	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	6.7E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.34E-004
	Aluminum	6.12E+003	mg/kg	NA	NA	M	3.9E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	3.91E-002
	Antimony	1.47E+001	mg/kg	NA	NA	M	9.4E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.35E-001
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	8.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	2.0E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.02E-001
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	2.2E-005	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	7.25E-002
	Barium	1.18E+002	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.08E-002
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	5.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	5.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	3.1E-006	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.53E-003
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	4.0E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.01E-004
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	3.6E-007	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.79E-006
	Cadmium	1.50E+000	mg/kg	NA	NA	M	9.6E-006	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	9.59E-003
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	1.8E-004	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.17E-004
	Chrysene	1.10E-001	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	3.6E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	5.97E-004
	Copper	1.97E+001	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.15E-003
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.16E-005
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	3.2E-008	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	6.33E-004
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	7.7E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	7.67E-006
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.73E-006
	Endrin	5.50E-003	mg/kg	NA	NA	M	3.5E-008	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.17E-004
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	9.6E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.40E-005
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	3.2E-009	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.05E-005
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	5.4E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.09E-004
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	8.3E-009	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.67E-005
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	2.9E-008	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	2.26E-003
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	5.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	6.6E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.19E-001
	Lead	8.27E+001	mg/kg	NA	NA	M	5.3E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	2.8E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.40E-001
	Mercury	7.00E-002	mg/kg	NA	NA	M	4.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.17E-005

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-121
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	4.5E-008	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.46E-007
	Nickel	1.71E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.47E-003
	Pyrene	1.60E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.41E-005
	Selenium	5.70E-001	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.29E-004
	Silver	1.10E+000	mg/kg	NA	NA	M	7.0E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.41E-003
	Toluene	2.00E-003	mg/kg	NA	NA	M	1.3E-008	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.39E-008
	Vanadium	1.20E+001	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.10E-002
	Zinc	1.18E+002	mg/kg	NA	NA	M	7.5E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.51E-003
	(Total)												8.59E-001
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	2.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	3.2E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	6.44E-004
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	2.4E-008	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	2.4E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	4.81E-004
	Aluminum	6.12E+003	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	1.41E-001
	Antimony	1.47E+001	mg/kg	NA	NA	M	3.4E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	8.46E+001
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	7.4E-006	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	4.14E-001
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	5.3E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	7.8E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	2.75E-001
	Barium	1.18E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	3.88E-002
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	5.52E-001
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	1.4E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	7.25E-004
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.44E-006
	Cadmium	1.50E+000	mg/kg	NA	NA	M	3.5E-005	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	1.38E+000
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	6.3E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.05E-001
	Chrysene	1.10E-001	mg/kg	NA	NA	M	2.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	1.3E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	2.15E-003
	Copper	1.97E+001	mg/kg	NA	NA	M	4.5E-004	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.89E-002
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	2.99E-004
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	2.28E-003
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	2.8E-006	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	2.85E-005
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	8.1E-008	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	1.34E-005
	Endrin	5.50E-003	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	4.22E-004
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	8.63E-005
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	1.1E-008	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	3.80E-005

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-121
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	2.0E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.91E-004
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	3.0E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	6.01E-005
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	8.14E-003
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	2.0E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	2.4E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	7.90E-001
	Lead	8.27E+001	mg/kg	NA	NA	M	1.9E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	1.0E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.05E-001
	Mercury	7.00E-002	mg/kg	NA	NA	M	1.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	3.9E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.82E-005
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	4.88E-006
	Nickel	1.71E+001	mg/kg	NA	NA	M	3.9E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	3.94E-001
	Pyrene	1.60E-001	mg/kg	NA	NA	M	3.7E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	1.23E-004
	Selenium	5.70E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.62E-003
	Silver	1.10E+000	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	2.41E-002
	Toluene	2.00E-003	mg/kg	NA	NA	M	4.6E-008	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.30E-007
	Vanadium	1.20E+001	mg/kg	NA	NA	M	2.8E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	3.95E-002
	Zinc	1.18E+002	mg/kg	NA	NA	M	2.7E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	3.02E-002
	(Total)												8.93E+001
												Total Hazard Index Across All Exposure Routes/Pathways	9.0E+001

(1) *Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.*

Scenario Timeframe:	Current/Future
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-122
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_CRE85eCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	1.34E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	9.58E-004
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	1.55E-004	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.40E-004
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	1.03E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	1.71E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	2.42E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	2.69E-002
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	5.33E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	3.81E-002
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	2.91E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	5.30E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	4.65E-002
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	1.24E-005	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	2.18E-004
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	4.59E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	2.00E-005
	2-Butanone	0.00E+000	mg/kg	2.51E-008	mg/cu. m.	R	2.41E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	8.43E-008
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	1.15E-003	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	8.20E-001
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	4.60E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	2.35E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	8.70E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-006	mg/cu. m.	R	1.80E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	1.27E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	3.37E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	1.36E-004	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	6.81E-003
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	8.42E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	7.61E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	4.28E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	6.06E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	4.60E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-008	mg/cu. m.	R	2.79E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	1.97E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	2.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	1.60E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	1.58E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	5.63E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	4.44E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	2.67E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	2.12E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	1.68E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	1.38E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	1.38E-007	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	9.88E-004
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	1.57E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	9.21E-002
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	2.05E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	2.19E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	7.42E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	2.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	7.29E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	6.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	2.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	1.29E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	1.19E-010	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	2.09E-005
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	3.05E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	4.43E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	3.23E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-008	mg/cu. m.	R	2.10E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	1.09E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	1.56E-009	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	7.80E-009
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	4.86E-005	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	9.73E-003
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	1.86E-004	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.16E+000
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	1.02E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.78E-008	mg/cu. m.	R	1.70E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	2.33E-010	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium: Soil	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-122
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: AreaSeRM.wk4 \ TT_Inh_CREGSeCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	2.10E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	2.80E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	1.07E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	1.75E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	1.37E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	1.27E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	4.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	6.80E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	1.76E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	1.31E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	4.52E-003
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	3.23E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	2.41E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	3.17E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	1.51E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	4.65E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	6.64E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	7.29E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	6.87E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	2.65E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	8.84E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	8.69E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	6.08E-003
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	7.86E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	9.14E-006
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	4.62E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	5.37E-004
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	1.21E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	1.42E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	1.58E-001
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	3.24E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	5.11E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	5.83E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	2.30E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	9.73E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	5.22E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	4.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	7.62E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	4.82E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	7.72E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.70E-004
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	4.24E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	3.03E-002
	Thallium	0.00E+000	mg/kg	3.68E-011	mg/cu. m.	R	3.51E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	1.48E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	1.30E-001
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	1.22E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	1.60E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	7.08E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	8.37E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	7.11E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												3.53E+000

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Resident
Receptor Age:	Child

Table 5-1-123
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	6.0E-009	mg/kg-day	3.4E-001	kg-day/mg	2.0E-009
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	7.7E-009	mg/kg-day	3.4E-001	kg-day/mg	2.6E-009
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	5.8E-010	mg/kg-day	6.3E+000	kg-day/mg	3.6E-009
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	5.7E-009	mg/kg-day	3.5E-001	kg-day/mg	2.0E-009
	Aluminum	6.12E+003	mg/kg	NA	NA	M	3.4E-003	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	8.1E-006	mg/kg-day		kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	7.7E-008	mg/kg-day	2.0E+000	kg-day/mg	1.5E-007
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	2.0E+000	kg-day/mg	3.5E-007
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	2.0E+000	kg-day/mg	2.5E-007
	Arsenic	3.40E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	1.5E+000	kg-day/mg	2.8E-006
	Barium	1.18E+002	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	4.9E-008	mg/kg-day	7.3E-001	kg-day/mg	3.6E-008
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	6.0E-008	mg/kg-day	7.3E+000	kg-day/mg	4.4E-007
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	6.0E-008	mg/kg-day	7.3E-001	kg-day/mg	4.4E-008
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	4.8E-008	mg/kg-day	7.3E-002	kg-day/mg	3.5E-009
	Beryllium	4.80E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	3.5E-007	mg/kg-day	1.4E-002	kg-day/mg	4.8E-009
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	3.1E-008	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	8.2E-007	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	1.5E-005	mg/kg-day		kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	6.0E-008	mg/kg-day	7.3E-003	kg-day/mg	4.4E-010
	Cobalt	5.60E+000	mg/kg	NA	NA	M	3.1E-006	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	7.1E-008	mg/kg-day		kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	2.7E-009	mg/kg-day	1.6E+001	kg-day/mg	4.3E-008
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	6.6E-008	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	1.9E-009	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	3.0E-009	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	8.2E-008	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	2.7E-010	mg/kg-day	1.3E+000	kg-day/mg	3.5E-010
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	4.7E-009	mg/kg-day	3.5E-001	kg-day/mg	1.6E-009
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	7.2E-010	mg/kg-day	4.5E+000	kg-day/mg	3.2E-009
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	2.5E-009	mg/kg-day	9.1E+000	kg-day/mg	2.3E-008
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	4.8E-008	mg/kg-day	7.3E-001	kg-day/mg	3.5E-008
	Iron	1.03E+004	mg/kg	NA	NA	M	5.6E-003	mg/kg-day		kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	2.4E-004	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	3.8E-008	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	9.3E-009	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Resident
Receptor Age:	Child

Table 5-1-123
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	3.8E-009	mg/kg-day	7.5E-003	kg-day/mg	2.9E-011
	Nickel	1.71E+001	mg/kg	NA	NA	M	9.4E-006	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	8.8E-008	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	3.1E-007	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	6.0E-007	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	1.1E-009	mg/kg-day		kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	6.6E-006	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	6.5E-005	mg/kg-day		kg-day/mg	
	(Total)										4.20E-006
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	2.2E-008	mg/kg-day	3.4E-001	kg-day/mg	7.38E-009
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	3.4E-001	kg-day/mg	9.39E-009
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	2.1E-009	mg/kg-day	6.3E+000	kg-day/mg	1.30E-008
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	2.1E-008	mg/kg-day	3.5E-001	kg-day/mg	7.21E-009
	Aluminum	6.12E+003	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	2.9E-005	mg/kg-day		kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	2.0E+000	kg-day/mg	5.52E-007
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	6.3E-007	mg/kg-day	2.2E+000	kg-day/mg	1.42E-006
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	4.5E-007	mg/kg-day	2.0E+000	kg-day/mg	9.07E-007
	Arsenic	3.40E+000	mg/kg	NA	NA	M	6.7E-006	mg/kg-day	1.6E+000	kg-day/mg	1.06E-005
	Barium	1.18E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	7.3E-001	kg-day/mg	1.28E-007
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	8.6E+000	kg-day/mg	1.86E-006
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	7.3E-001	kg-day/mg	1.58E-007
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	7.3E-002	kg-day/mg	1.25E-008
	Beryllium	4.80E-001	mg/kg	NA	NA	M	9.5E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	1.4E-002	kg-day/mg	1.74E-008
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	1.1E-007	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	3.0E-006	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	5.4E-005	mg/kg-day		kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	1.8E-002	kg-day/mg	3.86E-009
	Cobalt	5.60E+000	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	9.8E-009	mg/kg-day	1.6E+001	kg-day/mg	1.56E-007
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	2.4E-007	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	6.9E-009	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	9.8E-010	mg/kg-day	1.3E+000	kg-day/mg	1.27E-009

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Resident
Receptor Age:	Child

Table 5-1-123
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_CRES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	1.7E-008	mg/kg-day	3.5E-001	kg-day/mg	5.87E-009
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	2.6E-009	mg/kg-day	4.5E+000	kg-day/mg	1.16E-008
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	9.1E-009	mg/kg-day	9.1E+000	kg-day/mg	8.26E-008
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.7E-007	mg/kg-day	7.3E-001	kg-day/mg	1.25E-007
	Iron	1.03E+004	mg/kg	NA	NA	M	2.0E-002	mg/kg-day		kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	8.7E-004	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	3.4E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	1.4E-002	kg-day/mg	1.88E-010
	Nickel	1.71E+001	mg/kg	NA	NA	M	3.4E-005	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	2.2E-006	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	3.9E-009	mg/kg-day		kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	2.4E-005	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	2.3E-004	mg/kg-day		kg-day/mg	
	(Total)										1.61E-005
										Total Hazard Index Across All Exposure Routes/Pathways	2.0E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-1-124
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: AreaSeRIM.wb4 \ TT_Inh_CRE55eCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	1.15E-005	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	1.32E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	8.85E-010	mg/kg-day	5.60E-002	mg/kg-day	4.96E-011
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	1.47E-008	mg/kg-day	2.00E-001	mg/kg-day	2.94E-009
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	2.08E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	4.57E-006	mg/kg-day	9.10E-002	mg/kg-day	4.16E-007
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	2.49E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	4.54E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	1.06E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	3.93E-007	mg/kg-day	2.20E-002	mg/kg-day	8.65E-009
	2-Butanone	0.00E+000	mg/kg	2.51E-008	mg/cu. m.	R	2.07E-009	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	9.84E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	3.94E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	2.02E-006	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	7.46E-007	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	1.54E-009	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	1.09E-007	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	2.89E-013	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	1.17E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	7.22E-006	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	6.53E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	3.67E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	5.19E-012	mg/kg-day	3.40E-001	mg/kg-day	1.77E-012
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	3.94E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-006	mg/cu. m.	R	2.39E-009	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	1.69E-005	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	2.51E-011	mg/kg-day	1.70E+001	mg/kg-day	4.27E-010
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	1.37E-012	mg/kg-day	6.30E+000	mg/kg-day	8.66E-012
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	1.36E-008	mg/kg-day		mg/kg-day	
	Antimony	1.47E+001	mg/kg	5.67E-009	mg/cu. m.	R	4.62E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	3.81E-011	mg/kg-day	2.00E+000	mg/kg-day	7.62E-011
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	2.29E-010	mg/kg-day	2.00E+000	mg/kg-day	4.58E-010
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	1.82E-010	mg/kg-day	2.00E+000	mg/kg-day	3.63E-010
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	1.44E-009	mg/kg-day	2.00E+000	mg/kg-day	2.88E-009
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	1.19E-010	mg/kg-day	1.51E+001	mg/kg-day	1.79E-009
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	1.19E-008	mg/kg-day		mg/kg-day	
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	1.34E-005	mg/kg-day	2.90E-002	mg/kg-day	3.89E-007
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	1.76E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	1.87E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	6.36E-012	mg/kg-day	3.10E+000	mg/kg-day	1.97E-011
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	2.35E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	6.25E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	2.35E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	1.10E-010	mg/kg-day		mg/kg-day	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	1.02E-011	mg/kg-day	8.40E+000	mg/kg-day	8.59E-011
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	2.62E-012	mg/kg-day	1.80E+000	mg/kg-day	4.71E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	3.80E-006	mg/kg-day	1.10E+000	mg/kg-day	4.18E-006
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	2.77E-009	mg/kg-day	1.40E-002	mg/kg-day	3.88E-011
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-008	mg/cu. m.	R	1.80E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	9.35E-010	mg/kg-day	6.30E+000	mg/kg-day	5.89E-009
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	1.34E-010	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	4.17E-006	mg/kg-day		mg/kg-day	
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	1.59E-005	mg/kg-day	8.10E-002	mg/kg-day	1.29E-006
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	8.77E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.78E-008	mg/cu. m.	R	1.46E-009	mg/kg-day	4.10E+001	mg/kg-day	5.99E-008
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	1.99E-011	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Child

Table 5-1-124
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: AreaSaRM.wk4 \ TT_inh_CRESScT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	1.80E-007	mg/kg-day		mg/kg-day	
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	2.40E-010	mg/kg-day		mg/kg-day	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	9.21E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	1.50E-010	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	1.17E-011	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.03E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	1.09E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	3.60E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	5.83E-011	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	1.51E-014	mg/kg-day		mg/kg-day	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	1.12E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	2.77E-011	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	2.07E-007	mg/kg-day		mg/kg-day	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	2.72E-013	mg/kg-day	4.50E+000	mg/kg-day	1.22E-012
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	1.30E-013	mg/kg-day	9.10E+000	mg/kg-day	1.18E-012
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	3.98E-014	mg/kg-day	1.60E+000	mg/kg-day	6.38E-014
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	5.69E-011	mg/kg-day	7.80E-002	mg/kg-day	4.44E-012
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	6.25E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	5.89E-012	mg/kg-day		mg/kg-day	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	2.27E-005	mg/kg-day		mg/kg-day	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	7.57E-008	mg/kg-day		mg/kg-day	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	7.45E-009	mg/kg-day		mg/kg-day	
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	6.74E-011	mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	3.96E-005	mg/kg-day	1.65E-003	mg/kg-day	6.53E-008
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	1.04E-006	mg/kg-day		mg/kg-day	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	1.22E-005	mg/kg-day		mg/kg-day	
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	2.77E-010	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	4.38E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	4.99E-007	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	1.97E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	8.34E-011	mg/kg-day		mg/kg-day	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	4.48E-006	mg/kg-day		mg/kg-day	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	4.06E-011	mg/kg-day		mg/kg-day	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	6.53E-011	mg/kg-day		mg/kg-day	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	4.13E-011	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	6.62E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	3.64E-004	mg/kg-day	2.00E-003	mg/kg-day	7.27E-007
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	3.01E-012	mg/kg-day		mg/kg-day	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	1.27E-003	mg/kg-day		mg/kg-day	
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	1.04E-004	mg/kg-day	6.00E-003	mg/kg-day	6.27E-007
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	1.37E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	6.07E-007	mg/kg-day	3.00E-001	mg/kg-day	1.82E-007
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	7.18E-004	mg/kg-day		mg/kg-day	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	6.09E-008	mg/kg-day		mg/kg-day	
	(Total)										7.98E-006

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-125
Calculation of Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: AreaSaRM.wk4 \TT_tD_ARESSaRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc	Reference Conc. Units	Hazard Quotient
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.5E-008	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.9E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.84E-005
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.4E-009	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.4E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.86E-005
	Aluminum	6.12E+003	mg/kg	NA	NA	M	8.4E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	8.38E-003
	Antimony	1.47E+001	mg/kg	NA	NA	M	2.0E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	5.03E-002
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	4.4E-007	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	2.19E-002
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	3.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	4.7E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.55E-002
	Barium	1.18E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.31E-003
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	6.6E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	3.29E-004
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	8.6E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.32E-005
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	7.7E-008	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.84E-007
	Cadmium	1.50E+000	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	2.05E-003
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	2.51E-005
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	7.7E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.28E-004
	Copper	1.97E+001	mg/kg	NA	NA	M	2.7E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	6.75E-004
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.8E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	8.90E-006
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	6.8E-009	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	1.36E-004
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	1.64E-006
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	4.8E-009	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	7.99E-007
	Endrin	5.50E-003	mg/kg	NA	NA	M	7.5E-009	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.51E-005
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.14E-006
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	6.8E-010	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.26E-006
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.33E-005
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.8E-009	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.58E-006
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	6.3E-009	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	4.85E-004
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	1.4E-002	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.70E-002
	Lead	8.27E+001	mg/kg	NA	NA	M	1.1E-004	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	6.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.01E-002
	Mercury	7.00E-002	mg/kg	NA	NA	M	9.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	2.3E-008	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.66E-006
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	9.6E-009	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.60E-007
	Nickel	1.71E+001	mg/kg	NA	NA	M	2.3E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.17E-003
	Pyrene	1.60E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.31E-006
	Selenium	5.70E-001	mg/kg	NA	NA	M	7.8E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.56E-004
	Silver	1.10E+000	mg/kg	NA	NA	M	1.5E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	3.01E-004
	Toluene	2.00E-003	mg/kg	NA	NA	M	2.7E-009	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.37E-008
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.35E-003
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	5.39E-004
	(Total)												1.84E-001
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	8.7E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.22E-003
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	8.3E-008	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	8.3E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.66E-003
	Aluminum	6.12E+003	mg/kg	NA	NA	M	4.9E-001	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.86E-001
	Antimony	1.47E+001	mg/kg	NA	NA	M	1.2E-003	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	2.92E+002
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.1E-005	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	2.5E-005	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	1.43E+000

Scenario Timeframe:	Current/Future
Medium	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age	Adult

Table 5-1-125
Calculation of Non - Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: AreaSaRM.wk4 \ TT_IO_ARESSaRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	1.8E-005	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	9.48E-001
	Barium	1.18E+002	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.34E-001
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	7.1E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	3.8E-005	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.91E+000
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	5.0E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.50E-003
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	2.22E-005
	Cadmium	1.50E+000	mg/kg	NA	NA	M	1.2E-004	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	4.77E+000
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	2.2E-003	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	3.64E-001
	Chrysene	1.10E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	4.4E-004	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.42E-003
	Copper	1.97E+001	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	6.52E-002
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.03E-003
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	3.9E-007	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	7.87E-003
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	9.5E-006	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	9.83E-005
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.63E-005
	Endrin	5.50E-003	mg/kg	NA	NA	M	4.4E-007	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.46E-003
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.98E-004
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	3.9E-008	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.31E-004
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	6.8E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.35E-003
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.07E-004
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	3.7E-007	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	2.81E-002
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	8.2E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.73E+000
	Lead	8.27E+001	mg/kg	NA	NA	M	6.6E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	3.5E-002	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.74E+000
	Mercury	7.00E-002	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	1.4E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.70E-004
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	1.69E-005
	Nickel	1.71E+001	mg/kg	NA	NA	M	1.4E-003	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.36E+000
	Pyrene	1.60E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	4.24E-004
	Selenium	5.70E-001	mg/kg	NA	NA	M	4.5E-005	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	9.06E-003
	Silver	1.10E+000	mg/kg	NA	NA	M	8.7E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	8.32E-002
	Toluene	2.00E-003	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	7.95E-007
	Vanadium	1.20E+001	mg/kg	NA	NA	M	9.5E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.36E-001
	Zinc	1.18E+002	mg/kg	NA	NA	M	9.4E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.04E-001
	(Total)												3.08E+002
												Total Hazard Index Across All Exposure Routes/Pathways	3.1E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-126
Calculation of Non-Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: AreaSaRM wk4 \ TT_Inh_ARESSaRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc	Reference Conc Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	3.82E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.73E-004
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	4.42E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.54E-004
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	2.95E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	4.90E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	6.93E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	7.69E-003
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	1.52E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.09E-002
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	8.31E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	1.51E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	1.33E-002
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	3.55E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	6.22E-005
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	1.31E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	5.72E-006
	2-Butanone	0.00E+000	mg/kg	2.51E-008	mg/cu. m.	R	6.89E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	2.41E-008
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	3.28E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	2.34E-001
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	1.31E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	6.72E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	2.49E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	5.13E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	3.63E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	9.62E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	3.89E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.95E-003
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	2.41E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	2.18E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	1.22E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	1.73E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	1.31E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-008	mg/cu. m.	R	7.98E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	5.64E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	8.38E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	4.58E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	4.52E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	1.61E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	1.27E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	7.63E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	6.06E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	4.80E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	3.95E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	3.95E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.82E-004
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	4.47E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	2.63E-002
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	5.87E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	6.25E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	2.12E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	7.84E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	2.08E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	7.83E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	3.68E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	3.41E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	5.98E-006
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	8.72E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	1.27E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	9.24E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-008	mg/cu. m.	R	6.01E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	3.12E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	4.46E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	2.23E-009
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	1.39E-005	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.78E-003
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	5.31E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	6.18E-001
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	2.92E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.78E-008	mg/cu. m.	R	4.87E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	6.65E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	5.99E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-126
Calculation of Non-Cancer Hazards
Resonable Maximum Exposures
American Chemical Service Site

File: AreaSeRM.wk4 \ TT_Inh_ARE5SeRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc	Reference Conc Units	Hazard Quotient
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	7.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	3.07E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	4.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	3.91E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	3.45E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	3.62E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	1.20E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	1.94E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	5.04E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	3.74E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	1.29E-003
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	9.24E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	6.90E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	9.07E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	4.33E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	1.33E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	1.90E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	2.08E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	1.96E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	7.58E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	2.52E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	2.48E-008	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.74E-003
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	2.25E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	2.61E-006
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	1.32E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.53E-004
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	3.46E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	4.07E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	4.52E-002
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	9.25E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphanylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	1.46E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	1.66E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	6.57E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	2.78E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	1.49E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	1.35E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	2.18E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	1.38E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	2.21E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	7.71E-005
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	1.21E-003	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	8.66E-003
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	1.00E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	4.23E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	3.71E-002
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	3.48E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	4.57E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	2.02E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	2.39E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	2.03E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												1.01E+000

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-127
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: AreaSeRM.wb4 \TT_ID_ARE5SeRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	4.2E-008	mg/kg-day	7.3E-001	kg-day/mg	3.1E-008
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day	7.3E+000	kg-day/mg	3.8E-007
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day	7.3E-001	kg-day/mg	3.8E-008
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	4.1E-008	mg/kg-day	7.3E-002	kg-day/mg	3.0E-009
	Benzyl Alcohol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	beta-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E+000	kg-day/mg	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E+000	kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	1.4E-002	kg-day/mg	4.1E-009
	Bromodichloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butanol, 1-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	2.6E-008	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	7.0E-007	mg/kg-day		kg-day/mg	
	Cadmium (water)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Caprolactam	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbazole	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-002	kg-day/mg	
	Carbon Disulfide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorodifluoromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-003	kg-day/mg	
	Chloroform	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.1E-003	kg-day/mg	
	Chloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	Chromium 6+	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.0E-005	kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	5.2E-008	mg/kg-day	7.3E-003	kg-day/mg	3.8E-010
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	9.3E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	6.1E-008	mg/kg-day		kg-day/mg	
	Cyclohexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E+000	kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	2.3E-009	mg/kg-day	1.6E+001	kg-day/mg	3.7E-008
	Diethyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Diethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dimethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	5.6E-008	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dioxane, 1,4-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	1.6E-009	mg/kg-day		kg-day/mg	
	Endosulfan sulfate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	2.6E-009	mg/kg-day		kg-day/mg	
	Endrin aldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin ketone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethyl Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	7.0E-008	mg/kg-day		kg-day/mg	
	Fluorene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	2.3E-010	mg/kg-day	1.3E+000	kg-day/mg	3.0E-010
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	4.0E-009	mg/kg-day	3.5E-001	kg-day/mg	1.4E-009
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	6.1E-010	mg/kg-day	4.5E+000	kg-day/mg	2.8E-009
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	2.2E-009	mg/kg-day	9.1E+000	kg-day/mg	2.0E-008
	Hexachlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.6E+000	kg-day/mg	
	Hexachlorobutadiene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.8E-002	kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-127
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5eRM.wk4 \TT_ID_ARE5SeRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
Ingestion	1,1-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.7E-002	kg-day/mg	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-001	kg-day/mg	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E-002	kg-day/mg	
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.8E-002	kg-day/mg	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-002	kg-day/mg	
	2-Butanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Chloronaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	2,4-Dichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E-001	kg-day/mg	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Nitrophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4,4'-DDD	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-001	kg-day/mg	
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	5.2E-009	mg/kg-day	3.4E-001	kg-day/mg	1.8E-009
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	6.6E-009	mg/kg-day	3.4E-001	kg-day/mg	2.2E-009
	Acenaphthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetaldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetophenone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Aldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.7E+001	kg-day/mg	
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	4.9E-010	mg/kg-day	6.3E+000	kg-day/mg	3.1E-009
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	4.9E-009	mg/kg-day	3.5E-001	kg-day/mg	1.7E-009
	Aluminum	6.12E+003	mg/kg	NA	NA	M	2.9E-003	mg/kg-day		kg-day/mg	
	Ammonia**	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	6.9E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	6.6E-008	mg/kg-day	2.0E+000	kg-day/mg	1.3E-007
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	2.0E+000	kg-day/mg	3.0E-007
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	2.0E+000	kg-day/mg	2.2E-007
	Arsenic	3.40E+000	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	1.5E+000	kg-day/mg	2.4E-006
	Azobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Barium	1.18E+002	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-002	kg-day/mg	
	Benzoic Acid	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-127
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_IO_AREA5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Hexane, n-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	4.1E-006	mg/kg-day	7.3E-001	kg-day/mg	3.0E-006
	Iron	1.03E+004	mg/kg	NA	NA	M	4.8E-003	mg/kg-day		kg-day/mg	
	Isophorone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.5E-004	kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	8.0E-009	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	3.3E-009	mg/kg-day	7.5E-003	kg-day/mg	2.5E-011
	m,p-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Naphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Nickel	1.71E+001	mg/kg	NA	NA	M	8.0E-006	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.9E-003	kg-day/mg	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	ortho-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	p-Cymene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pentachlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.2E-001	kg-day/mg	
	Phenanthrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol, 4,4'-(1-methylethylidene)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phthalic anhydride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	7.5E-006	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	2.7E-007	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	5.2E-007	mg/kg-day		kg-day/mg	
	Styrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Tetrachloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.2E-002	kg-day/mg	
	Tetrahydrofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Thallium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	9.4E-010	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E-002	kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	5.6E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.9E+000	kg-day/mg	
	Xylenes (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	5.5E-005	mg/kg-day		kg-day/mg	
	(Total)										3.6OE-006
Dermal	1,1-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
Dermal	1,1-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-001	kg-day/mg	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E-002	kg-day/mg	
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloropropene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.8E-002	kg-day/mg	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-002	kg-day/mg	
	2-Butanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Chloronaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-127
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: AreaSeRM.wb4 \ TT_ID_ARESSeRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	2,4-Dichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E-001	kg-day/mg	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Nitrophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4,4'-DDD	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-001	kg-day/mg	
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	3.4E-001	kg-day/mg	1.02E-007
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	3.8E-007	mg/kg-day	3.4E-001	kg-day/mg	1.30E-007
	Acenaphthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetaldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetophenone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Aldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.7E+001	kg-day/mg	
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	2.9E-008	mg/kg-day	6.3E+000	kg-day/mg	1.80E-007
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	2.8E-007	mg/kg-day	3.5E-001	kg-day/mg	9.96E-008
	Aluminum	6.12E+003	mg/kg	NA	NA	M	1.7E-001	mg/kg-day		kg-day/mg	
	Ammonia**	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	4.0E-004	mg/kg-day		kg-day/mg	
	Aroclor-1242	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	2.0E+000	kg-day/mg	7.63E-006
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	8.7E-006	mg/kg-day	2.2E+000	kg-day/mg	1.96E-005
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	6.3E-006	mg/kg-day	2.0E+000	kg-day/mg	1.25E-005
	Arsenic	3.40E+000	mg/kg	NA	NA	M	9.3E-005	mg/kg-day	1.6E+000	kg-day/mg	1.46E-004
	Azobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Barium	1.18E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.2E-002	kg-day/mg	
	Benzoic Acid	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-001	kg-day/mg	1.77E-006
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	8.6E+000	kg-day/mg	2.57E-005
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	7.3E-001	kg-day/mg	2.19E-006
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-002	kg-day/mg	1.73E-007
	Benzyl Alcohol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day		kg-day/mg	
	beta-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E+000	kg-day/mg	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E+000	kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	1.7E-005	mg/kg-day	1.4E-002	kg-day/mg	2.40E-007
	Bromodichloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butanol, 1-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	4.1E-005	mg/kg-day		kg-day/mg	
	Cadmium (water)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Caprolactam	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbazole	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-002	kg-day/mg	
	Carbon Disulfide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-127
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_AREA5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorodifluoromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-003	kg-day/mg	
	Chloroform	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.4E-003	kg-day/mg	
	Chloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	7.5E-004	mg/kg-day		kg-day/mg	
	Chromium 6+	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.0E-004	kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	3.0E-006	mg/kg-day	1.8E-002	kg-day/mg	5.34E-008
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	3.5E-006	mg/kg-day		kg-day/mg	
	Cyclohexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	8.1E+000	kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	1.6E+001	kg-day/mg	2.16E-006
	Diethyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Diethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dimethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	3.3E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dioxane, 1,4-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	9.5E-006	mg/kg-day		kg-day/mg	
	Endosulfan sulfate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		kg-day/mg	
	Endrin aldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin ketone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethyl Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	4.1E-006	mg/kg-day		kg-day/mg	
	Fluorene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	1.3E-006	mg/kg-day	1.3E+000	kg-day/mg	1.75E-006
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	2.3E-007	mg/kg-day	3.5E-001	kg-day/mg	8.10E-008
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	3.6E-006	mg/kg-day	4.5E+000	kg-day/mg	1.60E-007
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	1.3E-007	mg/kg-day	9.1E+000	kg-day/mg	1.14E-006
	Hexachlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Hexachlorobutadiene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.8E-002	kg-day/mg	
	Hexane, n-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	2.4E-006	mg/kg-day	7.3E-001	kg-day/mg	1.73E-006
	Iron	1.03E+004	mg/kg	NA	NA	M	2.8E-001	mg/kg-day		kg-day/mg	
	Isophorone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.5E-004	kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	2.3E-003	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	1.2E-002	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	4.6E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	1.4E-002	kg-day/mg	2.66E-009
	m,p-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Naphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Nickel	1.71E+001	mg/kg	NA	NA	M	4.7E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.9E-003	kg-day/mg	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	ortho-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	p-Cymene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pentachlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.2E-001	kg-day/mg	
	Phenanthrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-127
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wb4 \ TT_ID_ARE5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol, 4,4'-(1-methylethylidene)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phthalic anhydride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	1.6E-005	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Styrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Tetrachloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.2E-002	kg-day/mg	
	Tetrahydrofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Thallium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	5.4E-008	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E-002	kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	3.3E-004	mg/kg-day		kg-day/mg	
	Vinyl Chloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.9E+000	kg-day/mg	
	Xylenes (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	3.2E-003	mg/kg-day		kg-day/mg	
	(Total)										2.22E-004
										Total Hazard Index Across All Exposure Routes/Pathways	2.3E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-128
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	1.31E-005	mg/kg-day		mg/kg-day	
	1,1-Dichloroethene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	1.51E-005	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	1.01E-009	mg/kg-day	5.60E-002	mg/kg-day	5.67E-011
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	1.68E-008	mg/kg-day	2.00E-001	mg/kg-day	3.36E-009
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	2.37E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	5.22E-006	mg/kg-day	9.10E-002	mg/kg-day	4.75E-007
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	2.85E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	5.19E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	1.22E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	4.49E-007	mg/kg-day	2.20E-002	mg/kg-day	9.88E-009
	2-Butanone	0.00E+000	mg/kg	2.51E-008	mg/cu. m.	R	2.36E-009	mg/kg-day		mg/kg-day	
	2-Chloronaphthalene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	1.12E-004	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	4.51E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	2.30E-006	mg/kg-day		mg/kg-day	
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	3.50E-002	mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	8.52E-007	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	1.76E-009	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	1.25E-007	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	3.30E-013	mg/kg-day		mg/kg-day	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	1.33E-005	mg/kg-day		mg/kg-day	
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	8.25E-006	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	7.46E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	4.19E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	5.93E-012	mg/kg-day	3.40E-001	mg/kg-day	2.02E-012
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	4.50E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-008	mg/cu. m.	R	2.73E-009	mg/kg-day		mg/kg-day	
	Acetaldehyde	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	1.93E-005	mg/kg-day		mg/kg-day	
	Acetophenone	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	2.87E-011	mg/kg-day	1.70E+001	mg/kg-day	4.88E-010
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	1.57E-012	mg/kg-day	6.30E+000	mg/kg-day	9.90E-012
	alpha-Chlordane	1.05E-002	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	3.50E-001	mg/kg-day	
	Aluminum	6.12E+003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ammonia**	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	1.55E-008	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-128
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	5.51E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	4.35E-011	mg/kg-day	2.00E+000	mg/kg-day	8.71E-011
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	2.62E-010	mg/kg-day	2.00E+000	mg/kg-day	5.23E-010
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	2.08E-010	mg/kg-day	2.00E+000	mg/kg-day	4.15E-010
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	1.64E-009	mg/kg-day	2.00E+000	mg/kg-day	3.29E-009
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	1.36E-010	mg/kg-day	1.51E+001	mg/kg-day	2.05E-009
	Azobenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	1.36E-008	mg/kg-day		mg/kg-day	
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	1.53E-005	mg/kg-day	2.90E-002	mg/kg-day	4.45E-007
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	2.01E-005	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	2.14E-011	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	7.27E-012	mg/kg-day	3.10E+000	mg/kg-day	2.25E-011
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	2.69E-011	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	7.14E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	2.69E-011	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	1.26E-010	mg/kg-day		mg/kg-day	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	1.17E-011	mg/kg-day	8.40E+000	mg/kg-day	9.82E-011
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	2.99E-012	mg/kg-day	1.80E+000	mg/kg-day	5.38E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	4.34E-006	mg/kg-day	1.10E+000	mg/kg-day	4.77E-006
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	3.17E-009	mg/kg-day	1.40E-002	mg/kg-day	4.43E-011
	Bromodichloromethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Butanol, 1-	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-008	mg/cu. m.	R	2.06E-009	mg/kg-day		mg/kg-day	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	1.07E-009	mg/kg-day	6.30E+000	mg/kg-day	6.73E-009
	Cadmium (water)	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	6.30E+000	mg/kg-day	
	Caprolactam	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Carbazole	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	1.53E-010	mg/kg-day		mg/kg-day	
	Carbon Tetrachloride	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	4.77E-006	mg/kg-day		mg/kg-day	
	Chlorodifluoromethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	1.82E-005	mg/kg-day	8.10E-002	mg/kg-day	1.48E-006
	Chloromethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	1.00E-008	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.78E-008	mg/cu. m.	R	1.67E-009	mg/kg-day	4.10E+001	mg/kg-day	6.85E-008
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	2.28E-011	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	2.06E-007	mg/kg-day		mg/kg-day	
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	2.74E-010	mg/kg-day		mg/kg-day	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	1.05E-008	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	1.71E-010	mg/kg-day		mg/kg-day	
	Cyclohexanone	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	1.34E-011	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Dieldrin	4.95E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	1.60E+001	mg/kg-day	
	Diethyl ether	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-128
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	1.18E-010	mg/kg-day		mg/kg-day	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	1.24E-009	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	4.12E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	6.66E-011	mg/kg-day		mg/kg-day	
	Dioxane, 1,4-	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endosulfan I	3.50E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endosulfan sulfate	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endrin	5.50E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endrin aldehyde	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	1.73E-014	mg/kg-day		mg/kg-day	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	1.28E-004	mg/kg-day		mg/kg-day	
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	3.17E-011	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	2.36E-007	mg/kg-day		mg/kg-day	
	gamma-BHC	4.95E-004	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	gamma-Chlordane	8.50E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	3.50E-001	mg/kg-day	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	3.11E-013	mg/kg-day	4.50E+000	mg/kg-day	1.40E-012
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	1.48E-013	mg/kg-day	9.10E+000	mg/kg-day	1.35E-012
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	4.55E-014	mg/kg-day	1.60E+000	mg/kg-day	7.29E-014
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	6.50E-011	mg/kg-day	7.80E-002	mg/kg-day	5.07E-012
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	7.14E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	6.73E-012	mg/kg-day		mg/kg-day	
	Iron	1.03E+004	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	2.60E-005	mg/kg-day		mg/kg-day	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	8.66E-008	mg/kg-day		mg/kg-day	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	8.51E-009	mg/kg-day		mg/kg-day	
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	7.70E-011	mg/kg-day		mg/kg-day	
	Methoxychlor	1.70E-002	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	4.52E-005	mg/kg-day	1.65E-003	mg/kg-day	7.46E-008
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	1.19E-006	mg/kg-day		mg/kg-day	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	1.39E-005	mg/kg-day		mg/kg-day	
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	3.17E-010	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	5.01E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	5.71E-007	mg/kg-day		mg/kg-day	
	p-Cymene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	2.25E-010	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	9.54E-011	mg/kg-day		mg/kg-day	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	5.12E-006	mg/kg-day		mg/kg-day	
	Phenol, 4,4'-(1-methylethyliden	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	4.64E-011	mg/kg-day		mg/kg-day	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	7.46E-011	mg/kg-day		mg/kg-day	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	4.72E-011	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	7.56E-006	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-128
Calculation of Cancer Risks
Resonable Maximum Exposures
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aRM

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	4.16E-004	mg/kg-day	2.00E-003	mg/kg-day	8.31E-007
	Tetrahydrofuran	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	3.44E-012	mg/kg-day		mg/kg-day	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	1.45E-003	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	1.19E-004	mg/kg-day	6.00E-003	mg/kg-day	7.16E-007
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	1.57E-010	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	6.94E-007	mg/kg-day	3.00E-001	mg/kg-day	2.08E-007
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	8.20E-004	mg/kg-day		mg/kg-day	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	6.96E-008	mg/kg-day		mg/kg-day	
	(Total)										9.10E-006

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-129
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: AreaSaRM.wk4 \ TT_ID_AREASaCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	7.5E-009	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	9.6E-009	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.92E-005
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	7.2E-010	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	7.2E-009	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.43E-005
	Aluminum	6.12E+003	mg/kg	NA	NA	M	4.2E-003	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	4.19E-003
	Antimony	1.47E+001	mg/kg	NA	NA	M	1.0E-005	mg/kg-day	4.0E-004	mg/kg-day	NA	NA	2.52E-002
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	9.6E-008	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	2.2E-007	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	1.10E-002
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	1.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	2.3E-006	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	7.76E-003
	Barium	1.18E+002	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	1.15E-003
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	6.1E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	7.5E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	7.5E-008	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	6.0E-008	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	3.3E-007	mg/kg-day	2.0E-003	mg/kg-day	NA	NA	1.64E-004
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	4.3E-007	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	2.16E-005
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	3.8E-008	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.92E-007
	Cadmium	1.50E+000	mg/kg	NA	NA	M	1.0E-006	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	1.03E-003
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	1.9E-005	mg/kg-day	1.5E+000	mg/kg-day	NA	NA	1.26E-005
	Chrysene	1.10E-001	mg/kg	NA	NA	M	7.5E-008	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	3.8E-006	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	6.39E-005
	Copper	1.97E+001	mg/kg	NA	NA	M	1.3E-005	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	3.37E-004
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	8.9E-008	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.45E-006
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	3.4E-009	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	6.78E-005
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	8.2E-008	mg/kg-day	1.0E-001	mg/kg-day	NA	NA	8.22E-007
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	2.4E-009	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	4.00E-007
	Endrin	5.50E-003	mg/kg	NA	NA	M	3.8E-009	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.26E-005
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	1.0E-007	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	2.57E-006
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	3.4E-010	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	1.13E-006
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	5.8E-009	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.16E-005
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	8.9E-010	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	1.79E-006
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	3.2E-009	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	2.42E-004
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	6.0E-008	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	7.1E-003	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.35E-002
	Lead	8.27E+001	mg/kg	NA	NA	M	5.7E-005	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	3.0E-004	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	1.50E-002
	Mercury	7.00E-002	mg/kg	NA	NA	M	4.8E-006	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	2.33E-006
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	4.8E-009	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	7.99E-008
	Nickel	1.71E+001	mg/kg	NA	NA	M	1.2E-005	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	5.86E-004
	Pyrene	1.60E-001	mg/kg	NA	NA	M	1.1E-007	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	3.65E-006
	Selenium	5.70E-001	mg/kg	NA	NA	M	3.9E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	7.81E-005
	Silver	1.10E+000	mg/kg	NA	NA	M	7.5E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.51E-004
	Toluene	2.00E-003	mg/kg	NA	NA	M	1.4E-009	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	6.85E-009
	Vanadium	1.20E+001	mg/kg	NA	NA	M	8.2E-006	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	1.17E-003
	Zinc	1.18E+002	mg/kg	NA	NA	M	8.1E-005	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	2.69E-004
	(Total)												9.21E-002
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day		mg/kg-day	NA	NA	
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.84E-004
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.4E-008	mg/kg-day		mg/kg-day	NA	NA	
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.4E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.86E-004
	Aluminum	6.12E+003	mg/kg	NA	NA	M	8.4E-002	mg/kg-day	1.0E+000	mg/kg-day	NA	NA	8.38E-002
	Antimony	1.47E+001	mg/kg	NA	NA	M	2.0E-004	mg/kg-day	4.0E-006	mg/kg-day	NA	NA	5.03E+001
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		mg/kg-day	NA	NA	
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	4.4E-006	mg/kg-day	1.8E-005	mg/kg-day	NA	NA	2.48E-001

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-129
Calculation of Non - Cancer Hazards
Central Tendency
American Chemical Service Site

File: Area5aRM.wb4 \ TT_ID_AREB5eCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	3.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Arsenic	3.40E+000	mg/kg	NA	NA	M	4.7E-005	mg/kg-day	2.9E-004	mg/kg-day	NA	NA	1.63E-001
	Barium	1.18E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	7.0E-002	mg/kg-day	NA	NA	2.31E-002
	Benzo(a)anthracene	6.90E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	6.6E-006	mg/kg-day	2.0E-005	mg/kg-day	NA	NA	3.29E-001
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	8.6E-006	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	4.32E-004
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	7.7E-007	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	3.84E-006
	Cadmium	1.50E+000	mg/kg	NA	NA	M	2.1E-005	mg/kg-day	2.5E-005	mg/kg-day	NA	NA	8.22E-001
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	3.8E-004	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	6.28E-002
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		mg/kg-day	NA	NA	
	Cobalt	5.80E+000	mg/kg	NA	NA	M	7.7E-005	mg/kg-day	6.0E-002	mg/kg-day	NA	NA	1.28E-003
	Copper	1.97E+001	mg/kg	NA	NA	M	2.7E-004	mg/kg-day	2.4E-002	mg/kg-day	NA	NA	1.12E-002
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.8E-006	mg/kg-day	1.0E-002	mg/kg-day	NA	NA	1.78E-004
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	6.8E-008	mg/kg-day	5.0E-005	mg/kg-day	NA	NA	1.36E-003
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.6E-006	mg/kg-day	9.7E-002	mg/kg-day	NA	NA	1.69E-005
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	4.8E-008	mg/kg-day	6.0E-003	mg/kg-day	NA	NA	7.99E-006
	Endrin	5.50E-003	mg/kg	NA	NA	M	7.5E-008	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.51E-004
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	2.1E-006	mg/kg-day	4.0E-002	mg/kg-day	NA	NA	5.14E-005
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	6.8E-009	mg/kg-day	3.0E-004	mg/kg-day	NA	NA	2.26E-005
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	1.2E-007	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	2.33E-004
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	5.0E-004	mg/kg-day	NA	NA	3.58E-005
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	6.3E-008	mg/kg-day	1.3E-005	mg/kg-day	NA	NA	4.85E-003
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.2E-006	mg/kg-day		mg/kg-day	NA	NA	
	Iron	1.03E+004	mg/kg	NA	NA	M	1.4E-001	mg/kg-day	3.0E-001	mg/kg-day	NA	NA	4.70E-001
	Lead	8.27E+001	mg/kg	NA	NA	M	1.1E-003	mg/kg-day		mg/kg-day	NA	NA	
	Manganese	4.39E+002	mg/kg	NA	NA	M	6.0E-003	mg/kg-day	2.0E-002	mg/kg-day	NA	NA	3.01E-001
	Mercury	7.00E-002	mg/kg	NA	NA	M	9.6E-007	mg/kg-day		mg/kg-day	NA	NA	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	2.3E-007	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	4.66E-005
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	9.6E-008	mg/kg-day	3.3E-002	mg/kg-day	NA	NA	2.91E-006
	Nickel	1.71E+001	mg/kg	NA	NA	M	2.3E-004	mg/kg-day	1.0E-003	mg/kg-day	NA	NA	2.34E-001
	Pyrene	1.60E-001	mg/kg	NA	NA	M	2.2E-006	mg/kg-day	3.0E-002	mg/kg-day	NA	NA	7.31E-005
	Selenium	5.70E-001	mg/kg	NA	NA	M	7.8E-006	mg/kg-day	5.0E-003	mg/kg-day	NA	NA	1.56E-003
	Silver	1.10E+000	mg/kg	NA	NA	M	1.5E-005	mg/kg-day	1.1E-003	mg/kg-day	NA	NA	1.44E-002
	Toluene	2.00E-003	mg/kg	NA	NA	M	2.7E-006	mg/kg-day	2.0E-001	mg/kg-day	NA	NA	1.37E-007
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.6E-004	mg/kg-day	7.0E-003	mg/kg-day	NA	NA	2.35E-002
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.6E-003	mg/kg-day	9.0E-002	mg/kg-day	NA	NA	1.80E-002
	(Total)												5.32E+001
												Total Hazard Index Across All Exposure Routes/Pathways	5.3E+001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	*Area 5A, Surface Soil (0' to 2')*
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-130
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: AreaSaRM.wk4 \ TT_Inh_AREA5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	2.87E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	2.05E-004
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	3.31E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.16E-004
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	2.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	3.67E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	5.19E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu. m.	5.77E-003
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	1.14E-005	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	8.16E-003
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	6.23E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	1.14E-005	mg/kg-day	1.14E-003	mg/kg-day	3.99E-003	mg/cu. m.	9.96E-003
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	2.66E-006	mg/kg-day	5.70E-002	mg/kg-day	2.00E-001	mg/cu. m.	4.66E-005
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	9.83E-007	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu. m.	4.29E-006
	2-Butanone	0.00E+000	mg/kg	2.51E-006	mg/cu. m.	R	5.16E-009	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	1.81E-008
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	2.46E-004	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu. m.	1.76E-001
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	9.86E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	5.04E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	1.86E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-006	mg/cu. m.	R	3.85E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	2.72E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	7.21E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	2.92E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu. m.	1.46E-003
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	1.80E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	1.63E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	9.16E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	1.30E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	9.85E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-006	mg/cu. m.	R	5.98E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	4.23E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	6.28E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	3.44E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	3.39E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	1.21E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	9.52E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	5.72E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	4.54E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	3.60E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	2.97E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	2.95E-008	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu. m.	2.12E-004
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	3.36E-005	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu. m.	1.97E-002
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	4.40E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.26E-010	mg/cu. m.	R	4.66E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	1.59E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	5.88E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	1.56E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	5.88E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	2.76E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	2.56E-011	mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu. m.	4.48E-006
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	6.54E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	9.49E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	bis(2-Ethylhexyl)phthalate	8.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	6.93E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Butylbenzylphthalate	5.80E-002	mg/kg	2.19E-008	mg/cu. m.	R	4.50E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	2.34E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	3.34E-010	mg/kg-day	2.00E-001	mg/kg-day	7.00E-001	mg/cu. m.	1.67E-009
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	1.04E-005	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu. m.	2.08E-003
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	3.98E-005	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	4.63E-001
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	2.19E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chromium 6+	0.00E+000	mg/kg	1.78E-006	mg/cu. m.	R	3.65E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	4.99E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	4.50E-007	mg/kg-day		mg/kg-day		mg/cu. m.	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-130
Calculation of Non-Cancer Hazards
Central Tendency
American Chemical Service Site

File: AreaSoilRM.wb4 \TT_Inh_ARE5SaCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	5.99E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	2.30E-008	mg/kg-day		mg/kg-day		mg/cu. m.	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	3.74E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	2.94E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	2.59E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	2.72E-009	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	9.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	1.46E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	3.78E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	2.81E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu. m.	9.68E-004
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	6.93E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Fluorene	0.00E+000	mg/kg	2.52E-008	mg/cu. m.	R	5.17E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	6.80E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	3.25E-013	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	9.96E-014	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	1.42E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	1.56E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	1.47E-011	mg/kg-day		mg/kg-day		mg/cu. m.	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	5.68E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	1.89E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	Manganese	4.39E+002	mg/kg	9.06E-006	mg/cu. m.	R	1.86E-006	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu. m.	1.30E-003
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	1.68E-010	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu. m.	1.96E-006
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	9.89E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu. m.	1.15E-004
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	2.60E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	3.05E-005	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu. m.	3.39E-002
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	6.94E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	1.10E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	1.25E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	4.93E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	2.09E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	1.12E-005	mg/kg-day		mg/kg-day		mg/cu. m.	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	1.01E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	1.63E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	1.03E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	1.65E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu. m.	5.78E-005
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	9.09E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu. m.	6.50E-003
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	7.52E-012	mg/kg-day		mg/kg-day		mg/cu. m.	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	3.17E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu. m.	2.78E-002
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	2.61E-004	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	3.43E-010	mg/kg-day		mg/kg-day		mg/cu. m.	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	1.52E-006	mg/kg-day		mg/kg-day		mg/cu. m.	
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	1.79E-003	mg/kg-day		mg/kg-day		mg/cu. m.	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	1.52E-007	mg/kg-day		mg/kg-day		mg/cu. m.	
	(Total)												7.57E-001

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-131
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: AreaSaRM.wk4 \ TT_ID_ARE5eCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
Ingestion	1,1-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.7E-002	kg-day/mg	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-001	kg-day/mg	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E-002	kg-day/mg	
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.8E-002	kg-day/mg	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-002	kg-day/mg	
	2-Butanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Chloronaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	2,4-Dichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E-001	kg-day/mg	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Nitrophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4,4'-DDD	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-001	kg-day/mg	
Ingestion	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	9.7E-010	mg/kg-day	3.4E-001	kg-day/mg	3.3E-010
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	1.2E-009	mg/kg-day	3.4E-001	kg-day/mg	4.2E-010
	Acenaphthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetaldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetophenone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Aldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.7E+001	kg-day/mg	
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	9.2E-011	mg/kg-day	6.3E+000	kg-day/mg	5.8E-010
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	9.2E-010	mg/kg-day	3.5E-001	kg-day/mg	3.2E-010
	Aluminum	6.12E+003	mg/kg	NA	NA	M	5.4E-004	mg/kg-day		kg-day/mg	
	Ammonia**	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	1.3E-006	mg/kg-day		kg-day/mg	
	Aroclor-1242	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	2.0E+000	kg-day/mg	2.5E-008
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	2.8E-008	mg/kg-day	2.0E+000	kg-day/mg	5.6E-008
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	2.0E-008	mg/kg-day	2.0E+000	kg-day/mg	4.1E-008
	Arsenic	3.40E+000	mg/kg	NA	NA	M	3.0E-007	mg/kg-day	1.5E+000	kg-day/mg	4.5E-007
	Azobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Barium	1.18E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-002	kg-day/mg	
	Benzoic Acid	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-131
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: AreaSeRtd.wb4 \TT_ID_ARE5SaCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	7.8E-009	mg/kg-day	7.3E-001	kg-day/mg	5.7E-009
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	9.7E-009	mg/kg-day	7.3E+000	kg-day/mg	7.1E-008
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	9.7E-009	mg/kg-day	7.3E-001	kg-day/mg	7.1E-009
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	7.7E-009	mg/kg-day	7.3E-002	kg-day/mg	5.6E-010
	Benzyl Alcohol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	4.2E-008	mg/kg-day		kg-day/mg	
	beta-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E+000	kg-day/mg	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E+000	kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	5.5E-008	mg/kg-day	1.4E-002	kg-day/mg	7.8E-010
	Bromodichloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butanol, 1-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	4.9E-009	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	1.3E-007	mg/kg-day		kg-day/mg	
	Cadmium (water)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Caprolactam	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbazole	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-002	kg-day/mg	
	Carbon Disulfide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorodifluoromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-003	kg-day/mg	
	Chloroform	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.1E-003	kg-day/mg	
	Chloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	2.4E-006	mg/kg-day		kg-day/mg	
	Chromium 6+	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.0E-005	kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	9.7E-009	mg/kg-day	7.3E-003	kg-day/mg	7.1E-011
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	4.9E-007	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	1.7E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	Cyclohexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.3E+000	kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	4.4E-010	mg/kg-day	1.6E+001	kg-day/mg	7.0E-009
	Diethyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Diethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dimethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	1.1E-008	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dioxane, 1,4-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	3.1E-010	mg/kg-day		kg-day/mg	
	Endosulfan sulfate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	4.8E-010	mg/kg-day		kg-day/mg	
	Endrin aldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin ketone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethyl Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	1.3E-008	mg/kg-day		kg-day/mg	
	Fluorene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	4.4E-011	mg/kg-day	1.3E+000	kg-day/mg	5.7E-011
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	7.5E-010	mg/kg-day	3.5E-001	kg-day/mg	2.6E-010
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	1.1E-010	mg/kg-day	4.5E+000	kg-day/mg	5.2E-010
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	4.1E-010	mg/kg-day	9.1E+000	kg-day/mg	3.7E-009
	Hexachlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.6E+000	kg-day/mg	
	Hexachlorobutadiene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.8E-002	kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-131
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_ARE5SeCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Hexane, n-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	7.7E-009	mg/kg-day	7.3E-001	kg-day/mg	5.6E-009
	Iron	1.03E+004	mg/kg	NA	NA	M	9.1E-004	mg/kg-day		kg-day/mg	
	Isophorone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.5E-004	kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	7.3E-006	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	3.9E-005	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	6.2E-009	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	1.5E-009	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	6.2E-010	mg/kg-day	7.5E-003	kg-day/mg	4.6E-012
	m,p-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Naphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Nickel	1.71E+001	mg/kg	NA	NA	M	1.5E-006	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.9E-003	kg-day/mg	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	ortho-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	p-Cymene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pentachlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.2E-001	kg-day/mg	
	Phenanthrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol, 4,4'-(1-methylethylidene)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phthalic anhydride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	1.4E-006	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	5.0E-008	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	9.7E-006	mg/kg-day		kg-day/mg	
	Styrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Tetrachloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.2E-002	kg-day/mg	
	Tetrahydrofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Thallium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	1.8E-010	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E-002	kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.9E+000	kg-day/mg	
	Xylenes (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	1.0E-005	mg/kg-day		kg-day/mg	
	(Total)										6.74E-007
Dermal	1,1-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
Dermal	1,1-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-001	kg-day/mg	
	1,2-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.1E-002	kg-day/mg	
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2-Dichloropropane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.8E-002	kg-day/mg	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-002	kg-day/mg	
	2-Butanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Chloronaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Hexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-131
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5eRM wb4 \ TT_RD_ARE55eCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.0E-002	kg-day/mg	
	2,4-Dichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dimethylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.5E-001	kg-day/mg	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Methylphenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4-Nitrophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	4,4'-DDD	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.4E-001	kg-day/mg	
Dermal	4,4'-DDE	1.10E-002	mg/kg	NA	NA	M	1.9E-006	mg/kg-day	3.4E-001	kg-day/mg	6.59E-009
	4,4'-DDT	1.40E-002	mg/kg	NA	NA	M	2.5E-006	mg/kg-day	3.4E-001	kg-day/mg	8.38E-009
	Acenaphthene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acenaphthylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetaldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Acetophenone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Aldrin	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.7E+001	kg-day/mg	
	alpha-BHC	1.05E-003	mg/kg	NA	NA	M	1.8E-009	mg/kg-day	6.3E+000	kg-day/mg	1.17E-008
	alpha-Chlordane	1.05E-002	mg/kg	NA	NA	M	1.8E-008	mg/kg-day	3.5E-001	kg-day/mg	6.44E-009
	Aluminum	6.12E+003	mg/kg	NA	NA	M	1.1E-002	mg/kg-day		kg-day/mg	
	Ammonia**	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Antimony	1.47E+001	mg/kg	NA	NA	M	2.6E-005	mg/kg-day		kg-day/mg	
	Aroclor-1242	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Aroclor-1248	1.40E-001	mg/kg	NA	NA	M	2.5E-007	mg/kg-day	2.0E+000	kg-day/mg	4.93E-007
	Aroclor-1254	3.20E-001	mg/kg	NA	NA	M	5.6E-007	mg/kg-day	2.2E+000	kg-day/mg	1.27E-006
	Aroclor-1260	2.30E-001	mg/kg	NA	NA	M	4.1E-007	mg/kg-day	2.0E+000	kg-day/mg	8.10E-007
	Arsenic	3.40E+000	mg/kg	NA	NA	M	6.0E-006	mg/kg-day	1.6E+000	kg-day/mg	9.46E-006
	Azobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Barium	1.18E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.2E-002	kg-day/mg	
	Benzoic Acid	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(a)anthracene	8.90E-002	mg/kg	NA	NA	M	1.6E-007	mg/kg-day	7.3E-001	kg-day/mg	1.14E-007
	Benzo(a)pyrene	1.10E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	6.6E+000	kg-day/mg	1.66E-006
	Benzo(b)fluoranthene	1.10E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	7.3E-001	kg-day/mg	1.41E-007
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	7.3E-002	kg-day/mg	1.12E-008
	Benzyl Alcohol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Beryllium	4.80E-001	mg/kg	NA	NA	M	8.5E-007	mg/kg-day		kg-day/mg	
	beta-BHC	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.8E+000	kg-day/mg	
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E+000	kg-day/mg	
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	NA	NA	M	1.1E-006	mg/kg-day	1.4E-002	kg-day/mg	1.55E-006
	Bromodichloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butanol, 1-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Butylbenzylphthalate	5.60E-002	mg/kg	NA	NA	M	9.9E-008	mg/kg-day		kg-day/mg	
	Cadmium	1.50E+000	mg/kg	NA	NA	M	2.6E-006	mg/kg-day		kg-day/mg	
	Cadmium (water)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Caprolactam	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbazole	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E-002	kg-day/mg	
	Carbon Disulfide	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Carbon Tetrachloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-131
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: AreaSeRM.mb4 \TT_ID_ARE85sCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chlorodifluoromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chloroethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.9E-003	kg-day/mg	
	Chloroform	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	6.4E-003	kg-day/mg	
	Chloromethane	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Chromium 3+	2.75E+001	mg/kg	NA	NA	M	4.8E-005	mg/kg-day		kg-day/mg	
	Chromium 6+	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	3.0E-004	kg-day/mg	
	Chrysene	1.10E-001	mg/kg	NA	NA	M	1.9E-007	mg/kg-day	1.8E-002	kg-day/mg	3.45E-009
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Cobalt	5.60E+000	mg/kg	NA	NA	M	9.9E-006	mg/kg-day		kg-day/mg	
	Copper	1.97E+001	mg/kg	NA	NA	M	3.5E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.30E-001	mg/kg	NA	NA	M	2.3E-007	mg/kg-day		kg-day/mg	
	Cyclohexanone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	8.1E+000	kg-day/mg	
	Dieldrin	4.95E-003	mg/kg	NA	NA	M	8.7E-009	mg/kg-day	1.6E+001	kg-day/mg	1.39E-007
	Diethyl ether	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Diethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dimethylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Di-n-butylphthalate	1.20E-001	mg/kg	NA	NA	M	2.1E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Dioxane, 1,4-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endosulfan I	3.50E-003	mg/kg	NA	NA	M	6.2E-009	mg/kg-day		kg-day/mg	
	Endosulfan sulfate	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin	5.50E-003	mg/kg	NA	NA	M	9.7E-009	mg/kg-day		kg-day/mg	
	Endrin aldehyde	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Endrin ketone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Ethyl Benzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Fluoranthene	1.50E-001	mg/kg	NA	NA	M	2.6E-007	mg/kg-day		kg-day/mg	
	Fluorene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	gamma-BHC	4.95E-004	mg/kg	NA	NA	M	8.7E-010	mg/kg-day	1.3E+000	kg-day/mg	1.13E-009
	gamma-Chlordane	8.50E-003	mg/kg	NA	NA	M	1.5E-008	mg/kg-day	3.5E-001	kg-day/mg	5.24E-009
	Heptachlor	1.31E-003	mg/kg	NA	NA	M	2.3E-009	mg/kg-day	4.5E+000	kg-day/mg	1.03E-008
	Heptachlor epoxide	4.60E-003	mg/kg	NA	NA	M	8.1E-009	mg/kg-day	9.1E+000	kg-day/mg	7.37E-008
	Hexachlorobenzene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	2.0E+000	kg-day/mg	
	Hexachlorobutadiene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	7.8E-002	kg-day/mg	
	Hexane, n-	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	NA	NA	M	1.5E-007	mg/kg-day	7.3E-001	kg-day/mg	1.12E-007
	Iron	1.03E+004	mg/kg	NA	NA	M	1.8E-002	mg/kg-day		kg-day/mg	
	Isophorone	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	9.5E-004	kg-day/mg	
	Lead	8.27E+001	mg/kg	NA	NA	M	1.5E-004	mg/kg-day		kg-day/mg	
	Manganese	4.39E+002	mg/kg	NA	NA	M	7.7E-004	mg/kg-day		kg-day/mg	
	Mercury	7.00E-002	mg/kg	NA	NA	M	1.2E-007	mg/kg-day		kg-day/mg	
	Methoxychlor	1.70E-002	mg/kg	NA	NA	M	3.0E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-003	mg/kg	NA	NA	M	1.2E-008	mg/kg-day	1.4E-002	kg-day/mg	1.68E-010
	m,p-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Naphthalene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Nickel	1.71E+001	mg/kg	NA	NA	M	3.0E-005	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	4.9E-003	kg-day/mg	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	ortho-xylene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	p-Cymene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pentachlorophenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.2E-001	kg-day/mg	
	Phenanthrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-131
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_ID_ARESSsCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phenol, 4,4'-(1-methylethylidene)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Phthalic anhydride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Pyrene	1.60E-001	mg/kg	NA	NA	M	2.8E-007	mg/kg-day		kg-day/mg	
	Selenium	5.70E-001	mg/kg	NA	NA	M	1.0E-006	mg/kg-day		kg-day/mg	
	Silver	1.10E+000	mg/kg	NA	NA	M	1.9E-006	mg/kg-day		kg-day/mg	
	Styrene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Tetrachloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	5.2E-002	kg-day/mg	
	Tetrahydrofuran	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Thallium	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Toluene	2.00E-003	mg/kg	NA	NA	M	3.5E-009	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Trichloroethene	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.1E-002	kg-day/mg	
	Vanadium	1.20E+001	mg/kg	NA	NA	M	2.1E-005	mg/kg-day		kg-day/mg	
	Vinyl Chloride	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day	1.9E+000	kg-day/mg	
	Xylenes (total)	0.00E+000	mg/kg	NA	NA	M	0.0E+000	mg/kg-day		kg-day/mg	
	Zinc	1.18E+002	mg/kg	NA	NA	M	2.1E-004	mg/kg-day		kg-day/mg	
	(Total)										1.43E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.5E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-132
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Inhalation	1,1-Dichloroethane	0.00E+000	mg/kg	1.40E-004	mg/cu. m.	R	3.69E-006	mg/kg-day		mg/kg-day	
	1,1-Dichloroethene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,1,1-Trichloroethane	0.00E+000	mg/kg	1.61E-004	mg/cu. m.	R	4.26E-006	mg/kg-day		mg/kg-day	
	1,1,2-Trichloroethane	0.00E+000	mg/kg	1.08E-008	mg/cu. m.	R	2.85E-010	mg/kg-day	5.60E-002	mg/kg-day	1.59E-011
	1,1,2,2-Tetrachloroethane	0.00E+000	mg/kg	1.79E-007	mg/cu. m.	R	4.72E-009	mg/kg-day	2.00E-001	mg/kg-day	9.44E-010
	1,2-Dichlorobenzene	0.00E+000	mg/kg	2.53E-004	mg/cu. m.	R	6.68E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	0.00E+000	mg/kg	5.56E-005	mg/cu. m.	R	1.47E-006	mg/kg-day	9.10E-002	mg/kg-day	1.34E-007
	1,2-Dichloroethene (total)	0.00E+000	mg/kg	3.03E-004	mg/cu. m.	R	8.01E-006	mg/kg-day		mg/kg-day	
	1,2-Dichloropropane	0.00E+000	mg/kg	5.53E-005	mg/cu. m.	R	1.46E-006	mg/kg-day		mg/kg-day	
	1,2,4-Trichlorobenzene	0.00E+000	mg/kg	1.29E-005	mg/cu. m.	R	3.42E-007	mg/kg-day		mg/kg-day	
	1,2,4-Trimethylbenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,3,5-Trimethylbenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	0.00E+000	mg/kg	4.78E-006	mg/cu. m.	R	1.26E-007	mg/kg-day	2.20E-002	mg/kg-day	2.78E-009
	2-Butanone	0.00E+000	mg/kg	2.51E-008	mg/cu. m.	R	6.64E-010	mg/kg-day		mg/kg-day	
	2-Chloronaphthalene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	2-Hexanone	0.00E+000	mg/kg	1.20E-003	mg/cu. m.	R	3.16E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	0.00E+000	mg/kg	4.80E-005	mg/cu. m.	R	1.27E-006	mg/kg-day		mg/kg-day	
	2-Methylphenol	0.00E+000	mg/kg	2.45E-005	mg/cu. m.	R	6.48E-007	mg/kg-day		mg/kg-day	
	2,2'-oxybis(1-Chloropropane)	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	3.50E-002	mg/kg-day	
	2,4-Dichlorophenol	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	2,4-Dimethylphenol	0.00E+000	mg/kg	9.07E-006	mg/cu. m.	R	2.40E-007	mg/kg-day		mg/kg-day	
	2,4-Dinitrotoluene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	2,4,5-Trichlorophenol	0.00E+000	mg/kg	1.87E-008	mg/cu. m.	R	4.95E-010	mg/kg-day		mg/kg-day	
	2,6-Dinitrotoluene	0.00E+000	mg/kg	1.33E-006	mg/cu. m.	R	3.50E-008	mg/kg-day		mg/kg-day	
	3,3'-Dichlorobenzidine	0.00E+000	mg/kg	3.51E-012	mg/cu. m.	R	9.27E-014	mg/kg-day		mg/kg-day	
	4-Bromophenyl-phenylether	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Chloro-3-methylphenol	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Chlorophenyl-phenyl ether	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methyl-2-pentanone	0.00E+000	mg/kg	1.42E-004	mg/cu. m.	R	3.75E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	0.00E+000	mg/kg	8.78E-005	mg/cu. m.	R	2.32E-006	mg/kg-day		mg/kg-day	
	4-Nitrophenol	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	4,4'-DDD	0.00E+000	mg/kg	7.94E-011	mg/cu. m.	R	2.10E-012	mg/kg-day		mg/kg-day	
	4,4'-DDE	1.10E-002	mg/kg	4.46E-011	mg/cu. m.	R	1.18E-012	mg/kg-day		mg/kg-day	
	4,4'-DDT	1.40E-002	mg/kg	6.32E-011	mg/cu. m.	R	1.67E-012	mg/kg-day	3.40E-001	mg/kg-day	5.67E-013
	Acenaphthene	0.00E+000	mg/kg	4.80E-006	mg/cu. m.	R	1.27E-007	mg/kg-day		mg/kg-day	
	Acenaphthylene	0.00E+000	mg/kg	2.91E-008	mg/cu. m.	R	7.69E-010	mg/kg-day		mg/kg-day	
	Acetaldehyde	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Acetone	0.00E+000	mg/kg	2.06E-004	mg/cu. m.	R	5.43E-006	mg/kg-day		mg/kg-day	
	Acetophenone	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Aldrin	0.00E+000	mg/kg	3.06E-010	mg/cu. m.	R	8.08E-012	mg/kg-day	1.70E+001	mg/kg-day	1.37E-010
	alpha-BHC	1.05E-003	mg/kg	1.67E-011	mg/cu. m.	R	4.42E-013	mg/kg-day	6.30E+000	mg/kg-day	2.78E-012
	alpha-Chlordane	1.05E-002	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	3.50E-001	mg/kg-day	
	Aluminum	6.12E+003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ammonia**	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-132
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Anthracene	0.00E+000	mg/kg	1.65E-007	mg/cu. m.	R	4.36E-009	mg/kg-day		mg/kg-day	
	Antimony	1.47E+001	mg/kg	5.87E-009	mg/cu. m.	R	1.55E-010	mg/kg-day		mg/kg-day	
	Aroclor-1242	0.00E+000	mg/kg	4.63E-010	mg/cu. m.	R	1.22E-011	mg/kg-day	2.00E+000	mg/kg-day	2.45E-011
	Aroclor-1248	1.40E-001	mg/kg	2.79E-009	mg/cu. m.	R	7.36E-011	mg/kg-day	2.00E+000	mg/kg-day	1.47E-010
	Aroclor-1254	3.20E-001	mg/kg	2.21E-009	mg/cu. m.	R	5.84E-011	mg/kg-day	2.00E+000	mg/kg-day	1.17E-010
	Aroclor-1260	2.30E-001	mg/kg	1.75E-008	mg/cu. m.	R	4.62E-010	mg/kg-day	2.00E+000	mg/kg-day	9.25E-010
	Arsenic	3.40E+000	mg/kg	1.44E-009	mg/cu. m.	R	3.81E-011	mg/kg-day	1.51E+001	mg/kg-day	5.76E-010
	Azobenzene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Barium	1.18E+002	mg/kg	1.44E-007	mg/cu. m.	R	3.81E-009	mg/kg-day		mg/kg-day	
	Benzene	0.00E+000	mg/kg	1.63E-004	mg/cu. m.	R	4.31E-006	mg/kg-day	2.90E-002	mg/kg-day	1.25E-007
	Benzoic Acid	0.00E+000	mg/kg	2.14E-004	mg/cu. m.	R	5.66E-006	mg/kg-day		mg/kg-day	
	Benzo(a)anthracene	8.90E-002	mg/kg	2.28E-010	mg/cu. m.	R	6.03E-012	mg/kg-day		mg/kg-day	
	Benzo(a)pyrene	1.10E-001	mg/kg	7.74E-011	mg/cu. m.	R	2.04E-012	mg/kg-day	3.10E+000	mg/kg-day	6.34E-012
	Benzo(b)fluoranthene	1.10E-001	mg/kg	2.86E-010	mg/cu. m.	R	7.56E-012	mg/kg-day		mg/kg-day	
	Benzo(g,h,i)perylene	0.00E+000	mg/kg	7.60E-011	mg/cu. m.	R	2.01E-012	mg/kg-day		mg/kg-day	
	Benzo(k)fluoranthene	8.70E-002	mg/kg	2.86E-010	mg/cu. m.	R	7.55E-012	mg/kg-day		mg/kg-day	
	Benzyl Alcohol	0.00E+000	mg/kg	1.34E-009	mg/cu. m.	R	3.55E-011	mg/kg-day		mg/kg-day	
	Beryllium	4.80E-001	mg/kg	1.24E-010	mg/cu. m.	R	3.29E-012	mg/kg-day	8.40E+000	mg/kg-day	2.76E-011
	beta-BHC	0.00E+000	mg/kg	3.18E-011	mg/cu. m.	R	8.41E-013	mg/kg-day	1.80E+000	mg/kg-day	1.51E-012
	bis(2-Chloroethyl) ether	0.00E+000	mg/kg	4.62E-005	mg/cu. m.	R	1.22E-006	mg/kg-day	1.10E+000	mg/kg-day	1.34E-006
	bis(2-Ethylhexyl)phthalate	6.30E-001	mg/kg	3.37E-008	mg/cu. m.	R	8.91E-010	mg/kg-day	1.40E-002	mg/kg-day	1.25E-011
	Bromodichloromethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Butanol, 1-	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Butylbenzylphthalate	5.60E-002	mg/kg	2.19E-008	mg/cu. m.	R	5.79E-010	mg/kg-day		mg/kg-day	
	Cadmium	1.50E+000	mg/kg	1.14E-008	mg/cu. m.	R	3.01E-010	mg/kg-day	6.30E+000	mg/kg-day	1.89E-009
	Cadmium (water)	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	6.30E+000	mg/kg-day	
	Caprolactam	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Carbazole	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Carbon Disulfide	0.00E+000	mg/kg	1.63E-009	mg/cu. m.	R	4.30E-011	mg/kg-day		mg/kg-day	
	Carbon Tetrachloride	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chlorobenzene	0.00E+000	mg/kg	5.07E-005	mg/cu. m.	R	1.34E-006	mg/kg-day		mg/kg-day	
	Chlorodifluoromethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroform	0.00E+000	mg/kg	1.94E-004	mg/cu. m.	R	5.12E-006	mg/kg-day	8.10E-002	mg/kg-day	4.15E-007
	Chloromethane	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chromium 3+	2.75E+001	mg/kg	1.07E-007	mg/cu. m.	R	2.82E-009	mg/kg-day		mg/kg-day	
	Chromium 6+	0.00E+000	mg/kg	1.78E-008	mg/cu. m.	R	4.70E-010	mg/kg-day	4.10E+001	mg/kg-day	1.93E-008
	Chrysene	1.10E-001	mg/kg	2.43E-010	mg/cu. m.	R	6.41E-012	mg/kg-day		mg/kg-day	
	cis-1,2-Dichloroethene	0.00E+000	mg/kg	2.19E-006	mg/cu. m.	R	5.78E-008	mg/kg-day		mg/kg-day	
	Cobalt	5.60E+000	mg/kg	2.92E-009	mg/cu. m.	R	7.71E-011	mg/kg-day		mg/kg-day	
	Copper	1.97E+001	mg/kg	1.12E-007	mg/cu. m.	R	2.96E-009	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.30E-001	mg/kg	1.82E-009	mg/cu. m.	R	4.81E-011	mg/kg-day		mg/kg-day	
	Cyclohexanone	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Dibenzofuran	0.00E+000	mg/kg	1.43E-010	mg/cu. m.	R	3.77E-012	mg/kg-day		mg/kg-day	
	Dibenzo(a,h)anthracene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-132
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Dieldrin	4.95E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	1.60E+001	mg/kg-day	
	Diethyl ether	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Diethylphthalate	0.00E+000	mg/kg	1.26E-009	mg/cu. m.	R	3.33E-011	mg/kg-day		mg/kg-day	
	Dimethylphthalate	0.00E+000	mg/kg	1.32E-008	mg/cu. m.	R	3.49E-010	mg/kg-day		mg/kg-day	
	Di-n-butylphthalate	1.20E-001	mg/kg	4.39E-009	mg/cu. m.	R	1.16E-010	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	0.00E+000	mg/kg	7.09E-010	mg/cu. m.	R	1.87E-011	mg/kg-day		mg/kg-day	
	Dioxane, 1,4-	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endosulfan I	3.50E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endosulfan sulfate	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endrin	5.50E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endrin aldehyde	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Endrin ketone	0.00E+000	mg/kg	1.84E-013	mg/cu. m.	R	4.86E-015	mg/kg-day		mg/kg-day	
	Ethanol, 2-(2-butoxyethoxy)-	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ethyl Benzene	0.00E+000	mg/kg	1.37E-003	mg/cu. m.	R	3.61E-005	mg/kg-day		mg/kg-day	
	Fluoranthene	1.50E-001	mg/kg	3.37E-010	mg/cu. m.	R	8.91E-012	mg/kg-day		mg/kg-day	
	Fluorene	0.00E+000	mg/kg	2.52E-006	mg/cu. m.	R	6.65E-008	mg/kg-day		mg/kg-day	
	gamma-BHC	4.95E-004	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	gamma-Chlordane	8.50E-003	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day	3.50E-001	mg/kg-day	
	Heptachlor	1.31E-003	mg/kg	3.31E-012	mg/cu. m.	R	8.74E-014	mg/kg-day	4.50E+000	mg/kg-day	3.93E-013
	Heptachlor epoxide	4.60E-003	mg/kg	1.58E-012	mg/cu. m.	R	4.17E-014	mg/kg-day	9.10E+000	mg/kg-day	3.80E-013
	Hexachlorobenzene	0.00E+000	mg/kg	4.85E-013	mg/cu. m.	R	1.28E-014	mg/kg-day	1.60E+000	mg/kg-day	2.05E-014
	Hexachlorobutadiene	0.00E+000	mg/kg	6.92E-010	mg/cu. m.	R	1.83E-011	mg/kg-day	7.80E-002	mg/kg-day	1.43E-012
	Hexane, n-	0.00E+000	mg/kg	7.60E-012	mg/cu. m.	R	2.01E-013	mg/kg-day		mg/kg-day	
	Indeno(1,2,3-cd)pyrene	8.70E-002	mg/kg	7.17E-011	mg/cu. m.	R	1.89E-012	mg/kg-day		mg/kg-day	
	Iron	1.03E+004	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Isophorone	0.00E+000	mg/kg	2.77E-004	mg/cu. m.	R	7.31E-006	mg/kg-day		mg/kg-day	
	Lead	8.27E+001	mg/kg	9.21E-007	mg/cu. m.	R	2.43E-008	mg/kg-day		mg/kg-day	
	Manganese	4.39E+002	mg/kg	9.06E-008	mg/cu. m.	R	2.39E-009	mg/kg-day		mg/kg-day	
	Mercury	7.00E-002	mg/kg	8.19E-010	mg/cu. m.	R	2.16E-011	mg/kg-day		mg/kg-day	
	Methoxychlor	1.70E-002	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-003	mg/kg	4.81E-004	mg/cu. m.	R	1.27E-005	mg/kg-day	1.65E-003	mg/kg-day	2.10E-008
	m,p-xylene	0.00E+000	mg/kg	1.26E-005	mg/cu. m.	R	3.34E-007	mg/kg-day		mg/kg-day	
	Naphthalene	0.00E+000	mg/kg	1.48E-004	mg/cu. m.	R	3.92E-006	mg/kg-day		mg/kg-day	
	Nickel	1.71E+001	mg/kg	3.38E-009	mg/cu. m.	R	8.92E-011	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	N-Nitroso-di-n-propylamine	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	N-Nitrosodiphenylamine	0.00E+000	mg/kg	5.33E-007	mg/cu. m.	R	1.41E-008	mg/kg-day		mg/kg-day	
	ortho-xylene	0.00E+000	mg/kg	6.07E-006	mg/cu. m.	R	1.60E-007	mg/kg-day		mg/kg-day	
	p-Cymene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Pentachlorophenol	0.00E+000	mg/kg	2.40E-009	mg/cu. m.	R	6.33E-011	mg/kg-day		mg/kg-day	
	Phenanthrene	0.00E+000	mg/kg	1.02E-009	mg/cu. m.	R	2.68E-011	mg/kg-day		mg/kg-day	
	Phenol	0.00E+000	mg/kg	5.45E-005	mg/cu. m.	R	1.44E-006	mg/kg-day		mg/kg-day	
	Phenol, 4,4'-(1-methylethyliden	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Phthalic anhydride	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Pyrene	1.60E-001	mg/kg	4.94E-010	mg/cu. m.	R	1.30E-011	mg/kg-day		mg/kg-day	

Scenario Timeframe:	Current/Future
Medium:	Surface Soil
Exposure Medium:	Soil
Exposure Point:	Area 5A, Surface Soil (0' to 2')
Receptor Population:	Offsite Resident
Receptor Age:	Adult

Table 5-1-132
Calculation of Cancer Risks
Central Tendency
American Chemical Service Site

File: Area5aRM.wk4 \ TT_Inh_ARES5aCT

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
	Selenium	5.70E-001	mg/kg	7.94E-010	mg/cu. m.	R	2.10E-011	mg/kg-day		mg/kg-day	
	Silver	1.10E+000	mg/kg	5.02E-010	mg/cu. m.	R	1.33E-011	mg/kg-day		mg/kg-day	
	Styrene	0.00E+000	mg/kg	8.05E-005	mg/cu. m.	R	2.13E-006	mg/kg-day		mg/kg-day	
	Tetrachloroethene	0.00E+000	mg/kg	4.43E-003	mg/cu. m.	R	1.17E-004	mg/kg-day	2.00E-003	mg/kg-day	2.34E-007
	Tetrahydrofuran	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Thallium	0.00E+000	mg/kg	3.66E-011	mg/cu. m.	R	9.67E-013	mg/kg-day		mg/kg-day	
	Toluene	2.00E-003	mg/kg	1.54E-002	mg/cu. m.	R	4.08E-004	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	0.00E+000	mg/kg	0.00E+000	mg/cu. m.	R	0.00E+000	mg/kg-day		mg/kg-day	
	Trichloroethene	0.00E+000	mg/kg	1.27E-003	mg/cu. m.	R	3.36E-005	mg/kg-day	6.00E-003	mg/kg-day	2.01E-007
	Vanadium	1.20E+001	mg/kg	1.67E-009	mg/cu. m.	R	4.40E-011	mg/kg-day		mg/kg-day	
	Vinyl Chloride	0.00E+000	mg/kg	7.39E-006	mg/cu. m.	R	1.95E-007	mg/kg-day	3.00E-001	mg/kg-day	5.86E-008
	Xylenes (total)	0.00E+000	mg/kg	8.73E-003	mg/cu. m.	R	2.31E-004	mg/kg-day		mg/kg-day	
	Zinc	1.18E+002	mg/kg	7.41E-007	mg/cu. m.	R	1.96E-008	mg/kg-day		mg/kg-day	
	(Total)										2.56E-006

Table 5-2-1
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	6.0E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.0E-004
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	5.6E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	2.1E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.0E-001
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	1.8E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.1E-004
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	8.5E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.2E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	3.9E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.0E-005
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	1.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.0E-005
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.0E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	9.8E-008
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	1.6E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.6E-004
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	2.4E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.4E-008
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	2.6E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	8.6E-004
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	3.0E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	7.4E-005
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	2.1E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.1E-007
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	5.7E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.9E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	3.4E-005	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	2.6E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.3E-003
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	8.7E-008	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	2.3E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	3.9E-008
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	3.7E-010	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.8E-009
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	7.6E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.1E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.4E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.6E-005
	(Total)												1.1E-001
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.8E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.8E-003
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.6E-005	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	1.4E-004	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	7.5E+000
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	2.6E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	8.8E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	3.9E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.6E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.8E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	9.1E-003
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	7.4E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.7E-003
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.1E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.5E-006
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	7.4E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	3.0E-001
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.1E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.2E-006
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.2E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.0E-002
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.4E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	5.7E-004
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	9.6E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	9.9E-006
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.7E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.9E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.6E-004	mg/kg-day			N/A	N/A	

Table 5-2-1
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.1E-003
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.0E-007	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.1E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.8E-006
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.7E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	8.5E-008
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	3.5E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	5.0E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	6.5E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.2E-004
	(Total)												7.9E+000
												Total Hazard Index Across All Exposure Routes/Pathways	8.0E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-2
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.1E-004	mg/kg-day			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.0E-007	mg/kg-day	2.0E+000	kg-day/mg	4.0E-007
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	7.4E-007	mg/kg-day	2.0E+000	kg-day/mg	1.5E-006
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	6.6E-008	mg/kg-day	1.5E+000	kg-day/mg	9.8E-008
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	3.0E-006	mg/kg-day			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.4E-008	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	5.7E-007	mg/kg-day	1.4E-002	kg-day/mg	8.0E-009
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	7.0E-009	mg/kg-day			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	5.7E-008	mg/kg-day			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	8.7E-011	mg/kg-day	6.1E-003	kg-day/mg	5.3E-013
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	9.2E-007	mg/kg-day			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.1E-006	mg/kg-day			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	7.4E-009	mg/kg-day			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.0E-004	mg/kg-day			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.2E-005	mg/kg-day			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	9.4E-006	mg/kg-day			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.1E-008	mg/kg-day			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	8.3E-009	mg/kg-day			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.3E-010	mg/kg-day			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	2.7E-007	mg/kg-day			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	5.0E-006	mg/kg-day			
	(Total)										2.0E-006
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.9E-004	kg-day/mg			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	9.3E-006	kg-day/mg	2.0E+000	kg-day/mg	1.9E-005
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	4.8E-005	kg-day/mg	2.2E+000	kg-day/mg	1.1E-004
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	9.1E-007	kg-day/mg	1.6E+000	kg-day/mg	1.4E-006
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	1.4E-005	kg-day/mg			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	6.5E-008	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	2.6E-005	kg-day/mg	1.4E-002	kg-day/mg	3.7E-007
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.2E-007	kg-day/mg			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	2.6E-006	kg-day/mg			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	4.1E-009	kg-day/mg	6.4E-003	kg-day/mg	2.6E-011
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	4.3E-006	kg-day/mg			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	4.9E-006	kg-day/mg			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.4E-007	kg-day/mg			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	9.5E-004	kg-day/mg			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	5.7E-005	kg-day/mg			

Table 5-2-2
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.4E-005	kg-day/mg			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.4E-007	kg-day/mg			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	3.9E-007	kg-day/mg			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.1E-009	kg-day/mg			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	1.3E-006	kg-day/mg			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	2.3E-005	kg-day/mg			
	(Total)										1.3E-004
0										Total Hazard Index Across All Exposure Routes/Pathways	1.3E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-3
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.6E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.6E-004
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	9.1E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	4.6E-002
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	8.0E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.7E-004
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	3.7E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.3E-005
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.7E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	8.6E-006
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	7.0E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.5E-005
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	8.6E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.3E-008
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	7.0E-008	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	7.0E-005
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.1E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.1E-008
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.1E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.8E-004
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.3E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.3E-005
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	9.1E-009	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	9.1E-008
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.5E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.4E-004
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.5E-005	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.2E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.8E-004
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.8E-008	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.0E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.7E-008
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.6E-010	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	8.0E-010
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	3.3E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	4.7E-005
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	6.1E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.0E-005
	(Total)												4.8E-002
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	4.2E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	4.2E-004
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	3.9E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	2.0E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	1.1E+000
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	3.9E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	1.3E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	5.9E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	8.5E-005
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	2.7E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.4E-003
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.6E-004
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.4E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.9E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	1.1E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	4.5E-002
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.7E-009	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.8E-007
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.8E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.0E-003
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	2.1E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	8.7E-005
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.5E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	1.5E-006
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	4.0E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.3E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	2.4E-005	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.9E-005	mg/kg-day			N/A	N/A	

Table 5-2-3
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	6.1E-008	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.6E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.7E-007
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	2.6E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.3E-008
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	5.3E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	7.6E-005
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	9.8E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.1E-004
	(Total)												1.2E+000
												Total Hazard Index Across All Exposure Routes/Pathways	1.2E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5.2.4
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	*Area 1, Sediment (Fire Pond)*
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.9E-005	mg/kg-day			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	1.8E-008	mg/kg-day	2.0E+000	kg-day/mg	3.5E-008
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	6.5E-008	mg/kg-day	2.0E+000	kg-day/mg	1.3E-007
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	5.7E-009	mg/kg-day	1.5E+000	kg-day/mg	8.6E-009
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	2.6E-007	mg/kg-day			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.2E-009	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	5.0E-008	mg/kg-day	1.4E-002	kg-day/mg	7.0E-010
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.1E-010	mg/kg-day			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	5.0E-009	mg/kg-day			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	7.7E-012	mg/kg-day	6.1E-003	kg-day/mg	4.7E-014
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	8.0E-008	mg/kg-day			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	9.3E-008	mg/kg-day			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	6.5E-010	mg/kg-day			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	1.8E-005	mg/kg-day			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.1E-006	mg/kg-day			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	8.3E-007	mg/kg-day			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	2.7E-009	mg/kg-day			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	7.3E-010	mg/kg-day			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.1E-011	mg/kg-day			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	2.4E-008	mg/kg-day			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	4.4E-007	mg/kg-day			
	(Total)										1.7E-007
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	3.0E-005	kg-day/mg			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.8E-007	kg-day/mg	2.0E+000	kg-day/mg	5.6E-007
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	1.5E-006	kg-day/mg	2.2E+000	kg-day/mg	3.3E-006
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	2.8E-008	kg-day/mg	1.6E+000	kg-day/mg	4.4E-008
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	4.2E-007	kg-day/mg			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	2.0E-009	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	8.0E-007	kg-day/mg	1.4E-002	kg-day/mg	1.1E-008
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.8E-009	kg-day/mg			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	8.0E-008	kg-day/mg			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.2E-010	kg-day/mg	6.4E-003	kg-day/mg	7.8E-013
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.3E-007	kg-day/mg			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.5E-007	kg-day/mg			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.0E-008	kg-day/mg			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.9E-005	kg-day/mg			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.7E-006	kg-day/mg			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.3E-006	kg-day/mg			

Table 5.2.4
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.3E-009	kg-day/mg			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.2E-008	kg-day/mg			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.8E-010	kg-day/mg			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	3.8E-008	kg-day/mg			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	7.0E-007	kg-day/mg			
	(Total)										3.9E-006
										Total Hazard Index Across All Exposure Routes/Pathways	4.1E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-5
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	*Current/Future*
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	5.5E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.5E-003
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	5.2E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	1.9E-005	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	9.6E-001
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	1.7E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.6E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	7.8E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.1E-003
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	3.6E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	1.8E-004
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	1.5E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.3E-004
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.8E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	9.0E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	1.5E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.5E-003
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	2.3E-009	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.3E-007
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	2.4E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	7.9E-003
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	2.7E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.8E-004
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.9E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.9E-006
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	5.3E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.8E-002
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	3.1E-004	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	2.4E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-002
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	8.0E-007	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	2.1E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	3.6E-007
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	3.4E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.7E-008
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	7.0E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.0E-003
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.3E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.3E-004
	(Total)												1.0E+000
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.8E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.8E-003
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.6E-005	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	1.4E-004	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	7.5E+000
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	2.6E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	8.8E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	3.9E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.6E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.8E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	9.1E-003
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	7.4E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.7E-003
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.1E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.5E-006
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	7.4E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	3.0E-001
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.1E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.2E-006
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.2E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.0E-002
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.4E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	5.7E-004
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	9.6E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	9.9E-006
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.7E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.9E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.6E-004	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.2E-004	mg/kg-day			N/A	N/A	
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.0E-007	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.1E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.8E-006
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.7E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	8.5E-008
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	3.5E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	5.0E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	6.5E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.2E-004
	(Total)												7.9E+000
												Total Hazard Index Across All Exposure Routes/Pathways	8.9E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-6
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.0E-003	mg/kg-day			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	1.9E-006	mg/kg-day	2.0E+000	kg-day/mg	3.7E-006
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	6.8E-006	mg/kg-day	2.0E+000	kg-day/mg	1.4E-005
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	6.0E-007	mg/kg-day	1.5E+000	kg-day/mg	9.1E-007
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	2.8E-005	mg/kg-day			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.3E-007	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	5.2E-006	mg/kg-day	1.4E-002	kg-day/mg	7.3E-008
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.4E-008	mg/kg-day			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	5.2E-007	mg/kg-day			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	8.1E-010	mg/kg-day	6.1E-003	kg-day/mg	4.9E-012
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	8.5E-006	mg/kg-day			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	9.8E-006	mg/kg-day			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	6.8E-008	mg/kg-day			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	1.9E-003	mg/kg-day			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.1E-004	mg/kg-day			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	8.7E-005	mg/kg-day			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	2.9E-007	mg/kg-day			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	7.6E-008	mg/kg-day			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.2E-009	mg/kg-day			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	2.5E-006	mg/kg-day			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	4.6E-005	mg/kg-day			
	(Total)										1.8E-005
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.9E-004	kg-day/mg			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	9.3E-006	kg-day/mg	2.0E+000	kg-day/mg	1.9E-005
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	4.8E-005	kg-day/mg	2.2E+000	kg-day/mg	1.1E-004
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	9.1E-007	kg-day/mg	1.6E+000	kg-day/mg	1.4E-006
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	1.4E-005	kg-day/mg			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	6.5E-008	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	2.6E-005	kg-day/mg	1.4E-002	kg-day/mg	3.7E-007
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.2E-007	kg-day/mg			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	2.6E-006	kg-day/mg			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	4.1E-009	kg-day/mg	6.4E-003	kg-day/mg	2.6E-011
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	4.3E-006	kg-day/mg			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	4.9E-006	kg-day/mg			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.4E-007	kg-day/mg			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	9.5E-004	kg-day/mg			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	5.7E-005	kg-day/mg			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.4E-005	kg-day/mg			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.4E-007	kg-day/mg			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	3.9E-007	kg-day/mg			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.1E-009	kg-day/mg			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	1.3E-006	kg-day/mg			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	2.3E-005	kg-day/mg			
	(Total)										1.3E-004
										Total Hazard Index Across All Exposure Routes/Pathways	1.5E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-7
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.1E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.1E-003
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	7.5E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	3.7E-001
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	6.6E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.2E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	3.0E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	4.3E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.4E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	7.0E-005
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	5.7E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.8E-004
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	7.0E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.5E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	5.7E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	5.7E-004
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	8.8E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	8.8E-008
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	9.2E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.1E-003
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.1E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.7E-004
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	7.5E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.5E-007
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.1E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.9E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.2E-004	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	9.5E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.7E-003
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.1E-007	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	8.3E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.4E-007
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.3E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.6E-009
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	2.7E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	3.9E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	5.0E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.7E-004
	(Total)												3.9E-001
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	4.2E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	4.2E-004
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	3.9E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	2.0E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	1.1E+000
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	3.9E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	1.3E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	5.9E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	8.5E-005
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	2.7E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.4E-003
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.6E-004
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.4E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.9E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	1.1E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	4.5E-002
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.7E-009	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.8E-007
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.8E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.0E-003
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	2.1E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	8.7E-005
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.5E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	1.5E-006
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	4.0E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.3E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	2.4E-005	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.9E-005	mg/kg-day			N/A	N/A	
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	6.1E-008	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.6E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.7E-007
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	2.6E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.3E-008
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	5.3E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	7.6E-005
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	9.8E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.1E-004
	(Total)												1.2E+000
												Total Hazard Index Across All Exposure Routes/Pathways	1.6E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-8
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1
Receptor Population:	Utility Worker
Receptor Age:	Adult

File UTI1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.5E-004	mg/kg-day			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	1.4E-007	mg/kg-day	2.0E+000	kg-day/mg	2.9E-007
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	5.3E-007	mg/kg-day	2.0E+000	kg-day/mg	1.1E-006
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	4.7E-008	mg/kg-day	1.5E+000	kg-day/mg	7.0E-008
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	2.2E-006	mg/kg-day			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.0E-008	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	4.1E-007	mg/kg-day	1.4E-002	kg-day/mg	5.7E-009
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	5.0E-009	mg/kg-day			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	4.1E-008	mg/kg-day			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	6.3E-011	mg/kg-day	6.1E-003	kg-day/mg	3.8E-013
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	6.6E-007	mg/kg-day			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	7.6E-007	mg/kg-day			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	5.3E-009	mg/kg-day			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	1.5E-004	mg/kg-day			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	8.7E-006	mg/kg-day			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	6.8E-006	mg/kg-day			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	2.2E-008	mg/kg-day			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	5.9E-009	mg/kg-day			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	9.4E-011	mg/kg-day			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	1.9E-007	mg/kg-day			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	3.6E-006	mg/kg-day			
	(Total)										1.4E-006
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	3.0E-005	kg-day/mg			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.8E-007	kg-day/mg	2.0E+000	kg-day/mg	5.6E-007
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	1.5E-006	kg-day/mg	2.2E+000	kg-day/mg	3.3E-006
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	2.8E-008	kg-day/mg	1.6E+000	kg-day/mg	4.4E-008
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	4.2E-007	kg-day/mg			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	2.0E-009	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	8.0E-007	kg-day/mg	1.4E-002	kg-day/mg	1.1E-008
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.8E-009	kg-day/mg			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	8.0E-008	kg-day/mg			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.2E-010	kg-day/mg	6.4E-003	kg-day/mg	7.8E-013
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.3E-007	kg-day/mg			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.5E-007	kg-day/mg			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.0E-008	kg-day/mg			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.9E-005	kg-day/mg			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.7E-006	kg-day/mg			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.3E-006	kg-day/mg			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.3E-009	kg-day/mg			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	1.2E-008	kg-day/mg			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.8E-010	kg-day/mg			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	3.8E-008	kg-day/mg			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	7.0E-007	kg-day/mg			
	(Total)										3.9E-006
								Total Hazard Index Across All Exposure Routes/Pathways			5.3E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-9
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.5E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.5E-003
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	2.3E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	8.6E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	4.3E-001
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	7.6E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.5E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	3.5E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.0E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.6E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	8.1E-005
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	6.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.3E-004
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	8.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.1E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	6.6E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	6.6E-004
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.0E-009	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.0E-007
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	1.1E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.6E-003
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.2E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.1E-004
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	8.6E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.6E-007
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.4E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.9E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.4E-004	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.1E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.5E-003
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.6E-007	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	9.6E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.6E-007
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.5E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	7.6E-009
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	3.1E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	4.5E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	5.8E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.9E-004
	(Total)												4.6E-001
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.1E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.1E-003
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	1.0E-005	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	5.3E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	3.0E+000
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	1.0E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.5E-003
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	1.5E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.2E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	7.1E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	3.6E-003
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	2.9E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.5E-003
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.6E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.8E-006
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	2.9E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.2E-001
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	4.5E-009	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	4.7E-007
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	4.7E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.6E-002
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	5.4E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	2.3E-004
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.8E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	3.9E-006
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	1.0E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.5E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	6.2E-005	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.8E-005	mg/kg-day			N/A	N/A	
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.6E-007	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	4.2E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	7.1E-007
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.7E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.3E-008
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	1.4E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	2.0E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	2.5E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.8E-004
	(Total)												3.1E+000
										Total Hazard Index Across All Exposure Routes/Pathways			3.6E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-10
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS1RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.1E-004	mg/kg-day			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	1.9E-007	mg/kg-day	2.0E+000	kg-day/mg	3.9E-007
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	7.2E-007	mg/kg-day	2.0E+000	kg-day/mg	1.4E-006
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	6.3E-008	mg/kg-day	1.5E+000	kg-day/mg	9.5E-008
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	2.9E-006	mg/kg-day			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	1.4E-008	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	5.5E-007	mg/kg-day	1.4E-002	kg-day/mg	7.7E-009
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.8E-009	mg/kg-day			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	5.5E-008	mg/kg-day			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	8.5E-011	mg/kg-day	6.1E-003	kg-day/mg	5.2E-013
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	8.9E-007	mg/kg-day			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	1.0E-006	mg/kg-day			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	7.2E-009	mg/kg-day			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	2.0E-004	mg/kg-day			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	1.2E-005	mg/kg-day			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	9.1E-006	mg/kg-day			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.0E-008	mg/kg-day			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	8.0E-009	mg/kg-day			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.3E-010	mg/kg-day			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	2.6E-007	mg/kg-day			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	4.8E-006	mg/kg-day			
	(Total)										1.9E-006
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.1E-005	kg-day/mg			
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	8.6E-007	kg-day/mg	2.0E+000	kg-day/mg	1.7E-006
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	4.4E-006	kg-day/mg	2.2E+000	kg-day/mg	9.9E-006
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	8.4E-008	kg-day/mg	1.8E+000	kg-day/mg	1.3E-007
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	1.3E-006	kg-day/mg			
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	6.0E-009	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	2.4E-006	kg-day/mg	1.4E-002	kg-day/mg	3.4E-008
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.0E-008	kg-day/mg			
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	2.4E-007	kg-day/mg			
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	3.7E-010	kg-day/mg	6.4E-003	kg-day/mg	2.4E-012
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	3.9E-007	kg-day/mg			
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	4.5E-007	kg-day/mg			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.2E-008	kg-day/mg			
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	8.7E-005	kg-day/mg			
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	5.2E-006	kg-day/mg			
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.0E-006	kg-day/mg			
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.3E-008	kg-day/mg			
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	3.5E-008	kg-day/mg			
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	5.6E-010	kg-day/mg			
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	1.2E-007	kg-day/mg			
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	2.1E-006	kg-day/mg			
	(Total)										1.2E-005
								Total Hazard Index Across All Exposure Routes/Pathways			1.4E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-11
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	6.4E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.4E-004
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	6.0E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	2.2E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.1E-001
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	2.0E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.6E-004
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	9.1E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.3E-004
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	4.2E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.1E-005
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	1.7E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.5E-005
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.0E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	1.7E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.7E-004
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	2.6E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.6E-008
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	2.8E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	9.2E-004
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	3.2E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	8.0E-005
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	2.2E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.2E-007
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	6.2E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.1E-003
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	3.7E-005	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	2.8E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-003
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	9.3E-008	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	2.5E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	4.2E-008
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	3.9E-010	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.0E-009
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	8.1E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.2E-004
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.5E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.0E-005
	(Total)												1.2E-001
Dermal	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.2E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	9.2E-005
	Aroclor-1248	4.6E+000	mg/kg	4.6E+000	mg/kg	M	8.7E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	1.7E+001	mg/kg	1.7E+001	mg/kg	M	4.5E-006	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	2.5E-001
	Arsenic	1.5E+000	mg/kg	1.5E+000	mg/kg	M	8.5E-008	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	2.9E-004
	Barium	6.9E+001	mg/kg	6.9E+001	mg/kg	M	1.3E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.9E-005
	Beryllium	3.2E-001	mg/kg	3.2E-001	mg/kg	M	6.0E-009	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	3.0E-004
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.3E+001	mg/kg	M	2.5E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-004
	Butylbenzylphthalate	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.0E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.5E-007
	Cadmium	1.3E+000	mg/kg	1.3E+000	mg/kg	M	2.5E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	9.8E-003
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	3.8E-010	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	3.9E-008
	Chromium (total)	2.1E+001	mg/kg	2.1E+001	mg/kg	M	4.0E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.3E-003
	Copper	2.4E+001	mg/kg	2.4E+001	mg/kg	M	4.6E-007	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.9E-005
	Di-n-butylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.2E-008	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	3.3E-007
	Iron	4.7E+003	mg/kg	4.7E+003	mg/kg	M	8.9E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.0E-004
	Lead	2.8E+002	mg/kg	2.8E+002	mg/kg	M	5.3E-006	mg/kg-day			N/A	N/A	
	Manganese	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.1E-006	mg/kg-day			N/A	N/A	
	Mercury	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.3E-008	mg/kg-day			N/A	N/A	
	Phenol	1.9E-001	mg/kg	1.9E-001	mg/kg	M	3.6E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	6.0E-008
	Toluene	3.0E-003	mg/kg	3.0E-003	mg/kg	M	5.7E-010	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.8E-009
	Vanadium	6.2E+000	mg/kg	6.2E+000	mg/kg	M	1.2E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.7E-005
	Zinc	1.1E+002	mg/kg	1.1E+002	mg/kg	M	2.2E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.4E-005
	(Total)												2.6E-001
												Total Hazard Index Across All Exposure Routes/Pathways	3.8E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-12
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 1, Sediment (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	4.88E+003	mg/kg	4.88E+003	mg/kg	M	4.6E-006	mg/kg-day			
	Aroclor-1248	4.60E+000	mg/kg	4.60E+000	mg/kg	M	4.3E-009	mg/kg-day	2.0E+000	kg-day/mg	8.6E-009
	Aroclor-1254	1.70E+001	mg/kg	1.70E+001	mg/kg	M	1.6E-008	mg/kg-day	2.0E+000	kg-day/mg	3.2E-008
	Arsenic	1.50E+000	mg/kg	1.50E+000	mg/kg	M	1.4E-009	mg/kg-day	1.5E+000	kg-day/mg	2.1E-009
	Barium	6.92E+001	mg/kg	6.92E+001	mg/kg	M	6.5E-008	mg/kg-day			
	Beryllium	3.20E-001	mg/kg	3.20E-001	mg/kg	M	3.0E-010	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	1.3E+001	mg/kg	1.30E+001	mg/kg	M	1.2E-008	mg/kg-day	1.4E-002	kg-day/mg	1.7E-010
	Butylbenzylphthalate	1.6E-001	mg/kg	1.60E-001	mg/kg	M	1.5E-010	mg/kg-day			
	Cadmium	1.3E+000	mg/kg	1.30E+000	mg/kg	M	1.2E-009	mg/kg-day			
	Chloroform	2.0E-003	mg/kg	2.00E-003	mg/kg	M	1.9E-012	mg/kg-day	6.1E-003	kg-day/mg	1.1E-014
	Chromium (total)	2.1E+001	mg/kg	2.10E+001	mg/kg	M	2.0E-008	mg/kg-day			
	Copper	2.4E+001	mg/kg	2.43E+001	mg/kg	M	2.3E-008	mg/kg-day			
	Di-n-butylphthalate	1.7E-001	mg/kg	1.70E-001	mg/kg	M	1.6E-010	mg/kg-day			
	Iron	4.7E+003	mg/kg	4.69E+003	mg/kg	M	4.4E-006	mg/kg-day			
	Lead	2.8E+002	mg/kg	2.79E+002	mg/kg	M	2.6E-007	mg/kg-day			
	Manganese	2.2E+002	mg/kg	2.16E+002	mg/kg	M	2.0E-007	mg/kg-day			
	Mercury	7.1E-001	mg/kg	7.10E-001	mg/kg	M	6.7E-010	mg/kg-day			
	Phenol	1.9E-001	mg/kg	1.90E-001	mg/kg	M	1.8E-010	mg/kg-day			
	Toluene	3.0E-003	mg/kg	3.00E-003	mg/kg	M	2.8E-012	mg/kg-day			
	Vanadium	6.2E+000	mg/kg	6.20E+000	mg/kg	M	5.8E-009	mg/kg-day			
	Zinc	1.1E+002	mg/kg	1.14E+002	mg/kg	M	1.1E-007	mg/kg-day			
	(Total)										4.3E-008
Dermal	Aluminum	4.88E+003	mg/kg	4.88E+003	mg/kg	M	6.6E-007	kg-day/mg			
	Aroclor-1248	4.6E+000	mg/kg	4.60E+000	mg/kg	M	6.2E-009	kg-day/mg	2.0E+000	kg-day/mg	1.2E-008
	Aroclor-1254	1.7E+001	mg/kg	1.70E+001	mg/kg	M	3.2E-008	kg-day/mg	2.2E+000	kg-day/mg	7.2E-008
	Arsenic	1.5E+000	mg/kg	1.50E+000	mg/kg	M	6.1E-010	kg-day/mg	1.6E+000	kg-day/mg	9.6E-010
	Barium	6.9E+001	mg/kg	6.92E+001	mg/kg	M	9.4E-009	kg-day/mg			
	Beryllium	3.2E-001	mg/kg	3.20E-001	mg/kg	M	4.3E-011	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	1.30E+001	mg/kg	1.30E+001	mg/kg	M	1.8E-008	kg-day/mg	1.4E-002	kg-day/mg	2.5E-010
	Butylbenzylphthalate	1.60E-001	mg/kg	1.60E-001	mg/kg	M	2.2E-010	kg-day/mg			
	Cadmium	1.30E+000	mg/kg	1.30E+000	mg/kg	M	1.8E-009	kg-day/mg			
	Chloroform	2.00E-003	mg/kg	2.00E-003	mg/kg	M	2.7E-012	kg-day/mg	6.4E-003	kg-day/mg	1.7E-014
	Chromium (total)	2.10E+001	mg/kg	2.10E+001	mg/kg	M	2.8E-009	kg-day/mg			
	Copper	2.43E+001	mg/kg	2.43E+001	mg/kg	M	3.3E-009	kg-day/mg			
	Di-n-butylphthalate	1.70E-001	mg/kg	1.70E-001	mg/kg	M	2.3E-010	kg-day/mg			
	Iron	4.69E+003	mg/kg	4.69E+003	mg/kg	M	6.3E-007	kg-day/mg			
	Lead	2.79E+002	mg/kg	2.79E+002	mg/kg	M	3.8E-008	kg-day/mg			
	Manganese	2.16E+002	mg/kg	2.16E+002	mg/kg	M	2.9E-008	kg-day/mg			
	Mercury	7.10E-001	mg/kg	7.10E-001	mg/kg	M	9.6E-011	kg-day/mg			
	Phenol	1.90E-001	mg/kg	1.90E-001	mg/kg	M	2.6E-010	kg-day/mg			
	Toluene	3.00E-003	mg/kg	3.00E-003	mg/kg	M	4.1E-012	kg-day/mg			
	Vanadium	6.20E+000	mg/kg	6.20E+000	mg/kg	M	8.4E-010	kg-day/mg			
	Zinc	1.14E+002	mg/kg	1.14E+002	mg/kg	M	1.5E-008	kg-day/mg			
	(Total)										8.6E-008
										Total Hazard Index Across All Exposure Routes/Pathways	1.3E-007

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-13
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	7.5E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.7E-006
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.8E-007
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	5.9E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.9E-004
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.0E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.4E-008
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	1.2E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.1E-003
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.1E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.6E-004
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.7E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	5.7E-004
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	8.7E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	8.4E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	7.3E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	8.4E-008	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	5.7E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.9E-005
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	6.8E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	5.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.7E-005
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	2.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.0E-007
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	2.8E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.6E-004
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	3.7E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.7E-008
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	3.5E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.2E-003
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	8.4E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	4.6E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.1E-004
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.0E-008	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.6E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.6E-007
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.2E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.1E-006
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	4.6E-008	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	1.7E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.7E-003
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	1.9E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	4.5E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.2E-003
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.6E-008	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.7E-007
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.8E-005
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.3E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.5E-006
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	6.8E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.4E-008
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.8E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	2.5E-004
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.4E-008	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	1.2E-008
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	1.4E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.7E-005
	(Total)												1.6E-002

Table 5-2-13
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	3.5E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.7E-004
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.1E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.5E-005
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.8E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.8E-003
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	4.7E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	1.7E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	5.9E-002
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	5.2E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	7.4E-004
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	7.9E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	2.9E-002
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.0E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	5.1E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.4E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.9E-006	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	2.7E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.3E-002
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	3.2E-006	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	2.5E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	9.6E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.8E-006
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.3E-005	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	5.2E-001
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.7E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.8E-006
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.6E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.4E-002
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.9E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.1E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	8.8E-004
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.1E-007	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	7.4E-007	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	8.0E-006
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	5.7E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.4E-004
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	7.9E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.6E-002
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	8.6E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	2.1E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-002
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	7.4E-008	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	6.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.1E-005
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.2E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	8.2E-003
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	6.2E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.1E-004
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	3.2E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.2E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.2E-003
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.1E-006	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	6.3E-007
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	6.6E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.3E-004
	(Total)												7.3E-001
												Total Hazard Index Across All Exposure Routes/Pathways	7.5E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-13r
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Sediment, Area 2 (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	3.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-006
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	8.6E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.3E-007
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.6E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.6E-004
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	4.4E-009	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.5E-008
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	5.4E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.8E-003
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	4.9E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	7.0E-005
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	7.5E-007	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.5E-004
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.8E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.7E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.2E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.7E-008	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	2.5E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	1.3E-005
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	3.0E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	2.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-005
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	9.1E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.6E-008
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.2E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.5E-004
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.6E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.6E-008
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.5E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	5.1E-004
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.7E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.0E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.0E-005
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	8.6E-009	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	7.0E-009	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.0E-008
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	5.4E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.3E-006
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	2.0E-008	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	7.4E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.5E-003
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	8.1E-006	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	2.0E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.8E-004
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	7.0E-009	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.9E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.9E-007
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	7.7E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.9E-005
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	5.9E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.0E-006
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	3.0E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.5E-008
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	7.7E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.1E-004
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.1E-008	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	5.4E-009
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	6.2E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.1E-005
	(Total)												6.9E-003

Table 5-2-13r
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Sediment, Area 2 (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	5.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.6E-005
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.9E-006
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	4.2E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	4.2E-004
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	7.1E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.4E-007
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	2.6E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	9.0E-003
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	7.8E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.1E-004
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.2E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	4.4E-003
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	6.1E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	7.7E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	5.1E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	5.9E-007	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	4.0E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	2.0E-003
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	4.8E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	3.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.9E-004
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.5E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	7.3E-007
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	2.0E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	7.9E-002
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	2.6E-009	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	2.7E-007
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	2.4E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	8.1E-003
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	5.9E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	3.2E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.3E-004
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.4E-007	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.1E-007	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	1.2E-006
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	8.6E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.1E-005
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	3.3E-007	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	1.2E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.0E-003
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	1.3E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	3.1E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-003
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.1E-008	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	9.4E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.7E-006
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.2E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.2E-003
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	9.4E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	3.1E-005
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	4.8E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.4E-007
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.2E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.8E-004
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.7E-007	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	9.5E-008
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	9.9E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.1E-004
	(Total)												1.1E-001

Total Hazard Index Across All Exposure Routes/Pathways: 1.2E-001

Table 5-2-14
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	2.7E-008	mg/kg-day			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	7.0E-009	mg/kg-day			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.1E-004	mg/kg-day			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	3.6E-009	mg/kg-day			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	4.4E-007	mg/kg-day	1.5E+000	kg-day/mg	6.6E-007
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	4.0E-006	mg/kg-day			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	6.1E-007	mg/kg-day	2.9E-002	kg-day/mg	1.8E-008
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.1E-008	mg/kg-day	7.3E-001	kg-day/mg	2.3E-008
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.0E-008	mg/kg-day	7.3E+000	kg-day/mg	2.2E-007
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.6E-008	mg/kg-day	7.3E-001	kg-day/mg	1.9E-008
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.0E-008	mg/kg-day	7.3E-002	kg-day/mg	2.2E-009
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	2.1E-008	mg/kg-day			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.4E-008	mg/kg-day	1.1E+000	kg-day/mg	2.7E-008
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	1.9E-007	mg/kg-day	1.4E-002	kg-day/mg	2.7E-009
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	7.4E-009	mg/kg-day			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.0E-007	mg/kg-day			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.3E-010	mg/kg-day	6.1E-003	kg-day/mg	8.0E-013
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.2E-006	mg/kg-day			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.0E-008	mg/kg-day	7.3E-003	kg-day/mg	2.2E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.6E-006	mg/kg-day			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	7.0E-009	mg/kg-day	7.3E+000	kg-day/mg	5.1E-008
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	5.7E-009	mg/kg-day			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	4.4E-008	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	1.7E-008	mg/kg-day	7.3E-001	kg-day/mg	1.2E-008
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	6.1E-004	mg/kg-day			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	6.6E-006	mg/kg-day			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	1.6E-005	mg/kg-day			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	5.7E-009	mg/kg-day			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.8E-009	mg/kg-day			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	6.3E-007	mg/kg-day			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	4.8E-008	mg/kg-day			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	2.4E-009	mg/kg-day			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	6.3E-007	mg/kg-day			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	8.7E-009	mg/kg-day			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	5.1E-006	mg/kg-day			
	(Total)										1.0E-006

Table 5-2-14
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.2E-006	kg-day/mg			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.2E-007	kg-day/mg			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.8E-004	kg-day/mg			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.7E-007	kg-day/mg			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	6.1E-006	kg-day/mg	1.6E+000	kg-day/mg	9.7E-006
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.8E-005	kg-day/mg			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.8E-005	kg-day/mg	3.2E-002	kg-day/mg	9.1E-007
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.4E-006	kg-day/mg	7.3E-001	kg-day/mg	1.1E-006
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.8E-006	kg-day/mg	8.6E+000	kg-day/mg	1.6E-005
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.2E-006	kg-day/mg	7.3E-001	kg-day/mg	8.9E-007
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-006	kg-day/mg	7.3E-002	kg-day/mg	1.0E-007
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	9.5E-008	kg-day/mg			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-006	kg-day/mg	1.1E+000	kg-day/mg	1.2E-006
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	8.9E-006	kg-day/mg	1.4E-002	kg-day/mg	1.2E-007
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.4E-007	kg-day/mg			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.7E-006	kg-day/mg			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.1E-009	kg-day/mg	6.4E-001	kg-day/mg	3.9E-009
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	5.8E-006	kg-day/mg			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-006	kg-day/mg	1.8E-002	kg-day/mg	2.5E-008
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.6E-006	kg-day/mg			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.2E-007	kg-day/mg	8.1E+000	kg-day/mg	2.6E-006
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.6E-007	kg-day/mg			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.0E-006	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.7E-007	kg-day/mg	7.3E-001	kg-day/mg	5.6E-007
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.8E-003	kg-day/mg			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.1E-005	kg-day/mg			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	7.4E-005	kg-day/mg			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.6E-008	kg-day/mg			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.2E-007	kg-day/mg			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.9E-006	kg-day/mg			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.2E-006	kg-day/mg			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.1E-007	kg-day/mg			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.9E-006	kg-day/mg			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	4.1E-007	kg-day/mg			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.4E-005	kg-day/mg			
	(Total)										3.3E-005
										Total Hazard Index Across All Exposure Routes/Pathways	3.4E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Sediment, Area 2 (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	2.3E-009	mg/kg-day			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.1E-010	mg/kg-day			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.9E-005	mg/kg-day			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	3.2E-010	mg/kg-day			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	3.9E-008	mg/kg-day	1.5E+000	kg-day/mg	5.8E-008
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	3.5E-007	mg/kg-day			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	5.4E-008	mg/kg-day	2.9E-002	kg-day/mg	1.6E-009
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	2.7E-009	mg/kg-day	7.3E-001	kg-day/mg	2.0E-009
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.6E-009	mg/kg-day	7.3E+000	kg-day/mg	1.9E-008
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.3E-009	mg/kg-day	7.3E-001	kg-day/mg	1.7E-009
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.6E-009	mg/kg-day	7.3E-002	kg-day/mg	1.9E-010
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	1.8E-009	mg/kg-day			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.1E-009	mg/kg-day	1.1E+000	kg-day/mg	2.4E-009
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	1.7E-008	mg/kg-day	1.4E-002	kg-day/mg	2.4E-010
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	6.5E-010	mg/kg-day			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	8.8E-009	mg/kg-day			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.1E-011	mg/kg-day	6.1E-003	kg-day/mg	7.0E-014
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.1E-007	mg/kg-day			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.6E-009	mg/kg-day	7.3E-003	kg-day/mg	1.9E-011
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.4E-007	mg/kg-day			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.1E-010	mg/kg-day	7.3E+000	kg-day/mg	4.5E-009
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	5.0E-010	mg/kg-day			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	3.8E-009	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	1.5E-009	mg/kg-day	7.3E-001	kg-day/mg	1.1E-009
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	5.3E-005	mg/kg-day			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	5.8E-007	mg/kg-day			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	1.4E-006	mg/kg-day			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	5.0E-010	mg/kg-day			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.2E-010	mg/kg-day			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	5.5E-008	mg/kg-day			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	4.2E-009	mg/kg-day			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	2.1E-010	mg/kg-day			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	5.5E-008	mg/kg-day			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	7.7E-010	mg/kg-day			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	4.4E-007	mg/kg-day			
	(Total)										9.1E-008

Table 5-2-14r
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Sediment, Area 2 (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	3.7E-008	kg-day/mg			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.8E-009	kg-day/mg			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	3.0E-005	kg-day/mg			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	5.1E-009	kg-day/mg			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	1.9E-007	kg-day/mg	1.6E+000	kg-day/mg	2.9E-007
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	5.6E-007	kg-day/mg			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.6E-007	kg-day/mg	3.2E-002	kg-day/mg	2.8E-008
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.3E-008	kg-day/mg	7.3E-001	kg-day/mg	3.2E-008
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	5.5E-008	kg-day/mg	8.6E+000	kg-day/mg	4.7E-007
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.7E-008	kg-day/mg	7.3E-001	kg-day/mg	2.7E-008
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	4.2E-008	kg-day/mg	7.3E-002	kg-day/mg	3.1E-009
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	2.9E-009	kg-day/mg			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	3.4E-008	kg-day/mg	1.1E+000	kg-day/mg	3.8E-008
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	2.7E-007	kg-day/mg	1.4E-002	kg-day/mg	3.8E-009
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.0E-008	kg-day/mg			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.4E-007	kg-day/mg			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.8E-010	kg-day/mg	6.4E-001	kg-day/mg	1.2E-010
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.7E-007	kg-day/mg			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	4.2E-008	kg-day/mg	1.8E-002	kg-day/mg	7.5E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.3E-007	kg-day/mg			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.8E-009	kg-day/mg	8.1E+000	kg-day/mg	7.9E-008
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	8.0E-009	kg-day/mg			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	6.1E-008	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	2.3E-008	kg-day/mg	7.3E-001	kg-day/mg	1.7E-008
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	8.5E-005	kg-day/mg			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	9.3E-007	kg-day/mg			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	2.2E-006	kg-day/mg			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	8.0E-010	kg-day/mg			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	6.7E-009	kg-day/mg			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.8E-008	kg-day/mg			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	6.7E-008	kg-day/mg			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	3.4E-009	kg-day/mg			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.8E-008	kg-day/mg			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.2E-008	kg-day/mg			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	7.1E-007	kg-day/mg			
	(Total)										9.9E-007
											Total Hazard Index Across All Exposure Routes/Pathways 1.1E-006

Table 5-2-15
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	6.9E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.4E-005
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.0E-006
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	5.5E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.5E-003
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	9.4E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.1E-007
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	1.1E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.8E-002
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.0E-004	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.5E-003
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.6E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	5.3E-003
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	8.0E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	7.8E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	6.8E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	7.8E-007	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	5.3E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.6E-004
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	6.3E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	5.0E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.5E-004
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.9E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	9.6E-007
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	2.6E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.2E-003
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	3.4E-009	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.4E-007
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	3.2E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.1E-002
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	7.8E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	4.2E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.1E-003
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.5E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.5E-006
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.1E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.8E-005
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	4.3E-007	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	1.6E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.2E-002
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	1.7E-004	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	4.1E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.1E-002
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.2E-006
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.6E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.1E-004
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.2E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.1E-005
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	6.3E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.2E-007
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.6E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	2.3E-003

Table 5-2-15
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.3E-007	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	1.1E-007
	Zinc (Total)	1.2E+002	mg/kg	1.2E+002	mg/kg	M	1.3E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.4E-004
													1.4E-001
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	3.5E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.7E-004
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.1E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.5E-005
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.8E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.8E-003
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	4.7E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	1.7E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	5.9E-002
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	5.2E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	7.4E-004
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	7.9E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	2.9E-002
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.0E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	5.1E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.4E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.9E-006	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	2.7E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.3E-002
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	3.2E-006	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	2.5E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	9.6E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.8E-006
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.3E-005	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	5.2E-001
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.7E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.8E-006
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.6E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.4E-002
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.9E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.1E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	8.8E-004
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	9.1E-007	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	7.4E-007	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	8.0E-006
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	5.7E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.4E-004
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	7.9E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.6E-002
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	8.6E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	2.1E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-002
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	7.4E-008	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	6.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.1E-005
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.2E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	8.2E-003

Table 5-2-15
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	6.2E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.1E-004
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	3.2E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	8.2E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.2E-003
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.1E-006	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	6.3E-007
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	6.6E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.3E-004
	(Total)												7.3E-001
												Total Hazard Index Across All Exposure Routes/Pathways	8.8E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-16
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	2.5E-007	mg/kg-day			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.4E-008	mg/kg-day			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.0E-003	mg/kg-day			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	3.3E-008	mg/kg-day			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	4.1E-006	mg/kg-day	1.5E+000	kg-day/mg	6.1E-006
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	3.7E-005	mg/kg-day			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	5.6E-006	mg/kg-day	2.9E-002	kg-day/mg	1.6E-007
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	2.9E-007	mg/kg-day	7.3E-001	kg-day/mg	2.1E-007
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.8E-007	mg/kg-day	7.3E+000	kg-day/mg	2.0E-006
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.4E-007	mg/kg-day	7.3E-001	kg-day/mg	1.8E-007
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.8E-007	mg/kg-day	7.3E-002	kg-day/mg	2.0E-008
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	1.9E-007	mg/kg-day			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.3E-007	mg/kg-day	1.1E+000	kg-day/mg	2.5E-007
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	1.8E-006	mg/kg-day	1.4E-002	kg-day/mg	2.5E-008
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	6.8E-008	mg/kg-day			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	9.3E-007	mg/kg-day			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.2E-009	mg/kg-day	6.1E-003	kg-day/mg	7.4E-012
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.1E-005	mg/kg-day			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.8E-007	mg/kg-day	7.3E-003	kg-day/mg	2.0E-009
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.5E-005	mg/kg-day			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	6.4E-008	mg/kg-day	7.3E+000	kg-day/mg	4.7E-007
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	5.2E-008	mg/kg-day			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	4.0E-007	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	1.5E-007	mg/kg-day	7.3E-001	kg-day/mg	1.1E-007
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	5.6E-003	mg/kg-day			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	6.1E-005	mg/kg-day			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	1.5E-004	mg/kg-day			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	5.2E-008	mg/kg-day			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.4E-008	mg/kg-day			

Table 5-2-16
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	5.8E-006	mg/kg-day			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	4.4E-007	mg/kg-day			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	2.3E-008	mg/kg-day			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	5.8E-006	mg/kg-day			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	8.1E-008	mg/kg-day			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	4.7E-005	mg/kg-day			
	(Total)										9.6E-006
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.2E-006	kg-day/mg			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.2E-007	kg-day/mg			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.8E-004	kg-day/mg			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.7E-007	kg-day/mg			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	6.1E-006	kg-day/mg	1.6E+000	kg-day/mg	9.7E-006
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.8E-005	kg-day/mg			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.8E-005	kg-day/mg	3.2E-002	kg-day/mg	9.1E-007
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.4E-006	kg-day/mg	7.3E-001	kg-day/mg	1.1E-006
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.8E-006	kg-day/mg	8.6E+000	kg-day/mg	1.6E-005
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.2E-006	kg-day/mg	7.3E-001	kg-day/mg	8.9E-007
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-006	kg-day/mg	7.3E-002	kg-day/mg	1.0E-007
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	9.5E-008	kg-day/mg			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-006	kg-day/mg	1.1E+000	kg-day/mg	1.2E-006
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	8.9E-006	kg-day/mg	1.4E-002	kg-day/mg	1.2E-007
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.4E-007	kg-day/mg			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.7E-006	kg-day/mg			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.1E-009	kg-day/mg	6.4E-001	kg-day/mg	3.9E-009
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	5.8E-006	kg-day/mg			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-006	kg-day/mg	1.8E-002	kg-day/mg	2.5E-008
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.6E-006	kg-day/mg			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.2E-007	kg-day/mg	8.1E+000	kg-day/mg	2.6E-006
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.6E-007	kg-day/mg			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.0E-006	kg-day/mg			

Table 5-2-16
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.7E-007	kg-day/mg	7.3E-001	kg-day/mg	5.6E-007
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.8E-003	kg-day/mg			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.1E-005	kg-day/mg			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	7.4E-005	kg-day/mg			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.6E-008	kg-day/mg			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.2E-007	kg-day/mg			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.9E-006	kg-day/mg			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.2E-006	kg-day/mg			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.1E-007	kg-day/mg			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.9E-006	kg-day/mg			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	4.1E-007	kg-day/mg			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.4E-005	kg-day/mg			
	(Total)										3.3E-005
										Total Hazard Index Across All Exposure Routes/Pathways	4.2E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-17
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.2E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.0E-007
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.1E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-007
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.5E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	9.5E-005
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.6E-009	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.4E-009
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	2.0E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.6E-004
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.8E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.5E-005
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.7E-007	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	9.1E-005
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.2E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	9.2E-009	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	4.6E-006
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	8.6E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.3E-006
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.3E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.7E-008
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.5E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	9.0E-005
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	5.9E-011	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	5.9E-009
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	5.6E-007	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.9E-004
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.3E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.8E-005
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.1E-009	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.5E-009	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.5E-008
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.0E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.9E-007
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.4E-009	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.7E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.1E-004
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.0E-006	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	7.2E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.6E-004
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.5E-009	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.2E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-007
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-005
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.2E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.2E-007

Table 5-2-17
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.1E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.5E-009
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.8E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	4.0E-005
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	3.9E-009	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	2.0E-009
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.3E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.6E-006
	(Total)												2.5E-003
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.2E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.0E-007
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.1E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-007
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.5E-006	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	9.5E-006
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.6E-009	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.4E-009
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	5.9E-008	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	2.0E-004
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.8E-007	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.5E-006
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.7E-007	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.0E-004
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.8E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.2E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	9.2E-010	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	4.6E-005
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	8.6E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.3E-006
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.3E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.7E-008
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.5E-008	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.8E-003
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	5.9E-011	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	6.1E-009
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	5.6E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.9E-004
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.4E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.3E-008	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	3.0E-006
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.1E-009	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.5E-009	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	2.8E-008
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.0E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.9E-007
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.4E-009	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.7E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.1E-005
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.0E-007	mg/kg-day			N/A	N/A	

Table 5-2-17
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	7.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.6E-005
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.5E-010	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.2E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-007
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.8E-008	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	2.8E-005
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.2E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.2E-007
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.1E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.5E-009
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.8E-008	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	4.0E-006
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	3.9E-009	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	2.2E-009
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.3E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.5E-006
	(Total)												2.5E-003
												Total Hazard Index Across All Exposure Routes/Pathways	5.0E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-18
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	8.5E-010	mg/kg-day			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.2E-010	mg/kg-day			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	6.8E-006	mg/kg-day			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.2E-010	mg/kg-day			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	1.4E-008	mg/kg-day	1.5E+000	kg-day/mg	2.1E-008
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.3E-007	mg/kg-day			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.0E-008	mg/kg-day	2.9E-002	kg-day/mg	5.7E-010
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	9.9E-010	mg/kg-day	7.3E-001	kg-day/mg	7.2E-010
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.6E-010	mg/kg-day	7.3E+000	kg-day/mg	7.0E-009
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.4E-010	mg/kg-day	7.3E-001	kg-day/mg	6.1E-010
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.6E-010	mg/kg-day	7.3E-002	kg-day/mg	7.0E-011
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	6.6E-010	mg/kg-day			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.8E-010	mg/kg-day	1.1E+000	kg-day/mg	8.6E-010
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	6.2E-009	mg/kg-day	1.4E-002	kg-day/mg	8.6E-011
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	2.4E-010	mg/kg-day			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	3.2E-009	mg/kg-day			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	4.2E-012	mg/kg-day	6.1E-003	kg-day/mg	2.6E-014
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	4.0E-008	mg/kg-day			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.6E-010	mg/kg-day	7.3E-003	kg-day/mg	7.0E-012
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	5.2E-008	mg/kg-day			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.2E-010	mg/kg-day	7.3E+000	kg-day/mg	1.6E-009
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.8E-010	mg/kg-day			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.4E-009	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	5.3E-010	mg/kg-day	7.3E-001	kg-day/mg	3.9E-010
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	1.9E-005	mg/kg-day			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	2.1E-007	mg/kg-day			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	5.1E-007	mg/kg-day			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.8E-010	mg/kg-day			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.5E-010	mg/kg-day			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.0E-008	mg/kg-day			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.5E-009	mg/kg-day			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	7.8E-011	mg/kg-day			

Table 5-2-18
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.0E-008	mg/kg-day			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.8E-010	mg/kg-day			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	1.6E-007	mg/kg-day			
	(Total)										3.3E-008
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	8.5E-010	kg-day/mg			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.2E-010	kg-day/mg			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	6.8E-007	kg-day/mg			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.2E-010	kg-day/mg			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	4.2E-009	kg-day/mg	1.6E+000	kg-day/mg	6.7E-009
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.3E-008	kg-day/mg			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.0E-008	kg-day/mg	3.2E-002	kg-day/mg	6.3E-010
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	9.9E-010	kg-day/mg	7.3E-001	kg-day/mg	7.2E-010
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-009	kg-day/mg	8.6E+000	kg-day/mg	1.1E-008
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.4E-010	kg-day/mg	7.3E-001	kg-day/mg	6.1E-010
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.6E-010	kg-day/mg	7.3E-002	kg-day/mg	7.0E-011
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	6.6E-011	kg-day/mg			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.8E-010	kg-day/mg	1.1E+000	kg-day/mg	8.6E-010
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	6.2E-009	kg-day/mg	1.4E-002	kg-day/mg	8.6E-011
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	2.4E-010	kg-day/mg			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	3.2E-009	kg-day/mg			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	4.2E-012	kg-day/mg	6.4E-001	kg-day/mg	2.7E-012
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	4.0E-009	kg-day/mg			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.6E-010	kg-day/mg	1.6E-002	kg-day/mg	1.7E-011
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	5.2E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.2E-010	kg-day/mg	8.1E+000	kg-day/mg	1.8E-009
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.8E-010	kg-day/mg			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.4E-009	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	5.3E-010	kg-day/mg	7.3E-001	kg-day/mg	3.9E-010
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	1.9E-006	kg-day/mg			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	2.1E-008	kg-day/mg			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	5.1E-008	kg-day/mg			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.8E-011	kg-day/mg			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.5E-010	kg-day/mg			

Table 5-2-18
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.0E-009	kg-day/mg			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.5E-009	kg-day/mg			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	7.8E-011	kg-day/mg			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.0E-009	kg-day/mg			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.8E-010	kg-day/mg			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	1.6E-008	kg-day/mg			
	(Total)										2.3E-008
										Total Hazard Index Across All Exposure Routes/Pathways	5.6E-008

(1) *Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.*

Table 5-2-19
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.5E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.7E-006
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	4.1E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.0E-006
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.2E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.2E-003
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	2.1E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.0E-008
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	2.6E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	8.5E-003
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	2.3E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	3.3E-004
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.6E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.2E-003
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	1.2E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	6.0E-005
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.4E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	1.1E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.6E-005
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	4.3E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.2E-007
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	5.8E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.2E-003
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	7.6E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	7.6E-008
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	7.2E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.4E-003
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	9.5E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.4E-004
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	4.1E-008	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	3.3E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.3E-007
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.5E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.3E-006
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	9.6E-008	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	3.5E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.2E-002
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.9E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	9.3E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.6E-003
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	3.3E-008	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.8E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-006
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.7E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.8E-004
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.8E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	9.3E-006
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.4E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	7.1E-008
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.7E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	5.2E-004
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	5.1E-008	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	2.5E-008
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.9E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.8E-005
	(Total)												3.2E-002
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.4E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.8E-005
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.6E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.8E-005
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.1E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.1E-003

Table 5-2-19
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.9E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.2E-007
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	6.8E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	2.3E-002
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	2.0E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.9E-004
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.1E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.2E-002
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.6E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.3E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.5E-006	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	1.0E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	5.2E-003
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.2E-006	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	9.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.9E-004
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.8E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.9E-006
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	5.1E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	2.1E-001
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.7E-009	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	7.0E-007
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	6.4E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.1E-002
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.5E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	8.3E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	3.5E-004
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.6E-007	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.9E-007	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	3.2E-006
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.2E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.6E-005
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	8.5E-007	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	3.1E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.0E-002
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.4E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	8.2E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.1E-003
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.9E-008	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.5E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-005
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.2E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	3.2E-003
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.5E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	8.2E-005
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.2E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.2E-007
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.2E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	4.6E-004
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	4.5E-007	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	2.5E-007
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.6E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.9E-004
	(Total)												2.9E-001
												Total Hazard Index Across All Exposure Routes/Pathways	3.2E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-20
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.3E-008	mg/kg-day			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.4E-009	mg/kg-day			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	1.0E-004	mg/kg-day			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.8E-009	mg/kg-day			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	2.1E-007	mg/kg-day	1.5E+000	kg-day/mg	3.2E-007
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.9E-006	mg/kg-day			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.0E-007	mg/kg-day	2.9E-002	kg-day/mg	8.6E-009
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E-001	kg-day/mg	1.1E-008
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E+000	kg-day/mg	1.1E-007
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.3E-008	mg/kg-day	7.3E-001	kg-day/mg	9.3E-009
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E-002	kg-day/mg	1.1E-009
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	9.9E-009	mg/kg-day			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.2E-008	mg/kg-day	1.1E+000	kg-day/mg	1.3E-008
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	9.3E-008	mg/kg-day	1.4E-002	kg-day/mg	1.3E-009
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.6E-009	mg/kg-day			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.9E-008	mg/kg-day			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	6.3E-011	mg/kg-day	6.1E-003	kg-day/mg	3.9E-013
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	6.0E-007	mg/kg-day			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E-003	kg-day/mg	1.1E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.9E-007	mg/kg-day			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.4E-009	mg/kg-day	7.3E+000	kg-day/mg	2.5E-008
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.7E-009	mg/kg-day			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.1E-008	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	8.0E-009	mg/kg-day	7.3E-001	kg-day/mg	5.9E-009
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.9E-004	mg/kg-day			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	3.2E-006	mg/kg-day			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	7.7E-006	mg/kg-day			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.7E-009	mg/kg-day			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.3E-009	mg/kg-day			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.0E-007	mg/kg-day			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.3E-008	mg/kg-day			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.2E-009	mg/kg-day			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	3.0E-007	mg/kg-day			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	4.2E-009	mg/kg-day			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.5E-006	mg/kg-day			
	(Total)										5.0E-007
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.1E-007	kg-day/mg			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.0E-008	kg-day/mg			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.0E-005	kg-day/mg			

Table 5-2-20
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.5E-008	kg-day/mg			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	5.6E-007	kg-day/mg	1.6E+000	kg-day/mg	8.9E-007
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.7E-006	kg-day/mg			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.6E-006	kg-day/mg	3.2E-002	kg-day/mg	8.4E-008
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.3E-007	kg-day/mg	7.3E-001	kg-day/mg	9.6E-008
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.7E-007	kg-day/mg	8.6E+000	kg-day/mg	1.4E-006
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	kg-day/mg	7.3E-001	kg-day/mg	8.1E-008
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-007	kg-day/mg	7.3E-002	kg-day/mg	9.4E-009
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	8.7E-009	kg-day/mg			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.0E-007	kg-day/mg	1.1E+000	kg-day/mg	1.1E-007
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	8.2E-007	kg-day/mg	1.4E-002	kg-day/mg	1.1E-008
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.2E-008	kg-day/mg			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.3E-007	kg-day/mg			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	5.6E-010	kg-day/mg	6.4E-001	kg-day/mg	3.5E-010
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	5.3E-007	kg-day/mg			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-007	kg-day/mg	1.8E-002	kg-day/mg	2.3E-009
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	6.9E-007	kg-day/mg			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.0E-008	kg-day/mg	8.1E+000	kg-day/mg	2.4E-007
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.4E-008	kg-day/mg			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.9E-007	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.1E-008	kg-day/mg	7.3E-001	kg-day/mg	5.2E-008
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.6E-004	kg-day/mg			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	2.8E-006	kg-day/mg			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	6.8E-006	kg-day/mg			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.4E-009	kg-day/mg			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.0E-008	kg-day/mg			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.7E-007	kg-day/mg			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.0E-007	kg-day/mg			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.0E-008	kg-day/mg			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.7E-007	kg-day/mg			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	3.7E-008	kg-day/mg			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.2E-006	kg-day/mg			
	(Total)										3.0E-006
											Total Hazard Index Across All Exposure Routes/Pathways: 3.5E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-21
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	4.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.0E-006
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.2E-007
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	3.2E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	3.2E-004
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	5.4E-009	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.8E-008
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	6.6E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.2E-003
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	6.0E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	8.5E-005
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	9.2E-007	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.1E-004
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	4.7E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	4.5E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.9E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	4.5E-008	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	3.1E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	1.5E-005
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	3.7E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	2.9E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-005
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	1.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.6E-008
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.5E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.0E-004
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	2.0E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.0E-008
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.9E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	6.2E-004
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	4.5E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.4E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.1E-005
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	1.0E-008	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	8.5E-009	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.5E-008
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	6.6E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.6E-006
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	2.5E-008	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	9.1E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.0E-003
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	1.0E-005	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	2.4E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	8.5E-009	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	7.2E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.6E-007
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	9.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.7E-005
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	7.2E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.4E-006
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	3.7E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.8E-008
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	9.4E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.3E-004
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.3E-008	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	6.6E-009
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	7.6E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.5E-005
	(Total)												8.4E-003
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	1.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.8E-006
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.5E-006
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	9.2E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	9.2E-005

Table 5-2-21
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.6E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.2E-008
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	5.7E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	2.0E-003
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.7E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.5E-005
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.6E-006	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	9.8E-004
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.7E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	8.9E-009	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	4.4E-004
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	8.3E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.2E-005
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	3.2E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.6E-007
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	4.3E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.7E-002
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	5.7E-010	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	5.9E-008
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	5.4E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.8E-003
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.0E-007	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	2.9E-005
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	3.0E-008	mg/kg-day			N/A	N/A	
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.5E-008	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	2.7E-007
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.9E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.7E-006
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.2E-008	mg/kg-day			N/A	N/A	
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	2.6E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.8E-004
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	2.9E-006	mg/kg-day			N/A	N/A	
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	6.9E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.5E-004
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	2.5E-009	mg/kg-day			N/A	N/A	
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.1E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-006
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.7E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	2.7E-004
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.1E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	6.9E-006
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	1.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.3E-008
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	2.7E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	3.9E-005
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	3.8E-008	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	2.1E-008
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	2.2E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.4E-005
	(Total)												2.4E-002
												Total Hazard Index Across All Exposure Routes/Pathways	3.3E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-22
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	2.9E-010	mg/kg-day			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	7.5E-011	mg/kg-day			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	2.3E-006	mg/kg-day			
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	3.9E-011	mg/kg-day			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	4.7E-009	mg/kg-day	1.5E+000	kg-day/mg	7.1E-009
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	4.3E-008	mg/kg-day			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	6.6E-009	mg/kg-day	2.9E-002	kg-day/mg	1.9E-010
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	3.3E-010	mg/kg-day	7.3E-001	kg-day/mg	2.4E-010
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.2E-010	mg/kg-day	7.3E+000	kg-day/mg	2.4E-009
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.8E-010	mg/kg-day	7.3E-001	kg-day/mg	2.1E-010
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.2E-010	mg/kg-day	7.3E-002	kg-day/mg	2.4E-011
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	2.2E-010	mg/kg-day			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.6E-010	mg/kg-day	1.1E+000	kg-day/mg	2.9E-010
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	2.1E-009	mg/kg-day	1.4E-002	kg-day/mg	2.9E-011
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	8.0E-011	mg/kg-day			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	1.1E-009	mg/kg-day			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	1.4E-012	mg/kg-day	6.1E-003	kg-day/mg	8.6E-015
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	1.3E-008	mg/kg-day			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.2E-010	mg/kg-day	7.3E-003	kg-day/mg	2.4E-012
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.8E-008	mg/kg-day			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	7.5E-011	mg/kg-day	7.3E+000	kg-day/mg	5.5E-010
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	6.1E-011	mg/kg-day			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	4.7E-010	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	1.8E-010	mg/kg-day	7.3E-001	kg-day/mg	1.3E-010
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	6.5E-006	mg/kg-day			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	7.1E-008	mg/kg-day			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	1.7E-007	mg/kg-day			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	6.1E-011	mg/kg-day			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.2E-011	mg/kg-day			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	6.8E-009	mg/kg-day			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	5.2E-010	mg/kg-day			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	2.6E-011	mg/kg-day			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	6.8E-009	mg/kg-day			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	9.4E-011	mg/kg-day			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	5.4E-008	mg/kg-day			
	(Total)										1.1E-008
Dermal	2,4-Dimethylphenol	6.1E-001	mg/kg	6.1E-001	mg/kg	M	8.3E-010	kg-day/mg			
	2-Methylnaphthalene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.2E-010	kg-day/mg			
	Aluminum	4.9E+003	mg/kg	4.9E+003	mg/kg	M	6.6E-007	kg-day/mg			

Table 5-2-22
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 2, Sediment (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Anthracene	8.3E-002	mg/kg	8.3E-002	mg/kg	M	1.1E-010	kg-day/mg			
	Arsenic	1.0E+001	mg/kg	1.0E+001	mg/kg	M	4.1E-009	kg-day/mg	1.6E+000	kg-day/mg	6.5E-009
	Barium	9.1E+001	mg/kg	9.1E+001	mg/kg	M	1.2E-008	kg-day/mg			
	Benzene	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.9E-008	kg-day/mg	3.2E-002	kg-day/mg	6.1E-010
	Benzo(a)anthracene	7.1E-001	mg/kg	7.1E-001	mg/kg	M	9.6E-010	kg-day/mg	7.3E-001	kg-day/mg	7.0E-010
	Benzo(a)pyrene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.2E-009	kg-day/mg	8.6E+000	kg-day/mg	1.0E-008
	Benzo(b)fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.1E-010	kg-day/mg	7.3E-001	kg-day/mg	5.9E-010
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.3E-010	kg-day/mg	7.3E-002	kg-day/mg	6.8E-011
	Beryllium	4.7E-001	mg/kg	4.7E-001	mg/kg	M	6.4E-011	kg-day/mg			
	bis(2-Chloroethyl) ether	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.6E-010	kg-day/mg	1.1E+000	kg-day/mg	8.3E-010
	bis(2-Ethylhexyl)phthalate	4.4E+000	mg/kg	4.4E+000	mg/kg	M	6.0E-009	kg-day/mg	1.4E-002	kg-day/mg	8.3E-011
	Butylbenzylphthalate	1.7E-001	mg/kg	1.7E-001	mg/kg	M	2.3E-010	kg-day/mg			
	Cadmium	2.3E+000	mg/kg	2.3E+000	mg/kg	M	3.1E-009	kg-day/mg			
	Chloroform	3.0E-003	mg/kg	3.0E-003	mg/kg	M	4.1E-012	kg-day/mg	6.4E-001	kg-day/mg	2.6E-012
	Chromium (total)	2.9E+001	mg/kg	2.9E+001	mg/kg	M	3.9E-009	kg-day/mg			
	Chrysene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.3E-010	kg-day/mg	1.8E-002	kg-day/mg	1.7E-011
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	5.0E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	1.6E-001	mg/kg	1.6E-001	mg/kg	M	2.2E-010	kg-day/mg	8.1E+000	kg-day/mg	1.8E-009
	Ethyl Benzene	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.8E-010	kg-day/mg			
	Fluoranthene	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.4E-009	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	5.1E-010	kg-day/mg	7.3E-001	kg-day/mg	3.8E-010
	Iron	1.4E+004	mg/kg	1.4E+004	mg/kg	M	1.9E-006	kg-day/mg			
	Lead	1.5E+002	mg/kg	1.5E+002	mg/kg	M	2.1E-008	kg-day/mg			
	Manganese	3.7E+002	mg/kg	3.7E+002	mg/kg	M	5.0E-008	kg-day/mg			
	Mercury	1.3E-001	mg/kg	1.3E-001	mg/kg	M	1.8E-011	kg-day/mg			
	Naphthalene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.5E-010	kg-day/mg			
	Nickel	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.9E-009	kg-day/mg			
	Pyrene	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.5E-009	kg-day/mg			
	Toluene	5.6E-002	mg/kg	5.6E-002	mg/kg	M	7.6E-011	kg-day/mg			
	Vanadium	1.4E+001	mg/kg	1.4E+001	mg/kg	M	1.9E-009	kg-day/mg			
	Xylenes (total)	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.7E-010	kg-day/mg			
	Zinc	1.2E+002	mg/kg	1.2E+002	mg/kg	M	1.6E-008	kg-day/mg			
	(Total)										2.2E-008
										Total Hazard Index Across All Exposure Routes/Pathways	3.3E-008

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-23
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	4.3E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.1E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	3.5E-008
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	1.9E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.6E-006
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.6E-008	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.1E-005
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.0E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.0E-006
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	5.1E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.1E-003
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.4E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.6E-007
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	1.4E-006	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	3.6E-003
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	4.9E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	2.5E-001
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	1.7E-006	mg/kg-day			N/A	N/A	
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	6.2E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.1E-002
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	4.1E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.8E-004
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.6E-008	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.9E-005
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.8E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	2.9E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	3.8E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	3.5E-007	mg/kg-day			N/A	N/A	
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	6.1E-007	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	1.5E-007
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	5.1E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.5E-004
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	2.2E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	5.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.7E-005
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	5.6E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	5.6E-003
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	1.7E-008	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	4.3E-008
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.0E-009	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.0E-007
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	2.4E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	7.8E-003
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.1E-007	mg/kg-day			N/A	N/A	
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	3.7E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	9.4E-004
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.8E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.8E-006
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	1.9E-007	mg/kg-day			N/A	N/A	
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.0E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	7.6E-006
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	1.0E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.5E-002
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	1.1E-004	mg/kg-day			N/A	N/A	
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	2.0E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-002

Table 5-2-23
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	5.4E-007	mg/kg-day			N/A	N/A	
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	1.9E-008	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	3.1E-007
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	2.1E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	1.4E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.8E-004
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.1E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.0E-005
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	5.6E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.1E-004
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	7.1E-007	mg/kg-day	7.0E-005	mg/kg-day	N/A	N/A	1.0E-002
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	2.4E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.2E-007
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	2.4E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	3.5E-003
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.4E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.5E-004
	(Total)												3.5E-001
Dermal	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	1.9E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.7E-005
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	9.3E-008	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	1.6E-007
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	8.5E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.2E-005
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.5E-007	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	7.4E-005
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	4.4E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	5.6E-006
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	2.3E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.3E-003
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	6.0E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.0E-006
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	6.2E-007	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	1.6E-001
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	8.9E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	3.0E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	1.7E+000
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	7.5E-006	mg/kg-day			N/A	N/A	
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	8.7E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.0E-002
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	1.8E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.6E-004
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.5E-007	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	9.1E-005
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.2E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	1.6E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	1.7E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.5E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	2.7E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	6.7E-007
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	2.2E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.1E-002
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	9.6E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.4E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-004
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	2.5E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	9.8E-002
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	7.6E-008	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.9E-007

Table 5-2-23
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	4.5E-009	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	4.7E-007
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	1.0E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.5E-002
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.3E-006	mg/kg-day			N/A	N/A	
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	1.6E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	6.9E-004
	Di-*n*-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.3E-006	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	1.3E-005
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	8.1E-007	mg/kg-day			N/A	N/A	
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.3E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.3E-005
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	1.1E-006	mg/kg-day			N/A	N/A	
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	4.6E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.5E-002
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.9E-005	mg/kg-day			N/A	N/A	
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	9.0E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.5E-003
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.4E-007	mg/kg-day			N/A	N/A	
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	8.3E-008	mg/kg-day	3.3E-002	mg/kg-day	N/A	N/A	2.5E-006
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	9.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.7E-005
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	6.0E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	6.0E-003
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.3E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.5E-005
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.5E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	4.9E-005
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	3.1E-007	mg/kg-day	7.0E-005	mg/kg-day	N/A	N/A	4.5E-003
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	1.0E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.2E-007
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	1.1E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.5E-003
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	6.0E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	6.6E-004
	(Total)												2.0E+000
												Total Hazard Index Across All Exposure Routes/Pathways	2.4E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-24
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	3.6E-008	mg/kg-day	7.0E-002	kg-day/mg	2.5E-009
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.8E-009	mg/kg-day			
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	1.6E-008	mg/kg-day			
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.6E-009	mg/kg-day			
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	8.3E-009	mg/kg-day			
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	4.3E-004	mg/kg-day			
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.1E-008	mg/kg-day			
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	1.2E-007	mg/kg-day			
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.7E-007	mg/kg-day	2.0E+000	kg-day/mg	3.4E-007
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	4.1E-007	mg/kg-day	2.0E+000	kg-day/mg	8.2E-007
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	1.4E-007	mg/kg-day	2.0E+000	kg-day/mg	2.8E-007
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	5.2E-007	mg/kg-day	1.5E+000	kg-day/mg	7.7E-007
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	3.4E-006	mg/kg-day			
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.6E-009	mg/kg-day	2.9E-002	kg-day/mg	1.3E-010
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.4E-008	mg/kg-day	7.3E-001	kg-day/mg	1.7E-008
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	2.4E-008	mg/kg-day	7.3E+000	kg-day/mg	1.8E-007
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	3.1E-008	mg/kg-day	7.3E-001	kg-day/mg	2.3E-008
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	2.9E-008	mg/kg-day	7.3E-002	kg-day/mg	2.1E-009
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	5.1E-008	mg/kg-day			
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	4.2E-008	mg/kg-day			
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	1.8E-008	mg/kg-day	1.1E+000	kg-day/mg	2.0E-008
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	4.5E-008	mg/kg-day	1.4E-002	kg-day/mg	6.3E-010
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	4.6E-007	mg/kg-day			
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	1.4E-009	mg/kg-day	2.9E-003	kg-day/mg	4.2E-012
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	8.5E-011	mg/kg-day	6.1E-003	kg-day/mg	5.2E-013
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	2.0E-006	mg/kg-day			
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.6E-008	mg/kg-day	7.3E-003	kg-day/mg	1.9E-010
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	3.1E-006	mg/kg-day			
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	2.4E-008	mg/kg-day			
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E+000	kg-day/mg	1.1E-007
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.5E-008	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	2.1E-008	mg/kg-day	7.3E-001	kg-day/mg	1.5E-008
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	8.7E-004	mg/kg-day			
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	9.3E-006	mg/kg-day			
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	1.7E-005	mg/kg-day			

Table 5-2-24
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	4.5E-008	mg/kg-day			
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	1.6E-009	mg/kg-day	7.5E-003	kg-day/mg	1.2E-011
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	1.8E-008	mg/kg-day			
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	1.1E-006	mg/kg-day			
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.6E-008	mg/kg-day			
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	4.6E-008	mg/kg-day			
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	5.9E-008	mg/kg-day			
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	2.0E-009	mg/kg-day			
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	2.0E-006	mg/kg-day			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.1E-005	mg/kg-day			
	(Total)										2.6E-006
Dermal	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	1.6E-007	kg-day/mg	7.0E-002	kg-day/mg	1.1E-008
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	7.8E-009	kg-day/mg			
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.1E-008	kg-day/mg			
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.0E-008	kg-day/mg			
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	3.7E-008	kg-day/mg			
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	1.9E-004	kg-day/mg			
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	5.0E-008	kg-day/mg			
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	5.2E-008	kg-day/mg			
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	7.4E-007	kg-day/mg			
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	2.5E-006	kg-day/mg	2.2E+000	kg-day/mg	5.5E-006
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	6.3E-007	kg-day/mg	2.0E+000	kg-day/mg	1.3E-006
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	7.3E-007	kg-day/mg	1.6E+000	kg-day/mg	1.2E-006
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	1.5E-006	kg-day/mg			
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.0E-008	kg-day/mg	3.2E-002	kg-day/mg	6.5E-010
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.0E-007	kg-day/mg	7.3E-001	kg-day/mg	7.6E-008
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	1.4E-007	kg-day/mg	8.6E+000	kg-day/mg	1.2E-006
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	1.4E-007	kg-day/mg	7.3E-001	kg-day/mg	1.0E-007
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-007	kg-day/mg	7.3E-002	kg-day/mg	9.3E-009
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	2.2E-007	kg-day/mg			
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.9E-008	kg-day/mg			
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	8.0E-008	kg-day/mg	1.1E+000	kg-day/mg	8.8E-008
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.0E-007	kg-day/mg	1.4E-002	kg-day/mg	2.8E-009
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	2.0E-007	kg-day/mg			
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	6.3E-009	kg-day/mg	2.9E-003	kg-day/mg	1.8E-011

Table 5-2-24
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	3.7E-010	kg-day/mg	6.4E-003	kg-day/mg	2.4E-012
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	8.6E-007	kg-day/mg			
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	kg-day/mg	1.8E-002	kg-day/mg	2.0E-009
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	1.4E-006	kg-day/mg			
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.0E-007	kg-day/mg			
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	6.8E-008	kg-day/mg	8.1E+000	kg-day/mg	5.5E-007
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	9.0E-008	kg-day/mg	7.3E-001	kg-day/mg	6.6E-008
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	3.8E-004	kg-day/mg			
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.1E-006	kg-day/mg			
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	7.5E-006	kg-day/mg			
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.0E-008	kg-day/mg			
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	6.9E-009	kg-day/mg	1.4E-002	kg-day/mg	9.6E-011
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	7.8E-008	kg-day/mg			
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	5.0E-007	kg-day/mg			
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	kg-day/mg			
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.0E-008	kg-day/mg			
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	2.6E-008	kg-day/mg			
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	8.7E-009	kg-day/mg			
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	8.9E-007	kg-day/mg			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	5.0E-006	kg-day/mg			
	(Total)										1.0E-005
								Total Hazard Index Across All Exposure Routes/Pathways			1.3E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-25
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	1.1E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.8E-006
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	5.5E-009	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	9.1E-009
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	5.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.5E-006
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.4E-008	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.9E-006
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.6E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.6E-007
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	1.3E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.3E-003
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	3.5E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.2E-007
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	3.7E-007	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	9.2E-004
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	5.2E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	1.3E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	6.3E-002
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	4.4E-007	mg/kg-day			N/A	N/A	
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	1.6E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.3E-003
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	1.0E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.5E-004
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.4E-008	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	4.8E-006
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.3E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	7.4E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	9.7E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.0E-008	mg/kg-day			N/A	N/A	
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	1.6E-007	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	3.9E-008
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.3E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	6.6E-005
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	5.6E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.0E-006
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	1.4E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.4E-003
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	4.5E-009	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.1E-008
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	2.6E-010	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.6E-008
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	6.1E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.0E-003
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	7.9E-008	mg/kg-day			N/A	N/A	
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	9.7E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.4E-004
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.4E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.4E-007
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	4.8E-008	mg/kg-day			N/A	N/A	
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	7.8E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.0E-006
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	6.4E-008	mg/kg-day			N/A	N/A	
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	2.8E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.2E-003
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	2.9E-005	mg/kg-day			N/A	N/A	

Table 5-2-25
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	5.3E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.6E-003
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.4E-007	mg/kg-day			N/A	N/A	
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	4.8E-009	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	8.1E-008
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	5.5E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.8E-006
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	3.5E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.8E-004
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	7.9E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.6E-006
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.4E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.9E-005
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	1.8E-007	mg/kg-day	7.0E-005	mg/kg-day	N/A	N/A	2.6E-003
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	6.2E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.1E-008
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	6.3E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	9.0E-004
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	3.5E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.2E-004
	(Total)												9.1E-002
Dermal	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	1.6E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.0E-006
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	7.9E-009	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	1.4E-008
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	7.2E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.6E-006
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.1E-008	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	6.3E-006
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	3.7E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	4.7E-007
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	1.9E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.9E-004
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	5.1E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.7E-007
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	5.3E-008	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	1.3E-002
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	7.5E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	2.6E-006	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	1.4E-001
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	6.4E-007	mg/kg-day			N/A	N/A	
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	7.4E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	2.5E-003
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	1.5E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.2E-005
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.1E-008	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	7.7E-006
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	1.4E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	1.4E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	2.3E-007	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	5.7E-008
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.9E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	9.4E-004
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	8.1E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.0E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-005

Table 5-2-25
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	2.1E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	8.3E-003
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	6.4E-009	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.6E-008
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	3.8E-010	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	3.9E-008
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	8.8E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.9E-003
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	mg/kg-day			N/A	N/A	
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	1.4E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	5.8E-005
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	1.1E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	1.1E-006
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	6.9E-008	mg/kg-day			N/A	N/A	
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.8E-006
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	9.2E-008	mg/kg-day			N/A	N/A	
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	4.0E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.3E-003
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	4.1E-006	mg/kg-day			N/A	N/A	
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	7.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.8E-004
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.0E-008	mg/kg-day			N/A	N/A	
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	7.0E-009	mg/kg-day	3.3E-002	mg/kg-day	N/A	N/A	2.1E-007
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	7.9E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.0E-006
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	5.1E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	5.1E-004
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.1E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	3.8E-006
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	2.1E-008	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	4.2E-006
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	2.6E-008	mg/kg-day	7.0E-005	mg/kg-day	N/A	N/A	3.8E-004
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	8.9E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.4E-008
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	9.0E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.3E-004
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	5.0E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	5.6E-005
	(Total)												1.7E-001
												Total Hazard Index Across All Exposure Routes/Pathways	2.6E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-26
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,2'-oxybis(1-Chloropropane)	8.5E-001	mg/kg	8.5E-001	mg/kg	M	8.0E-010	mg/kg-day	7.0E-002	kg-day/mg	5.6E-011
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	3.9E-011	mg/kg-day			
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	3.6E-010	mg/kg-day			
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.0E-010	mg/kg-day			
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	1.8E-010	mg/kg-day			
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	9.5E-006	mg/kg-day			
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	2.5E-010	mg/kg-day			
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	2.6E-009	mg/kg-day			
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.7E-009	mg/kg-day	2.0E+000	kg-day/mg	7.5E-009
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	9.1E-009	mg/kg-day	2.0E+000	kg-day/mg	1.8E-008
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	3.2E-009	mg/kg-day	2.0E+000	kg-day/mg	6.3E-009
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	1.1E-008	mg/kg-day	1.5E+000	kg-day/mg	1.7E-008
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	7.5E-008	mg/kg-day			
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.0E-010	mg/kg-day	2.9E-002	kg-day/mg	3.0E-012
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	5.3E-010	mg/kg-day	7.3E-001	kg-day/mg	3.8E-010
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	5.3E-010	mg/kg-day	7.3E+000	kg-day/mg	3.9E-009
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	7.0E-010	mg/kg-day	7.3E-001	kg-day/mg	5.1E-010
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	6.5E-010	mg/kg-day	7.3E-002	kg-day/mg	4.7E-011
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	1.1E-009	mg/kg-day			
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	9.4E-010	mg/kg-day			
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	4.0E-010	mg/kg-day	1.1E+000	kg-day/mg	4.4E-010
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.0E-009	mg/kg-day	1.4E-002	kg-day/mg	1.4E-011
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	1.0E-008	mg/kg-day			
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	3.2E-011	mg/kg-day	2.9E-003	kg-day/mg	9.3E-014
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	1.9E-012	mg/kg-day	6.1E-003	kg-day/mg	1.1E-014
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	4.4E-008	mg/kg-day			
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	5.7E-010	mg/kg-day	7.3E-003	kg-day/mg	4.1E-012
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	6.9E-008	mg/kg-day			
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	5.3E-010	mg/kg-day			
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	3.4E-010	mg/kg-day	7.3E+000	kg-day/mg	2.5E-009
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	5.6E-010	mg/kg-day			
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	4.6E-010	mg/kg-day	7.3E-001	kg-day/mg	3.3E-010
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	2.0E-005	mg/kg-day			
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	2.1E-007	mg/kg-day			

Table 5-2-26
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	3.8E-007	mg/kg-day			
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.0E-009	mg/kg-day			
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	3.5E-011	mg/kg-day	7.5E-003	kg-day/mg	2.6E-013
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	3.9E-010	mg/kg-day			
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	2.5E-008	mg/kg-day			
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	5.7E-010	mg/kg-day			
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.0E-009	mg/kg-day			
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	1.3E-009	mg/kg-day			
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	4.4E-011	mg/kg-day			
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	4.5E-008	mg/kg-day			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	2.5E-007	mg/kg-day			
	(Total)										5.7E-008
Dermal	2,2'-oxybis(1-Chloropropan	8.5E-001	mg/kg	8.5E-001	mg/kg	M	1.2E-009	kg-day/mg	7.0E-002	kg-day/mg	8.1E-011
	2-Butanone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	5.7E-011	kg-day/mg			
	2-Methylnaphthalene	3.8E-001	mg/kg	3.8E-001	mg/kg	M	5.1E-010	kg-day/mg			
	4-Methylphenol	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.5E-010	kg-day/mg			
	Acetone	2.0E-001	mg/kg	2.0E-001	mg/kg	M	2.7E-010	kg-day/mg			
	Aluminum	1.0E+004	mg/kg	1.0E+004	mg/kg	M	1.4E-006	kg-day/mg			
	Anthracene	2.7E-001	mg/kg	2.7E-001	mg/kg	M	3.7E-010	kg-day/mg			
	Antimony	2.8E+000	mg/kg	2.8E+000	mg/kg	M	3.8E-010	kg-day/mg			
	Aroclor-1248	4.0E+000	mg/kg	4.0E+000	mg/kg	M	5.4E-009	kg-day/mg			
	Aroclor-1254	9.7E+000	mg/kg	9.7E+000	mg/kg	M	1.8E-008	kg-day/mg	2.2E+000	kg-day/mg	4.0E-008
	Aroclor-1260	3.4E+000	mg/kg	3.4E+000	mg/kg	M	4.6E-009	kg-day/mg	2.0E+000	kg-day/mg	9.1E-009
	Arsenic	1.2E+001	mg/kg	1.2E+001	mg/kg	M	5.3E-009	kg-day/mg	1.6E+000	kg-day/mg	8.4E-009
	Barium	8.0E+001	mg/kg	8.0E+001	mg/kg	M	1.1E-008	kg-day/mg			
	Benzene	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.5E-010	kg-day/mg	3.2E-002	kg-day/mg	4.8E-012
	Benzo(a)anthracene	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.6E-010	kg-day/mg	7.3E-001	kg-day/mg	5.5E-010
	Benzo(a)pyrene	5.7E-001	mg/kg	5.7E-001	mg/kg	M	1.0E-009	kg-day/mg	8.6E+000	kg-day/mg	8.6E-009
	Benzo(b)fluoranthene	7.4E-001	mg/kg	7.4E-001	mg/kg	M	1.0E-009	kg-day/mg	7.3E-001	kg-day/mg	7.3E-010
	Benzo(k)fluoranthene	6.9E-001	mg/kg	6.9E-001	mg/kg	M	9.3E-010	kg-day/mg	7.3E-002	kg-day/mg	6.8E-011
	Benzoic Acid	1.2E+000	mg/kg	1.2E+000	mg/kg	M	1.6E-009	kg-day/mg			
	Beryllium	1.0E+000	mg/kg	1.0E+000	mg/kg	M	1.4E-010	kg-day/mg			
	bis(2-Chloroethyl) ether	4.3E-001	mg/kg	4.3E-001	mg/kg	M	5.8E-010	kg-day/mg	1.1E+000	kg-day/mg	6.4E-010
	bis(2-Ethylhexyl)phthalate	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.4E-009	kg-day/mg	1.4E-002	kg-day/mg	2.0E-011

Table 5-2-26
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4A, Sediment (Wetland)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4aCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cadmium	1.1E+001	mg/kg	1.1E+001	mg/kg	M	1.5E-009	kg-day/mg			
	Chloroethane	3.4E-002	mg/kg	3.4E-002	mg/kg	M	4.6E-011	kg-day/mg	2.9E-003	kg-day/mg	1.3E-013
	Chloroform	2.0E-003	mg/kg	2.0E-003	mg/kg	M	2.7E-012	kg-day/mg	6.4E-003	kg-day/mg	1.7E-014
	Chromium (total)	4.6E+001	mg/kg	4.6E+001	mg/kg	M	6.3E-009	kg-day/mg			
	Chrysene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.2E-010	kg-day/mg	1.8E-002	kg-day/mg	1.5E-011
	Copper	7.4E+001	mg/kg	7.4E+001	mg/kg	M	1.0E-008	kg-day/mg			
	Di-n-butylphthalate	5.6E-001	mg/kg	5.6E-001	mg/kg	M	7.6E-010	kg-day/mg			
	Dibenzo(a,h)anthracene	3.7E-001	mg/kg	3.7E-001	mg/kg	M	4.9E-010	kg-day/mg	8.1E+000	kg-day/mg	4.0E-009
	Fluoranthene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.1E-010	kg-day/mg			
	Indeno(1,2,3-cd)pyrene	4.9E-001	mg/kg	4.9E-001	mg/kg	M	6.6E-010	kg-day/mg	7.3E-001	kg-day/mg	4.8E-010
	Iron	2.1E+004	mg/kg	2.1E+004	mg/kg	M	2.8E-006	kg-day/mg			
	Lead	2.2E+002	mg/kg	2.2E+002	mg/kg	M	3.0E-008	kg-day/mg			
	Manganese	4.0E+002	mg/kg	4.0E+002	mg/kg	M	5.4E-008	kg-day/mg			
	Mercury	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.4E-010	kg-day/mg			
	Methylene Chloride	3.7E-002	mg/kg	3.7E-002	mg/kg	M	5.0E-011	kg-day/mg	1.4E-002	kg-day/mg	7.0E-013
	Naphthalene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	5.7E-010	kg-day/mg			
	Nickel	2.7E+001	mg/kg	2.7E+001	mg/kg	M	3.6E-009	kg-day/mg			
	Pyrene	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.2E-010	kg-day/mg			
	Selenium	1.1E+000	mg/kg	1.1E+000	mg/kg	M	1.5E-010	kg-day/mg			
	Thallium	1.4E+000	mg/kg	1.4E+000	mg/kg	M	1.9E-010	kg-day/mg			
	Toluene	4.7E-002	mg/kg	4.7E-002	mg/kg	M	6.4E-011	kg-day/mg			
	Vanadium	4.8E+001	mg/kg	4.8E+001	mg/kg	M	6.5E-009	kg-day/mg			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	3.6E-008	kg-day/mg			
	(Total)										7.3E-008
										Total Hazard Index Across All Exposure Routes/Pathways	1.3E-007

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-27
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.2E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.3E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	3.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.5E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	7.6E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.8E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	2.3E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.7E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.4E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.4E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.2E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.3E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.5E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.3E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.2E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	8.6E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	4.3E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	9.5E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	7.4E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.5E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	3.5E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.9E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	4.3E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	4.0E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	2.5E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.9E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.0E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	5.8E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.2E-002
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	3.5E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	3.2E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.1E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.8E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	3.6E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	9.1E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	8.2E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.2E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.8E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.8E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	6.4E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	1.5E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.9E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.9E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	9.7E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	2.8E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	9.5E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	4.7E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	9.4E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	6.1E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.2E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	3.3E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	4.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.1E-007
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.4E-004	mg/kg-day			N/A	N/A	

Table 5-2-27
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	4.4E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.8E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	5.7E-005
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.4E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.8E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.3E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	2.9E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.8E-004
	(Total)												4.8E-001
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	6.8E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	7.6E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.8E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.4E-007	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.6E-006	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	4.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	8.2E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.4E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	1.8E-006
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	5.0E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.0E-003
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.4E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.8E-006
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.2E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	7.0E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	3.9E+000
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	5.5E-006	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.3E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	4.5E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.0E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.5E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.3E-006	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.5E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.3E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-003
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.3E-005	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.3E+000
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	2.0E-007	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.9E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.2E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.1E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	8.7E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	4.8E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	4.9E-006
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.6E-006	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.2E-006	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	3.7E-004
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	8.5E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.8E-003
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.2E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.6E-005

Table 5-2-27
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.6E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.5E-004
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.2E-004
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.5E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	7.0E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.9E-006	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.4E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.2E-006
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	8.2E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.6E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.6E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	3.3E-004
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.1E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.2E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.3E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.7E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.9E-003
	(Total)												5.4E+000
												Total Hazard Index Across All Exposure Routes/Pathways	5.9E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	4.2E-009	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.1E-008	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	2.7E-008	mg/kg-day	2.4E-001	kg-day/mg	6.5E-009
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.0E-007	mg/kg-day	3.4E-001	kg-day/mg	3.4E-008
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	8.4E-008	mg/kg-day	3.4E-001	kg-day/mg	2.9E-008
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	8.7E-009	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	7.7E-008	mg/kg-day	3.5E-001	kg-day/mg	2.7E-008
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	8.9E-008	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	7.7E-008	mg/kg-day	2.0E+000	kg-day/mg	1.5E-007
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	3.1E-006	mg/kg-day	2.0E+000	kg-day/mg	6.2E-006
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	3.4E-007	mg/kg-day	2.0E+000	kg-day/mg	6.8E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	2.7E-006	mg/kg-day	1.5E+000	kg-day/mg	4.0E-006
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.3E-007	mg/kg-day	7.3E-001	kg-day/mg	9.2E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.4E-007	mg/kg-day	7.3E+000	kg-day/mg	1.0E-006
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.5E-007	mg/kg-day	7.3E-001	kg-day/mg	1.1E-007
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.4E-007	mg/kg-day	7.3E-002	kg-day/mg	1.0E-008
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	9.1E-009	mg/kg-day	1.8E+000	kg-day/mg	1.6E-008
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.4E-006	mg/kg-day	1.4E-002	kg-day/mg	2.0E-008
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	2.1E-006	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.3E-008	mg/kg-day	2.0E-002	kg-day/mg	2.5E-010
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.1E-005	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.4E-007	mg/kg-day	7.3E-003	kg-day/mg	9.9E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.3E-005	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	2.9E-008	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.0E-007	mg/kg-day	7.3E+000	kg-day/mg	7.4E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.4E-007	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	5.2E-008	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.4E-007	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.0E-008	mg/kg-day	1.3E+000	kg-day/mg	1.3E-008
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.7E-008	mg/kg-day	3.5E-001	kg-day/mg	5.9E-009
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	2.2E-008	mg/kg-day	4.5E+000	kg-day/mg	9.7E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.2E-007	mg/kg-day	7.3E-001	kg-day/mg	8.7E-008
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.5E-008	mg/kg-day	9.5E-004	kg-day/mg	1.4E-011
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	5.0E-005	mg/kg-day			

Table 5-2-28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.6E-007	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.0E-007	mg/kg-day			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	8.7E-009	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.3E-007	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.0E-004	mg/kg-day			
	(Total)										1.3E-005
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	2.4E-008	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	6.3E-008	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.6E-007	kg-day/mg	2.4E-001	kg-day/mg	3.8E-008
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.9E-007	kg-day/mg	3.4E-001	kg-day/mg	2.0E-007
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.5E-007	kg-day/mg	3.4E-001	kg-day/mg	5.0E-008
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	5.1E-008	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.8E-007	kg-day/mg	3.5E-001	kg-day/mg	6.2E-008
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	5.2E-007	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	4.5E-007	kg-day/mg	2.0E+000	kg-day/mg	8.9E-007
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.5E-005	kg-day/mg	2.2E+000	kg-day/mg	5.6E-005
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	2.0E-006	kg-day/mg	2.0E+000	kg-day/mg	3.9E-006
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	4.6E-006	kg-day/mg	1.6E+000	kg-day/mg	7.3E-006
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	7.3E-007	kg-day/mg	7.3E-001	kg-day/mg	5.3E-007
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.1E-006	kg-day/mg	8.6E+000	kg-day/mg	9.1E-006
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	8.9E-007	kg-day/mg	7.3E-001	kg-day/mg	6.5E-007
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	8.3E-007	kg-day/mg	7.3E-002	kg-day/mg	6.1E-008
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	5.3E-009	kg-day/mg	1.8E+000	kg-day/mg	9.5E-009
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	8.1E-006	kg-day/mg	1.4E-002	kg-day/mg	1.1E-007
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.2E-005	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	7.3E-008	kg-day/mg	2.0E-002	kg-day/mg	1.5E-009
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	6.7E-006	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.9E-007	kg-day/mg	1.8E-002	kg-day/mg	1.4E-008
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.5E-006	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.7E-007	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.9E-007	kg-day/mg	8.1E+000	kg-day/mg	4.8E-006
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.9E-007	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	3.0E-007	kg-day/mg			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	8.0E-007	kg-day/mg			

Table 5-2-28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	5.9E-008	kg-day/mg	1.3E+000	kg-day/mg	7.6E-008
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	3.9E-008	kg-day/mg	3.5E-001	kg-day/mg	1.4E-008
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.3E-007	kg-day/mg	4.5E+000	kg-day/mg	5.7E-007
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	6.9E-007	kg-day/mg	7.3E-001	kg-day/mg	5.0E-007
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	8.5E-008	kg-day/mg	9.5E-004	kg-day/mg	8.1E-011
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	2.9E-005	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	9.1E-008	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.9E-007	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	5.1E-008	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.8E-007	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	6.1E-005	kg-day/mg			
	(Total)										8.5E-005
										Total Hazard Index Across All Exposure Routes/Pathways	9.8E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-29
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	5.1E-009	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.7E-007
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.6E-007
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	3.3E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.0E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.1E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.1E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.1E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	9.4E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.9E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.1E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.6E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	9.4E-008	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	3.8E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.9E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	4.2E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.3E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.1E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.7E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.9E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.1E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.7E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.6E-005
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	2.5E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.1E-003
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.5E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.4E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	4.7E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.7E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.6E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.0E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	3.6E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.6E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.7E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	2.8E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	6.4E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.1E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.7E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.2E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.2E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.1E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.1E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.1E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	2.7E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.3E-005
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.8E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	9.0E-008
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	6.2E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.9E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.5E-005

Table 5-2-29
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.1E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.4E-007
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.7E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	5.5E-006
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.3E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.3E-004
	(Total)												2.1E-001
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.0E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.1E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	2.7E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.3E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	6.7E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	6.2E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.2E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.1E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	2.7E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	7.5E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.5E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.2E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.3E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.9E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	1.1E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	5.9E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	8.3E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	2.0E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	6.9E-003
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	3.1E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	4.5E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	3.8E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	3.5E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	2.2E-009	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.4E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.7E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	5.1E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	2.0E-001
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	3.1E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	2.8E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	9.4E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.3E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	3.2E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.3E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	7.2E-008	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	7.4E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.3E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	5.6E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	1.3E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.3E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.4E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	8.5E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	2.5E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	8.3E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.6E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.3E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	5.3E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.1E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	2.9E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	3.6E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.8E-007

Table 5-2-29
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.2E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	3.9E-008	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.5E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	5.0E-005
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.1E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.3E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	2.6E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.8E-004
	(Total)												8.1E-001
												Total Hazard Index Across All Exposure Routes/Pathways	1.0E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-30
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	3.7E-010	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	9.5E-010	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	2.4E-009	mg/kg-day	2.4E-001	kg-day/mg	5.7E-010
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	8.9E-009	mg/kg-day	3.4E-001	kg-day/mg	3.0E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	7.4E-009	mg/kg-day	3.4E-001	kg-day/mg	2.5E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	7.7E-010	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	6.7E-009	mg/kg-day	3.5E-001	kg-day/mg	2.4E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	7.8E-009	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	6.7E-009	mg/kg-day	2.0E+000	kg-day/mg	1.3E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.7E-007	mg/kg-day	2.0E+000	kg-day/mg	5.4E-007
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	3.0E-008	mg/kg-day	2.0E+000	kg-day/mg	6.0E-008
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	2.3E-007	mg/kg-day	1.5E+000	kg-day/mg	3.5E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.1E-008	mg/kg-day	7.3E-001	kg-day/mg	8.1E-009
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.2E-008	mg/kg-day	7.3E+000	kg-day/mg	9.0E-008
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.3E-008	mg/kg-day	7.3E-001	kg-day/mg	9.9E-009
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.3E-008	mg/kg-day	7.3E-002	kg-day/mg	9.2E-010
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	8.0E-010	mg/kg-day	1.8E+000	kg-day/mg	1.4E-009
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.2E-007	mg/kg-day	1.4E-002	kg-day/mg	1.7E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.8E-007	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.1E-009	mg/kg-day	2.0E-002	kg-day/mg	2.2E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.0E-006	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.2E-008	mg/kg-day	7.3E-003	kg-day/mg	8.7E-011
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.1E-006	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	2.6E-009	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	8.9E-009	mg/kg-day	7.3E+000	kg-day/mg	6.5E-008
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.2E-008	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	4.6E-009	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.2E-008	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	8.9E-010	mg/kg-day	1.3E+000	kg-day/mg	1.2E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.5E-009	mg/kg-day	3.5E-001	kg-day/mg	5.2E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.9E-009	mg/kg-day	4.5E+000	kg-day/mg	8.6E-009
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.0E-008	mg/kg-day	7.3E-001	kg-day/mg	7.6E-009
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.3E-009	mg/kg-day	9.5E-004	kg-day/mg	1.2E-012
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	4.4E-006	mg/kg-day			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.4E-008	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	8.9E-009	mg/kg-day			

Table 5-2-30
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	7.7E-010	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.2E-008	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	9.2E-006	mg/kg-day			
	(Total)										1.2E-006
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	7.4E-010	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.9E-009	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.8E-009	kg-day/mg	2.4E-001	kg-day/mg	1.1E-009
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg	3.4E-001	kg-day/mg	6.0E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	4.4E-009	kg-day/mg	3.4E-001	kg-day/mg	1.5E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.5E-009	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	5.4E-009	kg-day/mg	3.5E-001	kg-day/mg	1.9E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.6E-008	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.3E-008	kg-day/mg	2.0E+000	kg-day/mg	2.7E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	7.6E-007	kg-day/mg	2.2E+000	kg-day/mg	1.7E-006
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	6.0E-008	kg-day/mg	2.0E+000	kg-day/mg	1.2E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.4E-007	kg-day/mg	1.6E+000	kg-day/mg	2.2E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	2.2E-008	kg-day/mg	7.3E-001	kg-day/mg	1.6E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.2E-008	kg-day/mg	8.6E+000	kg-day/mg	2.7E-007
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.7E-008	kg-day/mg	7.3E-001	kg-day/mg	2.0E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.5E-008	kg-day/mg	7.3E-002	kg-day/mg	1.8E-009
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.6E-010	kg-day/mg	1.8E+000	kg-day/mg	2.9E-010
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.5E-007	kg-day/mg	1.4E-002	kg-day/mg	3.4E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.6E-007	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	2.2E-009	kg-day/mg	2.0E-002	kg-day/mg	4.4E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	2.0E-007	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.4E-008	kg-day/mg	1.8E-002	kg-day/mg	4.3E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.3E-007	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	5.2E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg	8.1E+000	kg-day/mg	1.4E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.4E-008	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	9.2E-009	kg-day/mg			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.4E-008	kg-day/mg			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.8E-009	kg-day/mg	1.3E+000	kg-day/mg	2.3E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.2E-009	kg-day/mg	3.5E-001	kg-day/mg	4.1E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.8E-009	kg-day/mg	4.5E+000	kg-day/mg	1.7E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	2.1E-008	kg-day/mg	7.3E-001	kg-day/mg	1.5E-008
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.6E-009	kg-day/mg	9.5E-004	kg-day/mg	2.4E-012

Table 5-2-30
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: IND4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	8.8E-007	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.8E-009	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.5E-009	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.4E-008	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.8E-006	kg-day/mg			
	(Total)										2.6E-006
								Total Hazard Index Across All Exposure Routes/Pathways			3.7E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-31
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.4E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.5E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	3.5E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.7E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	8.8E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.3E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	2.7E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.4E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.8E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.8E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.5E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.0E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.9E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.6E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	9.9E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	5.0E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	1.1E-006	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	8.6E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.9E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	4.1E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	4.5E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	5.0E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	4.6E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	2.9E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	4.5E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.3E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	6.7E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.3E-002
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	4.1E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	3.7E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.2E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	4.4E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	4.2E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.0E-003
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	9.5E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	9.5E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.3E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	4.4E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	7.3E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	1.7E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.6E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	4.5E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	3.3E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.1E-004
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	5.4E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.1E-004
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	7.0E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.4E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	3.8E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	4.7E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.4E-007
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.6E-004	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	5.1E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.3E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	6.5E-005

Table 5-2-31
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.8E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	4.3E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.4E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	3.4E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.1E-003
	(Total)												5.5E-001
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	6.8E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	7.6E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.8E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.4E-007	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.6E-006	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	4.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	8.2E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.4E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	1.8E-006
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	5.0E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.0E-003
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.4E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.8E-006
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.2E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	7.0E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	3.9E+000
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	5.5E-006	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.3E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	4.5E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.0E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.5E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.3E-006	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.5E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.3E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-003
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.3E-005	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.3E+000
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	2.0E-007	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.9E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.2E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.1E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	8.7E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	4.8E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	4.9E-006
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.6E-006	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.2E-006	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	3.7E-004
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	8.5E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.8E-003
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.2E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.6E-005
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.6E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.5E-004
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.2E-004
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.5E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	7.0E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.9E-006	mg/kg-day			N/A	N/A	

Table 5-2-31
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.4E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.2E-006
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	8.2E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.6E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.6E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	3.3E-004
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.4E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.1E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.2E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.3E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.7E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.9E-003
	(Total)												5.4E+000
												Total Hazard Index Across All Exposure Routes/Pathways	5.9E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-32
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	4.8E-009	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.3E-008	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	3.1E-008	mg/kg-day	2.4E-001	kg-day/mg	7.6E-009
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-007	mg/kg-day	3.4E-001	kg-day/mg	4.0E-008
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	9.7E-008	mg/kg-day	3.4E-001	kg-day/mg	3.3E-008
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.0E-008	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	8.9E-008	mg/kg-day	3.5E-001	kg-day/mg	3.1E-008
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.0E-007	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	8.9E-008	mg/kg-day	2.0E+000	kg-day/mg	1.8E-007
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	3.5E-006	mg/kg-day	2.0E+000	kg-day/mg	7.1E-006
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	3.9E-007	mg/kg-day	2.0E+000	kg-day/mg	7.8E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.1E-006	mg/kg-day	1.5E+000	kg-day/mg	4.6E-006
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.5E-007	mg/kg-day	7.3E-001	kg-day/mg	1.1E-007
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.6E-007	mg/kg-day	7.3E+000	kg-day/mg	1.2E-006
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.8E-007	mg/kg-day	7.3E-001	kg-day/mg	1.3E-007
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.7E-007	mg/kg-day	7.3E-002	kg-day/mg	1.2E-008
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.0E-008	mg/kg-day	1.8E+000	kg-day/mg	1.9E-008
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.6E-006	mg/kg-day	1.4E-002	kg-day/mg	2.3E-008
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	2.4E-006	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.5E-008	mg/kg-day	2.0E-002	kg-day/mg	2.9E-010
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.3E-005	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.6E-007	mg/kg-day	7.3E-003	kg-day/mg	1.1E-009
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.5E-005	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	3.4E-008	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-007	mg/kg-day	7.3E+000	kg-day/mg	8.5E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.6E-007	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	6.1E-008	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.6E-007	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.2E-008	mg/kg-day	1.3E+000	kg-day/mg	1.5E-008
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.9E-008	mg/kg-day	3.5E-001	kg-day/mg	6.8E-009
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	2.5E-008	mg/kg-day	4.5E+000	kg-day/mg	1.1E-007
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.4E-007	mg/kg-day	7.3E-001	kg-day/mg	1.0E-007
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.7E-008	mg/kg-day	9.5E-004	kg-day/mg	1.6E-011
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	5.8E-005	mg/kg-day			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.8E-007	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-007	mg/kg-day			

Table 5-2-32
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.0E-008	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.6E-007	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.2E-004	mg/kg-day			
	(Total)										1.5E-005
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	2.4E-008	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	6.3E-008	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.6E-007	kg-day/mg	2.4E-001	kg-day/mg	3.8E-008
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.9E-007	kg-day/mg	3.4E-001	kg-day/mg	2.0E-007
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.5E-007	kg-day/mg	3.4E-001	kg-day/mg	5.0E-008
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	5.1E-008	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.8E-007	kg-day/mg	3.5E-001	kg-day/mg	6.3E-008
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	5.2E-007	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	4.5E-007	kg-day/mg	2.0E+000	kg-day/mg	8.9E-007
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.5E-005	kg-day/mg	2.2E+000	kg-day/mg	5.6E-005
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	2.0E-006	kg-day/mg	2.0E+000	kg-day/mg	3.9E-006
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	4.6E-006	kg-day/mg	1.6E+000	kg-day/mg	7.3E-006
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	7.3E-007	kg-day/mg	7.3E-001	kg-day/mg	5.3E-007
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.1E-006	kg-day/mg	8.6E+000	kg-day/mg	9.1E-006
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	8.9E-007	kg-day/mg	7.3E-001	kg-day/mg	6.5E-007
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	8.3E-007	kg-day/mg	7.3E-002	kg-day/mg	6.1E-008
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	5.3E-009	kg-day/mg	1.8E+000	kg-day/mg	9.5E-009
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	8.1E-006	kg-day/mg	1.4E-002	kg-day/mg	1.1E-007
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.2E-005	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	7.3E-008	kg-day/mg	2.0E-002	kg-day/mg	1.5E-009
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	6.7E-006	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.9E-007	kg-day/mg	1.8E-002	kg-day/mg	1.4E-008
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.5E-006	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.7E-007	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.9E-007	kg-day/mg	8.1E+000	kg-day/mg	4.8E-006
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.9E-007	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	3.0E-007	kg-day/mg			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	8.0E-007	kg-day/mg			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	5.9E-008	kg-day/mg	1.3E+000	kg-day/mg	7.7E-008
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	3.9E-008	kg-day/mg	3.5E-001	kg-day/mg	1.4E-008
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.3E-007	kg-day/mg	4.5E+000	kg-day/mg	5.7E-007
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	6.9E-007	kg-day/mg	7.3E-001	kg-day/mg	5.0E-007

Table 5-2-32
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	8.5E-008	kg-day/mg	9.5E-004	kg-day/mg	8.1E-011
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	2.9E-005	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	9.1E-008	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.9E-007	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	5.1E-008	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.8E-007	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	6.1E-005	kg-day/mg			
	(Total)										8.5E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.0E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-33
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	5.3E-009	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.8E-007
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.4E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.8E-007
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	3.4E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.1E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.1E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.1E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	9.6E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.9E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.1E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.7E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	9.6E-008	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	3.9E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.9E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	4.3E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.3E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.1E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.6E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.9E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.1E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.8E-005
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	2.6E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.2E-003
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.6E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.4E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	4.8E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.7E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.6E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.1E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	3.7E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.7E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.7E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	2.8E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	6.6E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.2E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.7E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.3E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.3E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.2E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.1E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.2E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	2.7E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.4E-005
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.8E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	9.2E-008
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	6.3E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.0E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.3E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.5E-005

Table 5-2-33
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.1E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.5E-007
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.7E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	5.6E-006
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.3E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.4E-004
	(Total)												2.2E-001
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.0E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.1E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	2.7E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.3E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	6.7E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	6.2E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.2E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.1E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	2.7E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	7.5E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.5E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.2E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.3E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.9E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	1.1E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	5.9E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	8.3E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	2.0E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	6.9E-003
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	3.1E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	4.5E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	3.8E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	3.5E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	2.2E-009	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.4E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.7E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	5.1E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	2.0E-001
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	3.1E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	2.8E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	9.4E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.3E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	3.2E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.3E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	7.2E-008	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	7.4E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.5E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.3E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	5.6E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	1.3E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.3E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.4E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	8.5E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	2.5E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	8.3E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.6E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.3E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	5.3E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.1E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	2.9E-007	mg/kg-day			N/A	N/A	

Table 5-2-33
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	3.6E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.8E-007
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.2E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	3.9E-008	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.5E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	5.0E-005
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.1E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.3E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	2.6E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.8E-004
	(Total)												8.1E-001
												Total Hazard Index Across All Exposure Routes/Pathways	1.0E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-34
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	3.8E-010	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	9.7E-010	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	2.4E-009	mg/kg-day	2.4E-001	kg-day/mg	5.9E-010
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	9.1E-009	mg/kg-day	3.4E-001	kg-day/mg	3.1E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	7.5E-009	mg/kg-day	3.4E-001	kg-day/mg	2.6E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	7.8E-010	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	6.9E-009	mg/kg-day	3.5E-001	kg-day/mg	2.4E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	8.0E-009	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	6.9E-009	mg/kg-day	2.0E+000	kg-day/mg	1.4E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.8E-007	mg/kg-day	2.0E+000	kg-day/mg	5.5E-007
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	3.0E-008	mg/kg-day	2.0E+000	kg-day/mg	6.1E-008
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	2.4E-007	mg/kg-day	1.5E+000	kg-day/mg	3.6E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.1E-008	mg/kg-day	7.3E-001	kg-day/mg	8.2E-009
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.3E-008	mg/kg-day	7.3E+000	kg-day/mg	9.1E-008
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.4E-008	mg/kg-day	7.3E-001	kg-day/mg	1.0E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.3E-008	mg/kg-day	7.3E-002	kg-day/mg	9.4E-010
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	8.1E-010	mg/kg-day	1.8E+000	kg-day/mg	1.5E-009
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.3E-007	mg/kg-day	1.4E-002	kg-day/mg	1.8E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.8E-007	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.1E-009	mg/kg-day	2.0E-002	kg-day/mg	2.3E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.0E-006	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.2E-008	mg/kg-day	7.3E-003	kg-day/mg	8.9E-011
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.2E-006	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	2.6E-009	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	9.1E-009	mg/kg-day	7.3E+000	kg-day/mg	6.6E-008
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.2E-008	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	4.7E-009	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.2E-008	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	9.1E-010	mg/kg-day	1.3E+000	kg-day/mg	1.2E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.5E-009	mg/kg-day	3.5E-001	kg-day/mg	5.3E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.9E-009	mg/kg-day	4.5E+000	kg-day/mg	8.7E-009
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.1E-008	mg/kg-day	7.3E-001	kg-day/mg	7.8E-009
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.3E-009	mg/kg-day	9.5E-004	kg-day/mg	1.2E-012
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	4.5E-006	mg/kg-day			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.4E-008	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	9.1E-009	mg/kg-day			

Table 5-2-34
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	7.8E-010	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.2E-008	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	9.4E-006	mg/kg-day			
	(Total)										1.2E-006
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	7.3E-010	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.9E-009	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.8E-009	kg-day/mg	2.4E-001	kg-day/mg	1.1E-009
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg	3.4E-001	kg-day/mg	6.0E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	4.4E-009	kg-day/mg	3.4E-001	kg-day/mg	1.5E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.5E-009	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	5.4E-009	kg-day/mg	3.5E-001	kg-day/mg	1.9E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.6E-008	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.3E-008	kg-day/mg	2.0E+000	kg-day/mg	2.7E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	7.5E-007	kg-day/mg	2.2E+000	kg-day/mg	1.7E-006
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	5.9E-008	kg-day/mg	2.0E+000	kg-day/mg	1.2E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.4E-007	kg-day/mg	1.6E+000	kg-day/mg	2.2E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	2.2E-008	kg-day/mg	7.3E-001	kg-day/mg	1.6E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.2E-008	kg-day/mg	8.6E+000	kg-day/mg	2.7E-007
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.7E-008	kg-day/mg	7.3E-001	kg-day/mg	2.0E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.5E-008	kg-day/mg	7.3E-002	kg-day/mg	1.8E-009
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.6E-010	kg-day/mg	1.8E+000	kg-day/mg	2.9E-010
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.4E-007	kg-day/mg	1.4E-002	kg-day/mg	3.4E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.6E-007	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	2.2E-009	kg-day/mg	2.0E-002	kg-day/mg	4.4E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	2.0E-007	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.4E-008	kg-day/mg	1.8E-002	kg-day/mg	4.3E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.3E-007	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	5.1E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg	8.1E+000	kg-day/mg	1.4E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.4E-008	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	9.2E-009	kg-day/mg			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.4E-008	kg-day/mg			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.8E-009	kg-day/mg	1.3E+000	kg-day/mg	2.3E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.2E-009	kg-day/mg	3.5E-001	kg-day/mg	4.1E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.8E-009	kg-day/mg	4.5E+000	kg-day/mg	1.7E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	2.1E-008	kg-day/mg	7.3E-001	kg-day/mg	1.5E-008

Table 5-2-34
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: UTI4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.6E-009	kg-day/mg	9.5E-004	kg-day/mg	2.4E-012
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	8.8E-007	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.8E-009	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.5E-009	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.4E-008	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.8E-006	kg-day/mg			
	(Total)										2.6E-006
										Total Hazard Index Across All Exposure Routes/Pathways	3.8E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-35
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: CON4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	5.9E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	6.5E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.5E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.6E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	3.8E-007	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.4E-006	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.2E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.4E-003
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.2E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.2E-006
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.1E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.2E-003
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.3E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.2E-006
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.1E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	4.3E-005	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	2.2E+000
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	4.8E-006	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.7E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.2E-001
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.8E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.0E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.8E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	2.9E-005	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.8E-002
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.6E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	5.4E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.9E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.8E-004	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.5E-003
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	4.1E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.1E-006
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.4E-006	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.9E-006	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	3.2E-004
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	7.4E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.5E-003
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.9E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.8E-005
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.4E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.7E-004
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.4E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.7E-004
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.0E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	6.1E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.7E-006	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.1E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.0E-006

Table 5-2-35
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: CON4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	7.1E-004	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.4E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.8E-004
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.1E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.9E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	6.3E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.5E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.9E-003
	(Total)												2.4E+000
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	7.1E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	7.9E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.2E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.6E-007	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.7E-006	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	4.3E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	8.5E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.5E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	1.9E-006
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	5.2E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.0E-003
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.5E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.0E-006
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.3E-006	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	7.3E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	4.1E+000
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	5.7E-006	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.4E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	4.7E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	2.1E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.1E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.6E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.4E-006	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.5E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.4E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.5E-005	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.4E+000
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	2.1E-007	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.9E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.5E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.3E-006	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.2E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	9.1E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	5.0E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	5.1E-006
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.7E-006	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.3E-006	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	3.9E-004
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	8.9E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.0E-003

Table 5-2-35
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: CON4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.3E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.9E-005
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.7E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.7E-004
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.3E-004
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.7E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	7.3E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	2.0E-006	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.5E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.2E-006
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	8.5E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.7E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.7E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	3.4E-004
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.5E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.4E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.3E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.6E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.8E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.0E-003
	(Total)												5.6E+000
												Total Hazard Index Across All Exposure Routes/Pathways	8.0E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-36
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: CON4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	6.3E-010	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.6E-009	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.1E-009	mg/kg-day	2.4E-001	kg-day/mg	9.9E-010
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.5E-008	mg/kg-day	3.4E-001	kg-day/mg	5.2E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.3E-008	mg/kg-day	3.4E-001	kg-day/mg	4.3E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.3E-009	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.2E-008	mg/kg-day	3.5E-001	kg-day/mg	4.1E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.3E-008	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.2E-008	mg/kg-day	2.0E+000	kg-day/mg	2.3E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	4.6E-007	mg/kg-day	2.0E+000	kg-day/mg	9.3E-007
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	5.1E-008	mg/kg-day	2.0E+000	kg-day/mg	1.0E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	4.0E-007	mg/kg-day	1.5E+000	kg-day/mg	6.0E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.9E-008	mg/kg-day	7.3E-001	kg-day/mg	1.4E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.1E-008	mg/kg-day	7.3E+000	kg-day/mg	1.5E-007
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.3E-008	mg/kg-day	7.3E-001	kg-day/mg	1.7E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.2E-008	mg/kg-day	7.3E-002	kg-day/mg	1.6E-009
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.4E-009	mg/kg-day	1.8E+000	kg-day/mg	2.5E-009
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.1E-007	mg/kg-day	1.4E-002	kg-day/mg	3.0E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.1E-007	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.9E-009	mg/kg-day	2.0E-002	kg-day/mg	3.8E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.7E-006	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.1E-008	mg/kg-day	7.3E-003	kg-day/mg	1.5E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.0E-006	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	4.4E-009	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E+000	kg-day/mg	1.1E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.1E-008	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	7.9E-009	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.1E-008	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.5E-009	mg/kg-day	1.3E+000	kg-day/mg	2.0E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.5E-009	mg/kg-day	3.5E-001	kg-day/mg	8.9E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.3E-009	mg/kg-day	4.5E+000	kg-day/mg	1.5E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.8E-008	mg/kg-day	7.3E-001	kg-day/mg	1.3E-008
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.2E-009	mg/kg-day	9.5E-004	kg-day/mg	2.1E-012

Table 5-2-36
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: CON4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	7.6E-006	mg/kg-day			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.4E-008	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.5E-008	mg/kg-day			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.3E-009	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.0E-008	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.6E-005	mg/kg-day			
	(Total)										2.0E-006
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	7.6E-010	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	2.0E-009	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	5.0E-009	kg-day/mg	2.4E-001	kg-day/mg	1.2E-009
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg	3.4E-001	kg-day/mg	6.3E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	4.6E-009	kg-day/mg	3.4E-001	kg-day/mg	1.6E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.6E-009	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	5.6E-009	kg-day/mg	3.5E-001	kg-day/mg	2.0E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.6E-008	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.4E-008	kg-day/mg	2.0E+000	kg-day/mg	2.8E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	7.8E-007	kg-day/mg	2.2E+000	kg-day/mg	1.8E-006
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	6.2E-008	kg-day/mg	2.0E+000	kg-day/mg	1.2E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.5E-007	kg-day/mg	1.6E+000	kg-day/mg	2.3E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	2.3E-008	kg-day/mg	7.3E-001	kg-day/mg	1.7E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.3E-008	kg-day/mg	8.6E+000	kg-day/mg	2.8E-007
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.8E-008	kg-day/mg	7.3E-001	kg-day/mg	2.0E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.6E-008	kg-day/mg	7.3E-002	kg-day/mg	1.9E-009
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.7E-010	kg-day/mg	1.8E+000	kg-day/mg	3.0E-010
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.5E-007	kg-day/mg	1.4E-002	kg-day/mg	3.6E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.8E-007	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	2.3E-009	kg-day/mg	2.0E-002	kg-day/mg	4.6E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	2.1E-007	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.5E-008	kg-day/mg	1.8E-002	kg-day/mg	4.4E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	2.4E-007	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	5.3E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg	8.1E+000	kg-day/mg	1.5E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.5E-008	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	9.6E-009	kg-day/mg			

Table 5-2-36
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: CON4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.5E-008	kg-day/mg			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.8E-009	kg-day/mg	1.3E+000	kg-day/mg	2.4E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	1.2E-009	kg-day/mg	3.5E-001	kg-day/mg	4.3E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.9E-009	kg-day/mg	4.5E+000	kg-day/mg	1.8E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	2.2E-008	kg-day/mg	7.3E-001	kg-day/mg	1.6E-008
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.7E-009	kg-day/mg	9.5E-004	kg-day/mg	2.5E-012
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	9.2E-007	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.9E-009	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.8E-008	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.6E-009	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.5E-008	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.9E-006	kg-day/mg			
	(Total)										2.7E-006
										Total Hazard Index Across All Exposure Routes/Pathways	4.7E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-37
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File:TRS4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	6.1E-009	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	6.8E-007
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.6E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.9E-007
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	4.0E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.2E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.4E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.3E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.3E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.1E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.2E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.3E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.3E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.1E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	4.5E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	2.2E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	4.9E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.9E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.3E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.0E-007	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	2.2E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	2.1E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.3E-008	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.0E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	3.0E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	6.0E-003
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.8E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.7E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	5.6E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.0E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.9E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.7E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	4.3E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.3E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.5E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.0E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	3.3E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	7.6E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.5E-004
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	2.0E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.0E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.5E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.9E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.4E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.9E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	3.1E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	6.3E-005
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.7E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	2.1E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.1E-007
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	7.3E-005	mg/kg-day			N/A	N/A	

Table 5-2-37
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File:TRS4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	2.3E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.5E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.9E-005
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.3E-007
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	2.0E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	6.5E-006
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.5E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.1E-004
	(Total)												2.5E-001
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	2.7E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	3.0E-006
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	6.9E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.5E-006
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.7E-007	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	6.5E-007	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.6E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.2E-004
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	5.6E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	7.1E-007
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.0E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.9E-004
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	5.7E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.9E-006
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	4.9E-007	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.7E-005	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	1.5E+000
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	2.2E-006	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	5.1E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	1.8E-002
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	8.0E-007	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.2E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	9.8E-007	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	9.2E-007	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	5.8E-009	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	8.9E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.5E-004
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.3E-005	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	5.3E-001
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	8.0E-008	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	7.3E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.4E-002
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	8.7E-007	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	8.3E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	3.4E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.9E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	1.9E-006
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	6.5E-007	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	8.7E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	1.5E-004
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	3.3E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.1E-003
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	8.8E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.2E-005

Table 5-2-37
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File:TRS4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	6.5E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.2E-004
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	4.3E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	8.6E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.4E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.8E-004
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	7.6E-007	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	9.4E-008	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.7E-007
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	3.2E-005	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.0E-007	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	6.5E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.3E-004
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	5.6E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.8E-006
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	8.6E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.9E-005
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	6.7E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.4E-004
	(Total)												2.1E+000
												Total Hazard Index Across All Exposure Routes/Pathways	2.4E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-38
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File:TRS4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	5.1E-010	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	1.3E-009	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	3.3E-009	mg/kg-day	2.4E-001	kg-day/mg	7.9E-010
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-008	mg/kg-day	3.4E-001	kg-day/mg	4.2E-009
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.0E-008	mg/kg-day	3.4E-001	kg-day/mg	3.4E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.1E-009	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	9.3E-009	mg/kg-day	3.5E-001	kg-day/mg	3.3E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.1E-008	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	9.3E-009	mg/kg-day	2.0E+000	kg-day/mg	1.9E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	3.7E-007	mg/kg-day	2.0E+000	kg-day/mg	7.4E-007
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	4.1E-008	mg/kg-day	2.0E+000	kg-day/mg	8.2E-008
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.2E-007	mg/kg-day	1.5E+000	kg-day/mg	4.8E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	1.5E-008	mg/kg-day	7.3E-001	kg-day/mg	1.1E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.7E-008	mg/kg-day	7.3E+000	kg-day/mg	1.2E-007
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	1.9E-008	mg/kg-day	7.3E-001	kg-day/mg	1.4E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	1.7E-008	mg/kg-day	7.3E-002	kg-day/mg	1.3E-009
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	1.1E-009	mg/kg-day	1.8E+000	kg-day/mg	2.0E-009
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.7E-007	mg/kg-day	1.4E-002	kg-day/mg	2.4E-009
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	2.5E-007	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	1.5E-009	mg/kg-day	2.0E-002	kg-day/mg	3.0E-011
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	1.4E-006	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.6E-008	mg/kg-day	7.3E-003	kg-day/mg	1.2E-010
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	1.6E-006	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	3.6E-009	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-008	mg/kg-day	7.3E+000	kg-day/mg	8.9E-008
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.6E-008	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	6.3E-009	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	1.7E-008	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	1.2E-009	mg/kg-day	1.3E+000	kg-day/mg	1.6E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.0E-009	mg/kg-day	3.5E-001	kg-day/mg	7.1E-010
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	2.6E-009	mg/kg-day	4.5E+000	kg-day/mg	1.2E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	1.4E-008	mg/kg-day	7.3E-001	kg-day/mg	1.0E-008
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	1.8E-009	mg/kg-day	9.5E-004	kg-day/mg	1.7E-012
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	6.1E-006	mg/kg-day			

Table 5-2-38
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File:TRS4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	1.9E-008	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	1.2E-008	mg/kg-day			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	1.1E-009	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	1.6E-008	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	1.3E-005	mg/kg-day			
	(Total)										1.6E-006
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	2.2E-009	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	5.8E-009	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.5E-008	kg-day/mg	2.4E-001	kg-day/mg	3.5E-009
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.4E-008	kg-day/mg	3.4E-001	kg-day/mg	1.8E-008
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.3E-008	kg-day/mg	3.4E-001	kg-day/mg	4.6E-009
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	4.6E-009	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.6E-008	kg-day/mg	3.5E-001	kg-day/mg	5.7E-009
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	4.7E-008	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	4.1E-008	kg-day/mg	2.0E+000	kg-day/mg	8.2E-008
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.3E-006	kg-day/mg	2.2E+000	kg-day/mg	5.1E-006
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	1.8E-007	kg-day/mg	2.0E+000	kg-day/mg	3.6E-007
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	4.2E-007	kg-day/mg	1.6E+000	kg-day/mg	6.7E-007
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	6.7E-008	kg-day/mg	7.3E-001	kg-day/mg	4.9E-008
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	9.7E-008	kg-day/mg	8.6E+000	kg-day/mg	8.3E-007
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	8.2E-008	kg-day/mg	7.3E-001	kg-day/mg	6.0E-008
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	7.6E-008	kg-day/mg	7.3E-002	kg-day/mg	5.6E-009
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	4.8E-010	kg-day/mg	1.8E+000	kg-day/mg	8.7E-010
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	7.4E-007	kg-day/mg	1.4E-002	kg-day/mg	1.0E-008
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.1E-006	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	6.7E-009	kg-day/mg	2.0E-002	kg-day/mg	1.3E-010
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	6.1E-007	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.3E-008	kg-day/mg	1.8E-002	kg-day/mg	1.3E-009
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	6.9E-007	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.6E-008	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.4E-008	kg-day/mg	8.1E+000	kg-day/mg	4.4E-007
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.3E-008	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	2.8E-008	kg-day/mg			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	7.3E-008	kg-day/mg			

Table 5-2-38
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File:TRS4BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	5.4E-009	kg-day/mg	1.3E+000	kg-day/mg	7.0E-009
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	3.6E-009	kg-day/mg	3.5E-001	kg-day/mg	1.2E-009
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.2E-008	kg-day/mg	4.5E+000	kg-day/mg	5.2E-008
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	6.3E-008	kg-day/mg	7.3E-001	kg-day/mg	4.6E-008
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	7.8E-009	kg-day/mg	9.5E-004	kg-day/mg	7.4E-012
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	2.7E-006	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	8.4E-009	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.4E-008	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	4.6E-009	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.2E-008	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	5.6E-006	kg-day/mg			
	(Total)										7.8E-006
										Total Hazard Index Across All Exposure Routes/Pathways	9.4E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-39
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.6E-009	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.7E-007
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	4.1E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.0E-007
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.0E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.8E-008	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	3.1E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	6.3E-005
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	3.3E-009	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.3E-008
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.9E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.8E-005
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	3.3E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.1E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.9E-008	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	1.2E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	5.8E-002
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	1.3E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	1.0E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.3E-003
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	4.7E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	5.2E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	5.8E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	5.4E-008	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	3.4E-009	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	5.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.6E-005
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	7.7E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.5E-003
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	4.7E-009	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	4.3E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.4E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	5.1E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	4.9E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.2E-004
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.1E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.1E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.8E-008	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	5.1E-008	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	8.5E-006
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	2.0E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.6E-005
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	5.2E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.3E-006
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	3.8E-009	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.3E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	6.3E-009	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.3E-005
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	8.1E-009	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.6E-005
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	4.5E-008	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	5.5E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.8E-008
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.9E-005	mg/kg-day			N/A	N/A	

Table 5-2-39
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	5.9E-008	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.8E-008	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	7.6E-006
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	3.3E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-007
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	5.0E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.7E-006
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	3.9E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.3E-004
	(Total)												6.5E-002
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	2.3E-009	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	2.5E-007
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	5.9E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.9E-007
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.5E-008	mg/kg-day			N/A	N/A	
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.5E-008	mg/kg-day			N/A	N/A	
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	1.4E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.7E-005
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	4.7E-009	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	6.0E-008
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.7E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.3E-005
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	4.8E-008	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-007
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	4.2E-008	mg/kg-day			N/A	N/A	
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	2.3E-006	mg/kg-day	1.8E-005	mg/kg-day	N/A	N/A	1.3E-001
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	1.8E-007	mg/kg-day			N/A	N/A	
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	4.3E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	1.5E-003
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	6.8E-008	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	9.8E-008	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	8.3E-008	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	7.7E-008	mg/kg-day			N/A	N/A	
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	4.9E-010	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	7.6E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.8E-005
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	1.1E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	4.5E-002
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	6.8E-009	mg/kg-day			N/A	N/A	
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	6.2E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.1E-003
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.4E-008	mg/kg-day			N/A	N/A	
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	7.0E-007	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	2.9E-005
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.6E-008	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	1.6E-007
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.5E-008	mg/kg-day			N/A	N/A	
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.4E-008	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	1.2E-005
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	2.8E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	9.4E-005
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	7.5E-008	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.9E-006

Table 5-2-39
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	5.5E-009	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.8E-005
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	3.6E-009	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	7.3E-006
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	1.2E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.3E-005
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	6.4E-008	mg/kg-day			N/A	N/A	
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	7.9E-009	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.0E-008
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	2.7E-006	mg/kg-day			N/A	N/A	
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	8.5E-009	mg/kg-day			N/A	N/A	
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	5.5E-008	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.1E-005
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	4.7E-009	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.4E-007
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	7.3E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.4E-006
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	5.6E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	6.3E-005
	(Total)												1.8E-001
												Total Hazard Index Across All Exposure Routes/Pathways	2.4E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-40
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.1E-011	mg/kg-day			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	2.9E-011	mg/kg-day			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	7.3E-011	mg/kg-day	2.4E-001	kg-day/mg	1.8E-011
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.7E-010	mg/kg-day	3.4E-001	kg-day/mg	9.3E-011
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	2.3E-010	mg/kg-day	3.4E-001	kg-day/mg	7.7E-011
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.3E-011	mg/kg-day			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.1E-010	mg/kg-day	3.5E-001	kg-day/mg	7.2E-011
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.4E-010	mg/kg-day			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	2.1E-010	mg/kg-day	2.0E+000	kg-day/mg	4.1E-010
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	8.3E-009	mg/kg-day	2.0E+000	kg-day/mg	1.7E-008
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	9.1E-010	mg/kg-day	2.0E+000	kg-day/mg	1.8E-009
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	7.1E-009	mg/kg-day	1.5E+000	kg-day/mg	1.1E-008
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	3.4E-010	mg/kg-day	7.3E-001	kg-day/mg	2.5E-010
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.8E-010	mg/kg-day	7.3E+000	kg-day/mg	2.7E-009
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	4.1E-010	mg/kg-day	7.3E-001	kg-day/mg	3.0E-010
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	3.9E-010	mg/kg-day	7.3E-002	kg-day/mg	2.8E-011
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	2.4E-011	mg/kg-day	1.8E+000	kg-day/mg	4.4E-011
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.8E-009	mg/kg-day	1.4E-002	kg-day/mg	5.3E-011
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	5.5E-009	mg/kg-day			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	3.4E-011	mg/kg-day	2.0E-002	kg-day/mg	6.8E-013
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	3.1E-008	mg/kg-day			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.7E-010	mg/kg-day	7.3E-003	kg-day/mg	2.7E-012
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	3.5E-008	mg/kg-day			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	7.9E-011	mg/kg-day			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.7E-010	mg/kg-day	7.3E+000	kg-day/mg	2.0E-009
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.7E-010	mg/kg-day			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	1.4E-010	mg/kg-day			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	3.7E-010	mg/kg-day			
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	2.7E-011	mg/kg-day	1.3E+000	kg-day/mg	3.5E-011
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	4.5E-011	mg/kg-day	3.5E-001	kg-day/mg	1.6E-011
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	5.8E-011	mg/kg-day	4.5E+000	kg-day/mg	2.6E-010
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	3.2E-010	mg/kg-day	7.3E-001	kg-day/mg	2.3E-010
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	3.9E-011	mg/kg-day	9.5E-004	kg-day/mg	3.7E-014
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.4E-007	mg/kg-day			

Table 5-2-40
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	4.2E-010	mg/kg-day			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	2.7E-010	mg/kg-day			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	2.3E-011	mg/kg-day			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	3.6E-010	mg/kg-day			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	2.8E-007	mg/kg-day			
	(Total)										3.6E-008
Dermal	1,2-Dichloroethene (total)	1.2E-002	mg/kg	1.2E-002	mg/kg	M	1.6E-011	kg-day/mg			
	2-Methylnaphthalene	3.1E-002	mg/kg	3.1E-002	mg/kg	M	4.2E-011	kg-day/mg			
	4,4'-DDD	7.8E-002	mg/kg	7.8E-002	mg/kg	M	1.1E-010	kg-day/mg	2.4E-001	kg-day/mg	2.5E-011
	4,4'-DDE	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.9E-010	kg-day/mg	3.4E-001	kg-day/mg	1.3E-010
	4,4'-DDT	2.4E-001	mg/kg	2.4E-001	mg/kg	M	9.7E-011	kg-day/mg	3.4E-001	kg-day/mg	3.3E-011
	Acetone	2.5E-002	mg/kg	2.5E-002	mg/kg	M	3.4E-011	kg-day/mg			
	alpha-Chlordane	2.2E-001	mg/kg	2.2E-001	mg/kg	M	1.2E-010	kg-day/mg	3.5E-001	kg-day/mg	4.2E-011
	Anthracene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	3.4E-010	kg-day/mg			
	Aroclor-1248	2.2E-001	mg/kg	2.2E-001	mg/kg	M	3.0E-010	kg-day/mg	2.0E+000	kg-day/mg	6.0E-010
	Aroclor-1254	8.8E+000	mg/kg	8.8E+000	mg/kg	M	1.7E-008	kg-day/mg	2.2E+000	kg-day/mg	3.7E-008
	Aroclor-1260	9.7E-001	mg/kg	9.7E-001	mg/kg	M	1.3E-009	kg-day/mg	2.0E+000	kg-day/mg	2.6E-009
	Arsenic	7.6E+000	mg/kg	7.6E+000	mg/kg	M	3.1E-009	kg-day/mg	1.6E+000	kg-day/mg	4.9E-009
	Benzo(a)anthracene	3.6E-001	mg/kg	3.6E-001	mg/kg	M	4.9E-010	kg-day/mg	7.3E-001	kg-day/mg	3.6E-010
	Benzo(a)pyrene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	7.0E-010	kg-day/mg	8.6E+000	kg-day/mg	6.0E-009
	Benzo(b)fluoranthene	4.4E-001	mg/kg	4.4E-001	mg/kg	M	6.0E-010	kg-day/mg	7.3E-001	kg-day/mg	4.3E-010
	Benzo(k)fluoranthene	4.1E-001	mg/kg	4.1E-001	mg/kg	M	5.5E-010	kg-day/mg	7.3E-002	kg-day/mg	4.0E-011
	beta-BHC	2.6E-002	mg/kg	2.6E-002	mg/kg	M	3.5E-012	kg-day/mg	1.6E+000	kg-day/mg	6.3E-012
	bis(2-Ethylhexyl)phthalate	4.0E+000	mg/kg	4.0E+000	mg/kg	M	5.4E-009	kg-day/mg	1.4E-002	kg-day/mg	7.6E-011
	Cadmium	5.9E+000	mg/kg	5.9E+000	mg/kg	M	8.0E-009	kg-day/mg			
	Carbazole	3.6E-002	mg/kg	3.6E-002	mg/kg	M	4.9E-011	kg-day/mg	2.0E-002	kg-day/mg	9.7E-013
	Chromium (total)	3.3E+001	mg/kg	3.3E+001	mg/kg	M	4.5E-009	kg-day/mg			
	Chrysene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	5.3E-010	kg-day/mg	1.8E-002	kg-day/mg	9.4E-012
	Copper	3.7E+001	mg/kg	3.7E+001	mg/kg	M	5.0E-009	kg-day/mg			
	Di-n-butylphthalate	8.4E-002	mg/kg	8.4E-002	mg/kg	M	1.1E-010	kg-day/mg			
	Dibenzo(a,h)anthracene	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.9E-010	kg-day/mg	8.1E+000	kg-day/mg	3.2E-009
	Endosulfan I	3.9E-001	mg/kg	3.9E-001	mg/kg	M	5.3E-010	kg-day/mg			
	Endrin	1.5E-001	mg/kg	1.5E-001	mg/kg	M	2.0E-010	kg-day/mg			
	Fluoranthene	4.0E-001	mg/kg	4.0E-001	mg/kg	M	5.3E-010	kg-day/mg			

Table 5-2-40
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 4B, Sediment (Creek)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRS4BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	gamma-BHC	2.9E-002	mg/kg	2.9E-002	mg/kg	M	3.9E-011	kg-day/mg	1.3E+000	kg-day/mg	5.1E-011
	gamma-Chlordane	4.8E-002	mg/kg	4.8E-002	mg/kg	M	2.6E-011	kg-day/mg	3.5E-001	kg-day/mg	9.1E-012
	Heptachlor	6.2E-002	mg/kg	6.2E-002	mg/kg	M	8.4E-011	kg-day/mg	4.5E+000	kg-day/mg	3.8E-010
	Indeno(1,2,3-cd)pyrene	3.4E-001	mg/kg	3.4E-001	mg/kg	M	4.6E-010	kg-day/mg	7.3E-001	kg-day/mg	3.4E-010
	Isophorone	4.2E-002	mg/kg	4.2E-002	mg/kg	M	5.7E-011	kg-day/mg	9.5E-004	kg-day/mg	5.4E-014
	Lead	1.4E+002	mg/kg	1.4E+002	mg/kg	M	1.9E-008	kg-day/mg			
	Mercury	4.5E-001	mg/kg	4.5E-001	mg/kg	M	6.1E-011	kg-day/mg			
	Methoxychlor	2.9E-001	mg/kg	2.9E-001	mg/kg	M	3.9E-010	kg-day/mg			
	Naphthalene	2.5E-002	mg/kg	2.5E-002	mg/kg	M	3.4E-011	kg-day/mg			
	Pyrene	3.9E-001	mg/kg	3.9E-001	mg/kg	M	5.2E-010	kg-day/mg			
	Zinc	3.0E+002	mg/kg	3.0E+002	mg/kg	M	4.0E-008	kg-day/mg			
	(Total)										5.7E-008
										Total Hazard Index Across All Exposure Routes/Pathways	9.2E-008

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-41
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	1.3E-008	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.1E-008
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	3.1E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	6.2E-005
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	2.6E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	4.4E-006
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.8E-002	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.8E-002
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	4.8E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	5.8E-006	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	1.5E-002
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	2.6E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	8.6E-002
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.2E-004	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.7E-003
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	2.1E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	4.5E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	5.5E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	2.7E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	8.3E-007	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	2.1E-007
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	8.2E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	4.1E-004
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	5.7E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.8E-005
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	1.0E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.1E-003
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	6.9E-007	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	9.1E-009	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	9.1E-007
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	3.6E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.2E-002
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	4.1E-006	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	4.8E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	7.5E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.5E-007
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	7.2E-007	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.3E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	3.1E-005
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	2.2E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.4E-005
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	2.6E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.6E-006
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	2.9E-009	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	5.7E-006
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.9E-006	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	3.9E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.3E-001
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	1.0E-004	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	4.8E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.4E-002
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.9E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.5E-005
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	4.6E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.3E-003
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.8E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	6.1E-005
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	4.0E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	5.7E-003
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	3.1E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.0E-003
	(Total)												3.0E-001
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	7.3E-008	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	1.3E-007
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.8E-006	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	5.5E-004

Table 5-2-41
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.5E-006	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	2.5E-005
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.0E-002	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.0E-002
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	2.8E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.2E-006
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	3.4E-006	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	8.5E-001
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	4.5E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	1.6E-001
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	7.1E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.0E-003
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.2E-005	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.4E-005	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	3.2E-005	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.6E-005	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	4.8E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	1.2E-006
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	4.8E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	2.4E-001
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	3.3E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.7E-004
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	6.0E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	2.4E-001
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	4.0E-006	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	5.3E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	5.5E-006
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	2.1E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	7.0E-002
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	2.4E-005	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	2.8E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.1E-003
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	4.4E-007	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	4.5E-006
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	4.2E-006	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	7.3E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	1.8E-004
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.3E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.1E-004
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.5E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.8E-005
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.7E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.3E-005
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.1E-005	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	2.3E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.6E-002
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	5.9E-005	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	2.8E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-002
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.7E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.5E-005
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	2.7E-005	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	2.7E-002
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.1E-005	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	3.5E-004
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	2.3E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	3.3E-003
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.8E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.0E-003
	(Total)												1.7E+000
												Total Hazard Index Across All Exposure Routes/Pathways	2.0E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-42
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	8.9E-011	mg/kg-day			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	2.2E-009	mg/kg-day			
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.9E-009	mg/kg-day			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.3E-004	mg/kg-day			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	3.4E-009	mg/kg-day			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	4.1E-008	mg/kg-day			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.8E-007	mg/kg-day	1.5E+000	kg-day/mg	2.7E-007
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	8.6E-007	mg/kg-day			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.5E-008	mg/kg-day	7.3E-001	kg-day/mg	1.1E-008
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.2E-008	mg/kg-day	7.3E+000	kg-day/mg	2.3E-007
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	3.9E-008	mg/kg-day	7.3E-001	kg-day/mg	2.8E-008
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.9E-008	mg/kg-day	7.3E-002	kg-day/mg	1.4E-009
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	5.9E-009	mg/kg-day			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	5.8E-009	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	4.0E-009	mg/kg-day	1.4E-002	kg-day/mg	5.6E-011
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	7.2E-009	mg/kg-day			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	4.8E-009	mg/kg-day	2.0E-002	kg-day/mg	9.7E-011
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	6.4E-011	mg/kg-day	6.1E-003	kg-day/mg	3.9E-013
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	2.5E-007	mg/kg-day			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	2.9E-008	mg/kg-day	7.3E-003	kg-day/mg	2.1E-010
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	3.3E-007	mg/kg-day			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	5.3E-010	mg/kg-day			
	Dibenzo(a,h)anthracene	8.3E-001	mg/kg	8.3E-001	mg/kg	M	5.1E-009	mg/kg-day	7.3E+000	kg-day/mg	3.7E-008
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	8.9E-010	mg/kg-day			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.5E-008	mg/kg-day			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.9E-009	mg/kg-day			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	2.0E-011	mg/kg-day	4.5E+000	kg-day/mg	9.1E-011
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.4E-008	mg/kg-day	7.3E-001	kg-day/mg	1.0E-008
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	2.8E-004	mg/kg-day			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	7.2E-007	mg/kg-day			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	3.4E-006	mg/kg-day			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.1E-009	mg/kg-day			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	3.3E-007	mg/kg-day			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.3E-008	mg/kg-day			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	2.8E-007	mg/kg-day			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	2.2E-006	mg/kg-day			
	(Total)										5.9E-007
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	5.1E-010	kg-day/mg			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.3E-008	kg-day/mg			

Table 5-2-42
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.1E-008	kg-day/mg			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	7.3E-005	kg-day/mg			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	2.0E-008	kg-day/mg			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	2.4E-008	kg-day/mg			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	3.2E-007	kg-day/mg	1.4E+000	kg-day/mg	4.5E-007
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	5.0E-007	kg-day/mg			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	8.7E-008	kg-day/mg	7.3E-001	kg-day/mg	6.4E-008
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.4E-007	kg-day/mg	6.2E+000	kg-day/mg	1.5E-006
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	2.2E-007	kg-day/mg	7.3E-001	kg-day/mg	1.6E-007
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.1E-007	kg-day/mg	7.3E-002	kg-day/mg	8.2E-009
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	3.4E-008	kg-day/mg			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	3.4E-008	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	2.3E-008	kg-day/mg	1.4E-002	kg-day/mg	3.3E-010
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	4.2E-008	kg-day/mg			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.8E-008	kg-day/mg	2.0E-002	kg-day/mg	5.6E-010
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	3.7E-010	kg-day/mg	5.9E-003	kg-day/mg	2.2E-012
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	1.5E-007	kg-day/mg			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	1.7E-007	kg-day/mg	3.0E-003	kg-day/mg	5.0E-010
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	1.9E-007	kg-day/mg			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	3.1E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	3.0E-008	kg-day/mg	6.6E+000	kg-day/mg	1.9E-007
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.1E-009	kg-day/mg			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	8.9E-008	kg-day/mg			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.1E-008	kg-day/mg			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.2E-010	kg-day/mg	4.5E+000	kg-day/mg	5.3E-010
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	8.0E-008	kg-day/mg	7.3E-001	kg-day/mg	5.8E-008
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	1.6E-004	kg-day/mg			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	4.2E-007	kg-day/mg			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	2.0E-006	kg-day/mg			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.2E-008	kg-day/mg			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	1.9E-007	kg-day/mg			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	7.5E-008	kg-day/mg			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	1.6E-007	kg-day/mg			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.3E-006	kg-day/mg			
	(Total)										2.4E-006
								Total Hazard Index Across All Exposure Routes/Pathways			3.0E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-43
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	7.9E-009	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.3E-008
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.9E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	3.8E-005
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.6E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	2.7E-006
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.1E-002	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.1E-002
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	3.0E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.0E-006
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	3.6E-006	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	9.1E-003
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.6E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.4E-002
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	7.6E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.1E-003
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.3E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.8E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	3.4E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.7E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	5.2E-007	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	1.3E-007
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	5.1E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.6E-004
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	3.6E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.8E-005
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	6.4E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.3E-003
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	4.3E-007	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	5.7E-009	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	5.7E-007
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	2.3E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	7.5E-003
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	2.5E-006	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	3.0E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	7.4E-004
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	4.7E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.7E-007
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	4.5E-007	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	7.9E-008	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	2.0E-005
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.4E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.4E-005
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.6E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.1E-006
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.8E-009	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	3.6E-006
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.2E-006	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	2.5E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.2E-002
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	6.4E-005	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	3.0E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.5E-002
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.2E-006
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	2.9E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-003
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.1E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	3.8E-005
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	2.5E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	3.5E-003
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.9E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.5E-004
	(Total)												1.9E-001
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	1.6E-008	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	2.8E-008
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	3.8E-007	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	1.2E-004

Table 5-2-43
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	3.3E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	5.5E-006
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	2.2E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.2E-003
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	6.0E-007	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.0E-006
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	7.3E-007	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	1.8E-001
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	9.6E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.4E-002
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.5E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.2E-004
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	2.7E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	7.4E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	6.9E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	3.4E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	1.0E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	2.6E-007
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	1.0E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	5.1E-002
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	7.1E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.6E-005
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	1.3E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	5.1E-002
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.6E-007	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	1.1E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.2E-006
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	4.5E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.5E-002
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	5.1E-006	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	5.9E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	2.5E-004
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	9.4E-008	mg/kg-day	9.7E-002	mg/kg-day	N/A	N/A	9.7E-007
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	9.1E-007	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.6E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	3.9E-005
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	2.7E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.8E-005
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	3.3E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	8.2E-006
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	3.6E-009	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	7.1E-006
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	2.4E-006	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	4.9E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-002
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	1.3E-005	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	6.0E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.0E-003
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	3.7E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.8E-005
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	5.8E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	5.8E-003
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	2.3E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.6E-005
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	5.0E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	7.1E-004
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	3.9E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.3E-004
	(Total)												3.6E-001
													Total Hazard Index Across All Exposure Routes/Pathways 5.5E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-44
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	5.5E-012	mg/kg-day			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.3E-010	mg/kg-day			
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.2E-010	mg/kg-day			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	7.9E-006	mg/kg-day			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	2.1E-010	mg/kg-day			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	2.6E-009	mg/kg-day			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.1E-008	mg/kg-day	1.5E+000	kg-day/mg	1.7E-008
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	5.4E-008	mg/kg-day			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	9.4E-010	mg/kg-day	7.3E-001	kg-day/mg	6.8E-010
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.0E-009	mg/kg-day	7.3E+000	kg-day/mg	1.5E-008
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	2.4E-009	mg/kg-day	7.3E-001	kg-day/mg	1.8E-009
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.2E-009	mg/kg-day	7.3E-002	kg-day/mg	8.8E-011
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	3.7E-010	mg/kg-day			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	3.6E-010	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	2.5E-010	mg/kg-day	1.4E-002	kg-day/mg	3.5E-012
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	4.5E-010	mg/kg-day			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	3.0E-010	mg/kg-day	2.0E-002	kg-day/mg	6.0E-012
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	4.0E-012	mg/kg-day	6.1E-003	kg-day/mg	2.5E-014
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	1.6E-008	mg/kg-day			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	1.8E-009	mg/kg-day	7.3E-003	kg-day/mg	1.3E-011
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	2.1E-008	mg/kg-day			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	3.3E-011	mg/kg-day			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	3.2E-010	mg/kg-day	7.3E+000	kg-day/mg	2.3E-009
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.5E-011	mg/kg-day			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	9.6E-010	mg/kg-day			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.2E-010	mg/kg-day			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.3E-012	mg/kg-day	4.5E+000	kg-day/mg	5.7E-012
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	8.6E-010	mg/kg-day	7.3E-001	kg-day/mg	6.3E-010
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	1.7E-005	mg/kg-day			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	4.5E-008	mg/kg-day			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	2.1E-007	mg/kg-day			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.3E-010	mg/kg-day			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	2.0E-008	mg/kg-day			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	8.1E-010	mg/kg-day			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	1.7E-008	mg/kg-day			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.4E-007	mg/kg-day			
	(Total)										3.7E-008
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	1.1E-011	kg-day/mg			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	2.7E-010	kg-day/mg			

Table 5-2-44
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: ARES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	2.3E-010	kg-day/mg			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.6E-006	kg-day/mg			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	4.2E-010	kg-day/mg			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	5.1E-010	kg-day/mg			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	6.8E-009	kg-day/mg	1.4E+000	kg-day/mg	9.7E-009
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.1E-008	kg-day/mg			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.9E-009	kg-day/mg	7.3E-001	kg-day/mg	1.4E-009
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	5.2E-009	kg-day/mg	6.2E+000	kg-day/mg	3.2E-008
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	4.8E-009	kg-day/mg	7.3E-001	kg-day/mg	3.5E-009
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	2.4E-009	kg-day/mg	7.3E-002	kg-day/mg	1.8E-010
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	7.3E-010	kg-day/mg			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	7.2E-010	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	5.0E-010	kg-day/mg	1.4E-002	kg-day/mg	7.0E-012
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	9.1E-010	kg-day/mg			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	6.0E-010	kg-day/mg	2.0E-002	kg-day/mg	1.2E-011
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	8.1E-012	kg-day/mg	5.9E-003	kg-day/mg	4.7E-014
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	3.2E-009	kg-day/mg			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	3.6E-009	kg-day/mg	3.0E-003	kg-day/mg	1.1E-011
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	4.2E-009	kg-day/mg			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	6.6E-011	kg-day/mg			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	6.4E-010	kg-day/mg	6.6E+000	kg-day/mg	4.2E-009
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.1E-010	kg-day/mg			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.9E-009	kg-day/mg			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	2.3E-010	kg-day/mg			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	2.5E-012	kg-day/mg	4.5E+000	kg-day/mg	1.1E-011
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.7E-009	kg-day/mg	7.3E-001	kg-day/mg	1.3E-009
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	3.5E-006	kg-day/mg			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	9.0E-009	kg-day/mg			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	4.2E-008	kg-day/mg			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.6E-010	kg-day/mg			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	4.1E-009	kg-day/mg			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.6E-009	kg-day/mg			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	3.5E-009	kg-day/mg			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	2.7E-008	kg-day/mg			
	(Total)										5.3E-008
											Total Hazard Index Across All Exposure Routes/Pathways 9.0E-008

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-2-45
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	8.4E-008	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	4.2E-008
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	2.1E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	4.1E-004
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.7E-006	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	2.9E-005
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.2E-001	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.2E-001
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	3.2E-006	mg/kg-day	3.0E+000	mg/kg-day	N/A	N/A	1.1E-006
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	3.9E-005	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	9.7E-002
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.7E-004	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.7E-001
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	8.1E-004	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.2E-002
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.4E-005	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.0E-005	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	3.6E-005	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.8E-005	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	5.5E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	1.4E-006
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	5.5E-006	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.7E-003
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	3.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.9E-004
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	6.8E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.4E-002
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	4.6E-006	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	6.1E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	6.1E-006
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	2.4E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-002
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	2.7E-005	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	3.2E-004	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	7.9E-003
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	5.0E-007	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.0E-007
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	4.8E-006	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	8.4E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	2.1E-004
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.4E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.6E-004
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.7E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	4.4E-006
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.9E-008	mg/kg-day	5.0E-005	mg/kg-day	N/A	N/A	3.8E-004
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.3E-005	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	2.6E-001	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.7E-001
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	6.8E-004	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	3.2E-003	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-001
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.0E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.9E-005
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	3.1E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.5E-002
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.2E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.1E-005
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	2.6E-004	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	3.8E-002
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	2.1E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.9E-003
	(Total)												1.9E+000
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	4.4E-008	mg/kg-day	1.9E+000	mg/kg-day	N/A	N/A	2.3E-008
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.1E-006	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	3.3E-004

Table 5-2-45
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	9.2E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.5E-005
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	6.3E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.3E-003
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	1.7E-006	mg/kg-day	3.0E+000	mg/kg-day	N/A	N/A	5.6E-007
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	2.0E-006	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	5.1E-001
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	2.7E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	9.4E-002
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	4.3E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	6.1E-004
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	7.4E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	2.1E-005	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	1.9E-005	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	9.5E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	2.9E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	7.3E-007
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	2.9E-006	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.4E-001
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	2.0E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.9E-005
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	3.6E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.4E-001
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.4E-006	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	3.2E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	3.3E-006
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	1.3E-005	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	6.3E-003
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	1.4E-005	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	1.7E-005	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	6.9E-004
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	2.6E-007	mg/kg-day	9.7E-001	mg/kg-day	N/A	N/A	2.7E-007
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	2.5E-006	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.4E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	1.1E-004
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	7.6E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.9E-004
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	9.2E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	2.3E-006
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.0E-008	mg/kg-day	5.0E-005	mg/kg-day	N/A	N/A	2.0E-004
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	6.8E-006	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	1.4E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.6E-002
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	3.6E-005	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.4E-003
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.0E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.6E-005
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	1.6E-005	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.6E-002
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	6.4E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.1E-005
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	1.4E-005	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	2.0E-003
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.1E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	(Total)												9.8E-001
												Total Hazard Index Across All Exposure Routes/Pathways	2.9E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Subchronic values were used.

Table 5-2-46
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	5.4E-009	mg/kg-day			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.3E-007	mg/kg-day			
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.1E-007	mg/kg-day			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	7.7E-003	mg/kg-day			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	2.0E-007	mg/kg-day			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	2.5E-006	mg/kg-day			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.1E-005	mg/kg-day	1.5E+000	kg-day/mg	1.6E-005
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	5.2E-005	mg/kg-day			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	9.1E-007	mg/kg-day	7.3E-001	kg-day/mg	6.6E-007
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.9E-006	mg/kg-day	7.3E+000	kg-day/mg	1.4E-005
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	2.3E-006	mg/kg-day	7.3E-001	kg-day/mg	1.7E-006
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.2E-006	mg/kg-day	7.3E-002	kg-day/mg	8.5E-008
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	3.6E-007	mg/kg-day			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	3.5E-007	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	2.4E-007	mg/kg-day	1.4E-002	kg-day/mg	3.4E-009
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	4.4E-007	mg/kg-day			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.9E-007	mg/kg-day	2.0E-002	kg-day/mg	5.9E-009
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	3.9E-009	mg/kg-day	6.1E-003	kg-day/mg	2.4E-011
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	1.5E-005	mg/kg-day			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	1.7E-006	mg/kg-day	7.3E-003	kg-day/mg	1.3E-008
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	2.0E-005	mg/kg-day			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	3.2E-008	mg/kg-day			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	3.1E-007	mg/kg-day	7.3E+000	kg-day/mg	2.3E-006
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	5.4E-008	mg/kg-day			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	9.3E-007	mg/kg-day			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.1E-007	mg/kg-day			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	1.2E-009	mg/kg-day	4.5E+000	kg-day/mg	5.5E-009
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	8.3E-007	mg/kg-day	7.3E-001	kg-day/mg	6.1E-007
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	1.7E-002	mg/kg-day			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	4.4E-005	mg/kg-day			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	2.0E-004	mg/kg-day			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	1.3E-007	mg/kg-day			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	2.0E-005	mg/kg-day			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	7.8E-007	mg/kg-day			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	1.7E-005	mg/kg-day			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.3E-004	mg/kg-day			
	(Total)										3.6E-005
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	2.8E-009	kg-day/mg			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	6.9E-008	kg-day/mg			

Table 5-2-46
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	*Current/Future*
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	5.9E-008	kg-day/mg			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	4.0E-004	kg-day/mg			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	1.1E-007	kg-day/mg			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	1.3E-007	kg-day/mg			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.7E-006	kg-day/mg	1.4E+000	kg-day/mg	2.5E-006
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	2.7E-006	kg-day/mg			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	4.8E-007	kg-day/mg	7.3E-001	kg-day/mg	3.5E-007
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.3E-006	kg-day/mg	6.2E+000	kg-day/mg	8.2E-006
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	1.2E-006	kg-day/mg	7.3E-001	kg-day/mg	9.0E-007
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	6.1E-007	kg-day/mg	7.3E-002	kg-day/mg	4.5E-008
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	1.9E-007	kg-day/mg			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	1.8E-007	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	1.3E-007	kg-day/mg	1.4E-002	kg-day/mg	1.8E-009
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	2.3E-007	kg-day/mg			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.5E-007	kg-day/mg	2.0E-002	kg-day/mg	3.1E-009
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	2.1E-009	kg-day/mg	5.9E-003	kg-day/mg	1.2E-011
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	8.1E-007	kg-day/mg			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	9.1E-007	kg-day/mg	3.0E-003	kg-day/mg	2.7E-009
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	1.1E-006	kg-day/mg			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	1.7E-008	kg-day/mg			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	1.6E-007	kg-day/mg	6.6E+000	kg-day/mg	1.1E-006
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	2.8E-008	kg-day/mg			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	4.9E-007	kg-day/mg			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	5.9E-008	kg-day/mg			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	6.4E-010	kg-day/mg	4.5E+000	kg-day/mg	2.9E-009
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	4.4E-007	kg-day/mg	7.3E-001	kg-day/mg	3.2E-007
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	8.8E-004	kg-day/mg			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	2.3E-006	kg-day/mg			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	1.1E-005	kg-day/mg			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	6.6E-008	kg-day/mg			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	1.0E-006	kg-day/mg			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	4.1E-007	kg-day/mg			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	8.9E-007	kg-day/mg			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	6.9E-006	kg-day/mg			
	(Total)										1.3E-005
										Total Hazard Index Across All Exposure Routes/Pathways	4.9E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Subchronic values were used.

Table 5-2-47
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	4.2E-008	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	2.1E-008
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	1.0E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.0E-004
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	8.7E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.5E-005
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	6.0E-002	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.0E-002
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	1.6E-006	mg/kg-day	3.0E+000	mg/kg-day	N/A	N/A	5.3E-007
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	1.9E-005	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	4.8E-002
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	8.5E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.8E-001
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	4.1E-004	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.8E-003
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	7.1E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.5E-005	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	1.8E-005	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	9.1E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	2.8E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	6.9E-007
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	2.7E-006	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	1.4E-003
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	1.9E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.5E-005
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	3.4E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	6.8E-003
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	2.3E-006	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	3.0E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.0E-006
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	1.2E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.0E-003
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	1.3E-005	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	1.6E-004	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.9E-003
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	2.5E-007	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.5E-007
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	2.4E-006	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	4.2E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	1.0E-004
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	7.2E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.8E-004
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	8.7E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	2.2E-006
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	9.5E-009	mg/kg-day	5.0E-005	mg/kg-day	N/A	N/A	1.9E-004
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	6.5E-006	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	1.3E-001	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.4E-001
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	3.4E-004	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	1.6E-003	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.0E-002
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	9.8E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.4E-005
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	1.5E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.7E-003
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	6.1E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.0E-005
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	1.3E-004	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	1.9E-002
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	1.0E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.4E-003
	(Total)												9.6E-001
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	1.5E-008	mg/kg-day	1.9E+000	mg/kg-day	N/A	N/A	7.9E-009
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	3.6E-007	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	1.1E-004

Table 5-2-47
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	3.1E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	5.2E-006
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	2.1E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.1E-003
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	5.7E-007	mg/kg-day	3.0E+000	mg/kg-day	N/A	N/A	1.9E-007
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	7.0E-007	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	1.7E-001
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	9.2E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.2E-002
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	1.5E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	2.1E-004
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	2.5E-006	mg/kg-day			N/A	N/A	
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	7.1E-006	mg/kg-day			N/A	N/A	
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	6.6E-006	mg/kg-day			N/A	N/A	
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	3.3E-006	mg/kg-day			N/A	N/A	
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	1.0E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	2.5E-007
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	9.8E-007	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	4.9E-002
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	6.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.4E-005
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	1.2E-006	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	4.9E-002
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	8.2E-007	mg/kg-day			N/A	N/A	
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	1.1E-008	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.1E-006
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	4.3E-006	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.2E-003
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	4.9E-006	mg/kg-day			N/A	N/A	
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	5.7E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	2.4E-004
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	9.0E-008	mg/kg-day	9.7E-001	mg/kg-day	N/A	N/A	9.3E-008
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	8.7E-007	mg/kg-day			N/A	N/A	
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	1.5E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	3.8E-005
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	2.6E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.5E-005
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	3.1E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	7.9E-007
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	3.4E-009	mg/kg-day	5.0E-005	mg/kg-day	N/A	N/A	6.8E-005
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	2.3E-006	mg/kg-day			N/A	N/A	
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	4.7E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-002
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	1.2E-005	mg/kg-day			N/A	N/A	
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	5.7E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.9E-003
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	3.5E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	8.8E-006
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	5.5E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	5.5E-003
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	2.2E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	7.3E-006
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	4.7E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	6.8E-004
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	3.7E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.1E-004
	(Total)												3.4E-001
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Subchronic values are used.

Table 5-2-48
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES6CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	9.0E-010	mg/kg-day			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	2.2E-008	mg/kg-day			
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.9E-008	mg/kg-day			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	1.3E-003	mg/kg-day			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	3.4E-008	mg/kg-day			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	4.2E-007	mg/kg-day			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	1.8E-006	mg/kg-day	1.5E+000	kg-day/mg	2.7E-006
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	8.7E-006	mg/kg-day			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.5E-007	mg/kg-day	7.3E-001	kg-day/mg	1.1E-007
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	3.2E-007	mg/kg-day	7.3E+000	kg-day/mg	2.4E-006
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	3.9E-007	mg/kg-day	7.3E-001	kg-day/mg	2.9E-007
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	1.9E-007	mg/kg-day	7.3E-002	kg-day/mg	1.4E-008
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	5.9E-008	mg/kg-day			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	5.9E-008	mg/kg-day			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	4.1E-008	mg/kg-day	1.4E-002	kg-day/mg	5.7E-010
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	7.3E-008	mg/kg-day			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	4.9E-008	mg/kg-day	2.0E-002	kg-day/mg	9.8E-010
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	6.5E-010	mg/kg-day	6.1E-003	kg-day/mg	4.0E-012
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	2.6E-006	mg/kg-day			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	2.9E-007	mg/kg-day	7.3E-003	kg-day/mg	2.1E-009
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	3.4E-006	mg/kg-day			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	5.4E-009	mg/kg-day			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	5.2E-008	mg/kg-day	7.3E+000	kg-day/mg	3.8E-007
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	9.0E-009	mg/kg-day			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	1.5E-007	mg/kg-day			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	1.9E-008	mg/kg-day			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	2.0E-010	mg/kg-day	4.5E+000	kg-day/mg	9.2E-010
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	1.4E-007	mg/kg-day	7.3E-001	kg-day/mg	1.0E-007
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	2.8E-003	mg/kg-day			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	7.3E-006	mg/kg-day			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	3.4E-005	mg/kg-day			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	2.1E-008	mg/kg-day			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	3.3E-006	mg/kg-day			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	1.3E-007	mg/kg-day			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	2.8E-006	mg/kg-day			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	2.2E-005	mg/kg-day			
	(Total)										6.0E-006
Dermal	2-Butanone	1.1E-002	mg/kg	1.1E-002	mg/kg	M	3.2E-010	kg-day/mg			
	4-Methylphenol	2.7E-001	mg/kg	2.7E-001	mg/kg	M	7.8E-009	kg-day/mg			

Table 5-2-48
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Area 6, Sediment (Creek)
Receptor Population:	Resident
Receptor Age:	Child

File: CRES8CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Acenaphthene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	6.7E-009	kg-day/mg			
	Aluminum	1.6E+004	mg/kg	1.6E+004	mg/kg	M	4.6E-005	kg-day/mg			
	Anthracene	4.2E-001	mg/kg	4.2E-001	mg/kg	M	1.2E-008	kg-day/mg			
	Antimony	5.1E+000	mg/kg	5.1E+000	mg/kg	M	1.5E-008	kg-day/mg			
	Arsenic	2.3E+001	mg/kg	2.3E+001	mg/kg	M	2.0E-007	kg-day/mg	1.4E+000	kg-day/mg	2.8E-007
	Barium	1.1E+002	mg/kg	1.1E+002	mg/kg	M	3.1E-007	kg-day/mg			
	Benzo(a)anthracene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	5.5E-008	kg-day/mg	7.3E-001	kg-day/mg	4.0E-008
	Benzo(a)pyrene	4.0E+000	mg/kg	4.0E+000	mg/kg	M	1.5E-007	kg-day/mg	6.2E+000	kg-day/mg	9.4E-007
	Benzo(b)fluoranthene	4.8E+000	mg/kg	4.8E+000	mg/kg	M	1.4E-007	kg-day/mg	7.3E-001	kg-day/mg	1.0E-007
	Benzo(k)fluoranthene	2.4E+000	mg/kg	2.4E+000	mg/kg	M	7.0E-008	kg-day/mg	7.3E-002	kg-day/mg	5.1E-009
	Benzoic Acid	7.3E-001	mg/kg	7.3E-001	mg/kg	M	2.1E-008	kg-day/mg			
	Beryllium	7.2E-001	mg/kg	7.2E-001	mg/kg	M	2.1E-008	kg-day/mg			
	bis(2-Ethylhexyl)phthalate	5.0E-001	mg/kg	5.0E-001	mg/kg	M	1.5E-008	kg-day/mg	1.4E-002	kg-day/mg	2.0E-010
	Cadmium	9.0E-001	mg/kg	9.0E-001	mg/kg	M	2.6E-008	kg-day/mg			
	Carbazole	6.0E-001	mg/kg	6.0E-001	mg/kg	M	1.8E-008	kg-day/mg	2.0E-002	kg-day/mg	3.5E-010
	Chloroform	8.0E-003	mg/kg	8.0E-003	mg/kg	M	2.3E-010	kg-day/mg	5.9E-003	kg-day/mg	1.4E-012
	Chromium (total)	3.2E+001	mg/kg	3.2E+001	mg/kg	M	9.2E-008	kg-day/mg			
	Chrysene	3.6E+000	mg/kg	3.6E+000	mg/kg	M	1.0E-007	kg-day/mg	3.0E-003	kg-day/mg	3.1E-010
	Copper	4.2E+001	mg/kg	4.2E+001	mg/kg	M	1.2E-007	kg-day/mg			
	Di-n-butylphthalate	6.6E-002	mg/kg	6.6E-002	mg/kg	M	1.9E-009	kg-day/mg			
	Dibenzo(a,h)anthracene	6.3E-001	mg/kg	6.3E-001	mg/kg	M	1.9E-008	kg-day/mg	6.6E+000	kg-day/mg	1.2E-007
	Dibenzofuran	1.1E-001	mg/kg	1.1E-001	mg/kg	M	3.2E-009	kg-day/mg			
	Fluoranthene	1.9E+000	mg/kg	1.9E+000	mg/kg	M	5.6E-008	kg-day/mg			
	Fluorene	2.3E-001	mg/kg	2.3E-001	mg/kg	M	6.7E-009	kg-day/mg			
	Heptachlor	2.5E-003	mg/kg	2.5E-003	mg/kg	M	7.3E-011	kg-day/mg	4.5E+000	kg-day/mg	3.3E-010
	Indeno(1,2,3-cd)pyrene	1.7E+000	mg/kg	1.7E+000	mg/kg	M	5.0E-008	kg-day/mg	7.3E-001	kg-day/mg	3.6E-008
	Iron	3.5E+004	mg/kg	3.5E+004	mg/kg	M	1.0E-004	kg-day/mg			
	Lead	9.0E+001	mg/kg	9.0E+001	mg/kg	M	2.6E-007	kg-day/mg			
	Manganese	4.2E+002	mg/kg	4.2E+002	mg/kg	M	1.2E-006	kg-day/mg			
	Naphthalene	2.6E-001	mg/kg	2.6E-001	mg/kg	M	7.5E-009	kg-day/mg			
	Nickel	4.1E+001	mg/kg	4.1E+001	mg/kg	M	1.2E-007	kg-day/mg			
	Pyrene	1.6E+000	mg/kg	1.6E+000	mg/kg	M	4.7E-008	kg-day/mg			
	Vanadium	3.5E+001	mg/kg	3.5E+001	mg/kg	M	1.0E-007	kg-day/mg			
	Zinc	2.7E+002	mg/kg	2.7E+002	mg/kg	M	7.9E-007	kg-day/mg			
	(Total)										1.5E-006
								Total Hazard Index Across All Exposure Routes/Pathways			7.5E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Subchronic values are used.

Table 5-3-1
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: cfworkr1AA.123

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	4.7E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.7E-006
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	9.0E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	9.0E-005
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M	3.1E-005	mg/kg-day			N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	7.9E-008	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	6.8E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.4E-004
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	7.8E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.6E-003
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	2.1E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	5.2E-005
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	1.9E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.9E-006
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	9.4E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.0E-005
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	8.0E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.7E-004
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	2.2E-006	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	5.4E-006	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	3.9E-005
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	3.1E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	5.2E-006
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M	2.3E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.3E-004
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	5.7E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.9E-005
	(Total)												3.5E-003
Dermal	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	4.3E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	5.5E-007
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	1.0E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.0E-005
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M					N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	4.1E-005	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	7.8E-009	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	3.1E-004
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	9.0E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.0E-003
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	2.4E-007	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.0E-005
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	3.3E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.3E-006
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	1.8E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	2.0E-005
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	9.3E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.1E-005
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	1.0E-009	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	6.3E-007	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	4.5E-006
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	5.9E-007	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	1.0E-006
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	4.0E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.4E-006
	(Total)												3.4E-003
												Total Hazard Index Across All Exposure Routes/Pathways	6.9E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-2
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: cfworkr1AA.123

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	4.2E-008	mg/kg-day			
	Aluminum	9.60E-001	mg/L	9.60E-001	mg/L	M	8.1E-006	mg/kg-day			
	Ammonia	3.30E-001	mg/L	3.30E-001	mg/L	M	2.8E-006	mg/kg-day			
	Aroclor-1248	8.40E-004	mg/L	8.40E-004	mg/L	M	7.0E-009	mg/kg-day	2.0E+000	kg-day/mg	1.4E-008
	Cadmium	7.20E-004	mg/L	7.20E-004	mg/L	M	6.0E-009	mg/kg-day			
	Chromium (total)	8.30E-002	mg/L	8.30E-002	mg/L	M	7.0E-007	mg/kg-day			
	Copper	2.2E-002	mg/L	2.20E-002	mg/L	M	1.8E-007	mg/kg-day			
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.00E-003	mg/L	M	1.7E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.00E-003	mg/L	M	8.4E-009	mg/kg-day			
	Iron	8.5E-001	mg/L	8.51E-001	mg/L	M	7.1E-006	mg/kg-day			
	Lead	2.4E-002	mg/L	2.38E-002	mg/L	M	2.0E-007	mg/kg-day			
	Manganese	5.8E-002	mg/L	5.80E-002	mg/L	M	4.9E-007	mg/kg-day			
	2-Butanone	3.3E-002	mg/L	3.30E-002	mg/L	M	2.8E-007	mg/kg-day			
	Nitrate/Nitrite	2.5E-001	mg/L	2.50E-001	mg/L	M	2.1E-006	mg/kg-day			
	Zinc	6.1E-002	mg/L	6.10E-002	mg/L	M	5.1E-007	mg/kg-day			
	(Total)										1.4E-008
Dermal	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	3.9E-009	mg/kg-day			
	Aluminum	9.6E-001	mg/L	9.60E-001	mg/L	M	9.3E-007	mg/kg-day			
	Ammonia	3.3E-001	mg/L	3.30E-001	mg/L	M					
	Aroclor-1248	8.4E-004	mg/L	8.40E-004	mg/L	M	3.7E-006	mg/kg-day	2.0E+000	kg-day/mg	7.4E-006
	Cadmium	7.2E-004	mg/L	7.20E-004	mg/L	M	7.0E-010	mg/kg-day			
	Chromium (total)	8.3E-002	mg/L	8.30E-002	mg/L	M	8.1E-008	mg/kg-day			
	Copper	2.20E-002	mg/L	2.20E-002	mg/L	M	2.1E-008	mg/kg-day			
	Dichloroethane, 1,1-	2.00E-003	mg/L	2.00E-003	mg/L	M	2.9E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.00E-003	mg/L	1.00E-003	mg/L	M	1.6E-008	mg/kg-day			
	Iron	8.51E-001	mg/L	8.51E-001	mg/L	M	8.3E-007	mg/kg-day			
	Lead	2.38E-002	mg/L	2.38E-002	mg/L	M	9.3E-011	mg/kg-day			
	Manganese	5.80E-002	mg/L	5.80E-002	mg/L	M	5.6E-008	mg/kg-day			
	2-Butanone	3.30E-002	mg/L	3.30E-002	mg/L	M	5.2E-008	mg/kg-day			
	Nitrate/Nitrite	2.50E-001	mg/L	2.50E-001	mg/L	M					
	Zinc	6.10E-002	mg/L	6.10E-002	mg/L	M	3.6E-008	mg/kg-day			
	(Total)										7.4E-006
										Total Hazard Index Across All Exposure Routes/Pathways	7.4E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-3
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: cfwrkct1.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	8.6E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.6E-005
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	1.6E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.6E-003
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M	5.7E-004	mg/kg-day			N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	1.4E-006	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	1.2E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	2.5E-003
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	1.4E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	4.7E-002
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	3.8E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	9.4E-004
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	3.4E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.4E-005
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	1.7E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.9E-004
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	1.5E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.9E-003
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	4.1E-005	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	9.9E-005	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	7.1E-004
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	5.7E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	9.4E-005
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M	4.3E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.3E-003
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	1.0E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.5E-004
	(Total)												6.3E-002
Dermal	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	6.8E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	8.7E-006
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	1.6E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.6E-004
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M					N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	6.5E-004	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	1.2E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	4.9E-003
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	1.4E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.7E-002
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	3.8E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.6E-004
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	5.2E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	5.2E-005
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	2.9E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	3.2E-004
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	1.5E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.9E-004
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	1.6E-008	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	9.9E-006	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	7.1E-005
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	9.2E-006	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	1.6E-005
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	6.3E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.0E-005
	(Total)												5.4E-002
												Total Hazard Index Across All Exposure Routes/Pathways	1.2E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-4
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: cfwrkct1.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.5E-007	mg/kg-day			
	Aluminum	9.60E-001	mg/L	9.60E-001	mg/L	M	2.9E-005	mg/kg-day			
	Ammonia	3.30E-001	mg/L	3.30E-001	mg/L	M	1.0E-005	mg/kg-day			
	Aroclor-1248	8.40E-004	mg/L	8.40E-004	mg/L	M	2.6E-008	mg/kg-day	2.0E+000	kg-day/mg	5.1E-008
	Cadmium	7.20E-004	mg/L	7.20E-004	mg/L	M	2.2E-008	mg/kg-day			
	Chromium (total)	8.30E-002	mg/L	8.30E-002	mg/L	M	2.5E-006	mg/kg-day			
	Copper	2.2E-002	mg/L	2.20E-002	mg/L	M	6.7E-007	mg/kg-day			
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.00E-003	mg/L	M	6.1E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.00E-003	mg/L	M	3.1E-008	mg/kg-day			
	Iron	8.5E-001	mg/L	8.51E-001	mg/L	M	2.6E-005	mg/kg-day			
	Lead	2.4E-002	mg/L	2.38E-002	mg/L	M	7.3E-007	mg/kg-day			
	Manganese	5.8E-002	mg/L	5.80E-002	mg/L	M	1.8E-006	mg/kg-day			
	2-Butanone	3.3E-002	mg/L	3.30E-002	mg/L	M	1.0E-006	mg/kg-day			
	Nitrate/Nitrite	2.5E-001	mg/L	2.50E-001	mg/L	M	7.7E-006	mg/kg-day			
	Zinc	6.1E-002	mg/L	6.10E-002	mg/L	M	1.9E-006	mg/kg-day			
	(Total)										5.1E-008
Dermal	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.2E-008	mg/kg-day			
	Aluminum	9.6E-001	mg/L	9.60E-001	mg/L	M	2.9E-006	mg/kg-day			
	Ammonia	3.3E-001	mg/L	3.30E-001	mg/L	M					
	Aroclor-1248	8.4E-004	mg/L	8.40E-004	mg/L	M	1.2E-005	mg/kg-day	2.0E+000	kg-day/mg	2.3E-005
	Cadmium	7.2E-004	mg/L	7.20E-004	mg/L	M	2.2E-009	mg/kg-day			
	Chromium (total)	8.3E-002	mg/L	8.30E-002	mg/L	M	2.5E-007	mg/kg-day			
	Copper	2.20E-002	mg/L	2.20E-002	mg/L	M	6.7E-008	mg/kg-day			
	Dichloroethane, 1,1-	2.00E-003	mg/L	2.00E-003	mg/L	M	9.3E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.00E-003	mg/L	1.00E-003	mg/L	M	5.2E-008	mg/kg-day			
	Iron	8.51E-001	mg/L	8.51E-001	mg/L	M	2.6E-006	mg/kg-day			
	Lead	2.38E-002	mg/L	2.38E-002	mg/L	M	2.9E-010	mg/kg-day			
	Manganese	5.80E-002	mg/L	5.80E-002	mg/L	M	1.8E-007	mg/kg-day			
	2-Butanone	3.30E-002	mg/L	3.30E-002	mg/L	M	1.6E-007	mg/kg-day			
	Nitrate/Nitrite	2.50E-001	mg/L	2.50E-001	mg/L	M					
	Zinc	6.10E-002	mg/L	6.10E-002	mg/L	M	1.1E-007	mg/kg-day			
	(Total)										2.3E-005
										Total Hazard Index Across All Exposure Routes/Pathways	2.3E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-5
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: fconsta1.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	2.6E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.6E-005
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	4.9E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	4.9E-004
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M	1.7E-004	mg/kg-day			N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	4.3E-007	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	3.7E-007	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	7.4E-004
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	4.2E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.4E-002
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	1.1E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.8E-004
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	1.0E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.0E-005
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	5.1E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.7E-005
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	4.3E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.4E-003
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	1.2E-005	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	3.0E-005	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	2.1E-004
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	1.7E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.8E-005
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M	1.3E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.3E-003
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	3.1E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.0E-004
	(Total)												1.9E-002
Dermal	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	2.4E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	3.0E-006
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	5.7E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.7E-005
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M					N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	2.2E-004	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	4.3E-008	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.7E-003
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	4.9E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.6E-002
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	1.3E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	5.4E-005
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	1.8E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.8E-005
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	1.0E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.1E-004
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	5.0E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.7E-004
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	5.6E-009	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	3.4E-006	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	2.5E-005
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	3.2E-006	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	5.6E-006
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	2.2E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.4E-005
	(Total)												1.9E-002
												Total Hazard Index Across All Exposure Routes/Pathways	3.7E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-6
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: fconsta1.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	2.7E-008	mg/kg-day			
	Aluminum	9.60E-001	mg/L	9.60E-001	mg/L	M	5.3E-006	mg/kg-day			
	Ammonia	3.30E-001	mg/L	3.30E-001	mg/L	M	1.8E-006	mg/kg-day			
	Aroclor-1248	8.40E-004	mg/L	8.40E-004	mg/L	M	4.6E-009	mg/kg-day	2.0E+000	kg-day/mg	9.2E-009
	Cadmium	7.20E-004	mg/L	7.20E-004	mg/L	M	3.9E-009	mg/kg-day			
	Chromium (total)	8.30E-002	mg/L	8.30E-002	mg/L	M	4.5E-007	mg/kg-day			
	Copper	2.2E-002	mg/L	2.20E-002	mg/L	M	1.2E-007	mg/kg-day			
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.00E-003	mg/L	M	1.1E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.00E-003	mg/L	M	5.5E-009	mg/kg-day			
	Iron	8.5E-001	mg/L	8.51E-001	mg/L	M	4.7E-006	mg/kg-day			
	Lead	2.4E-002	mg/L	2.38E-002	mg/L	M	1.3E-007	mg/kg-day			
	Manganese	5.8E-002	mg/L	5.80E-002	mg/L	M	3.2E-007	mg/kg-day			
	2-Butanone	3.3E-002	mg/L	3.30E-002	mg/L	M	1.8E-007	mg/kg-day			
	Nitrate/Nitrite	2.5E-001	mg/L	2.50E-001	mg/L	M	1.4E-006	mg/kg-day			
	Zinc	6.1E-002	mg/L	6.10E-002	mg/L	M	3.3E-007	mg/kg-day			
	(Total)										9.2E-009
Dermal	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	2.5E-009	mg/kg-day			
	Aluminum	9.6E-001	mg/L	9.60E-001	mg/L	M	6.1E-007	mg/kg-day			
	Ammonia	3.3E-001	mg/L	3.30E-001	mg/L	M					
	Aroclor-1248	8.4E-004	mg/L	8.40E-004	mg/L	M	2.4E-006	mg/kg-day	2.0E+000	kg-day/mg	4.8E-006
	Cadmium	7.2E-004	mg/L	7.20E-004	mg/L	M	4.6E-010	mg/kg-day			
	Chromium (total)	8.3E-002	mg/L	8.30E-002	mg/L	M	5.3E-008	mg/kg-day			
	Copper	2.20E-002	mg/L	2.20E-002	mg/L	M	1.4E-008	mg/kg-day			
	Dichloroethane, 1,1-	2.00E-003	mg/L	2.00E-003	mg/L	M	1.9E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.00E-003	mg/L	1.00E-003	mg/L	M	1.1E-008	mg/kg-day			
	Iron	8.51E-001	mg/L	8.51E-001	mg/L	M	5.4E-007	mg/kg-day			
	Lead	2.38E-002	mg/L	2.38E-002	mg/L	M	6.1E-011	mg/kg-day			
	Manganese	5.80E-002	mg/L	5.80E-002	mg/L	M	3.7E-008	mg/kg-day			
	2-Butanone	3.30E-002	mg/L	3.30E-002	mg/L	M	3.4E-008	mg/kg-day			TBC = To be ca
	Nitrate/Nitrite	2.50E-001	mg/L	2.50E-001	mg/L	M					
	Zinc	6.10E-002	mg/L	6.10E-002	mg/L	M	2.3E-008	mg/kg-day			
	(Total)										4.8E-006
								Total Hazard Index Across All Exposure Routes/Pathways			4.8E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-7
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRESA1A.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	6.6E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	6.6E-006
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	1.3E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.3E-004
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M	4.3E-005	mg/kg-day			N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	1.1E-007	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	9.5E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.9E-004
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	1.1E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.6E-003
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	2.9E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	7.2E-005
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	2.6E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.6E-006
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	1.3E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.5E-005
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	1.1E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.7E-004
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	3.1E-006	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	7.6E-006	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	5.4E-005
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	4.3E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	7.2E-006
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M	3.3E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.3E-004
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	8.0E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.7E-005
	(Total)												4.8E-003
Dermal	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	4.0E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	5.0E-007
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	1.1E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.1E-005
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M					N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	3.1E-005	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	8.3E-009	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	3.3E-004
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	9.6E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.2E-003
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	2.5E-007	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	1.1E-005
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	2.8E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.8E-006
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	1.5E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.7E-005
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	9.8E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.3E-005
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	1.1E-009	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	6.7E-007	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	4.8E-006
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	5.2E-007	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	9.1E-007
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	4.2E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.7E-006
	(Total)												3.6E-003
												Total Hazard Index Across All Exposure Routes/Pathways	8.5E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-8
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRESA1A.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	5.5E-008	mg/kg-day			
	Aluminum	9.60E-001	mg/L	9.60E-001	mg/L	M	1.1E-005	mg/kg-day			
	Ammonia	3.30E-001	mg/L	3.30E-001	mg/L	M	3.6E-006	mg/kg-day			
	Aroclor-1248	8.40E-004	mg/L	8.40E-004	mg/L	M	9.2E-009	mg/kg-day	2.0E+000	kg-day/mg	1.8E-008
	Cadmium	7.20E-004	mg/L	7.20E-004	mg/L	M	7.9E-009	mg/kg-day			
	Chromium (total)	8.30E-002	mg/L	8.30E-002	mg/L	M	9.1E-007	mg/kg-day			
	Copper	2.2E-002	mg/L	2.20E-002	mg/L	M	2.4E-007	mg/kg-day			
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.00E-003	mg/L	M	2.2E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.00E-003	mg/L	M	1.1E-008	mg/kg-day			
	Iron	8.5E-001	mg/L	8.51E-001	mg/L	M	9.3E-006	mg/kg-day			
	Lead	2.4E-002	mg/L	2.38E-002	mg/L	M	2.6E-007	mg/kg-day			
	Manganese	5.8E-002	mg/L	5.80E-002	mg/L	M	6.4E-007	mg/kg-day			
	2-Butanone	3.3E-002	mg/L	3.30E-002	mg/L	M	3.6E-007	mg/kg-day			
	Nitrate/Nitrite	2.5E-001	mg/L	2.50E-001	mg/L	M	2.7E-006	mg/kg-day			
	Zinc	6.1E-002	mg/L	6.10E-002	mg/L	M	6.7E-007	mg/kg-day			
	(Total)										1.8E-008
Dermal	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	3.3E-009	mg/kg-day			
	Aluminum	9.6E-001	mg/L	9.60E-001	mg/L	M	9.3E-007	mg/kg-day			
	Ammonia	3.3E-001	mg/L	3.30E-001	mg/L	M					
	Aroclor-1248	8.4E-004	mg/L	8.40E-004	mg/L	M	2.6E-006	mg/kg-day	2.0E+000	kg-day/mg	5.2E-006
	Cadmium	7.2E-004	mg/L	7.20E-004	mg/L	M	6.9E-010	mg/kg-day			
	Chromium (total)	8.3E-002	mg/L	8.30E-002	mg/L	M	8.0E-008	mg/kg-day			
	Copper	2.20E-002	mg/L	2.20E-002	mg/L	M	2.1E-008	mg/kg-day			
	Dichloroethane, 1,1-	2.00E-003	mg/L	2.00E-003	mg/L	M	2.3E-008	mg/kg-day			
	Dichloroethene, 1,2-	1.00E-003	mg/L	1.00E-003	mg/L	M	1.3E-008	mg/kg-day			
	Iron	8.51E-001	mg/L	8.51E-001	mg/L	M	8.2E-007	mg/kg-day			
	Lead	2.38E-002	mg/L	2.38E-002	mg/L	M	9.2E-011	mg/kg-day			
	Manganese	5.80E-002	mg/L	5.80E-002	mg/L	M	5.6E-008	mg/kg-day			
	2-Butanone	3.30E-002	mg/L	3.30E-002	mg/L	M	4.3E-008	mg/kg-day			TBC
	Nitrate/Nitrite	2.50E-001	mg/L	2.50E-001	mg/L	M					
	Zinc	6.10E-002	mg/L	6.10E-002	mg/L	M	3.5E-008	mg/kg-day			
	(Total)										5.2E-006
								Total Hazard Index Across All Exposure Routes/Pathways			5.2E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-9
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TREBA1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	1.6E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	3.1E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	3.1E-005
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M	1.1E-005	mg/kg-day			N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	2.8E-008	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	2.4E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.7E-005
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	2.7E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	9.1E-004
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	7.2E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.8E-005
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	6.6E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	6.6E-007
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	3.3E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	3.6E-006
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	2.8E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.3E-005
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	7.8E-007	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	1.9E-006	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	1.4E-005
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	1.1E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.8E-006
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M	8.2E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.2E-005
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	2.0E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.7E-006
	(Total)												1.2E-003
Dermal	Acetone	5.0E-003	mg/L	5.0E-003	mg/L	M	9.4E-009	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	1.2E-007
	Aluminum	9.6E-001	mg/L	9.6E-001	mg/L	M	2.3E-006	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.3E-006
	Ammonia	3.3E-001	mg/L	3.3E-001	mg/L	M					N/A	N/A	
	Aroclor-1248	8.4E-004	mg/L	8.4E-004	mg/L	M	8.9E-006	mg/kg-day			N/A	N/A	
	Cadmium	7.2E-004	mg/L	7.2E-004	mg/L	M	1.7E-009	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	6.8E-005
	Chromium (total)	8.3E-002	mg/L	8.3E-002	mg/L	M	2.0E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	6.5E-004
	Copper	2.2E-002	mg/L	2.2E-002	mg/L	M	5.2E-008	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	2.2E-006
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.0E-003	mg/L	M	7.2E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.2E-007
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.0E-003	mg/L	M	4.0E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	4.4E-006
	Iron	8.5E-001	mg/L	8.5E-001	mg/L	M	2.0E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.7E-006
	Lead	2.4E-002	mg/L	2.4E-002	mg/L	M	2.2E-010	mg/kg-day			N/A	N/A	
	Manganese	5.8E-002	mg/L	5.8E-002	mg/L	M	1.4E-007	mg/kg-day	1.4E-001	mg/kg-day	N/A	N/A	9.8E-007
	2-Butanone	3.3E-002	mg/L	3.3E-002	mg/L	M	1.3E-007	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	2.2E-007
	Nitrate/Nitrite	2.5E-001	mg/L	2.5E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	6.1E-002	mg/L	6.1E-002	mg/L	M	8.6E-008	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	9.6E-007
	(Total)												7.4E-004
											Total Hazard Index Across All Exposure Routes/Pathways		1.9E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-10
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 1, Surface Water (Fire Pond)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRESA1CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.2E-009	mg/kg-day			
	Aluminum	9.60E-001	mg/L	9.60E-001	mg/L	M	2.3E-007	mg/kg-day			
	Ammonia	3.30E-001	mg/L	3.30E-001	mg/L	M	7.7E-008	mg/kg-day			
	Aroclor-1248	8.40E-004	mg/L	8.40E-004	mg/L	M	2.0E-010	mg/kg-day	2.0E+000	kg-day/mg	3.9E-010
	Cadmium	7.20E-004	mg/L	7.20E-004	mg/L	M	1.7E-010	mg/kg-day			
	Chromium (total)	8.30E-002	mg/L	8.30E-002	mg/L	M	1.9E-008	mg/kg-day			
	Copper	2.2E-002	mg/L	2.20E-002	mg/L	M	5.2E-009	mg/kg-day			
	Dichloroethane, 1,1-	2.0E-003	mg/L	2.00E-003	mg/L	M	4.7E-010	mg/kg-day			
	Dichloroethene, 1,2-	1.0E-003	mg/L	1.00E-003	mg/L	M	2.3E-010	mg/kg-day			
	Iron	8.5E-001	mg/L	8.51E-001	mg/L	M	2.0E-007	mg/kg-day			
	Lead	2.4E-002	mg/L	2.38E-002	mg/L	M	5.6E-009	mg/kg-day			
	Manganese	5.8E-002	mg/L	5.80E-002	mg/L	M	1.4E-008	mg/kg-day			
	2-Butanone	3.3E-002	mg/L	3.30E-002	mg/L	M	7.7E-009	mg/kg-day			
	Nitrate/Nitrite	2.5E-001	mg/L	2.50E-001	mg/L	M	5.9E-008	mg/kg-day			
	Zinc	6.1E-002	mg/L	6.10E-002	mg/L	M	1.4E-008	mg/kg-day			
	(Total)										3.9E-010
Dermal	Acetone	5.00E-003	mg/L	5.00E-003	mg/L	M	6.7E-011	mg/kg-day			
	Aluminum	9.6E-001	mg/L	9.60E-001	mg/L	M	1.6E-008	mg/kg-day			
	Ammonia	3.3E-001	mg/L	3.30E-001	mg/L	M					
	Aroclor-1248	8.4E-004	mg/L	8.40E-004	mg/L	M	6.4E-008	mg/kg-day	2.0E+000	kg-day/mg	1.3E-007
	Cadmium	7.2E-004	mg/L	7.20E-004	mg/L	M	1.2E-011	mg/kg-day			
	Chromium (total)	8.3E-002	mg/L	8.30E-002	mg/L	M	1.4E-009	mg/kg-day			
	Copper	2.20E-002	mg/L	2.20E-002	mg/L	M	3.7E-010	mg/kg-day			
	Dichloroethane, 1,1-	2.00E-003	mg/L	2.00E-003	mg/L	M	5.1E-010	mg/kg-day			
	Dichloroethene, 1,2-	1.00E-003	mg/L	1.00E-003	mg/L	M	2.8E-010	mg/kg-day			
	Iron	8.51E-001	mg/L	8.51E-001	mg/L	M	1.4E-008	mg/kg-day			
	Lead	2.38E-002	mg/L	2.38E-002	mg/L	M	1.6E-012	mg/kg-day			
	Manganese	5.80E-002	mg/L	5.80E-002	mg/L	M	9.8E-010	mg/kg-day			
	2-Butanone	3.30E-002	mg/L	3.30E-002	mg/L	M	9.1E-010	mg/kg-day			TBC
	Nitrate/Nitrite	2.50E-001	mg/L	2.50E-001	mg/L	M					
	Zinc	6.10E-002	mg/L	6.10E-002	mg/L	M	6.2E-010	mg/kg-day			
	(Total)										1.3E-007
								Total Hazard Index Across All Exposure Routes/Pathways			1.3E-007

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-11
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	2.0E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.0E-005
	1,2-Dichloroethene(total)	3.0E-003	mg/L	3.0E-003	mg/L	M	5.9E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	6.5E-004
	2,4-Dimethylphenol	1.2E-002	mg/L	1.2E-002	mg/L	M	2.3E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	2-Butanone (MEK)	1.4E-001	mg/L	1.4E-001	mg/L	M	2.7E-004	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	4.6E-004
	2-Methylphenol (O-Cresol)	5.0E-003	mg/L	5.0E-003	mg/L	M	9.8E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	2.0E-004
	4-Methyl-2-Pentanone	4.9E-002	mg/L	4.9E-002	mg/L	M	9.6E-005	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	4-Methylphenol (P-Cresol)	9.0E-003	mg/L	9.0E-003	mg/L	M	1.8E-005	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	3.5E-003
	Acetone	3.8E-001	mg/L	3.8E-001	mg/L	M	7.4E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.4E-003
	Aluminum	4.7E-001	mg/L	4.7E-001	mg/L	M	9.2E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	9.2E-004
	Ammonia	1.8E+001	mg/L	1.8E+001	mg/L	M	3.4E-002	mg/kg-day			N/A	N/A	
	Arsenic	4.5E-002	mg/L	4.5E-002	mg/L	M	8.8E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.9E-001
	Barium	3.3E-001	mg/L	3.3E-001	mg/L	M	6.5E-004	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	9.2E-003
	Benzene	4.6E-001	mg/L	4.6E-001	mg/L	M	9.0E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.0E-001
	Beryllium	2.8E-004	mg/L	2.8E-004	mg/L	M	5.5E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.7E-004
	bis(2-Chloroethyl)Ether	7.7E-002	mg/L	7.7E-002	mg/L	M	1.5E-004	mg/kg-day			N/A	N/A	
	Chloroethane	3.0E-002	mg/L	3.0E-002	mg/L	M	5.9E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.5E-004
	Chromium	2.8E-002	mg/L	2.8E-002	mg/L	M	5.5E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.8E-002
	Ethylbenzene	6.0E-003	mg/L	6.0E-003	mg/L	M	1.2E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.2E-004
	Iron	1.4E+001	mg/L	1.4E+001	mg/L	M	2.8E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	9.3E-002
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	9.8E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.9E-005
	Lead	4.2E-003	mg/L	4.2E-003	mg/L	M	8.2E-006	mg/kg-day			N/A	N/A	
	Manganese	9.9E-001	mg/L	9.9E-001	mg/L	M	1.9E-003	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.7E-002
	Nickel	8.0E-002	mg/L	8.0E-002	mg/L	M	1.6E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.8E-003
	Nitrate/Nitrite	1.2E-001	mg/L	1.2E-001	mg/L	M	2.3E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.3E-003
	Phenol	2.3E-002	mg/L	2.3E-002	mg/L	M	4.5E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	7.5E-005
	Toluene	7.0E-003	mg/L	7.0E-003	mg/L	M	1.4E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.8E-005
	Xylene (total)	3.5E-002	mg/L	3.5E-002	mg/L	M	6.8E-005	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	3.4E-005
	Zinc	5.3E-002	mg/L	5.3E-002	mg/L	M	1.0E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.5E-004
	(Total)												8.38E-001
Dermal	1,1-Dichloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	3.4E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.44E-005
	1,2-Dichloroethene(mixture)	3.0E-003	mg/L	3.0E-003	mg/L	M	1.1E-005	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.27E-003

Table 5-3-11
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2,4-Dimethylphenol	1.2E-002	mg/L	1.2E-002	mg/L	M	7.9E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.95E-003
	2-Butanone (MEK)	1.4E-001	mg/L	1.4E-001	mg/L	M	5.2E-005	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	9.08E-005
	2-Methylphenol (O-Cresol)	5.0E-003	mg/L	5.0E-003	mg/L	M	2.0E-005	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	4.10E-004
	4-Methyl-2-Pentanone	4.9E-002	mg/L	4.9E-002	mg/L	M	7.7E-005	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	9.57E-004
	4-Methylphenol (P-Cresol)	9.0E-003	mg/L	9.0E-003	mg/L	M	3.7E-005	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	1.13E-002
	Acetone	3.8E-001	mg/L	3.8E-001	mg/L	M	6.9E-005	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	8.71E-004
	Aluminum	4.7E-001	mg/L	4.7E-001	mg/L	M	1.1E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.07E-004
	Ammonia	1.8E+001	mg/L	1.8E+001	mg/L	M					N/A	N/A	
	Arsenic	4.5E-002	mg/L	4.5E-002	mg/L	M	1.0E-005	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.58E-002
	Barium	3.3E-001	mg/L	3.3E-001	mg/L	M	7.5E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.07E-003
	Benzene	4.6E-001	mg/L	4.6E-001	mg/L	M	3.3E-003	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.23E+000
	Beryllium	2.8E-004	mg/L	2.8E-004	mg/L	M	6.4E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	3.18E-003
	bis(2-Chloroethyl)Ether	7.7E-002	mg/L	7.7E-002	mg/L	M	8.2E-005	mg/kg-day			N/A	N/A	
	Chloroethane	3.0E-002	mg/L	3.0E-002	mg/L	M	7.8E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.96E-004
	Chromium	2.8E-002	mg/L	2.8E-002	mg/L	M	6.4E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.12E-002
	Ethyl Benzene	6.0E-003	mg/L	6.0E-003	mg/L	M	1.7E-004	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	1.89E-003
	Iron	1.4E+001	mg/L	1.4E+001	mg/L	M	3.2E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.08E-002
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	1.0E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.15E-005
	Lead	4.2E-003	mg/L	4.2E-003	mg/L	M	3.8E-009	mg/kg-day			N/A	N/A	
	Manganese	9.9E-001	mg/L	9.9E-001	mg/L	M	2.2E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.12E-002
	Nickel	8.0E-002	mg/L	8.0E-002	mg/L	M	1.8E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.82E-003
	Nitrate/Nitrite	1.2E-001	mg/L	1.2E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Phenol	2.3E-002	mg/L	2.3E-002	mg/L	M	4.8E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	7.95E-005
	Toluene	7.0E-003	mg/L	7.0E-003	mg/L	M	1.2E-004	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.91E-004
	Xylene (total)	3.5E-002	mg/L	3.5E-002	mg/L	M	9.6E-004	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	5.33E-004
	Zinc	5.3E-002	mg/L	5.3E-002	mg/L	M	7.2E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	8.02E-005
	(Total)												1.34E+000
												Total Hazard Index Across All Exposure Routes	2.2E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-12
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.7E-007	kg-day/mg			
	1,2-Dichloroethene(total)	3.00E-003	mg/L	3.00E-003	mg/L	M	5.2E-007	kg-day/mg			
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	2.1E-006	kg-day/mg			
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	2.4E-005	kg-day/mg			
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	8.7E-007	kg-day/mg			
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	8.6E-006	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	1.6E-006	kg-day/mg			
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	6.6E-005	kg-day/mg			
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	8.2E-005	kg-day/mg			
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M	3.1E-003	kg-day/mg			
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	7.9E-006	kg-day/mg	1.5E+000	kg-day/mg	1.2E-005
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	5.8E-005	kg-day/mg			
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	8.0E-005	kg-day/mg	2.9E-002	kg-day/mg	2.3E-006
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	4.9E-008	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	1.3E-005	kg-day/mg	1.1E+000	kg-day/mg	1.5E-005
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	5.2E-006	kg-day/mg	2.9E-003	kg-day/mg	1.5E-008
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	4.9E-006	kg-day/mg			
	Ethylbenzene	6.00E-003	mg/L	6.00E-003	mg/L	M	1.0E-006	kg-day/mg			
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	2.5E-003	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	8.7E-007	kg-day/mg	9.5E-004	kg-day/mg	8.3E-010
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	7.3E-007	kg-day/mg			
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	1.7E-004	kg-day/mg			
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	1.4E-005	kg-day/mg			
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M	2.1E-005	kg-day/mg			
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	4.0E-006	kg-day/mg			
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.2E-006	kg-day/mg			
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	6.1E-006	kg-day/mg			
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	9.3E-006	kg-day/mg			
	(Total)										2.9E-005
Dermal	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	3.1E-007	kg-day/mg			
	1,2-Dichloroethene(mixture)	3.00E-003	mg/L	3.00E-003	mg/L	M	1.0E-006	kg-day/mg			

Table 5-3-12
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	7.1E-006	kg-day/mg			
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	4.6E-006	kg-day/mg			
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	1.8E-006	kg-day/mg			
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	6.8E-006	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	3.3E-006	kg-day/mg			
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	6.1E-006	kg-day/mg			
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	9.5E-006	kg-day/mg			
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M					
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	9.1E-007	kg-day/mg	1.6E+000	kg-day/mg	1.4E-006
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	6.7E-006	kg-day/mg			
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	3.0E-004	kg-day/mg	3.2E-002	kg-day/mg	9.6E-006
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	5.7E-009	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	7.3E-006	kg-day/mg	1.1E+000	kg-day/mg	8.0E-006
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	7.0E-006	kg-day/mg	2.9E-003	kg-day/mg	2.0E-008
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	5.7E-007	kg-day/mg			
	Ethyl Benzene	6.00E-003	mg/L	6.00E-003	mg/L	M	1.6E-005	kg-day/mg			
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	2.9E-004	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	9.2E-007	kg-day/mg	9.5E-004	kg-day/mg	8.7E-010
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	3.4E-010	kg-day/mg			
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	2.0E-005	kg-day/mg			
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	1.6E-007	kg-day/mg			
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M					
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	4.3E-006	kg-day/mg			
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.1E-005	kg-day/mg			
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	8.6E-005	kg-day/mg			
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	6.4E-007	kg-day/mg			
	(Total)										1.9E-005
										Total Hazard Index Across All Exposure Routes/Pathways	4.8E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-13
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	1.7E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.7E-005
	1,2-Dichloroethene(total)	3.0E-003	mg/L	3.0E-003	mg/L	M	5.1E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.7E-004
	2,4-Dimethylphenol	1.2E-002	mg/L	1.2E-002	mg/L	M	2.1E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.0E-003
	2-Butanone (MEK)	1.4E-001	mg/L	1.4E-001	mg/L	M	2.4E-004	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	4.0E-004
	2-Methylphenol (O-Cresol)	5.0E-003	mg/L	5.0E-003	mg/L	M	8.6E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	1.7E-004
	4-Methyl-2-Pentanone	4.9E-002	mg/L	4.9E-002	mg/L	M	8.4E-005	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	1.1E-003
	4-Methylphenol (P-Cresol)	9.0E-003	mg/L	9.0E-003	mg/L	M	1.5E-005	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	3.1E-003
	Acetone	3.8E-001	mg/L	3.8E-001	mg/L	M	6.5E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	6.5E-003
	Aluminum	4.7E-001	mg/L	4.7E-001	mg/L	M	8.1E-004	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	8.1E-004
	Ammonia	1.8E+001	mg/L	1.8E+001	mg/L	M	3.0E-002	mg/kg-day			N/A	N/A	
	Arsenic	4.5E-002	mg/L	4.5E-002	mg/L	M	7.7E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.6E-001
	Barium	3.3E-001	mg/L	3.3E-001	mg/L	M	5.7E-004	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	8.1E-003
	Benzene	4.6E-001	mg/L	4.6E-001	mg/L	M	7.9E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.6E-001
	Beryllium	2.8E-004	mg/L	2.8E-004	mg/L	M	4.8E-007	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	2.4E-004
	bis(2-Chloroethyl)Ether	7.7E-002	mg/L	7.7E-002	mg/L	M	1.3E-004	mg/kg-day			N/A	N/A	
	Chloroethane	3.0E-002	mg/L	3.0E-002	mg/L	M	5.1E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.3E-004
	Chromium	2.8E-002	mg/L	2.8E-002	mg/L	M	4.8E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.6E-002
	Ethylbenzene	6.0E-003	mg/L	6.0E-003	mg/L	M	1.0E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.0E-004
	Iron	1.4E+001	mg/L	1.4E+001	mg/L	M	2.5E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.2E-002
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	8.6E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.3E-005
	Lead	4.2E-003	mg/L	4.2E-003	mg/L	M	7.2E-006	mg/kg-day			N/A	N/A	
	Manganese	9.9E-001	mg/L	9.9E-001	mg/L	M	1.7E-003	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.5E-002
	Nickel	8.0E-002	mg/L	8.0E-002	mg/L	M	1.4E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.9E-003
	Nitrate/Nitrite	1.2E-001	mg/L	1.2E-001	mg/L	M	2.1E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.1E-003
	Phenol	2.3E-002	mg/L	2.3E-002	mg/L	M	3.9E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	6.6E-005
	Toluene	7.0E-003	mg/L	7.0E-003	mg/L	M	1.2E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.0E-005
	Xylene (total)	3.5E-002	mg/L	3.5E-002	mg/L	M	6.0E-005	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	3.0E-005
	Zinc	5.3E-002	mg/L	5.3E-002	mg/L	M	9.1E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.0E-004
	(Total)												7.35E-001
Dermal	1,1-Dichloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	2.6E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.60E-005
	1,2-Dichloroethene(mixture)	3.0E-003	mg/L	3.0E-003	mg/L	M	8.7E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	9.62E-004
	2,4-Dimethylphenol	1.2E-002	mg/L	1.2E-002	mg/L	M	6.0E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.99E-003
	2-Butanone (MEK)	1.4E-001	mg/L	1.4E-001	mg/L	M	3.9E-005	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	6.86E-005

Table 5-3-13
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2-Methylphenol (O-Cresol)	5.0E-003	mg/L	5.0E-003	mg/L	M	1.5E-005	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	3.10E-004
	4-Methyl-2-Pentanone	4.9E-002	mg/L	4.9E-002	mg/L	M	5.8E-005	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	7.23E-004
	4-Methylphenol (P-Cresol)	9.0E-003	mg/L	9.0E-003	mg/L	M	2.8E-005	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	8.57E-003
	Acetone	3.8E-001	mg/L	3.8E-001	mg/L	M	5.2E-005	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	6.58E-004
	Aluminum	4.7E-001	mg/L	4.7E-001	mg/L	M	8.1E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	8.06E-005
	Ammonia	1.8E+001	mg/L	1.8E+001	mg/L	M					N/A	N/A	
	Arsenic	4.5E-002	mg/L	4.5E-002	mg/L	M	7.7E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	2.71E-002
	Barium	3.3E-001	mg/L	3.3E-001	mg/L	M	5.7E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	8.09E-004
	Benzene	4.6E-001	mg/L	4.6E-001	mg/L	M	2.5E-003	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	9.33E-001
	Beryllium	2.8E-004	mg/L	2.8E-004	mg/L	M	4.8E-008	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	2.40E-003
	bis(2-Chloroethyl)Ether	7.7E-002	mg/L	7.7E-002	mg/L	M	6.2E-005	mg/kg-day			N/A	N/A	
	Chloroethane	3.0E-002	mg/L	3.0E-002	mg/L	M	5.9E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.48E-004
	Chromium	2.8E-002	mg/L	2.8E-002	mg/L	M	4.8E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.60E-002
	Ethyl Benzene	6.0E-003	mg/L	6.0E-003	mg/L	M	1.3E-004	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	1.43E-003
	Iron	1.4E+001	mg/L	1.4E+001	mg/L	M	2.5E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	8.18E-003
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	7.8E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.89E-005
	Lead	4.2E-003	mg/L	4.2E-003	mg/L	M	2.9E-009	mg/kg-day			N/A	N/A	
	Manganese	9.9E-001	mg/L	9.9E-001	mg/L	M	1.7E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	8.48E-003
	Nickel	8.0E-002	mg/L	8.0E-002	mg/L	M	1.4E-006	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.37E-003
	Nitrate/Nitrite	1.2E-001	mg/L	1.2E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Phenol	2.3E-002	mg/L	2.3E-002	mg/L	M	3.6E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	6.01E-005
	Toluene	7.0E-003	mg/L	7.0E-003	mg/L	M	8.9E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.47E-004
	Xylene (total)	3.5E-002	mg/L	3.5E-002	mg/L	M	7.3E-004	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	4.03E-004
	Zinc	5.3E-002	mg/L	5.3E-002	mg/L	M	5.5E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	6.06E-005
	(Total)												1.01E+000
												Total Hazard Index Across All Exposure Routes	1.7E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-14
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	1,1-Dichloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	3.1E-008	kg-day/mg			
	1,2-Dichloroethene(total)	3.0E-003	mg/L	3.0E-003	mg/L	M	9.2E-008	kg-day/mg			
	2,4-Dimethylphenol	1.2E-002	mg/L	1.2E-002	mg/L	M	3.7E-007	kg-day/mg			
	2-Butanone (MEK)	1.4E-001	mg/L	1.4E-001	mg/L	M	4.3E-006	kg-day/mg			
	2-Methylphenol (O-Cresol)	5.0E-003	mg/L	5.0E-003	mg/L	M	1.5E-007	kg-day/mg			
	4-Methyl-2-Pentanone	4.9E-002	mg/L	4.9E-002	mg/L	M	1.5E-006	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.0E-003	mg/L	9.0E-003	mg/L	M	2.8E-007	kg-day/mg			
	Acetone	3.8E-001	mg/L	3.8E-001	mg/L	M	1.2E-005	kg-day/mg			
	Aluminum	4.7E-001	mg/L	4.7E-001	mg/L	M	1.4E-005	kg-day/mg			
	Ammonia	1.8E+001	mg/L	1.8E+001	mg/L	M	5.4E-004	kg-day/mg			
	Arsenic	4.5E-002	mg/L	4.5E-002	mg/L	M	1.4E-006	kg-day/mg	1.5E+000	kg-day/mg	2.1E-006
	Barium	3.3E-001	mg/L	3.3E-001	mg/L	M	1.0E-005	kg-day/mg			
	Benzene	4.6E-001	mg/L	4.6E-001	mg/L	M	1.4E-005	kg-day/mg	2.9E-002	kg-day/mg	4.1E-007
	Beryllium	2.8E-004	mg/L	2.8E-004	mg/L	M	8.6E-009	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.7E-002	mg/L	7.7E-002	mg/L	M	2.4E-006	kg-day/mg	1.1E+000	kg-day/mg	2.6E-006
	Chloroethane	3.0E-002	mg/L	3.0E-002	mg/L	M	9.2E-007	kg-day/mg	2.9E-003	kg-day/mg	2.7E-009
	Chromium	2.8E-002	mg/L	2.8E-002	mg/L	M	8.6E-007	kg-day/mg			
	Ethylbenzene	6.0E-003	mg/L	6.0E-003	mg/L	M	1.8E-007	kg-day/mg			
	Iron	1.4E+001	mg/L	1.4E+001	mg/L	M	4.4E-004	kg-day/mg			
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	1.5E-007	kg-day/mg	9.5E-004	kg-day/mg	1.5E-010
	Lead	4.2E-003	mg/L	4.2E-003	mg/L	M	1.3E-007	kg-day/mg			
	Manganese	9.9E-001	mg/L	9.9E-001	mg/L	M	3.0E-005	kg-day/mg			
	Nickel	8.0E-002	mg/L	8.0E-002	mg/L	M	2.4E-006	kg-day/mg			
	Nitrate/Nitrite	1.2E-001	mg/L	1.2E-001	mg/L	M	3.7E-006	kg-day/mg			
	Phenol	2.3E-002	mg/L	2.3E-002	mg/L	M	7.0E-007	kg-day/mg			
	Toluene	7.0E-003	mg/L	7.0E-003	mg/L	M	2.1E-007	kg-day/mg			
	Xylene (total)	3.5E-002	mg/L	3.5E-002	mg/L	M	1.1E-006	kg-day/mg			
	Zinc	5.3E-002	mg/L	5.3E-002	mg/L	M	1.6E-006	kg-day/mg			
	(Total)										5.1E-006
Dermal	1,1-Dichloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	4.6E-008	kg-day/mg			
	1,2-Dichloroethene(mixture)	3.0E-003	mg/L	3.0E-003	mg/L	M	1.5E-007	kg-day/mg			
	2,4-Dimethylphenol	1.2E-002	mg/L	1.2E-002	mg/L	M	1.1E-006	kg-day/mg			
	2-Butanone (MEK)	1.4E-001	mg/L	1.4E-001	mg/L	M	7.0E-007	kg-day/mg			

Table 5-3-14
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWORK2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2-Methylphenol (O-Cresol)	5.0E-003	mg/L	5.0E-003	mg/L	M	2.8E-007	kg-day/mg			
	4-Methyl-2-Pentanone	4.9E-002	mg/L	4.9E-002	mg/L	M	1.0E-006	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.0E-003	mg/L	9.0E-003	mg/L	M	5.0E-007	kg-day/mg			
	Acetone	3.8E-001	mg/L	3.8E-001	mg/L	M	9.3E-007	kg-day/mg			
	Aluminum	4.7E-001	mg/L	4.7E-001	mg/L	M	1.4E-006	kg-day/mg			
	Ammonia	1.8E+001	mg/L	1.8E+001	mg/L	M					
	Arsenic	4.5E-002	mg/L	4.5E-002	mg/L	M	1.4E-007	kg-day/mg	1.6E+000	kg-day/mg	2.2E-007
	Barium	3.3E-001	mg/L	3.3E-001	mg/L	M	1.0E-006	kg-day/mg			
	Benzene	4.6E-001	mg/L	4.6E-001	mg/L	M	4.5E-005	kg-day/mg	3.2E-002	kg-day/mg	1.4E-006
	Beryllium	2.8E-004	mg/L	2.8E-004	mg/L	M	8.6E-010	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.7E-002	mg/L	7.7E-002	mg/L	M	1.1E-006	kg-day/mg	1.1E+000	kg-day/mg	1.2E-006
	Chloroethane	3.0E-002	mg/L	3.0E-002	mg/L	M	1.1E-006	kg-day/mg	2.9E-003	kg-day/mg	3.1E-009
	Chromium	2.8E-002	mg/L	2.8E-002	mg/L	M	8.6E-008	kg-day/mg			
	Ethyl Benzene	6.0E-003	mg/L	6.0E-003	mg/L	M	2.3E-006	kg-day/mg			
	Iron	1.4E+001	mg/L	1.4E+001	mg/L	M	4.4E-005	kg-day/mg			
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	1.4E-007	kg-day/mg	9.5E-004	kg-day/mg	1.3E-010
	Lead	4.2E-003	mg/L	4.2E-003	mg/L	M	5.1E-011	kg-day/mg			
	Manganese	9.9E-001	mg/L	9.9E-001	mg/L	M	3.0E-006	kg-day/mg			
	Nickel	8.0E-002	mg/L	8.0E-002	mg/L	M	2.4E-008	kg-day/mg			
	Nitrate/Nitrite	1.2E-001	mg/L	1.2E-001	mg/L	M					
	Phenol	2.3E-002	mg/L	2.3E-002	mg/L	M	6.4E-007	kg-day/mg			
	Toluene	7.0E-003	mg/L	7.0E-003	mg/L	M	1.6E-006	kg-day/mg			
	Xylene (total)	3.5E-002	mg/L	3.5E-002	mg/L	M	1.3E-005	kg-day/mg			
	Zinc	5.3E-002	mg/L	5.3E-002	mg/L	M	9.7E-008	kg-day/mg			
	(Total)										2.9E-006
								Total Hazard Index Across All Exposure Routes/Pathways			8.0E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-15
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.3E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.3E-006
	1,2-Dichloroethene(total)	3.00E-003	mg/L	3.00E-003	mg/L	M	3.9E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	4.4E-005
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	1.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.9E-005
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	1.8E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	3.1E-005
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	6.6E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	1.3E-005
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	6.4E-006	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	8.1E-005
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	1.2E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.4E-004
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	5.0E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	5.0E-004
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	6.2E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.2E-005
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M	2.3E-003	mg/kg-day			N/A	N/A	
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	5.9E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.0E-002
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	4.3E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	6.2E-004
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	6.0E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.0E-002
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	3.7E-008	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	1.8E-005
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	1.0E-005	mg/kg-day			N/A	N/A	
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	3.9E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	9.9E-006
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	3.7E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.2E-003
	Ethylbenzene	6.00E-003	mg/L	6.00E-003	mg/L	M	7.9E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	7.9E-006
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	1.9E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	6.3E-003
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	6.6E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.3E-006
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	5.5E-007	mg/kg-day			N/A	N/A	
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	1.3E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.5E-003
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.3E-004
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M	1.6E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.6E-004
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	3.0E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	5.0E-006
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	9.2E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.6E-006
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	4.6E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	2.3E-006
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	7.0E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.3E-005
	(Total)												5.7E-002
Dermal	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.4E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.4E-006
	1,2-Dichloroethene(mixture)	3.00E-003	mg/L	3.00E-003	mg/L	M	4.6E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.2E-005
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	3.1E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-004
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	2.2E-006	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	3.9E-006
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	8.1E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	1.6E-005
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	3.1E-006	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	3.9E-005
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	1.5E-006	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	4.5E-004
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	3.0E-006	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	3.8E-005
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	5.4E-006	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	5.4E-006
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M					N/A	N/A	

Table 5-3-15
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	5.2E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	1.8E-003
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	3.8E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	5.5E-005
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	1.4E-004	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	5.2E-002
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	3.2E-009	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	1.6E-004
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	3.1E-006	mg/kg-day			N/A	N/A	
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	3.4E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	8.5E-006
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	3.2E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.1E-003
	Ethyl Benzene	6.00E-003	mg/L	6.00E-003	mg/L	M	7.0E-006	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	7.6E-005
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	1.7E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.5E-004
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	3.9E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.0E-006
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	1.9E-010	mg/kg-day			N/A	N/A	
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	1.1E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.7E-004
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	9.3E-008	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	9.3E-005
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	1.9E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	3.2E-006
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	4.7E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.4E-005
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	3.9E-005	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	2.1E-005
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	3.7E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.1E-006
	(Total)												5.8E-002
												Total Hazard Index Across All Exposure Routes	1.2E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-16
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.1E-008	kg-day/mg			
	1,2-Dichloroethene(total)	3.00E-003	mg/L	3.00E-003	mg/L	M	3.3E-008	kg-day/mg			
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	1.3E-007	kg-day/mg			
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	1.5E-006	kg-day/mg			
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	5.5E-008	kg-day/mg			
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	5.4E-007	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	9.9E-008	kg-day/mg			
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	4.2E-006	kg-day/mg			
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	5.2E-006	kg-day/mg			
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M	1.9E-004	kg-day/mg			
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	4.9E-007	kg-day/mg	1.5E+000	kg-day/mg	7.4E-007
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	3.6E-006	kg-day/mg			
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	5.0E-006	kg-day/mg	2.9E-002	kg-day/mg	1.5E-007
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	3.1E-009	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	8.4E-007	kg-day/mg	1.1E+000	kg-day/mg	9.3E-007
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	3.3E-007	kg-day/mg	2.9E-003	kg-day/mg	9.5E-010
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	3.1E-007	kg-day/mg			
	Ethylbenzene	6.00E-003	mg/L	6.00E-003	mg/L	M	6.6E-008	kg-day/mg			
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	1.6E-004	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	5.5E-008	kg-day/mg	9.5E-004	kg-day/mg	5.2E-011
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	4.6E-008	kg-day/mg			
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	1.1E-005	kg-day/mg			
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	8.8E-007	kg-day/mg			
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M	1.3E-006	kg-day/mg			
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	2.5E-007	kg-day/mg			
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	7.7E-008	kg-day/mg			
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	3.8E-007	kg-day/mg			
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	5.8E-007	kg-day/mg			
	(Total)										1.8E-006
Dermal	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.2E-008	kg-day/mg			
	1,2-Dichloroethene(mixture)	3.00E-003	mg/L	3.00E-003	mg/L	M	3.9E-008	kg-day/mg			
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	2.6E-007	kg-day/mg			
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	1.8E-007	kg-day/mg			
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	6.7E-008	kg-day/mg			
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	2.6E-007	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	1.2E-007	kg-day/mg			
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	2.5E-007	kg-day/mg			
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	4.5E-007	kg-day/mg			
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M					

Table 5-3-16
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	4.3E-008	kg-day/mg	1.6E+000	kg-day/mg	6.9E-008
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	3.2E-007	kg-day/mg			
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	1.2E-005	kg-day/mg	3.2E-002	kg-day/mg	3.8E-007
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	2.7E-010	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	2.6E-007	kg-day/mg	1.1E+000	kg-day/mg	2.8E-007
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	2.8E-007	kg-day/mg	2.9E-003	kg-day/mg	8.2E-010
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	2.7E-008	kg-day/mg			
	Ethyl Benzene	6.00E-003	mg/L	6.00E-003	mg/L	M	5.8E-007	kg-day/mg			
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	1.4E-005	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	3.3E-008	kg-day/mg	9.5E-004	kg-day/mg	3.1E-011
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	1.6E-011	kg-day/mg			
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	9.5E-007	kg-day/mg			
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	7.7E-009	kg-day/mg			
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M					
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	1.6E-007	kg-day/mg			
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	4.0E-007	kg-day/mg			
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	3.2E-006	kg-day/mg			
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	3.1E-008	kg-day/mg			
	(Total)										7.3E-007
										Total Hazard Index Across All Exposure Routes/Pathways	2.6E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-17
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	3.3E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.3E-007
	1,2-Dichloroethene(total)	3.00E-003	mg/L	3.00E-003	mg/L	M	9.8E-008	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.1E-005
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	3.9E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.0E-005
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	4.6E-006	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	7.7E-006
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	1.6E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	3.3E-006
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	1.6E-006	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	2.0E-005
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	3.0E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	5.9E-005
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	1.2E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.2E-004
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	1.5E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.5E-005
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M	5.8E-004	mg/kg-day			N/A	N/A	
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	1.5E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.9E-003
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	1.1E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.5E-004
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	1.5E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	5.0E-003
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	9.2E-009	mg/kg-day	2.0E-003	mg/kg-day	N/A	N/A	4.6E-006
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	2.5E-006	mg/kg-day			N/A	N/A	
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	9.8E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	2.5E-006
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	9.2E-007	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.1E-004
	Ethylbenzene	6.00E-003	mg/L	6.00E-003	mg/L	M	2.0E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.0E-006
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	4.7E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.6E-003
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.6E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	8.2E-007
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	1.4E-007	mg/kg-day			N/A	N/A	
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	3.2E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.6E-003
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	2.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.3E-004
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M	3.9E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.9E-005
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	7.5E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.3E-006
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	2.3E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.1E-006
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	1.1E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	5.7E-007
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	1.7E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.8E-006
	(Total)												1.4E-002
Dermal	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	3.6E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.6E-007
	1,2-Dichloroethene(mixture)	3.00E-003	mg/L	3.00E-003	mg/L	M	1.2E-007	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.3E-005
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	8.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.1E-005
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	5.4E-007	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	9.4E-007

Table 5-3-17
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	2.1E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	4.3E-006
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	8.0E-007	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	1.0E-005
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	3.8E-007	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	1.2E-004
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	7.2E-007	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	9.1E-006
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	1.1E-006	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	1.1E-006
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M					N/A	N/A	
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	1.1E-007	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.7E-004
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	7.8E-007	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	3.5E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.3E-002
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	6.6E-010	mg/kg-day	2.0E-005	mg/kg-day	N/A	N/A	3.3E-005
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	8.5E-007	mg/kg-day			N/A	N/A	
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	8.2E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	2.0E-006
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	6.6E-008	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	2.2E-004
	Ethyl Benzene	6.00E-003	mg/L	6.00E-003	mg/L	M	1.8E-006	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	2.0E-005
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	3.4E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.1E-004
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.1E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.4E-007
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	4.0E-011	mg/kg-day			N/A	N/A	
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	2.3E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-004
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	1.9E-008	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.9E-005
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	5.0E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	8.3E-007
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.2E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	6.2E-006
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	1.0E-005	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	5.5E-006
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	7.5E-008	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	8.3E-007
	(Total)												1.4E-002
												Total Hazard Index Across All Exposure Routes	2.8E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-18
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	2.3E-010	kg-day/mg			
	1,2-Dichloroethene(total)	3.00E-003	mg/L	3.00E-003	mg/L	M	7.0E-010	kg-day/mg			
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	2.8E-009	kg-day/mg			
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	3.3E-008	kg-day/mg			
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	1.2E-009	kg-day/mg			
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	1.2E-008	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	2.1E-009	kg-day/mg			
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	8.9E-008	kg-day/mg			
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	1.1E-007	kg-day/mg			
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M	4.1E-006	kg-day/mg			
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	1.1E-008	kg-day/mg	1.5E+000	kg-day/mg	1.6E-008
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	7.7E-008	kg-day/mg			
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	1.1E-007	kg-day/mg	2.9E-002	kg-day/mg	3.1E-009
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	6.6E-011	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	1.8E-008	kg-day/mg	1.1E+000	kg-day/mg	2.0E-008
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	7.0E-009	kg-day/mg	2.9E-003	kg-day/mg	2.0E-011
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	6.6E-009	kg-day/mg			
	Ethylbenzene	6.00E-003	mg/L	6.00E-003	mg/L	M	1.4E-009	kg-day/mg			
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	3.4E-006	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.2E-009	kg-day/mg	9.5E-004	kg-day/mg	1.1E-012
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	9.9E-010	kg-day/mg			
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	2.3E-007	kg-day/mg			
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	1.9E-008	kg-day/mg			
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M	2.8E-008	kg-day/mg			
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	5.4E-009	kg-day/mg			
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.6E-009	kg-day/mg			
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	8.2E-009	kg-day/mg			
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	1.2E-008	kg-day/mg			
	(Total)										3.9E-008
Dermal	1,1-Dichloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	2.6E-010	kg-day/mg			
	1,2-Dichloroethene(mixture)	3.00E-003	mg/L	3.00E-003	mg/L	M	8.5E-010	kg-day/mg			
	2,4-Dimethylphenol	1.20E-002	mg/L	1.20E-002	mg/L	M	5.9E-009	kg-day/mg			
	2-Butanone (MEK)	1.40E-001	mg/L	1.40E-001	mg/L	M	3.9E-009	kg-day/mg			

Table 5-3-18
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 2, Surface Water (Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: FTRES2CT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2-Methylphenol (O-Cresol)	5.00E-003	mg/L	5.00E-003	mg/L	M	1.5E-009	kg-day/mg			
	4-Methyl-2-Pentanone	4.90E-002	mg/L	4.90E-002	mg/L	M	5.7E-009	kg-day/mg			
	4-Methylphenol (P-Cresol)	9.00E-003	mg/L	9.00E-003	mg/L	M	2.7E-009	kg-day/mg			
	Acetone	3.80E-001	mg/L	3.80E-001	mg/L	M	5.1E-009	kg-day/mg			
	Aluminum	4.70E-001	mg/L	4.70E-001	mg/L	M	7.9E-009	kg-day/mg			
	Ammonia	1.76E+001	mg/L	1.76E+001	mg/L	M					
	Arsenic	4.50E-002	mg/L	4.50E-002	mg/L	M	7.6E-010	kg-day/mg	1.6E+000	kg-day/mg	1.2E-009
	Barium	3.30E-001	mg/L	3.30E-001	mg/L	M	5.6E-009	kg-day/mg			
	Benzene	4.60E-001	mg/L	4.60E-001	mg/L	M	2.5E-007	kg-day/mg	3.2E-002	kg-day/mg	8.0E-009
	Beryllium	2.80E-004	mg/L	2.80E-004	mg/L	M	4.7E-012	kg-day/mg			
	bis(2-Chloroethyl)Ether	7.70E-002	mg/L	7.70E-002	mg/L	M	6.1E-009	kg-day/mg	1.1E+000	kg-day/mg	6.7E-009
	Chloroethane	3.00E-002	mg/L	3.00E-002	mg/L	M	5.8E-009	kg-day/mg	2.9E-003	kg-day/mg	1.7E-011
	Chromium	2.80E-002	mg/L	2.80E-002	mg/L	M	4.7E-010	kg-day/mg			
	Ethyl Benzene	6.00E-003	mg/L	6.00E-003	mg/L	M	1.3E-008	kg-day/mg			
	Iron	1.43E+001	mg/L	1.43E+001	mg/L	M	2.4E-007	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	7.7E-010	kg-day/mg	9.5E-004	kg-day/mg	7.3E-013
	Lead	4.20E-003	mg/L	4.20E-003	mg/L	M	2.8E-013	kg-day/mg			
	Manganese	9.89E-001	mg/L	9.89E-001	mg/L	M	1.7E-008	kg-day/mg			
	Nickel	8.00E-002	mg/L	8.00E-002	mg/L	M	1.4E-010	kg-day/mg			
	Nitrate/Nitrite	1.20E-001	mg/L	1.20E-001	mg/L	M					
	Phenol	2.30E-002	mg/L	2.30E-002	mg/L	M	3.6E-009	kg-day/mg			
	Toluene	7.00E-003	mg/L	7.00E-003	mg/L	M	8.8E-009	kg-day/mg			
	Xylene (total)	3.50E-002	mg/L	3.50E-002	mg/L	M	7.2E-008	kg-day/mg			
	Zinc	5.30E-002	mg/L	5.30E-002	mg/L	M	5.4E-010	kg-day/mg			
	(Total)										1.6E-008
										Total Hazard Index Across All Exposure Routes/Pathways	5.5E-008

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-19
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRES4A.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,2'-oxybis(1-Chloropropane)	1.6E-002	mg/L	1.6E-002	mg/L	M	3.71E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	9.3E-005
	2-Butanone	7.0E-004	mg/L	7.0E-004	mg/L	M	1.58E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.6E-007
	4-Methylphenol	1.0E-003	mg/L	1.0E-003	mg/L	M	2.25E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	4.5E-005
	Acetone	1.3E-002	mg/L	1.3E-002	mg/L	M	2.93E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.9E-005
	Ammonia	3.2E-001	mg/L	3.2E-001	mg/L	M	7.21E-005	mg/kg-day			N/A	N/A	
	Antimony	4.8E-001	mg/L	4.8E-001	mg/L	M	1.08E-004	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	2.7E-001
	Arsenic	2.3E-003	mg/L	2.3E-003	mg/L	M	5.19E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	1.7E-003
	Barium	1.2E-001	mg/L	1.2E-001	mg/L	M	2.66E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	3.8E-004
	Benzene	1.3E+000	mg/L	1.3E+000	mg/L	M	2.86E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	9.5E-002
	bis(2-Chloroethyl) ether	6.0E-003	mg/L	6.0E-003	mg/L	M	1.35E-006	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	6.0E-003	mg/L	6.0E-003	mg/L	M	1.35E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.8E-005
	Cadmium	3.2E-002	mg/L	3.2E-002	mg/L	M	7.10E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.4E-002
	Chloroethane	1.7E-001	mg/L	1.7E-001	mg/L	M	3.86E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	9.6E-005
	Cyanide (total)	4.0E-003	mg/L	4.0E-003	mg/L	M	9.02E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.5E-005
	Iron	6.5E+001	mg/L	6.5E+001	mg/L	M	1.48E-002	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.9E-002
	Isophorone	2.0E-003	mg/L	2.0E-003	mg/L	M	4.51E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.3E-006
	Lead	1.8E-001	mg/L	1.8E-001	mg/L	M	4.15E-005	mg/kg-day			N/A	N/A	
	Manganese	9.4E-001	mg/L	9.4E-001	mg/L	M	2.13E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-002
	Nitrate/Nitrite	5.0E-002	mg/L	5.0E-002	mg/L	M	1.13E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.1E-004
	Zinc	4.4E-001	mg/L	4.4E-001	mg/L	M	9.83E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	3.3E-004
	(Total)												4.4E-001
Dermal	2,2'-oxybis(1-Chloropropane)	1.6E-002	mg/L	1.6E-002	mg/L	M			4.0E-002	mg/kg-day	N/A	N/A	
	2-Butanone	7.0E-004	mg/L	7.0E-004	mg/L	M	4.31E-008	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	7.6E-008
	4-Methylphenol	1.0E-003	mg/L	1.0E-003	mg/L	M	1.39E-007	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	4.3E-005
	Acetone	1.3E-002	mg/L	1.3E-002	mg/L	M	8.82E-008	mg/kg-day	7.9E-002	mg/kg-day	N/A	N/A	1.1E-006
	Ammonia	3.2E-001	mg/L	3.2E-001	mg/L	M					N/A	N/A	
	Antimony	4.8E-001	mg/L	4.8E-001	mg/L	M	4.76E-006	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	1.2E-002
	Arsenic	2.3E-003	mg/L	2.3E-003	mg/L	M	2.28E-008	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	8.0E-005
	Barium	1.2E-001	mg/L	1.2E-001	mg/L	M	1.17E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.7E-005
	Benzene	1.3E+000	mg/L	1.3E+000	mg/L	M	3.32E-004	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.2E-001
	bis(2-Chloroethyl) ether	6.0E-003	mg/L	6.0E-003	mg/L	M	2.06E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	6.0E-003	mg/L	6.0E-003	mg/L	M	1.81E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.1E-004

Table 5-3-19
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRES4A.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cadmium	3.2E-002	mg/L	3.2E-002	mg/L	M	3.12E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	1.2E-002
	Chloroethane	1.7E-001	mg/L	1.7E-001	mg/L	M	1.65E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	4.1E-005
	Cyanide (total)	4.0E-003	mg/L	4.0E-003	mg/L	M	3.97E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	4.0E-006
	Iron	6.5E+001	mg/L	6.5E+001	mg/L	M	6.50E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	2.2E-003
	Isophorone	2.0E-003	mg/L	2.0E-003	mg/L	M	1.41E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	7.0E-007
	Lead	1.8E-001	mg/L	1.8E-001	mg/L	M	7.30E-009	mg/kg-day			N/A	N/A	
	Manganese	9.4E-001	mg/L	9.4E-001	mg/L	M	9.35E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.7E-004
	Nitrate/Nitrite	5.0E-002	mg/L	5.0E-002	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	4.4E-001	mg/L	4.4E-001	mg/L	M	2.60E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.9E-005
	(Total)												1.5E-001
Inhalation	2,2'-oxybis(1-Chloropropane)	1.5E-003	(mg/ cu m)	1.5E-003	(mg/ cu m)	M	5.48E-006	mg/kg-day			N/A		
	2-Butanone	7.2E-005	(mg/ cu m)	7.2E-005	(mg/ cu m)	M	2.69E-007	mg/kg-day	6.6E-002	mg/kg-day	1.00E+000	mg/cu m	4.1E-006
	4-Methylphenol	1.3E-006	(mg/ cu m)	1.3E-006	(mg/ cu m)	M	4.91E-009	mg/kg-day			N/A		
	Acetone	1.3E-003	(mg/ cu m)	1.3E-003	(mg/ cu m)	M	4.90E-006	mg/kg-day			N/A		
	Ammonia					M			6.6E-003	mg/kg-day	1.00E-001	mg/cu m	
	Antimony					M					N/A		
	Arsenic					M					N/A		
	Barium					M			3.3E-005	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	9.1E-002	(mg/ cu m)	9.1E-002	(mg/ cu m)	M	3.42E-004	mg/kg-day	4.0E-004	mg/kg-day	6.00E-003	mg/cu m	8.6E-001
	bis(2-Chloroethyl) ether	2.3E-004	(mg/ cu m)	2.3E-004	(mg/ cu m)	M	8.61E-007	mg/kg-day			N/A		
	bis(2-Ethylhexyl)phthalate					M					N/A		
	Cadmium					M					N/A		
	Chloroethane	2.8E-002	(mg/ cu m)	2.8E-002	(mg/ cu m)	M	1.04E-004	mg/kg-day	6.6E-001	mg/kg-day	1.00E+001	mg/cu m	1.6E-004
	Cyanide (total)					M					N/A		
	Iron					M					N/A		
	Isophorone	3.7E-005	(mg/ cu m)	3.7E-005	(mg/ cu m)	M	1.38E-007	mg/kg-day			N/A		
	Lead					M					N/A		
	Manganese					M			3.3E-006	mg/kg-day	5.00E-005	mg/cu m	
	Nitrate/Nitrite					M					N/A		
	Zinc					M					N/A		
	(Total)												8.6E-001
											Total Hazard Index Across All Exposure Routes		1.5E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-20
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRES4A.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,2'-oxybis(1-Chloropropane)	1.65E-002	mg/L	1.65E-002	mg/L	M	3.1E-007	kg-day/mg	7.0E-002	kg-day/mg	2.2E-008
	2-Butanone	7.00E-004	mg/L	7.00E-004	mg/L	M	1.3E-008	kg-day/mg			
	4-Methylphenol	1.00E-003	mg/L	1.00E-003	mg/L	M	1.9E-008	kg-day/mg			
	Acetone	1.30E-002	mg/L	1.30E-002	mg/L	M	2.4E-007	kg-day/mg			
	Ammonia	3.20E-001	mg/L	3.20E-001	mg/L	M	6.0E-006	kg-day/mg			
	Antimony	4.80E-001	mg/L	4.80E-001	mg/L	M	9.0E-006	kg-day/mg			
	Arsenic	2.3E-003	mg/L	2.30E-003	mg/L	M	4.3E-008	kg-day/mg	1.5E+000	kg-day/mg	6.48E-008
	Barium	1.2E-001	mg/L	1.18E-001	mg/L	M	2.2E-006	kg-day/mg			
	Benzene	1.3E+000	mg/L	1.27E+000	mg/L	M	2.4E-005	kg-day/mg	2.9E-002	kg-day/mg	6.92E-007
	bis(2-Chloroethyl) ether	6.0E-003	mg/L	6.00E-003	mg/L	M	1.1E-007	kg-day/mg	1.1E+000	kg-day/mg	1.24E-007
	bis(2-Ethylhexyl)phthalate	6.0E-003	mg/L	6.00E-003	mg/L	M	1.1E-007	kg-day/mg	1.4E-002	kg-day/mg	1.58E-009
	Cadmium	3.2E-002	mg/L	3.15E-002	mg/L	M	5.9E-007	kg-day/mg			
	Chloroethane	1.7E-001	mg/L	1.71E-001	mg/L	M	3.2E-006	kg-day/mg	2.9E-003	kg-day/mg	9.32E-009
	Cyanide (total)	4.0E-003	mg/L	4.00E-003	mg/L	M	7.5E-008	kg-day/mg			
	Iron	6.5E+001	mg/L	6.55E+001	mg/L	M	1.2E-003	kg-day/mg			
	Isophorone	2.0E-003	mg/L	2.00E-003	mg/L	M	3.8E-008	kg-day/mg	9.5E-004	kg-day/mg	3.57E-011
	Lead	1.8E-001	mg/L	1.84E-001	mg/L	M	3.5E-006	kg-day/mg			
	Manganese	9.4E-001	mg/L	9.43E-001	mg/L	M	1.8E-005	kg-day/mg			
	Nitrate/Nitrite	5.0E-002	mg/L	5.00E-002	mg/L	M	9.4E-007	kg-day/mg			
	Zinc	4.4E-001	mg/L	4.36E-001	mg/L	M	8.2E-006	kg-day/mg			
	(Total)										9.13E-007
Dermal	2,2'-oxybis(1-Chloropropane)	1.65E-002	mg/L	1.65E-002	mg/L	M			7.0E-002	kg-day/mg	
	2-Butanone	7.0E-004	mg/L	7.00E-004	mg/L	M	3.6E-009	kg-day/mg			
	4-Methylphenol	1.0E-003	mg/L	1.00E-003	mg/L	M	1.2E-008	kg-day/mg			
	Acetone	1.3E-002	mg/L	1.30E-002	mg/L	M	7.4E-009	kg-day/mg			
	Ammonia	3.2E-001	mg/L	3.20E-001	mg/L	M					
	Antimony	4.8E-001	mg/L	4.80E-001	mg/L	M	4.0E-007	kg-day/mg			
	Arsenic	2.30E-003	mg/L	2.30E-003	mg/L	M	1.9E-009	kg-day/mg	1.4E+000	kg-day/mg	2.66E-009
	Barium	1.18E-001	mg/L	1.18E-001	mg/L	M	9.8E-008	kg-day/mg			
	Benzene	1.27E+000	mg/L	1.27E+000	mg/L	M	2.8E-005	kg-day/mg	2.6E-002	kg-day/mg	7.19E-007
	bis(2-Chloroethyl) ether	6.00E-003	mg/L	6.00E-003	mg/L	M	1.7E-008	kg-day/mg	1.1E+000	kg-day/mg	1.89E-008
	bis(2-Ethylhexyl)phthalate	6.00E-003	mg/L	6.00E-003	mg/L	M	1.5E-006	kg-day/mg	1.4E-002	kg-day/mg	2.11E-008

Table 5-3-20
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: TRES4A.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cadmium	3.15E-002	mg/L	3.15E-002	mg/L	M	2.6E-008	kg-day/mg			
	Chloroethane	1.71E-001	mg/L	1.71E-001	mg/L	M	1.4E-006	kg-day/mg	2.9E-003	kg-day/mg	4.00E-009
	Cyanide (total)	4.00E-003	mg/L	4.00E-003	mg/L	M	3.3E-009	kg-day/mg			
	Iron	6.55E+001	mg/L	6.55E+001	mg/L	M	5.4E-005	kg-day/mg			
	Isophorone	2.00E-003	mg/L	2.00E-003	mg/L	M	1.2E-008	kg-day/mg	9.5E-004	kg-day/mg	1.11E-011
	Lead	1.84E-001	mg/L	1.84E-001	mg/L	M	6.1E-010	kg-day/mg			
	Manganese	9.43E-001	mg/L	9.43E-001	mg/L	M	7.8E-007	kg-day/mg			
	Nitrate/Nitrite	5.00E-002	mg/L	5.00E-002	mg/L	M					
	Zinc	4.36E-001	mg/L	4.36E-001	mg/L	M	2.2E-007	kg-day/mg			
	(Total)										7.65E-007
Inhalation	2,2'-oxybis(1-Chloropropane)	1.47E-003	(mg/ cu m)	1.47E-003	(mg/ cu m)	M	4.6E-007	kg-day/mg	3.5E-002	kg-day/mg	1.6E-008
	2-Butanone	7.20E-005	(mg/ cu m)	7.20E-005	(mg/ cu m)	M	2.2E-008	kg-day/mg			
	4-Methylphenol	1.31E-006	(mg/ cu m)	1.31E-006	(mg/ cu m)	M	4.1E-010	kg-day/mg			
	Acetone	1.31E-003	(mg/ cu m)	1.31E-003	(mg/ cu m)	M	4.1E-007	kg-day/mg			
	Ammonia					M		kg-day/mg			
	Antimony					M		kg-day/mg			
	Arsenic					M		kg-day/mg	1.5E-001	kg-day/mg	
	Barium					M		kg-day/mg			
	Benzene	9.1E-002	(mg/ cu m)	9.14E-002	(mg/ cu m)	M	2.8E-005	kg-day/mg	2.9E-002	kg-day/mg	8.26E-007
	bis(2-Chloroethyl) ether	2.3E-004	(mg/ cu m)	2.30E-004	(mg/ cu m)	M	7.2E-008	kg-day/mg	1.1E+000	kg-day/mg	7.89E-008
	bis(2-Ethylhexyl)phthalate					M		kg-day/mg	1.4E-002	kg-day/mg	
	Cadmium					M		kg-day/mg	6.3E+000	kg-day/mg	
	Chloroethane	2.8E-002	(mg/ cu m)	2.77E-002	(mg/ cu m)	M	8.6E-006	kg-day/mg			
	Cyanide (total)					M		kg-day/mg			
	Iron					M		kg-day/mg			
	Isophorone	3.7E-005	(mg/ cu m)	3.69E-005	(mg/ cu m)	M	1.2E-008	kg-day/mg			
	Lead					M		kg-day/mg			
	Manganese					M		kg-day/mg			
	Nitrate/Nitrite					M		kg-day/mg			
	Zinc					M		kg-day/mg			
	(Total)										9.21E-007
										Total Hazard Index Across All Exposure Routes	2.6E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-21
ALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Tresspasser
Receptor Age:	Adolescent

File: TRES4Act.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2,2'-oxybis(1-Chloropropane)	1.6E-002	mg/L	1.6E-002	mg/L	M	1.08E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.7E-005
	2-Butanone	1.5E-002	mg/L	1.5E-002	mg/L	M	9.63E-007	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	4-Methylphenol	5.0E-003	mg/L	5.0E-003	mg/L	M	3.29E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	6.6E-005
	Acetone	1.6E-002	mg/L	1.6E-002	mg/L	M	1.03E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.0E-005
	Ammonia	3.2E-001	mg/L	3.2E-001	mg/L	M	2.10E-005	mg/kg-day			N/A	N/A	
	Antimony	4.8E-001	mg/L	4.8E-001	mg/L	M	3.16E-005	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	7.9E-002
	Arsenic	2.3E-003	mg/L	2.3E-003	mg/L	M	1.51E-007	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	5.0E-004
	Barium	1.2E-001	mg/L	1.2E-001	mg/L	M	7.76E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.11E-004
	Benzene	1.7E+000	mg/L	1.7E+000	mg/L	M	1.12E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.72E-002
	bis(2-Chloroethyl) ether	6.1E-003	mg/L	6.1E-003	mg/L	M	4.01E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	5.8E-003	mg/L	5.8E-003	mg/L	M	3.78E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.89E-005
	Cadmium	3.2E-002	mg/L	3.2E-002	mg/L	M	2.07E-006	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	4.14E-003
	Chloroethane	2.0E-001	mg/L	2.0E-001	mg/L	M	1.32E-005	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	3.30E-005
	Cyanide (total)	3.6E-003	mg/L	3.6E-003	mg/L	M	2.35E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.18E-005
	Iron	7.5E+001	mg/L	7.5E+001	mg/L	M	4.93E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.64E-002
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	3.29E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.64E-006
	Lead	1.8E-001	mg/L	1.8E-001	mg/L	M	1.21E-005	mg/kg-day			N/A	N/A	
	Manganese	9.4E-001	mg/L	9.4E-001	mg/L	M	6.20E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.10E-003
	Nitrate/Nitrite	5.0E-002	mg/L	5.0E-002	mg/L	M	3.29E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.29E-005
	Zinc	4.6E-001	mg/L	4.6E-001	mg/L	M	3.04E-005	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.01E-004
	(Total)												1.41E-001
Dermal	2,2'-oxybis(1-Chloropropane)	1.6E-002	mg/L	1.6E-002	mg/L	M			4.0E-002	mg/kg-day	N/A	N/A	
	2-Butanone	1.5E-002	mg/L	1.5E-002	mg/L	M	4.30E-007	mg/kg-day	5.7E-001	mg/kg-day	N/A	N/A	7.54E-007
	4-Methylphenol	5.0E-003	mg/L	5.0E-003	mg/L	M	3.31E-007	mg/kg-day	3.3E-003	mg/kg-day	N/A	N/A	1.02E-004
	Acetone	1.6E-002	mg/L	1.6E-002	mg/L	M	5.08E-008	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	5.08E-007
	Ammonia	3.2E-001	mg/L	3.2E-001	mg/L	M					N/A	N/A	
	Antimony	4.8E-001	mg/L	4.8E-001	mg/L	M	2.27E-006	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	5.68E-003
	Arsenic	2.3E-003	mg/L	2.3E-003	mg/L	M	1.09E-008	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	3.82E-005
	Barium	1.2E-001	mg/L	1.2E-001	mg/L	M	5.59E-007	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	7.98E-006
	Benzene	1.7E+000	mg/L	1.7E+000	mg/L	M	2.12E-004	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	7.84E-002
	bis(2-Chloroethyl) ether	6.1E-003	mg/L	6.1E-003	mg/L	M	1.00E-007	mg/kg-day			N/A	N/A	
	bis(2-Ethylhexyl)phthalate	5.8E-003	mg/L	5.8E-003	mg/L	M	7.43E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.72E-003

Table 5-3-21
ALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Tresspasser
Receptor Age:	Adolescent

File: TRES4Act.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cadmium	3.2E-002	mg/L	3.2E-002	mg/L	M	1.49E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	5.97E-003
	Chloroethane	2.0E-001	mg/L	2.0E-001	mg/L	M	9.26E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	2.32E-005
	Cyanide (total)	3.6E-003	mg/L	3.6E-003	mg/L	M	1.69E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.69E-006
	Iron	7.5E+001	mg/L	7.5E+001	mg/L	M	3.55E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.18E-003
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	1.68E-007	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	8.39E-007
	Lead	1.8E-001	mg/L	1.8E-001	mg/L	M	3.48E-009	mg/kg-day			N/A	N/A	
	Manganese	9.4E-001	mg/L	9.4E-001	mg/L	M	4.46E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.23E-004
	Nitrate/Nitrite	5.0E-002	mg/L	5.0E-002	mg/L	M			3.0E-003	mg/kg-day	N/A	N/A	
	Zinc	4.6E-001	mg/L	4.6E-001	mg/L	M	1.32E-006	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	4.38E-006
	(Total)												9.54E-002
Inhalation	2,2'-oxybis(1-Chloropropane)	1.5E-003	(mg/ cu m)	1.5E-003	(mg/ cu m)	M	2.31E-006	mg/kg-day			N/A		
	2-Butanone	7.2E-005	(mg/ cu m)	7.2E-005	(mg/ cu m)	M	1.14E-007	mg/kg-day	4.8E-002	mg/kg-day	1.00E+000	mg/cu m	2.4E-006
	4-Methylphenol	1.3E-006	(mg/ cu m)	1.3E-006	(mg/ cu m)	M	2.07E-009	mg/kg-day			N/A		
	Acetone	1.3E-003	(mg/ cu m)	1.3E-003	(mg/ cu m)	M	2.07E-006	mg/kg-day			N/A		
	Ammonia					M			4.8E-003	mg/kg-day	1.00E-001	mg/cu m	
	Antimony					M					N/A		
	Arsenic					M					N/A		
	Barium					M			2.4E-005	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	9.1E-002	(mg/ cu m)	9.1E-002	(mg/ cu m)	M	1.44E-004	mg/kg-day	2.9E-004	mg/kg-day	6.00E-003	mg/cu m	5.01E-001
	bis(2-Chloroethyl) ether	2.3E-004	(mg/ cu m)	2.3E-004	(mg/ cu m)	M	3.63E-007	mg/kg-day			N/A		
	bis(2-Ethylhexyl)phthalate					M					N/A		
	Cadmium					M					N/A		
	Chloroethane	2.8E-002	(mg/ cu m)	2.8E-002	(mg/ cu m)	M	4.37E-005	mg/kg-day	4.8E-001	mg/kg-day	1.00E+001	mg/cu m	9.11E-005
	Cyanide (total)					M					N/A		
	Iron					M					N/A		
	Isophorone	3.7E-005	(mg/ cu m)	3.7E-005	(mg/ cu m)	M	5.82E-008	mg/kg-day			N/A		
	Lead					M					N/A		
	Manganese					M			2.4E-006	mg/kg-day	5.00E-005	mg/cu m	
	Nitrate/Nitrite					M					N/A		
	Zinc					M					N/A		
	(Total)												5.01E-001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Total Hazard Index Across All Exposure Routes: 7.4E-001

Table 5-3-22
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4A, Surface Water (Wetlands)
Receptor Population:	Tresspasser
Receptor Age:	Adolescent

File: TRES4Act.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2,2'-oxybis(1-Chloropropane)	1.65E-002	mg/L	1.65E-002	mg/L	M	7.7E-009	kg-day/mg	7.0E-002	kg-day/mg	5.4E-010
	2-Butanone	1.47E-002	mg/L	1.47E-002	mg/L	M	6.9E-009	kg-day/mg			
	4-Methylphenol	5.00E-003	mg/L	5.00E-003	mg/L	M	2.4E-009	kg-day/mg			
	Acetone	1.57E-002	mg/L	1.57E-002	mg/L	M	7.4E-009	kg-day/mg			
	Ammonia	3.20E-001	mg/L	3.20E-001	mg/L	M	1.5E-007	kg-day/mg			
	Antimony	4.80E-001	mg/L	4.80E-001	mg/L	M	2.3E-007	kg-day/mg			
	Arsenic	2.3E-003	mg/L	2.30E-003	mg/L	M	1.1E-009	kg-day/mg	1.5E+000	kg-day/mg	1.62E-009
	Barium	1.2E-001	mg/L	1.18E-001	mg/L	M	5.6E-008	kg-day/mg			
	Benzene	1.7E+000	mg/L	1.70E+000	mg/L	M	8.0E-007	kg-day/mg	2.9E-002	kg-day/mg	2.32E-008
	bis(2-Chloroethyl) ether	6.1E-003	mg/L	6.10E-003	mg/L	M	2.9E-009	kg-day/mg	1.1E+000	kg-day/mg	3.16E-009
	bis(2-Ethylhexyl)phthalate	5.8E-003	mg/L	5.75E-003	mg/L	M	2.7E-009	kg-day/mg	1.4E-002	kg-day/mg	3.79E-011
	Cadmium	3.2E-002	mg/L	3.15E-002	mg/L	M	1.5E-008	kg-day/mg			
	Chloroethane	2.0E-001	mg/L	2.01E-001	mg/L	M	9.4E-008	kg-day/mg	2.9E-003	kg-day/mg	2.74E-010
	Cyanide (total)	3.6E-003	mg/L	3.58E-003	mg/L	M	1.7E-009	kg-day/mg			
	Iron	7.5E+001	mg/L	7.50E+001	mg/L	M	3.5E-005	kg-day/mg			
	Isophorone	5.0E-003	mg/L	5.00E-003	mg/L	M	2.4E-009	kg-day/mg	9.5E-004	kg-day/mg	2.24E-012
	Lead	1.8E-001	mg/L	1.84E-001	mg/L	M	8.7E-008	kg-day/mg			
	Manganese	9.4E-001	mg/L	9.43E-001	mg/L	M	4.4E-007	kg-day/mg			
	Nitrate/Nitrite	5.0E-002	mg/L	5.00E-002	mg/L	M	2.4E-008	kg-day/mg			
	Zinc	4.6E-001	mg/L	4.63E-001	mg/L	M	2.2E-007	kg-day/mg			
	(Total)										2.88E-008
Dermal	2,2'-oxybis(1-Chloropropane)	1.65E-002	mg/L	1.65E-002	mg/L	M			7.0E-002	kg-day/mg	
	2-Butanone	1.5E-002	mg/L	1.47E-002	mg/L	M	3.1E-009	kg-day/mg			
	4-Methylphenol	5.0E-003	mg/L	5.00E-003	mg/L	M	2.4E-009	kg-day/mg			
	Acetone	1.6E-002	mg/L	1.57E-002	mg/L	M	3.6E-010	kg-day/mg			
	Ammonia	3.2E-001	mg/L	3.20E-001	mg/L	M					
	Antimony	4.8E-001	mg/L	4.80E-001	mg/L	M	1.6E-008	kg-day/mg			
	Arsenic	2.30E-003	mg/L	2.30E-003	mg/L	M	7.8E-011	kg-day/mg	1.4E+000	kg-day/mg	1.09E-010
	Barium	1.18E-001	mg/L	1.18E-001	mg/L	M	4.0E-009	kg-day/mg			
	Benzene	1.70E+000	mg/L	1.70E+000	mg/L	M	1.5E-006	kg-day/mg	2.6E-002	kg-day/mg	3.94E-008
	bis(2-Chloroethyl) ether	6.10E-003	mg/L	6.10E-003	mg/L	M	7.2E-010	kg-day/mg	1.1E+000	kg-day/mg	7.88E-010
	bis(2-Ethylhexyl)phthalate	5.75E-003	mg/L	5.75E-003	mg/L	M	5.3E-007	kg-day/mg	1.4E-002	kg-day/mg	7.44E-009

Table 5-3-22
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	*Current/Future*
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	*Area 4A, Surface Water (Wetlands)*
Receptor Population:	Tresspasser
Receptor Age:	Adolescent

File: TRES4Act.WK4

Exposure *Route*	Chemical *of Potential* Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC *Selected* for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cadmium	3.15E-002	mg/L	3.15E-002	mg/L	M	1.1E-009	kg-day/mg			
	Chloroethane	2.01E-001	mg/L	2.01E-001	mg/L	M	6.6E-008	kg-day/mg	2.9E-003	kg-day/mg	1.92E-010
	Cyanide (total)	3.58E-003	mg/L	3.58E-003	mg/L	M	1.2E-010	kg-day/mg			
	Iron	7.50E+001	mg/L	7.50E+001	mg/L	M	2.5E-006	kg-day/mg			
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	1.2E-009	kg-day/mg	9.5E-004	kg-day/mg	1.14E-012
	Lead	1.84E-001	mg/L	1.84E-001	mg/L	M	2.5E-011	kg-day/mg			
	Manganese	9.43E-001	mg/L	9.43E-001	mg/L	M	3.2E-008	kg-day/mg			
	Nitrate/Nitrite	5.00E-002	mg/L	5.00E-002	mg/L	M					
	Zinc	4.63E-001	mg/L	4.63E-001	mg/L	M	9.4E-009	kg-day/mg			
	(Total)										4.79E-008
Inhalation	2,2'-oxybis(1-Chloropropane)	1.47E-003	(mg/ cu m)	1.47E-003	(mg/ cu m)	M	1.7E-008	kg-day/mg	3.5E-002	kg-day/mg	5.8E-010
	2-Butanone	7.20E-005	(mg/ cu m)	7.20E-005	(mg/ cu m)	M	8.1E-010	kg-day/mg			
	4-Methylphenol	1.31E-006	(mg/ cu m)	1.31E-006	(mg/ cu m)	M	1.5E-011	kg-day/mg			
	Acetone	1.31E-003	(mg/ cu m)	1.31E-003	(mg/ cu m)	M	1.5E-008	kg-day/mg			
	Ammonia					M		kg-day/mg			
	Antimony					M		kg-day/mg			
	Arsenic					M		kg-day/mg	1.5E-001	kg-day/mg	
	Barium					M		kg-day/mg			
	Benzene	9.1E-002	(mg/ cu m)	9.14E-002	(mg/ cu m)	M	1.0E-006	kg-day/mg	2.9E-002	kg-day/mg	2.99E-008
	bis(2-Chloroethyl) ether	2.3E-004	(mg/ cu m)	2.30E-004	(mg/ cu m)	M	2.6E-009	kg-day/mg	1.1E+000	kg-day/mg	2.86E-009
	bis(2-Ethylhexyl)phthalate					M		kg-day/mg	1.4E-002	kg-day/mg	
	Cadmium					M		kg-day/mg	6.3E+000	kg-day/mg	
	Chloroethane	2.8E-002	(mg/ cu m)	2.77E-002	(mg/ cu m)	M	3.1E-007	kg-day/mg			
	Cyanide (total)					M		kg-day/mg			
	Iron					M		kg-day/mg			
	Isophorone	3.7E-005	(mg/ cu m)	3.69E-005	(mg/ cu m)	M	4.2E-010	kg-day/mg			
	Lead					M		kg-day/mg			
	Manganese					M		kg-day/mg			
	Nitrate/Nitrite					M		kg-day/mg			
	Zinc					M		kg-day/mg			
	(Total)										3.34E-008
										Total Hazard Index Across All Exposure Routes	1.1E-007

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-3-23
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: fworkr4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	1.5E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.5E-004
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	9.4E-008	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.6E-006
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	2.8E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	7.0E-005
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	2.3E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.3E-004
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	3.0E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	6.0E-005
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	6.6E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.3E-006
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	5.6E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.9E-005
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	1.0E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	2.1E-005
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	9.4E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	3.1E-006
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	9.4E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	3.1E-006
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	1.0E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.4E-003
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	9.4E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.7E-006
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	2.5E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	6.3E-006
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	6.6E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	6.6E-005
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	1.8E-005	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.8E-003
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	4.7E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.7E-006
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	1.5E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	7.5E-007
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	7.5E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.8E-005
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	2.7E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	1.4E-006
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	9.4E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	9.4E-006
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	4.2E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	2.1E-005
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.4E-005
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.8E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	4.7E-005
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	1.3E-005	mg/kg-day			N/A	N/A	
	(Total)												6.60E-003
Dermal	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	6.2E-005		2.0E-002	mg/kg-day			3.09E-003
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	2.6E-007		4.2E-002	mg/kg-day	N/A	N/A	6.2E-006
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	5.7E-007		3.2E-003	mg/kg-day			1.8E-004
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	4.0E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	4.0E-004
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	1.1E-004		5.0E-002	mg/kg-day	N/A	N/A	2.2E-003
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	1.1E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.2E-004
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	5.9E-007		3.0E-002	mg/kg-day			2.0E-005
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	2.1E-005		5.0E-002	mg/kg-day	N/A	N/A	4.3E-004

Table 5-3-23
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: fworkr4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	2.2E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.3E-005
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	1.6E-006		3.0E-002	mg/kg-day	N/A	N/A	5.2E-005
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	3.8E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.4E-002
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	8.5E-007	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	1.4E-004
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	3.4E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	8.5E-006
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	1.3E-006	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	1.3E-004
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	3.5E-005		1.0E-002	mg/kg-day	N/A	N/A	3.5E-003
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	7.0E-006	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	7.6E-005
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	2.7E-005	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	1.4E-005
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	1.2E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.1E-004
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	4.9E-005		1.8E+000	mg/kg-day	N/A	N/A	2.6E-005
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	1.4E-006	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.4E-004
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	3.7E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.8E-004
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	5.9E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.9E-006
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.1E-006	mg/kg-day	5.9E-003	mg/kg-day	N/A	N/A	1.8E-004
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	1.6E-005	mg/kg-day			N/A	N/A	
	(Total)												2.58E-002
												Total Hazard Index Across All Exposure Routes	3.2E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-24
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: fworkr4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	1.3E-006	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	8.4E-009	kg-day/mg	2.0E-001	kg-day/mg	1.7E-009
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	2.5E-008	kg-day/mg	5.7E-002	kg-day/mg	1.4E-009
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	2.0E-006	kg-day/mg			
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	2.7E-007	kg-day/mg			
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	5.9E-008	kg-day/mg			
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	5.0E-008	kg-day/mg	9.1E-002	kg-day/mg	4.6E-009
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	9.2E-008	kg-day/mg			
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	8.4E-009	kg-day/mg			
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	8.4E-009	kg-day/mg	2.4E-002	kg-day/mg	2.0E-010
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	9.2E-007	kg-day/mg	2.9E-002	kg-day/mg	2.7E-008
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	8.4E-009	kg-day/mg			
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	2.3E-007	kg-day/mg	2.9E-003	kg-day/mg	6.6E-010
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	5.9E-008	kg-day/mg	6.1E-003	kg-day/mg	3.6E-010
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	1.6E-006	kg-day/mg			
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	4.2E-008	kg-day/mg			
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	1.3E-007	kg-day/mg			
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	6.7E-008	kg-day/mg			
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	2.4E-007	kg-day/mg			
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	8.4E-009	kg-day/mg	5.2E-002	kg-day/mg	4.4E-010
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	3.8E-007	kg-day/mg			
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.5E-008	kg-day/mg			
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.5E-008	kg-day/mg	1.1E-002	kg-day/mg	2.8E-010
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	1.2E-006	kg-day/mg	1.9E+000	kg-day/mg	2.2E-006
	(Total)										2.3E-006
Dermal	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	5.5E-006	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	2.3E-008	kg-day/mg	2.9E-001	kg-day/mg	6.6E-009
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	5.1E-008	kg-day/mg	7.0E-002	kg-day/mg	3.6E-009
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	3.5E-006	kg-day/mg			
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	1.0E-005	kg-day/mg			
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	9.5E-007	kg-day/mg			
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	5.3E-008	kg-day/mg	9.1E-002	kg-day/mg	4.8E-009
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	1.9E-006	kg-day/mg			

Table 5-3-24
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: fworkr4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	1.9E-007	kg-day/mg			
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	1.4E-007	kg-day/mg	2.4E-002	kg-day/mg	3.3E-009
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	3.4E-006	kg-day/mg	3.2E-002	kg-day/mg	1.1E-007
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	7.6E-008	kg-day/mg			
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	3.0E-007	kg-day/mg	2.9E-003	kg-day/mg	8.8E-010
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	1.1E-007	kg-day/mg	6.4E-003	kg-day/mg	7.3E-010
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	3.1E-006	kg-day/mg			
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	6.2E-007	kg-day/mg			
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	2.4E-006	kg-day/mg			
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	1.1E-006	kg-day/mg			
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	4.3E-006	kg-day/mg			
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	1.2E-007	kg-day/mg	5.2E-002	kg-day/mg	6.4E-009
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	3.3E-006	kg-day/mg			
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	5.3E-009	kg-day/mg			
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	9.6E-008	kg-day/mg	1.1E-002	kg-day/mg	1.1E-009
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	1.4E-006	kg-day/mg	1.9E+000	kg-day/mg	2.7E-006
	(Total)										2.8E-006
										Total Hazard Index Across All Exposure Routes/Pathways	5.1E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-25
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWRKCT4B.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	3.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.9E-004
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	2.3E-008	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	3.9E-007
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	7.0E-008	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	1.8E-005
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	5.6E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	5.6E-005
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	7.5E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	1.5E-005
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	1.6E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.8E-006
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	1.4E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.7E-006
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	2.6E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	5.2E-006
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	2.3E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.8E-007
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	2.3E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.8E-007
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	2.6E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	8.6E-004
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	2.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.2E-006
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	6.3E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.6E-006
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	1.6E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.6E-005
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	4.5E-006	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	4.5E-004
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	1.2E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.2E-006
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	3.8E-007	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	1.9E-007
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	1.9E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.4E-006
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	6.8E-007	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	3.4E-007
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	2.3E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.3E-006
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	1.1E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.3E-006
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	7.0E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.5E-006
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	7.0E-008	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	1.2E-005
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	3.3E-006	mg/kg-day			N/A	N/A	
	(Total)												1.65E-003
Dermal	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	1.3E-005		2.0E-002	mg/kg-day			6.67E-004
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	5.6E-008		4.2E-002	mg/kg-day	N/A	N/A	1.3E-006
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	1.2E-007		3.2E-003	mg/kg-day			3.8E-005
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	8.5E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.5E-005
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	2.4E-005		5.0E-002	mg/kg-day	N/A	N/A	4.8E-004
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	2.3E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.6E-005
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	1.3E-007		3.0E-002	mg/kg-day			4.2E-006

Table 5-3-25
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWRKCT4B.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	4.6E-006		5.0E-002	mg/kg-day	N/A	N/A	9.2E-005
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	4.7E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.6E-005
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	3.3E-007		3.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	8.3E-006	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	3.1E-003
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	1.8E-007	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	3.0E-005
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	7.3E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.8E-006
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	2.8E-007	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	2.9E-005
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	7.5E-006		1.0E-002	mg/kg-day	N/A	N/A	7.5E-004
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	1.5E-006	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	1.6E-005
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	5.7E-006	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	3.1E-006
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	2.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.3E-004
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	1.0E-005		1.8E+000	mg/kg-day	N/A	N/A	5.7E-006
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	3.0E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.0E-005
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	7.9E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.9E-005
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.3E-007
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.3E-007	mg/kg-day	5.9E-003	mg/kg-day	N/A	N/A	3.9E-005
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	3.4E-006	mg/kg-day			N/A	N/A	
	(Total)												5.56E-003
												Total Hazard Index Across All Exposure Routes	7.2E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-26
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWRKCT4B.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	6.7E-008	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	4.2E-010	kg-day/mg	2.0E-001	kg-day/mg	8.4E-011
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	1.3E-009	kg-day/mg	5.7E-002	kg-day/mg	7.2E-011
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	1.0E-007	kg-day/mg			
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	1.3E-008	kg-day/mg			
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	2.9E-009	kg-day/mg			
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	2.5E-009	kg-day/mg	9.1E-002	kg-day/mg	2.3E-010
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	4.6E-009	kg-day/mg			
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	4.2E-010	kg-day/mg			
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	4.2E-010	kg-day/mg	2.4E-002	kg-day/mg	1.0E-011
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	4.6E-008	kg-day/mg	2.9E-002	kg-day/mg	1.3E-009
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	4.2E-010	kg-day/mg			
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	1.1E-008	kg-day/mg	2.9E-003	kg-day/mg	3.3E-011
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	2.9E-009	kg-day/mg	6.1E-003	kg-day/mg	1.8E-011
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	8.0E-008	kg-day/mg			
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	2.1E-009	kg-day/mg			
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	6.7E-009	kg-day/mg			
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	3.4E-009	kg-day/mg			
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	1.2E-008	kg-day/mg			
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	4.2E-010	kg-day/mg	5.2E-002	kg-day/mg	2.2E-011
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	1.9E-008	kg-day/mg			
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.3E-009	kg-day/mg			
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.3E-009	kg-day/mg	1.1E-002	kg-day/mg	1.4E-011
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	5.9E-008	kg-day/mg	1.9E+000	kg-day/mg	1.1E-007
	(Total)										1.1E-007
Dermal	1,1,1-Trichloroethane	1.6E-001	mg/L	1.6E-001	mg/L	M	2.4E-007	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.0E-003	mg/L	1.0E-003	mg/L	M	1.0E-009	kg-day/mg	2.9E-001	kg-day/mg	2.9E-010
	1,1,2-Trichloroethane	3.0E-003	mg/L	3.0E-003	mg/L	M	2.2E-009	kg-day/mg	7.0E-002	kg-day/mg	1.6E-010
	1,1-Dichloroethane	2.4E-001	mg/L	2.4E-001	mg/L	M	1.5E-007	kg-day/mg			
	1,2,4-Trimethylbenzene	3.2E-002	mg/L	3.2E-002	mg/L	M	4.3E-007	kg-day/mg			
	1,2-Dichlorobenzene	7.0E-003	mg/L	7.0E-003	mg/L	M	4.1E-008	kg-day/mg			
	1,2-Dichloroethane	6.0E-003	mg/L	6.0E-003	mg/L	M	2.3E-009	kg-day/mg	9.1E-002	kg-day/mg	2.1E-010

Table 5-3-26
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Routine Worker
Receptor Age:	Adult

File: FWRKCT4B.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	1,3,5-Trimethylbenzene	1.1E-002	mg/L	1.1E-002	mg/L	M	8.2E-008	kg-day/mg			
	1,3-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	8.4E-009	kg-day/mg			
	1,4-Dichlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	6.0E-009	kg-day/mg	2.4E-002	kg-day/mg	1.4E-010
	Benzene	1.1E-001	mg/L	1.1E-001	mg/L	M	1.5E-007	kg-day/mg	3.2E-002	kg-day/mg	4.8E-009
	Chlorobenzene	1.0E-003	mg/L	1.0E-003	mg/L	M	3.3E-009	kg-day/mg			
	Chloroethane	2.7E-002	mg/L	2.7E-002	mg/L	M	1.3E-008	kg-day/mg	2.9E-003	kg-day/mg	3.8E-011
	Chloroform	7.0E-003	mg/L	7.0E-003	mg/L	M	5.0E-009	kg-day/mg	6.4E-003	kg-day/mg	3.2E-011
	cis-1,2-Dichloroethene	1.9E-001	mg/L	1.9E-001	mg/L	M	1.3E-007	kg-day/mg			
	Ethyl Benzene	5.0E-003	mg/L	5.0E-003	mg/L	M	2.7E-008	kg-day/mg			
	m,p-xylene	1.6E-002	mg/L	1.6E-002	mg/L	M	1.0E-007	kg-day/mg			
	Naphthalene	8.0E-003	mg/L	8.0E-003	mg/L	M	4.7E-008	kg-day/mg			
	ortho-xylene	2.9E-002	mg/L	2.9E-002	mg/L	M	1.9E-007	kg-day/mg			
	Tetrachloroethene	1.0E-003	mg/L	1.0E-003	mg/L	M	5.3E-009	kg-day/mg	5.2E-002	kg-day/mg	2.7E-010
	Toluene	4.5E-002	mg/L	4.5E-002	mg/L	M	1.4E-007	kg-day/mg			
	trans-1,2-Dichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.3E-010	kg-day/mg			
	Trichloroethene	3.0E-003	mg/L	3.0E-003	mg/L	M	4.1E-009	kg-day/mg	1.1E-002	kg-day/mg	4.6E-011
	Vinyl Chloride	1.4E-001	mg/L	1.4E-001	mg/L	M	6.1E-008	kg-day/mg	1.9E+000	kg-day/mg	1.2E-007
	(Total)										1.2E-007
										Total Hazard Index Across All Exposure Routes/Pathways	2.4E-007

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-27
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: cftres4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	3.6E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.8E-003
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	2.3E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	3.8E-006
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	6.8E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	1.7E-004
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	5.4E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	5.4E-004
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	7.2E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	1.4E-004
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.6E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.8E-005
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	1.4E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.5E-005
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	2.5E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	5.0E-005
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.3E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.5E-006
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.3E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	7.5E-006
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	2.5E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	8.3E-003
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.3E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	6.1E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.5E-005
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	1.6E-006	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.6E-004
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	4.3E-005	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	4.3E-003
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.1E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.1E-005
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	3.6E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	1.8E-006
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	1.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.0E-005
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	6.5E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	3.3E-006
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.3E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	2.3E-005
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	1.0E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.1E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	6.8E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.4E-005
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	6.8E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	1.1E-004
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	3.2E-005	mg/kg-day			N/A	N/A	
	(Total)												1.59E-002
Dermal	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	4.2E-005		2.0E-002	mg/kg-day			2.12E-003
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.7E-007		4.2E-002	mg/kg-day	N/A	N/A	4.0E-006
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	3.9E-007		3.2E-003	mg/kg-day			1.2E-004
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	2.9E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.9E-004
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	7.2E-005		5.0E-002	mg/kg-day	N/A	N/A	1.4E-003
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	6.9E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.6E-005
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	4.3E-007		3.0E-002	mg/kg-day			1.4E-005
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	1.4E-005		5.0E-002	mg/kg-day	N/A	N/A	2.7E-004
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.4E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.7E-005
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.0E-006		3.0E-002	mg/kg-day	N/A	N/A	3.3E-005
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	2.9E-005	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	1.1E-002
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	5.8E-007	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	9.3E-005
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	2.6E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	6.5E-006

Table 5-3-27
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: cftres4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	9.1E-007	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	9.5E-005
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	2.5E-005		1.0E-002	mg/kg-day	N/A	N/A	2.5E-003
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	5.0E-006	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	5.4E-005
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	1.9E-005	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	1.0E-005
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	7.8E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.9E-004
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	3.5E-005		1.8E+000	mg/kg-day	N/A	N/A	1.9E-005
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	8.8E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	8.8E-005
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	2.6E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.3E-004
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	4.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.1E-006
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	7.4E-007	mg/kg-day	5.9E-003	mg/kg-day	N/A	N/A	1.3E-004
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	1.2E-005	mg/kg-day			N/A	N/A	
	(Total)												1.86E-002
												Total Hazard Index Across All Exposure Routes	3.4E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: cfres4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	3.0E-006	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.9E-008	kg-day/mg	2.0E-001	kg-day/mg	3.8E-009
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	5.6E-008	kg-day/mg	5.7E-002	kg-day/mg	3.2E-009
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	4.5E-006	kg-day/mg			
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	6.0E-007	kg-day/mg			
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.3E-007	kg-day/mg			
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	1.1E-007	kg-day/mg	9.1E-002	kg-day/mg	1.0E-008
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	2.1E-007	kg-day/mg			
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.9E-008	kg-day/mg			
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.9E-008	kg-day/mg	2.4E-002	kg-day/mg	4.5E-010
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	2.1E-006	kg-day/mg	2.9E-002	kg-day/mg	6.0E-008
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.9E-008	kg-day/mg			
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	5.1E-007	kg-day/mg	2.9E-003	kg-day/mg	1.5E-009
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	1.3E-007	kg-day/mg	6.1E-003	kg-day/mg	8.0E-010
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	3.6E-006	kg-day/mg			
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	9.4E-008	kg-day/mg			
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	3.0E-007	kg-day/mg			
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	1.5E-007	kg-day/mg			
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	5.4E-007	kg-day/mg			
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.9E-008	kg-day/mg	5.2E-002	kg-day/mg	9.8E-010
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	8.5E-007	kg-day/mg			
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.6E-008	kg-day/mg			
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.6E-008	kg-day/mg	1.1E-002	kg-day/mg	6.2E-010
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	2.6E-006	kg-day/mg	1.9E+000	kg-day/mg	5.0E-006
	(Total)										5.1E-006
Dermal	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	3.5E-006	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	1.4E-008	kg-day/mg	2.9E-001	kg-day/mg	4.0E-009
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	3.3E-008	kg-day/mg	7.0E-002	kg-day/mg	2.3E-009
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	2.4E-006	kg-day/mg			
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	6.0E-006	kg-day/mg			
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	5.7E-007	kg-day/mg			
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	3.5E-008	kg-day/mg	9.1E-002	kg-day/mg	3.2E-009
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	1.1E-006	kg-day/mg			
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.2E-007	kg-day/mg			
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	8.3E-008	kg-day/mg	2.4E-002	kg-day/mg	2.0E-009
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	2.4E-006	kg-day/mg	3.2E-002	kg-day/mg	7.7E-008
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.8E-008	kg-day/mg			
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	2.2E-007	kg-day/mg	2.9E-003	kg-day/mg	6.3E-010

Table 5-3-28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: cftres4b.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	7.6E-008	kg-day/mg	6.4E-003	kg-day/mg	4.8E-010
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	2.1E-006	kg-day/mg			
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	4.2E-007	kg-day/mg			
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	1.6E-006	kg-day/mg			
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	6.5E-007	kg-day/mg			
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	2.9E-006	kg-day/mg			
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	7.4E-008	kg-day/mg	5.2E-002	kg-day/mg	3.8E-009
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	2.2E-006	kg-day/mg			
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.5E-009	kg-day/mg			
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	6.2E-008	kg-day/mg	1.1E-002	kg-day/mg	6.9E-010
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	1.0E-006	kg-day/mg	1.9E+000	kg-day/mg	1.9E-006
	(Total)										2.0E-006
										Total Hazard Index Across All Exposure Routes/Pathways	7.1E-006

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-29
ALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: tres4bct.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	1.0E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.2E-004
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	6.6E-008	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.1E-006
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	2.0E-007	mg/kg-day	4.0E-003	mg/kg-day	N/A	N/A	4.9E-005
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	1.6E-005	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.6E-004
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	2.1E-006	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	4.2E-005
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	4.6E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	5.1E-006
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	3.9E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.3E-005
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	7.2E-007	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	1.4E-005
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	6.6E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.2E-006
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	6.6E-008	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.2E-006
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	7.2E-006	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	2.4E-003
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	6.6E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.3E-006
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	1.8E-006	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	4.4E-006
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	4.6E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	4.6E-005
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	1.2E-005	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	1.2E-003
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	3.3E-007	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.3E-006
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	1.0E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	5.2E-007
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	5.2E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.6E-005
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	1.9E-006	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	9.5E-007
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	6.6E-008	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	6.6E-006
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	3.0E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	1.5E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.0E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	9.8E-006
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.0E-007	mg/kg-day	6.0E-003	mg/kg-day	N/A	N/A	3.3E-005
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	9.2E-006	mg/kg-day			N/A	N/A	
	(Total)												4.61E-003
Dermal	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	1.3E-005		2.0E-002	mg/kg-day			6.70E-004
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	5.6E-008		4.2E-002	mg/kg-day	N/A	N/A	1.3E-006
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	1.2E-007		3.2E-003	mg/kg-day			3.8E-005
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	8.6E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	8.6E-005
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	2.4E-005		5.0E-002	mg/kg-day	N/A	N/A	4.9E-004
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	2.3E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	2.6E-005
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	1.3E-007		3.0E-002	mg/kg-day			4.3E-006
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	4.6E-006		5.0E-002	mg/kg-day	N/A	N/A	9.3E-005
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.7E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.6E-005
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	3.4E-007		3.0E-002	mg/kg-day	N/A	N/A	1.1E-005
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	8.3E-006	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	3.1E-003
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.8E-007	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	3.0E-005
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	7.3E-007	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	1.8E-006

Table 5-3-29
ALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Area 4B, Surface Water (Drainage Ditch)
Receptor Population:	Trespasser
Receptor Age:	Adolescent

File: tres4bct.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	2.8E-007	mg/kg-day	9.6E-003	mg/kg-day	N/A	N/A	2.9E-005
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	7.5E-006		1.0E-002	mg/kg-day	N/A	N/A	7.5E-004
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.5E-006	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	1.6E-005
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	5.8E-006	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	3.1E-006
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	2.6E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.3E-004
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	1.1E-005		1.8E+000	mg/kg-day	N/A	N/A	5.7E-006
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	3.0E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.0E-005
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	7.9E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.0E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.3E-008	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.4E-007
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.3E-007	mg/kg-day	5.9E-003	mg/kg-day	N/A	N/A	4.0E-005
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	3.4E-006	mg/kg-day			N/A	N/A	
	(Total)												5.58E-003
												Total Hazard Index Across All Exposure Routes	1.0E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-3-30
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Exposure Medium:	Surface Water
Exposure Point:	Surface Water
Receptor Population:	Area 4B, Surface Water (Drainage Ditch)
Receptor Age:	Trespasser

File: tres4bct.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	7.5E-008	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	4.7E-010	kg-day/mg	2.0E-001	kg-day/mg	9.4E-011
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	1.4E-009	kg-day/mg	5.7E-002	kg-day/mg	8.0E-011
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	1.1E-007	kg-day/mg			
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	1.5E-008	kg-day/mg			
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	3.3E-009	kg-day/mg			
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	2.8E-009	kg-day/mg	9.1E-002	kg-day/mg	2.6E-010
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	5.2E-009	kg-day/mg			
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.7E-010	kg-day/mg			
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.7E-010	kg-day/mg	2.4E-002	kg-day/mg	1.1E-011
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	5.2E-008	kg-day/mg	2.9E-002	kg-day/mg	1.5E-009
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.7E-010	kg-day/mg			
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	1.3E-008	kg-day/mg	2.9E-003	kg-day/mg	3.7E-011
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	3.3E-009	kg-day/mg	6.1E-003	kg-day/mg	2.0E-011
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	8.9E-008	kg-day/mg			
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	2.3E-009	kg-day/mg			
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	7.5E-009	kg-day/mg			
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	3.8E-009	kg-day/mg			
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	1.4E-008	kg-day/mg			
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.7E-010	kg-day/mg	5.2E-002	kg-day/mg	2.4E-011
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	2.1E-008	kg-day/mg			
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.4E-009	kg-day/mg			
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.4E-009	kg-day/mg	1.1E-002	kg-day/mg	1.5E-011
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	6.6E-008	kg-day/mg	1.9E+000	kg-day/mg	1.2E-007
	(Total)										1.3E-007
Dermal	1,1,1-Trichloroethane	1.60E-001	mg/L	1.60E-001	mg/L	M	9.6E-008	kg-day/mg			
	1,1,2,2-Tetrachloroethane	1.00E-003	mg/L	1.00E-003	mg/L	M	4.0E-010	kg-day/mg	2.9E-001	kg-day/mg	1.2E-010
	1,1,2-Trichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	8.9E-010	kg-day/mg	7.0E-002	kg-day/mg	6.3E-011
	1,1-Dichloroethane	2.40E-001	mg/L	2.40E-001	mg/L	M	6.1E-008	kg-day/mg			
	1,2,4-Trimethylbenzene	3.20E-002	mg/L	3.20E-002	mg/L	M	1.7E-007	kg-day/mg			
	1,2-Dichlorobenzene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.7E-008	kg-day/mg			
	1,2-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	9.1E-010	kg-day/mg	9.1E-002	kg-day/mg	8.3E-011
	1,3,5-Trimethylbenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	3.3E-008	kg-day/mg			
	1,3-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	3.4E-009	kg-day/mg			
	1,4-Dichlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.4E-009	kg-day/mg	2.4E-002	kg-day/mg	5.8E-011
	Benzene	1.10E-001	mg/L	1.10E-001	mg/L	M	5.9E-008	kg-day/mg	3.2E-002	kg-day/mg	1.9E-009
	Chlorobenzene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.3E-009	kg-day/mg			
	Chloroethane	2.70E-002	mg/L	2.70E-002	mg/L	M	5.3E-009	kg-day/mg	2.9E-003	kg-day/mg	1.5E-011

Table 5-3-30
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Services NPL Site

Scenario Timeframe:	Current/Future
Exposure Medium:	Surface Water
Exposure Point:	Surface Water
Receptor Population:	Area 4B, Surface Water (Drainage Ditch)
Receptor Age:	Trespasser

File: tres4bcl.wk4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Chloroform	7.00E-003	mg/L	7.00E-003	mg/L	M	2.0E-009	kg-day/mg	6.4E-003	kg-day/mg	1.3E-011
	cis-1,2-Dichloroethene	1.90E-001	mg/L	1.90E-001	mg/L	M	5.4E-008	kg-day/mg			
	Ethyl Benzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.1E-008	kg-day/mg			
	m,p-xylene	1.60E-002	mg/L	1.60E-002	mg/L	M	4.1E-008	kg-day/mg			
	Naphthalene	8.00E-003	mg/L	8.00E-003	mg/L	M	1.9E-008	kg-day/mg			
	ortho-xylene	2.90E-002	mg/L	2.90E-002	mg/L	M	7.5E-008	kg-day/mg			
	Tetrachloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.1E-009	kg-day/mg	5.2E-002	kg-day/mg	1.1E-010
	Toluene	4.50E-002	mg/L	4.50E-002	mg/L	M	5.7E-008	kg-day/mg			
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	9.1E-011	kg-day/mg			
	Trichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.7E-009	kg-day/mg	1.1E-002	kg-day/mg	1.9E-011
	Vinyl Chloride	1.40E-001	mg/L	1.40E-001	mg/L	M	2.5E-008	kg-day/mg	1.9E+000	kg-day/mg	4.7E-008
	(Total)										4.9E-008
										Total Hazard Index Across All Exposure Routes/Pathways	1.8E-007

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-1
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	3.6E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.56E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	7.0E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	7.76E-003
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	1.9E-004	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	2.13E-002
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	4.1E-005	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.37E-003
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	1.4E-004	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	4.57E-003
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	4.1E-003	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	1.03E-001
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	1.5E-003	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	7.54E-002
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	3.7E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.85E-002
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	1.8E-004	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	3.56E-003
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	8.2E-005	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	1.03E-003
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	1.1E-003	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	2.14E-001
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	3.8E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	3.84E-003
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	1.5E-001	mg/kg-day		mg/kg-day	N/A	N/A	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.6E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	7.8E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	2.60E+000
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	1.1E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.55E-001
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.4E+000	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	4.57E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	1.8E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	4.45E-005
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	2.2E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	6.9E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.43E-003
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	4.2E-005	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	8.49E-002
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	1.3E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	2.6E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	6.51E-002
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	9.3E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	1.4E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	2.9E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.44E-002
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	1.2E-004	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	1.54E-004
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	1.5E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.51E-001
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	7.0E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.33E+000
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	5.9E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.95E+000
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	1.4E-005	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	2.28E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	9.7E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.86E-002
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	7.3E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.63E-002
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	2.3E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.33E-001
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	3.3E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	5.48E-003
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	8.5E-005	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.70E-002
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	4.9E-005	mg/kg-day	7.0E-005	mg/kg-day	N/A	N/A	7.05E-001

Table 5-4-1
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	3.2E-002	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.58E-001
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	2.7E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	3.91E-002
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	2.2E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	4.1E-002	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	2.06E-002
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	7.0E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.33E-002
	(Total)												4.67E+002
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.71E-005	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.71E-004
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	2.30E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	2.56E-003
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	1.04E-005	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	1.15E-003
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.93E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	6.44E-004
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	4.59E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.53E-003
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	1.19E-004	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	2.96E-003
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	1.22E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.11E-003
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	2.84E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.42E-002
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	9.62E-006	mg/kg-day	5.00E-002	mg/kg-day	N/A	N/A	1.92E-004
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	1.47E-006	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	1.83E-005
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	5.77E-005	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	1.78E-002
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	2.07E-005	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.07E-005
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	0.00E+000	mg/kg-day		mg/kg-day	N/A	N/A	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	1.37E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	4.22E-006	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	1.48E-002
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	5.85E-005	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	8.35E-004
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.55E-001	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	5.76E+001
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	7.02E-006	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.76E-006
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	2.49E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-ethylhexy)phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	1.22E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.11E-004
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	2.29E-007	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	9.18E-003
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	2.91E-004	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	4.70E-002
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	1.12E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	2.81E-003
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	2.11E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	7.40E-007	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	7.40E-005
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.55E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.77E-002
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	3.20E-006	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	4.00E-006
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	6.02E-003	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	6.55E-002
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	3.77E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.26E-002
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	3.18E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.59E-002
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	3.33E-007	mg/kg-day	3.3E-002	mg/kg-day	N/A	N/A	1.01E-005
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	3.63E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.81E-002
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	3.92E-007	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	3.92E-004
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	0.00E+000	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	9.77E-005	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.63E-004

Table 5-4-1

CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	4.59E-007	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	9.18E-005
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	2.66E-007	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	3.81E-003
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	7.66E-003	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	3.83E-002
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	1.48E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	2.11E-004
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	8.64E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene	3.00E+000	mg/L	3.00E+000	mg/L	M	1.67E-002	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	9.32E-003
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	2.26E-005	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	2.52E-004
	(Total)												5.79E+001

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 5.25E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-1A

CALCULATION OF NONCANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	1.23E-004	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	1.54E-003
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	3.01E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	3.01E-003
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	2.05E-001	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.05E-001
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M	5.04E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	1.14E-004	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	2.84E-001
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	1.71E-003	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	5.71E+000
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	2.22E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.17E-001
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	4.25E-003	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	1.42E+000
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	8.22E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.05E-005
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	2.60E-005	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	1.30E-002
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	6.03E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	1.27E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.37E-002
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	4.90E-004	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	9.81E-001
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	3.97E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	9.93E-002
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	4.93E-003	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	1.64E+000
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	5.27E-004	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	5.27E-002
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	1.92E-004	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.20E-003
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	1.71E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	4.28E-002
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	7.05E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.35E+000
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	6.85E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	3.42E-004
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	4.16E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	2.29E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.14E+000
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	9.18E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	3.52E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.76E-001
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M	1.44E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.44E-001
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	4.66E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	7.76E-003

Table 5-4-1A
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsk\bls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	4.11E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.05E-004
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	2.74E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.37E-003
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	4.16E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	5.95E-002
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	8.22E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	4.11E-005
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	4.56E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.52E+000
	(Total)												1.62E+001
Dermal	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	1.19E-005	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	1.49E-004
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	3.10E-006	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	3.10E-005
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	1.13E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.13E-003
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	6.23E-007	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	1.56E-003
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	9.38E-006	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	3.29E-002
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	1.22E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.74E-003
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	1.86E-003	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	6.87E-001
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	1.72E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	4.31E-006
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	1.43E-007	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	7.13E-003
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	4.20E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	1.10E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.51E-001
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	2.69E-006	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	1.07E-001
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	6.01E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.50E-002
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	2.70E-005	mg/kg-day	1.50E-003	mg/kg-day	N/A	N/A	1.80E-002
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	1.25E-004	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	1.25E-002
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	1.05E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	1.75E-005
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	9.38E-006	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	3.91E-004
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	3.86E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.29E-002
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	9.68E-006	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	4.84E-005
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	9.12E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	1.25E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.26E-003

Table 5-4-1A
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	5.03E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	1.93E-006	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.93E-003
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	5.97E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	9.95E-004
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	4.25E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.13E-004
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	6.96E-007	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.48E-005
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	2.28E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	3.26E-004
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	2.18E-004	mg/kg-day	1.80E+000	mg/kg-day	N/A	N/A	1.21E-004
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	1.50E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	5.00E-003
	(Total)												1.46E+000
													Total Hazard Index Across All Exposure Routes/Pathways 1.77E+001

Worker * - includes routine and utility maintenance workers

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-2
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	2.12E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	1.51E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	4.16E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	4.62E-002
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	R	1.14E-004	mg/kg-day		mg/kg-day		mg/cu m	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.45E-005	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu m	1.22E-002
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	8.15E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	3.56E-004
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	2.45E-003	mg/kg-day		mg/kg-day		mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	8.97E-004	mg/kg-day		mg/kg-day		mg/cu m	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	2.20E-004	mg/kg-day		mg/kg-day		mg/cu m	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	R	1.06E-004	mg/kg-day		mg/kg-day		mg/cu m	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	4.89E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	2.45E-003
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	R	6.36E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	2.28E-003	mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	2.28E+000
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	8.97E-002	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	3.13E+000
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	2.12E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	R	4.65E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	6.44E-003	mg/kg-day	1.40E-004	mg/kg-day	4.9E-004	mg/cu m	4.60E+001
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	8.15E-001	mg/kg-day	1.70E-003	mg/kg-day	6.0E-003	mg/cu m	4.79E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	1.06E-004	mg/kg-day		mg/kg-day		mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	1.30E-003	mg/kg-day		mg/kg-day		mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	4.08E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	2.53E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	7.82E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu m	1.56E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	1.55E-002	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	5.34E-003
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	5.54E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	R	8.15E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	1.71E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	7.34E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	R	8.97E-003	mg/kg-day	2.90E-001	mg/kg-day	1.0E+000	mg/cu m	3.09E-002
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	4.16E-001	mg/kg-day		mg/kg-day		mg/cu m	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	R	3.50E-002	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	2.45E+003
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	8.15E-006	mg/kg-day	8.60E-001	mg/kg-day	3.0E+000	mg/cu m	9.48E-006
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	5.79E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	6.43E-001
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	4.32E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	R	1.39E-002	mg/kg-day		mg/kg-day		mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	1.96E-003	mg/kg-day		mg/kg-day		mg/cu m	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	5.05E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	2.93E-005	mg/kg-day		mg/kg-day		mg/cu m	

Table 5-4-2

CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	1.87E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	1.64E-001
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	R	1.63E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	1.30E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	2.45E-002	mg/kg-day		mg/kg-day		mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	4.16E-003	mg/kg-day		mg/kg-day		mg/cu m	
	(Total)												2.98E+003

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 2.98E+003

Table 5-4-2A

CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Areas 1,2,3,4B, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	R	3.67E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	1.83E-003
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	R	8.97E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	R	1.50E-002	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	5.25E-001
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	R	1.26E-003	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	7.43E-001
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	R	1.79E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	R	1.18E-002	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	4.08E-003
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	R	1.59E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	R	2.04E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	R		mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	R	1.39E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-2A

CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Areas 1,2,3,4B, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	R	1.22E-005	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	1.07E-004
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	R	8.15E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	R	2.45E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.27E+000

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 1.27E+000

Table 5-4-3
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rskbis\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.27E-004	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	2.50E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	6.86E-005	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.47E-005	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	4.90E-005	mg/kg-day	2.40E-002	kg-day/mg	1.18E-006
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	1.47E-003	mg/kg-day	7.00E-002	kg-day/mg	1.03E-004
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	5.39E-004	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.32E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	6.37E-005	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	2.94E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	3.82E-004	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.37E-003	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	5.39E-002	mg/kg-day		kg-day/mg	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	1.27E-005	mg/kg-day	2.00E+000	kg-day/mg	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	2.79E-004	mg/kg-day	1.50E+000	kg-day/mg	4.19E-004
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	3.87E-003	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	4.90E-001	mg/kg-day	2.90E-002	kg-day/mg	1.42E-002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	6.37E-005	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	7.84E-004	mg/kg-day	1.10E+000	kg-day/mg	8.62E-004
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	2.45E-005	mg/kg-day	1.40E-002	kg-day/mg	3.43E-007
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.52E-005	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	4.70E-004	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	9.31E-003	mg/kg-day		kg-day/mg	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	3.33E-004	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	4.90E-005	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.03E-004	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	4.41E-005	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	5.39E-003	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.50E-001	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	2.11E-002	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	4.90E-006	mg/kg-day		kg-day/mg	
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	3.48E-004	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.60E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	8.33E-003	mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	1.18E-003	mg/kg-day		kg-day/mg	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	3.04E-005	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.76E-005	mg/kg-day		kg-day/mg	

Table 5-4-3
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\sktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	1.13E-002	mg/kg-day		kg-day/mg	
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	9.80E-005	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	7.84E-005	mg/kg-day		kg-day/mg	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.47E-002	mg/kg-day		kg-day/mg	
	Zinc (Total)	5.10E-001	mg/L	5.10E-001	mg/L	M	2.50E-003	mg/kg-day		kg-day/mg	
											1.55E-002
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	6.25E-006	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	8.40E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	3.78E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	7.05E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	1.67E-005	mg/kg-day	2.4E-002	kg-day/mg	4.02E-007
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	4.32E-005	mg/kg-day	7.00E-002	kg-day/mg	3.03E-006
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	4.46E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.04E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	3.51E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	5.35E-007	mg/kg-day		kg-day/mg	
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	2.11E-005	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	7.56E-006	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	4.98E-005	mg/kg-day	2.00E+000	kg-day/mg	9.97E-005
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	1.54E-006	mg/kg-day	1.58E+000	kg-day/mg	2.43E-006
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	2.13E-005	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	5.67E-002	mg/kg-day	3.22E-002	kg-day/mg	1.83E-003
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	2.56E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	9.07E-006	mg/kg-day	1.10E+000	kg-day/mg	9.98E-006
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	4.46E-006	mg/kg-day	1.4E-002	kg-day/mg	6.24E-008
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	8.37E-008	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	1.06E-004	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	4.10E-004	mg/kg-day	2.9E-003	kg-day/mg	1.19E-006
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	7.71E-006	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	2.70E-007	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	5.67E-004	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	1.17E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	2.20E-003	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	1.38E-003	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	1.16E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	1.22E-007	mg/kg-day		kg-day/mg	
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	1.32E-004	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	1.43E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	3.56E-005	mg/kg-day		kg-day/mg	

Table 5-4-3

CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\risktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	1.67E-007	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	9.72E-008	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	2.79E-003	mg/kg-day		kg-day/mg	
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	5.40E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	3.15E-006	mg/kg-day		kg-day/mg	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	6.09E-003	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	8.26E-006	mg/kg-day		kg-day/mg	
	(Total)										1.94E-003
										Total Hazard Index Across All Exposure Routes/Pathways	1.74E-002

Worker * - includes routine and utility maintenance workers

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-3A

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	4.40E-005	mg/kg-day		kg-day/mg	
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	1.08E-004	mg/kg-day		kg-day/mg	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	7.34E-002	mg/kg-day		kg-day/mg	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M	1.80E-002	mg/kg-day		kg-day/mg	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	4.06E-005	mg/kg-day		kg-day/mg	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	6.12E-004	mg/kg-day	1.50E+000	kg-day/mg	9.17E-004
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	7.93E-003	mg/kg-day		kg-day/mg	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	1.52E-003	mg/kg-day	2.90E-002	kg-day/mg	4.40E-005
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	2.94E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	9.30E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	2.15E-004	mg/kg-day	1.10E+000	kg-day/mg	2.37E-004
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	4.55E-004	mg/kg-day	1.40E-002	kg-day/mg	6.37E-006
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	1.75E-004	mg/kg-day		kg-day/mg	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	1.42E-002	mg/kg-day	2.90E-003	kg-day/mg	4.11E-005
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	1.76E-003	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	1.88E-004	mg/kg-day		kg-day/mg	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	6.85E-005	mg/kg-day		kg-day/mg	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	6.12E-004	mg/kg-day		kg-day/mg	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	2.52E-001	mg/kg-day		kg-day/mg	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	2.45E-005	mg/kg-day	9.50E-004	kg-day/mg	2.32E-008
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	1.49E-003	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	8.17E-003	mg/kg-day		kg-day/mg	
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	3.28E-006	mg/kg-day		kg-day/mg	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	1.26E-003	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M	5.14E-003	mg/kg-day		kg-day/mg	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	1.66E-003	mg/kg-day		kg-day/mg	

Table 5-4-3A
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.47E-005	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	9.78E-006	mg/kg-day		kg-day/mg	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	1.49E-004	mg/kg-day		kg-day/mg	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	2.94E-005	mg/kg-day		kg-day/mg	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	1.63E-001	mg/kg-day		kg-day/mg	
	(Total)										1.25E-003
Dermal	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	1.72E-006	mg/kg-day		kg-day/mg	
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	4.21E-006	mg/kg-day		kg-day/mg	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M	7.04E-004	mg/kg-day		kg-day/mg	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	0.00E+000	mg/kg-day	1.58E+000	kg-day/mg	
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	5.93E-005	mg/kg-day	3.22E-002	kg-day/mg	1.91E-006
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	8.42E-006	mg/kg-day	1.10E+000	kg-day/mg	9.26E-006
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	0.00E+000	mg/kg-day	1.40E-002	kg-day/mg	
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	5.55E-004	mg/kg-day	2.90E-003	kg-day/mg	1.61E-006
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	7.46E-006	mg/kg-day		kg-day/mg	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	9.57E-007	mg/kg-day	9.50E-004	kg-day/mg	9.09E-010
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	

Table 5-4-3A
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsk\tbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	6.51E-005	mg/kg-day		kg-day/mg	
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	5.74E-007	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	3.83E-007	mg/kg-day		kg-day/mg	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	1.15E-006	mg/kg-day		kg-day/mg	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	(Total)										1.26E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.26E-003

Worker * - includes routine and utility maintenance workers

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

Table 5-4-4
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	9.96E-006	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	1.95E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	R	5.36E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	1.15E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	3.83E-006	mg/kg-day	2.2E-002	mg/kg-day	8.43E-008
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	1.15E-004	mg/kg-day	2.5E-002	mg/kg-day	2.87E-006
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	4.21E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	1.03E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	R	4.98E-006	mg/kg-day		mg/kg-day	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	2.30E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	R	2.99E-005	mg/kg-day		mg/kg-day	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	1.07E-004	mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	4.21E-003	mg/kg-day		mg/kg-day	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	9.96E-007	mg/kg-day	2.00E+000	mg/kg-day	1.99E-006
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	R	2.18E-005	mg/kg-day	1.51E+000	mg/kg-day	3.30E-005
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	3.03E-004	mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	3.83E-002	mg/kg-day	2.9E-002	mg/kg-day	1.11E-003
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	4.98E-006	mg/kg-day		mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	6.13E-005	mg/kg-day	1.10E+000	mg/kg-day	6.74E-005
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	1.92E-006	mg/kg-day	1.4E-002	mg/kg-day	2.68E-008
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	1.19E-006	mg/kg-day	6.30E+000	mg/kg-day	7.48E-006
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	3.68E-005	mg/kg-day		mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	7.28E-004	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	2.60E-005	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	R	3.83E-006	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	8.04E-006	mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	3.45E-006	mg/kg-day		mg/kg-day	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	R	4.21E-004	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	1.95E-002	mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	R	1.65E-003	mg/kg-day		mg/kg-day	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	3.83E-007	mg/kg-day		mg/kg-day	
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	2.72E-005	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	2.03E-005	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	R	6.51E-004	mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	9.19E-005	mg/kg-day		mg/kg-day	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	2.37E-006	mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	1.38E-006	mg/kg-day		mg/kg-day	

CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	*Ambient Air (Volatilization of VOCs)*
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRRMEAAA.WK4

Exposure Route	Chemical of Potential *Concern*	Medium EPC *Value*	Medium EPC Units	Route EPC *Value*	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	8.81E-004	mg/kg-day		mg/kg-day	
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	R	7.66E-006	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	6.13E-006	mg/kg-day		mg/kg-day	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	1.15E-003	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	1.95E-004	mg/kg-day		mg/kg-day	
	(Total)										1.22E-003

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 1.22E-003

Table 5-4-4A

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Areas 1,2,3,4B, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsk\bls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	R	1.72E-006	mg/kg-day		mg/kg-day	
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	R	4.21E-006	mg/kg-day		mg/kg-day	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	R	7.04E-004	mg/kg-day		mg/kg-day	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	R	0.00E+000	mg/kg-day	1.51E+001	mg/kg-day	
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	R	5.93E-005	mg/kg-day	2.90E-002	mg/kg-day	1.72E-006
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	R	0.00E+000	mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	R	8.42E-006	mg/kg-day	1.10E+000	mg/kg-day	9.26E-006
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	R	0.00E+000	mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	R	5.55E-004	mg/kg-day		mg/kg-day	
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	R	0.00E+000	mg/kg-day	3.50E-005	mg/kg-day	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	R	7.46E-006	mg/kg-day		mg/kg-day	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	R	9.57E-007	mg/kg-day		mg/kg-day	
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	R	6.51E-005	mg/kg-day		mg/kg-day	

Table 5-4-4A
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Areas 1,2,3,4B, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRRMEA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	R	5.74E-007	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	R	3.83E-007	mg/kg-day		mg/kg-day	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	R	1.15E-006	mg/kg-day		mg/kg-day	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	(Total)										1.10E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.10E-005

Worker * - includes routine and utility maintenance workers

Table 5-4-5
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	2.2E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.24E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	4.4E-004	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.87E-003
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	1.2E-004	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.34E-002
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.6E-005	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	8.60E-004
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	8.6E-005	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.87E-003
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	2.6E-003	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	6.45E-002
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	9.5E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.73E-002
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	2.3E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.16E-002
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	1.1E-004	mg/kg-day	5.0E-002	mg/kg-day	N/A	N/A	2.24E-003
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	5.2E-005	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	6.45E-004
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	6.7E-004	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.34E-001
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	2.4E-003	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	2.41E-003
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	9.5E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	2.2E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	4.9E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.63E+000
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	6.8E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	9.71E-002
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	8.6E-001	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	2.87E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	1.1E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.80E-005
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.4E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	4.3E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.15E-003
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	2.7E-005	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	5.33E-002
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	8.3E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	1.6E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	4.09E-002
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	5.8E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	8.6E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.8E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	9.03E-003
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	7.7E-005	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	9.68E-005
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	9.5E-003	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	9.46E-002
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	4.4E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.46E+000
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	3.7E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.85E+000
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	8.6E-006	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.43E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	6.1E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.05E-002
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	4.6E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.28E-002
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	1.5E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.46E-001
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	2.1E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	3.44E-003
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	5.3E-005	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.07E-002
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	3.1E-005	mg/kg-day	7.0E-005	mg/kg-day	N/A	N/A	4.42E-001

Table 5-4-5
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	2.0E-002	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	9.89E-002
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	1.7E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	2.46E-002
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	1.4E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	2.6E-002	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	1.29E-002
	Zinc (Total)	5.10E-001	mg/L	5.10E-001	mg/L	M	4.4E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.46E-002
													2.93E+002
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	6.71E-007	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	6.71E-006
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	9.02E-006	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.00E-004
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	4.06E-007	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	4.51E-005
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	7.57E-007	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	2.52E-005
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	1.80E-006	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	5.99E-005
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	4.65E-006	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.16E-004
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	4.79E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.39E-004
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.11E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.57E-004
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	3.77E-007	mg/kg-day	5.00E-002	mg/kg-day	N/A	N/A	7.54E-006
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	5.74E-008	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	7.18E-007
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	2.26E-006	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	6.96E-004
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	8.12E-007	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	8.12E-007
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	0.00E+000	mg/kg-day		mg/kg-day	N/A	N/A	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	5.35E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	1.65E-007	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	5.80E-004
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	2.29E-006	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.27E-005
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	6.09E-003	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	2.26E+000
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	2.75E-007	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	6.88E-008
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	9.74E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-ethylhexy)phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	4.79E-007	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.39E-005
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	8.99E-009	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	3.60E-004
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	1.14E-005	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	1.84E-003
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	4.41E-005	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.10E-004
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	8.28E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	2.90E-008	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	2.90E-006
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	6.09E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.05E-003
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	1.25E-007	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	1.57E-007
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	2.36E-004	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	2.57E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	1.48E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.93E-004
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	1.25E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.24E-004
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	1.31E-008	mg/kg-day	3.3E-002	mg/kg-day	N/A	N/A	3.95E-007
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	1.42E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.10E-004
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	1.54E-008	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.54E-005
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	0.00E+000	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	3.83E-006	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	6.38E-006

Table 5-4-5
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	1.80E-008	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	3.60E-006
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.04E-008	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.49E-004
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	3.00E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.50E-003
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	5.80E-008	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	8.29E-006
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	3.39E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene	3.00E+000	mg/L	3.00E+000	mg/L	M	6.54E-004	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	3.65E-004
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	8.87E-007	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	9.86E-006
	(Total)												2.27E+000

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 2.95E+002

(1) *Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.*

(2) Specify if subchronic.

Table 5-4-5A
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	7.71E-005	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	9.64E-004
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	1.89E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.89E-003
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	1.29E-001	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.29E-001
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M	3.15E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	7.11E-005	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	1.78E-001
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	1.07E-003	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	3.57E+000
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	1.39E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.98E-001
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	2.66E-003	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	8.86E-001
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	5.14E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.29E-005
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	1.63E-005	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	8.14E-003
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	3.77E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	7.97E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.99E-002
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	3.07E-004	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	6.14E-001
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	2.49E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	6.21E-002
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	3.09E-003	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	1.03E+000
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	3.30E-004	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	3.30E-002
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	1.20E-004	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.00E-003
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	1.07E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	2.68E-002
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	4.41E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.47E+000
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	4.29E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.14E-004
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	2.61E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	1.43E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.16E-001
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	5.74E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	2.20E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.10E-001
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M	9.00E-003	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	9.00E-002
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	2.91E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	4.86E-003

Table 5-4-5A
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.57E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.29E-004
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	1.71E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	8.57E-004
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	2.61E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	3.72E-002
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	5.14E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	2.57E-005
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	2.85E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	9.51E-001
	(Total)												1.02E+001
Dermal	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	6.40E-006	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	8.00E-005
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	1.67E-006	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.67E-005
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	4.29E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	4.29E-004
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	2.37E-007	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	5.93E-004
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	3.57E-006	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	1.25E-002
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	4.63E-005	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	6.61E-004
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	1.00E-003	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	3.70E-001
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	9.28E-006	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.32E-006
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	5.43E-008	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	2.71E-003
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	2.26E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	5.94E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.97E-001
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	1.02E-006	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	4.09E-002
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	3.24E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	8.09E-003
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	1.03E-005	mg/kg-day	1.50E-003	mg/kg-day	N/A	N/A	6.86E-003
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	6.74E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	6.74E-003
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	4.00E-007	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	6.67E-006
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	3.57E-006	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	1.49E-004
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	1.47E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.90E-003
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	5.21E-006	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.61E-005
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	3.47E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	4.77E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.39E-003

Table 5-4-5A
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	1.91E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	7.34E-007	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	7.34E-004
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	3.22E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	5.36E-004
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	2.29E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.15E-004
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	3.75E-007	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.87E-005
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	8.69E-007	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.24E-004
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	1.17E-004	mg/kg-day	1.80E+000	mg/kg-day	N/A	N/A	6.52E-005
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	5.71E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.90E-003
	(Total)												7.58E-001
												Total Hazard Index Across All Exposure Routes/Pathways	1.09E+001

*Worker - includes routine and utility maintenance workers

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-6
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsk\bls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	1.39E-004	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	9.95E-004
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	2.73E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	3.04E-002
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	R	7.50E-005	mg/kg-day		mg/kg-day		mg/cu m	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	1.61E-005	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu m	8.04E-003
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	5.36E-005	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	2.34E-004
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	1.61E-003	mg/kg-day		mg/kg-day		mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	5.90E-004	mg/kg-day		mg/kg-day		mg/cu m	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	1.45E-004	mg/kg-day		mg/kg-day		mg/cu m	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	R	6.97E-005	mg/kg-day		mg/kg-day		mg/cu m	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	3.22E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	1.61E-003
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	R	4.18E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	1.50E-003	mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	1.50E+000
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	5.90E-002	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	2.06E+000
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	1.39E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	R	3.06E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	4.23E-003	mg/kg-day	1.40E-004	mg/kg-day	4.9E-004	mg/cu m	3.02E+001
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	5.36E-001	mg/kg-day	1.70E-003	mg/kg-day	6.0E-003	mg/cu m	3.15E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	6.97E-005	mg/kg-day		mg/kg-day		mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	8.58E-004	mg/kg-day		mg/kg-day		mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	2.68E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	1.66E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	5.15E-004	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu m	1.03E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	1.02E-002	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	3.51E-003
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	3.64E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	R	5.36E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	1.13E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	4.82E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	R	5.90E-003	mg/kg-day	2.90E-001	mg/kg-day	1.0E+000	mg/cu m	2.03E-002
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	2.73E-001	mg/kg-day		mg/kg-day		mg/cu m	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	R	2.30E-002	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	1.61E+003
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	5.36E-006	mg/kg-day	8.60E-001	mg/kg-day	3.0E+000	mg/cu m	6.23E-006
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	3.81E-004	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	4.23E-001
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	2.84E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	R	9.11E-003	mg/kg-day		mg/kg-day		mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	1.29E-003	mg/kg-day		mg/kg-day		mg/cu m	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	3.32E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	1.93E-005	mg/kg-day		mg/kg-day		mg/cu m	

Table 5-4-6

CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	1.23E-002	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	1.08E-001
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	R	1.07E-004	mg/kg-day		mg/kg-day		mg/cu m	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	8.58E-005	mg/kg-day		mg/kg-day		mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	1.61E-002	mg/kg-day		mg/kg-day		mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	2.73E-003	mg/kg-day		mg/kg-day		mg/cu m	
	(Total)												1.96E+003

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 1.96E+003

Table 5-4-6A
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Areas 1,2,3,4B, Groundwater
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	R	2.41E-005	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	1.21E-003
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	R	5.89E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	R	9.86E-003	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	3.45E-001
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	R	8.30E-004	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	4.88E-001
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	R	1.18E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	R	7.77E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	2.68E-003
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	R	1.04E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	R	1.34E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	R		mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	R	9.11E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-6A
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Areas 1,2,3,4B, Groundwater
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	R	8.04E-006	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	7.05E-005
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	R	5.36E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	R	1.61E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												8.37E-001
												Total Hazard Index Across All Exposure Routes/Pathways	8.37E-001

*Worker - Includes routine and maintenance utility worker

Table 5-4-7
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.59E-005	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	3.11E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	8.54E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.83E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	6.10E-006	mg/kg-day	2.40E-002	kg-day/mg	1.46E-007
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	1.83E-004	mg/kg-day	7.00E-002	kg-day/mg	1.28E-005
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	6.71E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.65E-005	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	7.93E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	3.66E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	4.76E-005	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.71E-004	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	6.71E-003	mg/kg-day		kg-day/mg	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	1.59E-006	mg/kg-day	2.00E+000	kg-day/mg	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	3.48E-005	mg/kg-day	1.50E+000	kg-day/mg	5.22E-005
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	4.82E-004	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	6.10E-002	mg/kg-day	2.90E-002	kg-day/mg	1.77E-003
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	7.93E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	9.76E-005	mg/kg-day	1.10E+000	kg-day/mg	1.07E-004
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	3.05E-006	mg/kg-day	1.40E-002	kg-day/mg	4.27E-008
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.89E-006	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	5.86E-005	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	1.16E-003	mg/kg-day		kg-day/mg	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	4.15E-005	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	6.10E-006	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.28E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	5.49E-006	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	6.71E-004	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	3.11E-002	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	2.62E-003	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	6.10E-007	mg/kg-day		kg-day/mg	
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	4.33E-005	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	3.23E-005	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	1.04E-003	mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	1.46E-004	mg/kg-day		kg-day/mg	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	3.78E-006	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	2.20E-006	mg/kg-day		kg-day/mg	

Table 5-4-7
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	1.40E-003	mg/kg-day		kg-day/mg	
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	1.22E-005	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	9.76E-006	mg/kg-day		kg-day/mg	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.83E-003	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	3.11E-004	mg/kg-day		kg-day/mg	
	(Total)										1.93E-003
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	4.86E-008	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	6.53E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	M	2.94E-008	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.48E-008	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	1.30E-007	mg/kg-day	2.4E-002	kg-day/mg	3.12E-009
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	M	3.36E-007	mg/kg-day	7.00E-002	kg-day/mg	2.35E-008
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	3.47E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	8.07E-007	mg/kg-day		kg-day/mg	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	M	2.73E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	4.16E-009	mg/kg-day		kg-day/mg	
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	M	1.64E-007	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	5.88E-008	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.88E-007	mg/kg-day	2.00E+000	kg-day/mg	7.75E-007
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	M	1.20E-008	mg/kg-day	1.58E+000	kg-day/mg	1.89E-008
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	1.66E-007	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	4.41E-004	mg/kg-day	3.22E-002	kg-day/mg	1.42E-005
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	1.99E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	7.06E-008	mg/kg-day	1.10E+000	kg-day/mg	7.76E-008
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	3.47E-008	mg/kg-day	1.4E-002	kg-day/mg	4.85E-010
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	6.51E-010	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	8.27E-007	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	3.19E-006	mg/kg-day	2.9E-003	kg-day/mg	9.26E-009
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	6.00E-008	mg/kg-day		kg-day/mg	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	M	2.10E-009	mg/kg-day		kg-day/mg	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	4.41E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	9.07E-009	mg/kg-day		kg-day/mg	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	M	1.71E-005	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	1.07E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	M	9.03E-007	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	9.45E-010	mg/kg-day		kg-day/mg	
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	1.03E-006	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	1.11E-009	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	2.77E-007	mg/kg-day		kg-day/mg	

Table 5-4-7
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 1, Groundwater (Tapwater)
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rskitbis\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	1.30E-009	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	7.56E-010	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	2.17E-005	mg/kg-day		kg-day/mg	
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	M	4.20E-009	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	2.45E-008	mg/kg-day		kg-day/mg	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	4.74E-005	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	6.43E-008	mg/kg-day		kg-day/mg	
	(Total)										1.51E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.94E-003

Worker * - Includes routine and utility maintenance workers

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-7A
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	5.51E-006	mg/kg-day		kg-day/mg	
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	1.35E-005	mg/kg-day		kg-day/mg	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	9.18E-003	mg/kg-day		kg-day/mg	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M	2.25E-003	mg/kg-day		kg-day/mg	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	5.08E-006	mg/kg-day		kg-day/mg	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	7.65E-005	mg/kg-day	1.50E+000	kg-day/mg	1.15E-004
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	9.92E-004	mg/kg-day		kg-day/mg	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	1.90E-004	mg/kg-day	2.90E-002	kg-day/mg	5.50E-006
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	3.67E-006	mg/kg-day		kg-day/mg	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	1.16E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	2.69E-005	mg/kg-day	1.10E+000	kg-day/mg	2.96E-005
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	5.69E-005	mg/kg-day	1.40E-002	kg-day/mg	7.97E-007
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	2.19E-005	mg/kg-day		kg-day/mg	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	1.78E-003	mg/kg-day	2.90E-003	kg-day/mg	5.15E-006
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	2.20E-004	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	2.36E-005	mg/kg-day		kg-day/mg	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	8.57E-006	mg/kg-day		kg-day/mg	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	7.65E-005	mg/kg-day		kg-day/mg	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	3.15E-002	mg/kg-day		kg-day/mg	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	3.06E-006	mg/kg-day	9.50E-004	kg-day/mg	2.91E-009
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	1.86E-004	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	1.02E-003	mg/kg-day		kg-day/mg	
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	4.10E-007	mg/kg-day		kg-day/mg	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	1.57E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M	6.43E-004	mg/kg-day		kg-day/mg	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	2.08E-004	mg/kg-day		kg-day/mg	

Table 5-4-7A
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.84E-006	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	1.22E-006	mg/kg-day		kg-day/mg	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	1.86E-005	mg/kg-day		kg-day/mg	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	3.67E-006	mg/kg-day		kg-day/mg	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	2.04E-002	mg/kg-day		kg-day/mg	
	(Total)										1.56E-004
Dermal	4-Methyl-2-Pentanone	9.0E-003	mg/L	9.0E-003	mg/L	M	4.57E-007	mg/kg-day		kg-day/mg	
	Acetone	2.2E-002	mg/L	2.2E-002	mg/L	M	1.19E-007	mg/kg-day		kg-day/mg	
	Aluminum	1.5E+001	mg/L	1.5E+001	mg/L	M	3.06E-005	mg/kg-day		kg-day/mg	
	Ammonia	3.7E+000	mg/L	3.7E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Antimony	8.3E-003	mg/L	8.3E-003	mg/L	M	1.69E-008	mg/kg-day		kg-day/mg	
	Arsenic	1.3E-001	mg/L	1.3E-001	mg/L	M	2.55E-007	mg/kg-day	1.58E+000	kg-day/mg	4.03E-007
	Barium	1.6E+000	mg/L	1.6E+000	mg/L	M	3.31E-006	mg/kg-day		kg-day/mg	
	Benzene	3.1E-001	mg/L	3.1E-001	mg/L	M	7.14E-005	mg/kg-day	3.22E-002	kg-day/mg	2.30E-006
	Benzoic Acid	6.0E-003	mg/L	6.0E-003	mg/L	M	6.63E-007	mg/kg-day		kg-day/mg	
	Beryllium	1.9E-003	mg/L	1.9E-003	mg/L	M	3.88E-009	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	4.4E-002	mg/L	4.4E-002	mg/L	M	1.61E-006	mg/kg-day	1.10E+000	kg-day/mg	1.78E-006
	bis(2-Ethylhexyl)Phthalate	9.3E-002	mg/L	9.3E-002	mg/L	M	4.24E-004	mg/kg-day	1.40E-002	kg-day/mg	5.94E-006
	Cadmium (water)	3.6E-002	mg/L	3.6E-002	mg/L	M	7.31E-008	mg/kg-day		kg-day/mg	
	Chloroethane	2.9E+000	mg/L	2.9E+000	mg/L	M	2.31E-004	mg/kg-day	2.90E-003	kg-day/mg	6.70E-007
	Chromium (Total as VI)	3.6E-001	mg/L	3.6E-001	mg/L	M	7.35E-007	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	3.9E-002	mg/L	3.9E-002	mg/L	M	4.82E-006	mg/kg-day		kg-day/mg	
	Cobalt	1.4E-002	mg/L	1.4E-002	mg/L	M	2.86E-008	mg/kg-day		kg-day/mg	
	Copper	1.3E-001	mg/L	1.3E-001	mg/L	M	2.55E-007	mg/kg-day		kg-day/mg	
	Iron	5.2E+001	mg/L	5.2E+001	mg/L	M	1.05E-004	mg/kg-day		kg-day/mg	
	Isophorone	5.0E-003	mg/L	5.0E-003	mg/L	M	3.72E-007	mg/kg-day	9.50E-004	kg-day/mg	3.54E-010
	Lead	3.0E-001	mg/L	3.0E-001	mg/L	M	2.48E-009	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	1.7E+000	mg/L	1.7E+000	mg/L	M	3.41E-006	mg/kg-day		kg-day/mg	

Table 5-4-7A
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Areas 1,2,3,4B, Groundwater (Tapwater)
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Mercury	6.7E-004	mg/L	6.7E-004	mg/L	M	1.37E-009	mg/kg-day		kg-day/mg	
	Nickel	2.6E-001	mg/L	2.6E-001	mg/L	M	5.24E-008	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.1E+000	mg/L	1.1E+000	mg/L	M	0.00E+000	mg/kg-day		kg-day/mg	
	Phenol	3.4E-001	mg/L	3.4E-001	mg/L	M	2.30E-005	mg/kg-day		kg-day/mg	
	Toluene	3.0E-003	mg/L	3.0E-003	mg/L	M	1.64E-006	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	2.0E-003	mg/L	2.0E-003	mg/L	M	2.68E-008	mg/kg-day		kg-day/mg	
	Vanadium	3.0E-002	mg/L	3.0E-002	mg/L	M	6.20E-008	mg/kg-day		kg-day/mg	
	Xylene (mixed)	6.0E-003	mg/L	6.0E-003	mg/L	M	8.38E-006	mg/kg-day		kg-day/mg	
	Zinc	3.3E+001	mg/L	3.3E+001	mg/L	M	4.08E-005	mg/kg-day		kg-day/mg	
	(Total)										1.11E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.67E-004

*Worker - includes routine and utility maintenance workers

Table 5-4-8
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\risktbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	9.96E-006	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	1.95E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene (total)	1.40E-002	mg/L	1.40E-002	mg/L	R	5.36E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	1.15E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	3.83E-006	mg/kg-day	2.2E-002	mg/kg-day	
	2,2-Oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	1.15E-004	mg/kg-day	2.5E-002	mg/kg-day	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	4.21E-005	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	1.03E-005	mg/kg-day		mg/kg-day	
	2-Methylphenol	1.30E-002	mg/L	1.30E-002	mg/L	R	4.98E-006	mg/kg-day		mg/kg-day	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	2.30E-006	mg/kg-day		mg/kg-day	
	4-Methylphenol	7.80E-002	mg/L	7.80E-002	mg/L	R	2.99E-005	mg/kg-day		mg/kg-day	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	1.07E-004	mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	4.21E-003	mg/kg-day		mg/kg-day	
	Aroclor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	9.96E-007	mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	5.70E-002	mg/L	5.70E-002	mg/L	R	2.18E-005	mg/kg-day	1.51E+000	mg/kg-day	3.30E-005
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	3.03E-004	mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	3.83E-002	mg/kg-day	2.9E-002	mg/kg-day	1.11E-003
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	4.98E-006	mg/kg-day		mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	6.13E-005	mg/kg-day	1.10E+000	mg/kg-day	6.74E-005
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	1.92E-006	mg/kg-day	1.4E-002	mg/kg-day	2.68E-008
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	1.19E-006	mg/kg-day	6.30E+000	mg/kg-day	7.48E-006
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	3.68E-005	mg/kg-day		mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	7.28E-004	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	2.60E-005	mg/kg-day		mg/kg-day	
	Cyanide (total)	1.00E-002	mg/L	1.00E-002	mg/L	R	3.83E-006	mg/kg-day		mg/kg-day	
	Di-n-octylphthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	8.04E-006	mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	3.45E-006	mg/kg-day		mg/kg-day	
	Ethyl Benzene	1.10E+000	mg/L	1.10E+000	mg/L	R	4.21E-004	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	1.95E-002	mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.30E+000	mg/L	4.30E+000	mg/L	R	1.65E-003	mg/kg-day		mg/kg-day	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	3.83E-007	mg/kg-day		mg/kg-day	
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	2.72E-005	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	2.03E-005	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.70E+000	mg/L	1.70E+000	mg/L	R	6.51E-004	mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	9.19E-005	mg/kg-day		mg/kg-day	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	2.37E-006	mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	1.38E-006	mg/kg-day		mg/kg-day	

Table 5-4-8

CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 1, Groundwater
Receptor Population:	Worker *
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGOVRCTAAA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	8.81E-004	mg/kg-day		mg/kg-day	
	Vanadium	2.00E-002	mg/L	2.00E-002	mg/L	R	7.66E-006	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	6.13E-006	mg/kg-day		mg/kg-day	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	1.15E-003	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	1.95E-004	mg/kg-day		mg/kg-day	
	(Total)										1.22E-003

Worker * - includes routine and utility maintenance workers

Total Hazard Index Across All Exposure Routes/Pathways 1.22E-003

Table 5-4-8A
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 1,2,3,4B, Groundwater
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	R	1.72E-006	mg/kg-day		mg/kg-day	
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	R	4.21E-006	mg/kg-day		mg/kg-day	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	R	7.04E-004	mg/kg-day		mg/kg-day	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	R	5.93E-005	mg/kg-day	2.90E-002	mg/kg-day	1.72E-006
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	R	8.42E-006	mg/kg-day	1.10E+000	mg/kg-day	9.26E-006
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	R	5.55E-004	mg/kg-day		mg/kg-day	
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	R		mg/kg-day	3.50E-005	mg/kg-day	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	R	7.46E-006	mg/kg-day		mg/kg-day	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	R	9.57E-007	mg/kg-day		mg/kg-day	
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	R	6.51E-005	mg/kg-day		mg/kg-day	

Table 5-4-8A
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 1,2,3,4B, Groundwater
Receptor Population:	Worker*
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGOVRCTA.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	R	5.74E-007	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	R	3.83E-007	mg/kg-day		mg/kg-day	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	R	1.15E-006	mg/kg-day		mg/kg-day	
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										1.10E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.10E-005

*Worker - Includes routine and utility maintenance workers

Table 5-4-9
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\vsk\tbls\LG5ACCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	3.65E-004	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	1.83E-004
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	1.55E-004	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	3.88E-001
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	3.47E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.16E+000
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	2.65E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.78E-001
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	9.13E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.57E-003
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	1.00E-004	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.00E-001
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	9.13E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	9.13E-003
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	1.42E-002	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	3.54E-001
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	4.12E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.37E+000
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	2.06E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	8.43E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.21E+000
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	1.83E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.04E-004
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	4.57E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.28E-002
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	2.74E-005	mg/kg-day	6.00E-003	mg/kg-day	N/A	N/A	4.57E-003
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	5.48E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	1.44E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.81E-001
	(Total)												8.49E+000

Table 5-4-9
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5ACCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	2.96E-009	mg/kg-day	1.90E+000	mg/kg-day	N/A	N/A	1.56E-009
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	6.57E-010	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	1.64E-004
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	1.47E-009	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	5.16E-006
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	1.12E-007	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.60E-006
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	4.25E-010	mg/kg-day	5.00E-005	mg/kg-day	N/A	N/A	8.51E-006
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	9.55E-003	mg/kg-day	N/A	N/A	
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	5.99E-008	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.50E-006
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	1.74E-006	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	5.81E-006
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	3.50E-011	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	3.57E-007	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.78E-005
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M		mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	1.93E-010	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.93E-007
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M		mg/kg-day	5.88E-003	mg/kg-day	N/A	N/A	
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	2.76E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.67E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	4.07E-006
	(Total)												2.10E-004
												Total Hazard Index Across All Exposure Routes/Pathways	8.49E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-10
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private - Household)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5ACCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	R	1.95E-007	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu m	6.81E-007
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day	2.67E-001	mg/kg-day	2.00E-001	mg/cu m	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	R	4.87E-008	mg/kg-day	5.33E-002	mg/kg-day	4.00E-002	mg/cu m	9.13E-007
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	R	9.74E-009	mg/kg-day	4.00E+000	mg/kg-day	3.00E+000	mg/cu m	2.44E-009
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	R	1.46E-008	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	R	2.92E-008	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.60E-006
												Total Hazard Index Across All Exposure Routes/Pathways	1.60E-006

Table 5-4-11
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\LG5ACCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	3.13E-005	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	1.33E-005	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	2.97E-005	mg/kg-day	1.50E+000	kg-day/mg	4.46E-005
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	2.27E-003	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	7.83E-006	mg/kg-day	1.40E-002	kg-day/mg	1.10E-007
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	8.61E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	7.83E-006	mg/kg-day	6.10E-003	kg-day/mg	4.77E-008
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	1.21E-003	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	3.53E-002	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	1.77E-004	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	7.23E-003	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	1.57E-006	mg/kg-day	7.50E-003	kg-day/mg	1.17E-008
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	3.91E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	2.35E-006	mg/kg-day	1.10E-002	kg-day/mg	2.58E-008
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	4.70E-006	mg/kg-day	1.90E+000	kg-day/mg	8.92E-006
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	1.24E-002	mg/kg-day		kg-day/mg	
	(Total)										5.37E-005

Table 5-4-11
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\LG5ACCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	2.50E-010	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	5.55E-011	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	1.24E-010	mg/kg-day	1.58E+000	kg-day/mg	1.96E-010
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	9.47E-009	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	1.40E-002	kg-day/mg	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	3.59E-011	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	6.39E-003	kg-day/mg	
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	5.06E-009	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	1.47E-007	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	2.95E-012	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	3.02E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M		mg/kg-day	1.36E-002	kg-day/mg	
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	1.63E-011	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M		mg/kg-day	1.12E-002	kg-day/mg	
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	2.33E-010	mg/kg-day	1.90E+000	kg-day/mg	4.43E-010
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.10E-008	mg/kg-day		kg-day/mg	
	(Total)										6.39E-010
										Total Hazard Index Across All Exposure Routes/Pathways	5.37E-005

Table 5-4-12
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private - Household)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5ACCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	R	3.34E-008	mg/kg-day		mg/kg-day	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	R		mg/kg-day		mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	R	8.35E-009	mg/kg-day	8.10E-002	mg/kg-day	6.76E-010
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	R	1.67E-009	mg/kg-day	1.65E-003	mg/kg-day	2.75E-012
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	R	2.50E-009	mg/kg-day	6.00E-003	mg/kg-day	1.50E-011
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	R	5.01E-009	mg/kg-day	3.00E-001	mg/kg-day	1.50E-009
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										2.20E-009
										Total Hazard Index Across All Exposure Routes/Pathways	2.20E-009

Table 5-4-13
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskitbls\LG5ACCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	9.13E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	4.57E-005
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	3.88E-005	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	9.70E-002
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	8.68E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	2.89E-001
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	6.62E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	9.46E-002
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	2.28E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.14E-003
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	2.51E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.51E-002
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	2.28E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	2.28E-003
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	3.54E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	8.85E-002
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	1.03E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	3.43E-001
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	5.16E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	2.11E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.05E+000
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	4.57E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	7.61E-005
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	1.14E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.71E-003
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	6.85E-006	mg/kg-day	6.00E-003	mg/kg-day	N/A	N/A	1.14E-003
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.37E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.61E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.20E-001
	(Total)												2.12E+000

Table 5-4-13
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5ACCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	5.93E-010	mg/kg-day	1.90E+000	mg/kg-day	N/A	N/A	3.12E-010
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	6.23E-011	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	1.56E-005
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	1.39E-010	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	4.89E-007
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	1.06E-008	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.52E-007
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	4.03E-011	mg/kg-day	5.00E-005	mg/kg-day	N/A	N/A	8.07E-007
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	9.55E-003	mg/kg-day	N/A	N/A	
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	5.68E-009	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.37E-007
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	1.65E-007	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	5.51E-007
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	3.31E-012	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	3.38E-008	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.69E-006
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M		mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	1.83E-011	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.83E-008
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M		mg/kg-day	5.88E-003	mg/kg-day	N/A	N/A	
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	5.49E-010	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.48E-008	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	3.86E-007
	(Total)												1.99E-005
												Total Hazard Index Across All Exposure Routes/Pathways	2.12E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-14
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilizatin of VOCs)
Exposure Point:	Area 5A, Groundwater (Private - Household)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5ACCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	R	9.69E-008	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu m	3.39E-007
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day	2.67E-001	mg/kg-day	2.00E-001	mg/cu m	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	R	2.42E-008	mg/kg-day	5.33E-002	mg/kg-day	4.00E-002	mg/cu m	4.54E-007
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	R	4.85E-009	mg/kg-day	4.00E+000	mg/kg-day	3.00E+000	mg/cu m	1.21E-009
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	R	7.27E-009	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	R	1.45E-008	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												7.94E-007
												Total Hazard Index Across All Exposure Routes/Pathways	7.94E-007

Table 5-4-15
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskfbls\LG5ACCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	7.83E-006	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	3.33E-006	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	7.44E-006	mg/kg-day	1.50E+000	kg-day/mg	1.12E-005
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	5.68E-004	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	1.96E-006	mg/kg-day	1.40E-002	kg-day/mg	2.74E-008
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	2.15E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	1.96E-006	mg/kg-day	6.10E-003	kg-day/mg	1.19E-008
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	3.03E-004	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	8.83E-003	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	4.42E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	1.81E-003	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	3.91E-007	mg/kg-day	7.50E-003	kg-day/mg	2.94E-009
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	9.78E-006	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	5.87E-007	mg/kg-day	1.10E-002	kg-day/mg	6.46E-009
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.17E-006	mg/kg-day	1.90E+000	kg-day/mg	2.23E-006
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.09E-003	mg/kg-day		kg-day/mg	
	(Total)										1.34E-005

Table 5-4-15
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5ACCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.52E-007	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	1.60E-008	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	3.57E-008	mg/kg-day	1.58E+000	kg-day/mg	5.64E-008
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	2.72E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	1.40E-002	kg-day/mg	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	1.03E-008	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M		mg/kg-day	6.39E-003	kg-day/mg	
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	1.46E-006	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	4.24E-005	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	8.49E-010	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	8.67E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M		mg/kg-day	1.36E-002	kg-day/mg	
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	4.70E-009	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M		mg/kg-day	1.12E-002	kg-day/mg	
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.41E-007	mg/kg-day	1.90E+000	kg-day/mg	2.67E-007
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	8.90E-006	mg/kg-day		kg-day/mg	
	(Total)										3.24E-007
										Total Hazard Index Across All Exposure Routes/Pathways	1.38E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-16
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\vskbls\LG5ACCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	R	1.66E-008	mg/kg-day		mg/kg-day	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	R		mg/kg-day		mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	R	4.15E-009	mg/kg-day	8.10E-002	mg/kg-day	3.36E-010
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	R	8.31E-010	mg/kg-day	1.65E-003	mg/kg-day	1.37E-012
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	R	1.25E-009	mg/kg-day	6.00E-003	mg/kg-day	7.46E-012
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	R	2.49E-009	mg/kg-day	3.00E-001	mg/kg-day	7.48E-010
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										1.09E-009
										Total Hazard Index Across All Exposure Routes/Pathways	1.09E-009

Table 5-4-17
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vskl\bls\LG5ACARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.10E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.83E-004
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	4.66E-005	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	1.16E-001
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	1.04E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	3.47E-001
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	7.95E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.14E-001
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	2.74E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.37E-003
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	3.01E-005	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	6.03E-002
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	2.74E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	2.74E-003
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	4.25E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.06E-001
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	1.24E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.12E-001
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	6.19E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	2.53E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.26E+000
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	5.48E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	9.13E-005
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	1.37E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.85E-003
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	8.22E-006	mg/kg-day	6.00E-003	mg/kg-day	N/A	N/A	1.37E-003
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.64E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	4.33E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.44E-001
	(Total)												2.58E+000

Table 5-4-17
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risktbls\LG5ACARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.49E-006	mg/kg-day	5.70E-001	mg/kg-day	N/A	N/A	2.62E-006
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	3.12E-007	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	7.81E-002
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	6.98E-007	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	2.45E-003
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	5.33E-005	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	7.61E-004
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	2.19E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.10E-002
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	2.02E-007	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	8.09E-003
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	6.21E-006	mg/kg-day	9.55E-003	mg/kg-day	N/A	N/A	6.50E-004
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	2.85E-005	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	1.19E-003
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	8.29E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.76E-003
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	1.66E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	1.70E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	8.48E-003
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	4.97E-007	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	1.51E-005
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	9.19E-008	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	9.19E-005
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	3.64E-006	mg/kg-day	5.88E-003	mg/kg-day	N/A	N/A	6.19E-004
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.39E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	1.74E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.94E-003
	(Total)												1.16E-001
												Total Hazard Index Across All Exposure Routes/Pathways	2.69E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-18
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LG5ACARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	2-Butanone (MEK)	4.0E-003	mg/L	4.0E-003	mg/L	R	1.32E-005	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu m	4.61E-005
	Antimony	1.7E-003	mg/L	1.7E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	3.8E-003	mg/L	3.8E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	2.9E-001	mg/L	2.9E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.0E-003	mg/L	1.0E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	1.1E-003	mg/L	1.1E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroform	1.0E-003	mg/L	1.0E-003	mg/L	R	3.30E-006	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	3.83E-002
	Copper	1.6E-001	mg/L	1.6E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	4.5E+000	mg/L	4.5E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	2.3E-002	mg/L	2.3E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	9.2E-001	mg/L	9.2E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	2.0E-004	mg/L	2.0E-004	mg/L	R	6.59E-007	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	7.67E-007
	Nickel	5.0E-003	mg/L	5.0E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Trichloroethene	3.0E-004	mg/L	3.0E-004	mg/L	R	9.89E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	6.0E-004	mg/L	6.0E-004	mg/L	R	1.98E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	1.6E+000	mg/L	1.6E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												3.84E-002

Total Hazard Index Across All Exposure Routes/Pathways 3.84E-002

Table 5-4-19
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\aca\risk\a\LG5ACARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	3.76E-005	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	1.60E-005	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	3.57E-005	mg/kg-day	1.50E+000	kg-day/mg	5.35E-005
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	2.72E-003	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	9.39E-006	mg/kg-day	1.40E-002	kg-day/mg	1.32E-007
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	1.03E-005	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	9.39E-006	mg/kg-day	6.10E-003	kg-day/mg	5.73E-008
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	1.46E-003	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	4.24E-002	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	2.12E-004	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	8.67E-003	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	1.88E-006	mg/kg-day	7.50E-003	kg-day/mg	1.41E-008
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	4.70E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	2.82E-006	mg/kg-day	1.10E-002	kg-day/mg	3.10E-008
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	5.64E-006	mg/kg-day	1.90E+000	kg-day/mg	1.07E-005
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	1.48E-002	mg/kg-day		kg-day/mg	
	(Total)										6.45E-005

Table 5-4-19
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LG5ACARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	5.12E-007	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	1.07E-007	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	2.39E-007	mg/kg-day	1.58E+000	kg-day/mg	3.78E-007
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	1.83E-005	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	7.53E-005	mg/kg-day	1.40E-002	kg-day/mg	1.05E-006
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	6.93E-008	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	2.13E-006	mg/kg-day	6.39E-003	kg-day/mg	1.36E-008
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	9.77E-006	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	2.84E-004	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	5.70E-009	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	5.82E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	1.70E-007	mg/kg-day	1.36E-002	kg-day/mg	2.32E-009
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	3.15E-008	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	1.25E-006	mg/kg-day	1.12E-002	kg-day/mg	1.40E-008
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	4.75E-007	mg/kg-day	1.90E+000	kg-day/mg	9.02E-007
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	5.97E-005	mg/kg-day		kg-day/mg	
	(Total)										2.36E-006
										Total Hazard Index Across All Exposure Routes/Pathways	6.68E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-20
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\aca\rskbls\LG5ACARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	2-Butanone (MEK)	4.0E-003	mg/L	4.0E-003	mg/L	R	9.04E-006	mg/kg-day		mg/kg-day	
	Antimony	1.7E-003	mg/L	1.7E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	3.8E-003	mg/L	3.8E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	2.9E-001	mg/L	2.9E-001	mg/L	R		mg/kg-day		mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.0E-003	mg/L	1.0E-003	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	1.1E-003	mg/L	1.1E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroform	1.0E-003	mg/L	1.0E-003	mg/L	R	2.26E-006	mg/kg-day	8.10E-002	mg/kg-day	1.83E-007
	Copper	1.6E-001	mg/L	1.6E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	4.5E+000	mg/L	4.5E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	2.3E-002	mg/L	2.3E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	9.2E-001	mg/L	9.2E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	2.0E-004	mg/L	2.0E-004	mg/L	R	4.52E-007	mg/kg-day	1.65E-003	mg/kg-day	7.46E-010
	Nickel	5.0E-003	mg/L	5.0E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Trichloroethene	3.0E-004	mg/L	3.0E-004	mg/L	R	6.78E-007	mg/kg-day	6.00E-003	mg/kg-day	4.07E-009
	Vinyl Chloride	6.0E-004	mg/L	6.0E-004	mg/L	R	1.36E-006	mg/kg-day	3.00E-001	mg/kg-day	4.07E-007
	Zinc	1.6E+000	mg/L	1.6E+000	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										5.95E-007
										Total Hazard Index Across All Exposure Routes/Pathways	5.95E-007

Table 5-4-21
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\wk\bls\LG5ACACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	7.67E-005	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.28E-004
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	3.26E-005	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	8.15E-002
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	7.29E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	2.43E-001
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	5.56E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	7.95E-002
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	1.92E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	9.59E-004
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	2.11E-005	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	4.22E-002
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	1.92E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	1.92E-003
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	2.97E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	7.43E-002
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	8.65E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.88E-001
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	4.33E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	1.77E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	8.85E-001
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	3.84E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	6.39E-005
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	9.59E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.79E-003
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	5.75E-006	mg/kg-day	6.00E-003	mg/kg-day	N/A	N/A	9.59E-004
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.15E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.03E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.01E-001
	(Total)												1.80E+000

Table 5-4-21
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\ucs\vsktbls\LG5ACACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.05E-006	mg/kg-day	5.70E-001	mg/kg-day	N/A	N/A	1.83E-006
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	7.76E-008	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	1.94E-002
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	1.74E-007	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	6.09E-004
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	1.32E-005	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.89E-004
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	1.02E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.10E-003
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	5.02E-008	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	2.01E-003
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	2.89E-006	mg/kg-day	9.55E-003	mg/kg-day	N/A	N/A	3.02E-004
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	7.08E-006	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.95E-004
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	2.06E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	6.86E-004
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	4.13E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	4.21E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.11E-003
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	2.31E-007	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	7.00E-006
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	2.28E-008	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.28E-005
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	1.69E-006	mg/kg-day	5.88E-003	mg/kg-day	N/A	N/A	2.88E-004
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	9.67E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	4.33E-005	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	4.81E-004
	(Total)												3.15E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Total Hazard Index Across All Exposure Routes/Pathways 1.84E+000

Table 5-4-22
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LG5ACACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	2-Butanone (MEK)	4.0E-003	mg/L	4.0E-003	mg/L	R	3.87E-006	mg/kg-day	2.86E-001	mg/kg-day	1.00E+000	mg/cu m	1.35E-005
	Antimony	1.7E-003	mg/L	1.7E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	3.8E-003	mg/L	3.8E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	2.9E-001	mg/L	2.9E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.0E-003	mg/L	1.0E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	1.1E-003	mg/L	1.1E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroform	1.0E-003	mg/L	1.0E-003	mg/L	R	9.66E-007	mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	1.12E-002
	Copper	1.6E-001	mg/L	1.6E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	4.5E+000	mg/L	4.5E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	2.3E-002	mg/L	2.3E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	9.2E-001	mg/L	9.2E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	2.0E-004	mg/L	2.0E-004	mg/L	R	1.93E-007	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	2.25E-007
	Nickel	5.0E-003	mg/L	5.0E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Trichloroethene	3.0E-004	mg/L	3.0E-004	mg/L	R	2.90E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	6.0E-004	mg/L	6.0E-004	mg/L	R	5.80E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	1.6E+000	mg/L	1.6E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.13E-002
												Total Hazard Index Across All Exposure Routes/Pathways	1.13E-002

Table 5-4-23
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risktbls\LG5ACACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	9.86E-006	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	4.19E-006	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	9.37E-006	mg/kg-day	1.50E+000	kg-day/mg	1.41E-005
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	7.15E-004	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	2.47E-006	mg/kg-day	1.40E-002	kg-day/mg	3.45E-008
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	2.71E-006	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	2.47E-006	mg/kg-day	6.10E-003	kg-day/mg	1.50E-008
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	3.82E-004	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	1.11E-002	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	5.57E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	2.28E-003	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	4.93E-007	mg/kg-day	7.50E-003	kg-day/mg	3.70E-009
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	1.23E-005	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	7.40E-007	mg/kg-day	1.10E-002	kg-day/mg	8.14E-009
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.48E-006	mg/kg-day	1.90E+000	kg-day/mg	2.81E-006
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	3.90E-003	mg/kg-day		kg-day/mg	
	(Total)										1.69E-005

Table 5-4-23
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LG5ACACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2-Butanone (MEK)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.34E-007	mg/kg-day		kg-day/mg	
	Antimony	1.70E-003	mg/L	1.70E-003	mg/L	M	9.98E-009	mg/kg-day		kg-day/mg	
	Arsenic	3.80E-003	mg/L	3.80E-003	mg/L	M	2.23E-008	mg/kg-day	1.58E+000	kg-day/mg	3.52E-008
	Barium	2.90E-001	mg/L	2.90E-001	mg/L	M	1.70E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	1.00E-003	mg/L	1.00E-003	mg/L	M	1.31E-005	mg/kg-day	1.40E-002	kg-day/mg	1.84E-007
	Cadmium (water)	1.10E-003	mg/L	1.10E-003	mg/L	M	6.46E-009	mg/kg-day		kg-day/mg	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	3.71E-007	mg/kg-day	6.39E-003	kg-day/mg	2.37E-009
	Copper	1.55E-001	mg/L	1.55E-001	mg/L	M	9.10E-007	mg/kg-day		kg-day/mg	
	Iron	4.51E+000	mg/L	4.51E+000	mg/L	M	2.65E-005	mg/kg-day		kg-day/mg	
	Lead	2.26E-002	mg/L	2.26E-002	mg/L	M	5.31E-010	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	9.23E-001	mg/L	9.23E-001	mg/L	M	5.42E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	2.00E-004	mg/L	2.00E-004	mg/L	M	2.97E-008	mg/kg-day	1.36E-002	kg-day/mg	4.05E-010
	Nickel	5.00E-003	mg/L	5.00E-003	mg/L	M	2.94E-009	mg/kg-day		kg-day/mg	
	Trichloroethene	3.00E-004	mg/L	3.00E-004	mg/L	M	2.18E-007	mg/kg-day	1.12E-002	kg-day/mg	2.44E-009
	Vinyl Chloride	6.00E-004	mg/L	6.00E-004	mg/L	M	1.24E-007	mg/kg-day	1.90E+000	kg-day/mg	2.36E-007
	Zinc	1.58E+000	mg/L	1.58E+000	mg/L	M	5.57E-006	mg/kg-day		kg-day/mg	
	(Total)										4.60E-007
										Total Hazard Index Across All Exposure Routes/Pathways	1.74E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-24
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\raldbls\LG5ACACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	2-Butanone (MEK)	4.0E-003	mg/L	4.0E-003	mg/L	R	9.94E-007	mg/kg-day		mg/kg-day	
	Antimony	1.7E-003	mg/L	1.7E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	3.8E-003	mg/L	3.8E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	2.9E-001	mg/L	2.9E-001	mg/L	R		mg/kg-day		mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.0E-003	mg/L	1.0E-003	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	1.1E-003	mg/L	1.1E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroform	1.0E-003	mg/L	1.0E-003	mg/L	R	2.49E-007	mg/kg-day	8.10E-002	mg/kg-day	2.01E-008
	Copper	1.6E-001	mg/L	1.6E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	4.5E+000	mg/L	4.5E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	2.3E-002	mg/L	2.3E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	9.2E-001	mg/L	9.2E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	2.0E-004	mg/L	2.0E-004	mg/L	R	4.97E-008	mg/kg-day	1.65E-003	mg/kg-day	8.20E-011
	Nickel	5.0E-003	mg/L	5.0E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Trichloroethene	3.0E-004	mg/L	3.0E-004	mg/L	R	7.46E-008	mg/kg-day	6.00E-003	mg/kg-day	4.47E-010
	Vinyl Chloride	6.0E-004	mg/L	6.0E-004	mg/L	R	1.49E-007	mg/kg-day	3.00E-001	mg/kg-day	4.47E-008
	Zinc	1.6E+000	mg/L	1.6E+000	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										6.54E-008
Total Hazard Index Across All Exposure Routes/Pathways											6.54E-008

Table 5-4-25
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\risk\bis\LG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	6.92E-001	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	6.92E-001
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	3.55E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	4.46E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.49E+000
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	5.71E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	8.16E-001
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	5.46E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.37E-004
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	1.00E-004	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	5.01E-002
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	5.10E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.55E-001
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	9.83E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.91E-001
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	6.10E-004	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	1.02E-002
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	1.14E-002	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	2.84E-001
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	1.20E+000	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	3.99E+000
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	1.06E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	2.69E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.35E+000
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	6.75E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.38E-001
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	8.28E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	8.28E-001
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	3.00E-002	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	5.01E-002
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	2.73E-004	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	5.46E-002
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	3.28E-004	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	4.68E+000
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	9.10E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	4.55E-005
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	1.16E-003	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.65E-001
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	3.86E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.29E-002
	(Total)												1.55E+001

Table 5-4-25
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acavsktbls\LG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	2.91E-006	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.91E-006
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.88E-009	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	6.59E-006
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	2.41E-007	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.44E-006
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	6.23E-008	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.56E-008
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	7.93E-009	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	3.96E-004
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	2.40E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.20E-003
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	4.14E-008	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	2.07E-005
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	2.57E-009	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	4.28E-008
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	4.79E-008	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.00E-006
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	5.04E-006	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.68E-005
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	1.78E-011	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	1.13E-007	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.67E-006
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	2.84E-009	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.84E-006
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	2.09E-006	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	3.49E-006
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	1.15E-009	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	2.30E-007
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.38E-009	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.97E-005
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	5.12E-008	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	2.56E-008
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	4.87E-009	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	6.95E-007
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	9.76E-009	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.08E-007
	(Total)												1.68E-003
										Total Hazard Index Across All Exposure Routes/Pathways			1.56E+001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-26
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\LG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	7.50E-004	mg/cu m	
Inhalation	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	1.89E-005	mg/kg-day	2.86E-002	mg/kg-day	2.15E-002	mg/cu m	6.61E-004
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	1.05E-004	mg/cu m	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	4.28E-006	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	1.07E-005	mg/cu m	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	4.85E-008	mg/kg-day	1.00E+000	mg/kg-day	7.50E-001	mg/cu m	4.85E-008
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												6.61E-004
												Total Hazard Index Across All Exposure Routes/Pathways	6.61E-004

Table 5-4-27
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\risktbls\LG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	5.95E-002	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	3.05E-003	mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	3.84E-005	mg/kg-day	1.50E+000	kg-day/mg	5.75E-005
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	4.92E-003	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	4.70E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	8.61E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	4.38E-004	mg/kg-day	1.40E-002	kg-day/mg	6.14E-006
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	8.45E-004	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	5.24E-005	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	9.78E-004	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	1.03E-001	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	9.08E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	2.32E-003	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	5.81E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	7.12E-003	mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	2.58E-003	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	2.35E-005	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	2.82E-005	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	7.83E-006	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	9.94E-005	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	3.32E-004	mg/kg-day		kg-day/mg	
	(Total)										8.37E-005

Table 5-4-27
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\LGSAFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	2.48E-007	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.60E-010	mg/kg-day	1.58E+000	kg-day/mg	2.53E-010
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	2.05E-008	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	5.31E-009	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	6.76E-010	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	2.04E-006	mg/kg-day	1.40E-002	kg-day/mg	2.86E-008
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	3.53E-009	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	2.19E-010	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	4.08E-009	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	4.30E-007	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	1.52E-012	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	9.67E-009	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	2.42E-010	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	1.78E-007	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	9.80E-011	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.18E-010	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	4.37E-009	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	4.15E-010	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	8.32E-010	mg/kg-day		kg-day/mg	
	(Total)										2.89E-008
								Total Hazard Index Across All Exposure Routes/Pathways			6.37E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\riskbls\LG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	3.24E-006	mg/kg-day		mg/kg-day	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	8.31E-009	mg/kg-day		mg/kg-day	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										0.00E+000
										Total Hazard Index Across All Exposure Routes/Pathways	0.00E+000

Table 5-4-29
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\aca\rskbls\LG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	1.75E-001	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.75E-001
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	8.97E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.13E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	3.76E-001
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.44E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	2.06E-001
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.38E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	3.45E-005
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	2.53E-005	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	1.27E-002
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	1.29E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.44E-002
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	2.48E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.24E-001
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	1.54E-004	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.57E-003
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	2.88E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	7.19E-002
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	3.02E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.01E+000
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.67E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	6.81E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.40E-001
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	1.71E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	8.53E-002
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	2.09E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.09E-001
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	7.59E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.27E-002
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	6.90E-005	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	1.38E-002
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	8.28E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.18E+000
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.30E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	1.15E-005
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	2.92E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	4.17E-002
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	9.76E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	3.25E-003
	(Total)												3.93E+000

Table 5-4-29
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\vsktbls\LG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	2.79E-007	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.79E-007
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.80E-010	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	6.30E-007
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	2.30E-008	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.29E-007
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	8.42E-009	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.11E-009
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	7.58E-010	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	3.79E-005
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	3.24E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.62E-004
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	3.96E-009	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	1.98E-006
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	2.46E-010	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	4.09E-009
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	4.58E-009	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	1.91E-007
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	4.82E-007	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.61E-006
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	1.70E-012	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	1.09E-008	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.43E-007
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	2.72E-010	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.72E-007
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	2.83E-007	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	4.72E-007
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	1.10E-010	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	2.20E-008
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.32E-010	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.89E-006
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	6.93E-009	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	3.47E-009
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	4.66E-010	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	6.65E-008
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	9.34E-010	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.04E-008
	(Total)												2.08E-004
												Total Hazard Index Across All Exposure Routes/Pathways	3.93E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-30
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\LG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	7.50E-004	mg/cu m	
Inhalation	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	9.45E-006	mg/kg-day	2.86E-002	mg/kg-day	2.15E-002	mg/cu m	3.30E-004
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	1.05E-004	mg/cu m	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	4.28E-006	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	1.07E-005	mg/cu m	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	2.42E-008	mg/kg-day	1.00E+000	mg/kg-day	7.50E-001	mg/cu m	2.42E-008
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												3.30E-004

Total Hazard Index Across All Exposure Routes/Pathways 3.30E-004

Table 5-4-31
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\aca\vaktbls\LG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	1.49E-002	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	7.63E-004	mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	9.59E-006	mg/kg-day	1.50E+000	kg-day/mg	1.44E-005
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.23E-003	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.17E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	2.15E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	1.10E-004	mg/kg-day	1.40E-002	kg-day/mg	1.53E-006
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	2.11E-004	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	1.31E-005	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	2.45E-004	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	2.57E-002	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.27E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	5.79E-004	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	1.45E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	1.78E-003	mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	6.46E-004	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	5.87E-006	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	7.05E-006	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.96E-006	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	2.49E-005	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	8.31E-005	mg/kg-day		kg-day/mg	
	(Total)										1.59E-005

Table 5-4-31
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\vsktbls\LG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	2.36E-008	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.52E-011	mg/kg-day	1.58E+000	kg-day/mg	2.40E-011
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.95E-009	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	7.12E-010	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	6.41E-011	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	2.74E-007	mg/kg-day	1.40E-002	kg-day/mg	3.84E-009
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	3.35E-010	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	2.08E-011	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	3.87E-010	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	4.08E-008	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	1.44E-013	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	9.18E-010	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	2.30E-011	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	2.39E-008	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	9.30E-012	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.12E-011	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	5.86E-010	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	3.94E-011	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	7.90E-011	mg/kg-day		kg-day/mg	
	(Total)										3.86E-009
										Total Hazard Index Across All Exposure Routes/Pathways	1.59E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-32
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Ambient Air (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Monitoring Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\wk8\s\LG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	1.62E-006	mg/kg-day		mg/kg-day	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Ethythexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	4.15E-009	mg/kg-day		mg/kg-day	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										0.00E+000
										Total Hazard Index Across All Exposure Routes/Pathways	0.00E+000

Table 5-4-33
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskfbla\LGSAFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	2.08E-001	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.08E-001
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	1.07E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.34E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	4.47E-001
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.72E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	2.46E-001
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.64E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	4.11E-005
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	3.01E-005	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	1.51E-002
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	1.53E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.67E-002
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	2.96E-003	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	9.86E-001
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	1.84E-004	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.06E-003
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	3.42E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	8.56E-002
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	3.60E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.20E+000
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	3.18E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	8.11E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.05E-001
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	2.03E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.02E-001
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	2.49E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.49E-001
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	9.04E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.51E-002
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	8.22E-005	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	1.64E-002
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	9.86E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.41E+000
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.74E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.37E-004
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	3.48E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	4.97E-002
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	1.16E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	3.88E-003
	(Total)												5.52E+000

Table 5-4-33
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\aca\risk\bis\LG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	1.40E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.40E-003
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	9.01E-007	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	3.16E-003
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.15E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.65E-003
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	3.19E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	7.98E-006
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	3.80E-006	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	1.90E-001
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	1.23E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.15E-001
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	1.98E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	6.62E-002
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	1.23E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.05E-005
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	2.30E-005	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	9.57E-004
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	2.42E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	8.06E-003
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	8.53E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	5.44E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.72E-003
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	1.36E-006	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.36E-003
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	1.07E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.79E-003
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	5.51E-007	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	1.10E-004
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	6.62E-007	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	9.45E-003
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.63E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.31E-004
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	2.33E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	3.33E-004
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	4.68E-006	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	5.20E-005
	(Total)												9.02E-001
													6.42E+000

Total Hazard Index Across All Exposure Routes/Pathways

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-34
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskitbls\LGSAFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
Inhalation	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	1.29E-003	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	4.50E-002
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	3.30E-006	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	2.89E-005
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												4.50E-002
													Total Hazard Index Across All Exposure Routes/Pathways 4.50E-002

Table 5-4-35
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risk\bis\LG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	7.14E-002	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	3.66E-003	mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	4.60E-005	mg/kg-day	1.50E+000	kg-day/mg	6.90E-005
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	5.90E-003	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	5.64E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	1.03E-005	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	5.26E-004	mg/kg-day	1.40E-002	kg-day/mg	7.36E-006
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	1.01E-003	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	6.29E-005	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	1.17E-003	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	1.24E-001	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	1.09E-004	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	2.78E-003	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	6.97E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	8.55E-003	mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	3.10E-003	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	2.82E-005	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	3.38E-005	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	9.39E-006	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	1.19E-004	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	3.99E-004	mg/kg-day		kg-day/mg	
	(Total)										7.64E-005

Table 5-4-35
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vskibis\LG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	4.79E-004	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	3.09E-007	mg/kg-day	1.58E+000	kg-day/mg	4.88E-007
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	3.96E-005	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.09E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	1.30E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	4.21E-003	mg/kg-day	1.40E-002	kg-day/mg	5.90E-005
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	6.81E-006	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	4.22E-007	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	7.88E-006	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	8.29E-004	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.92E-009	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	1.87E-005	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	4.68E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	3.68E-004	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	1.89E-007	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	2.27E-007	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	9.00E-006	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	8.00E-007	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	1.60E-006	mg/kg-day		kg-day/mg	
	(Total)										5.95E-005
											Total Hazard Index Across All Exposure Routes/Pathways 1.36E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-36
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\aca\rskbls\LG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	8.82E-004	mg/kg-day		mg/kg-day	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	2.26E-006	mg/kg-day		mg/kg-day	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										0.00E+000
										Total Hazard Index Across All Exposure Routes/Pathways	0.00E+000

Table 5-4-37
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\ca\vsk\bls\LG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	1.46E-001	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.46E-001
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	7.48E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	9.40E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	3.13E-001
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.20E-002	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.72E-001
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.15E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.88E-005
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	2.11E-005	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	1.05E-002
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	1.07E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.37E-002
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	2.07E-003	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	6.90E-001
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	1.28E-004	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.14E-003
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	2.40E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	5.99E-002
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	2.52E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	8.41E-001
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.22E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	5.68E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.84E-001
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	1.42E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.12E-002
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	1.75E-002	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.75E-001
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	6.33E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.05E-002
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	5.75E-005	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	1.15E-002
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	6.90E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	9.86E-001
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.92E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	9.59E-005
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	2.44E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	3.48E-002
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	8.14E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.71E-003
	(Total)												3.86E+000

Table 5-4-37
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	3.47E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	3.47E-004
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	2.24E-007	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	7.85E-004
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	2.87E-005	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	4.10E-004
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.48E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	3.71E-006
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	9.44E-007	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	4.72E-002
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	5.71E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.86E-001
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	4.93E-006	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.64E-002
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	3.06E-007	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	5.10E-006
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	5.71E-006	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.38E-004
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	6.00E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.00E-003
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.12E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	1.35E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.76E-004
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	3.39E-007	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	3.39E-004
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	4.99E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	8.31E-004
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	1.37E-007	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	2.74E-005
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.64E-007	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	2.35E-003
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.22E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	6.10E-005
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	5.80E-007	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	8.28E-005
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	1.16E-006	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.29E-005
	(Total)												3.57E-001

Total Hazard Index Across All Exposure Routes/Pathways 4.22E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-38
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
Inhalation	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	3.77E-004	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	1.32E-002
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	9.66E-007	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	8.48E-006
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.32E-002
												Total Hazard Index Across All Exposure Routes/Pathways	1.32E-002

Table 5-4-39
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vskt\bis\LG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	1.87E-002	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M	9.62E-004	mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	1.21E-005	mg/kg-day	1.50E+000	kg-day/mg	1.81E-005
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	1.55E-003	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.48E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	2.71E-006	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	1.38E-004	mg/kg-day	1.40E-002	kg-day/mg	1.93E-006
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	2.66E-004	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	1.65E-005	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	3.08E-004	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	3.24E-002	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.86E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	7.30E-004	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	1.83E-004	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M	2.24E-003	mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	8.14E-004	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	7.40E-006	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	8.88E-006	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	2.47E-006	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	3.13E-005	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	1.05E-004	mg/kg-day		kg-day/mg	
	(Total)										2.01E-005

Table 5-4-39
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	M	4.46E-005	mg/kg-day		kg-day/mg	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	M	2.88E-008	mg/kg-day	1.58E+000	kg-day/mg	4.54E-008
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	M	3.69E-006	mg/kg-day		kg-day/mg	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.91E-006	mg/kg-day		kg-day/mg	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	M	1.21E-007	mg/kg-day		kg-day/mg	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	M	7.35E-004	mg/kg-day	1.40E-002	kg-day/mg	1.03E-005
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	M	6.34E-007	mg/kg-day		kg-day/mg	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	M	3.93E-008	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	7.34E-007	mg/kg-day		kg-day/mg	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	M	7.72E-005	mg/kg-day		kg-day/mg	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	M	2.72E-010	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	M	1.74E-006	mg/kg-day		kg-day/mg	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	M	4.36E-008	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	M	6.41E-005	mg/kg-day		kg-day/mg	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	M	1.76E-008	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	2.11E-008	mg/kg-day		kg-day/mg	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	M	1.57E-006	mg/kg-day		kg-day/mg	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	M	7.46E-008	mg/kg-day		kg-day/mg	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	M	1.50E-007	mg/kg-day		kg-day/mg	
	(Total)										1.03E-005
										Total Hazard Index Across All Exposure Routes/Pathways	3.04E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) *Specify if subchronic.*

Table 5-4-40
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer (Volatilization of VOCs)
Exposure Point:	Area 5A, Groundwater (Private Wells)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risk\bls\LG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	Aluminum	7.60E+000	mg/L	7.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.90E-001	mg/L	3.90E-001	mg/L	R	9.69E-005	mg/kg-day		mg/kg-day	
	Arsenic	4.90E-003	mg/L	4.90E-003	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	6.28E-001	mg/L	6.28E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.10E-003	mg/L	1.10E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	5.60E-002	mg/L	5.60E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Chromium (VI)	1.08E-001	mg/L	1.08E-001	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	Cobalt	6.70E-003	mg/L	6.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	1.32E+001	mg/L	1.32E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	1.16E-002	mg/L	1.16E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	2.96E-001	mg/L	2.96E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	7.42E-002	mg/L	7.42E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	9.10E-001	mg/L	9.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Selenium	3.00E-003	mg/L	3.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	1.00E-003	mg/L	1.00E-003	mg/L	R	2.49E-007	mg/kg-day		mg/kg-day	
	Vanadium	1.27E-002	mg/L	1.27E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Zinc	4.25E-002	mg/L	4.25E-002	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										0.00E+000
										Total Hazard Index Across All Exposure Routes/Pathways	0.00E+000

Table 5-4-41
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\ecs\rskbls\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	M	9.86E-005	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	1.23E-003
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	M	3.33E-005	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	3.33E-004
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	M	3.80E-002	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	3.80E-002
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	M	2.11E-005	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	5.26E-002
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	M	3.17E-004	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	1.11E+000
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	M	4.11E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	5.87E-002
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	M	1.74E-002	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	6.44E+000
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	1.24E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	3.10E-005
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	M	4.82E-006	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	2.41E-001
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	M	2.34E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	M	7.61E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.80E+000
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	M	9.08E-005	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	3.63E+000
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	M	6.19E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.55E-001
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	M	9.13E-004	mg/kg-day	1.50E-003	mg/kg-day	N/A	N/A	6.09E-001
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	M	1.05E-003	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	1.05E-001
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	M	3.55E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	5.92E-004
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	3.17E-004	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	1.32E-002
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	M	1.31E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.35E-001
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	6.41E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	3.21E-004
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	M	3.08E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	M	4.24E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.12E-001
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	M	1.70E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	M	6.52E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	6.52E-002
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	M	5.12E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	8.54E-003

Table 5-4-41
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.55E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.78E-003
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	5.86E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.93E-004
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	M	7.71E-005	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.10E-002
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	M	1.14E-003	mg/kg-day	1.80E+000	mg/kg-day	N/A	N/A	6.33E-004
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	M	5.07E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.69E-001
	(Total)												1.72E+001
												Total Hazard Index Across All Exposure Routes/Pathways	1.72E+001

*Onsite wells screened in the lower aquifer comprised the data set these future risks are based upon

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-42
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer"
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	
Inhalation	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	R	2.15E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	R	3.60E-001	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	1.26E+001
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	R	3.03E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	1.78E+001
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	R	4.31E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	R	2.84E-001	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	9.78E-002
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	R	3.77E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	R		mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-42
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer"
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\ecs\vsktbls\LGW58RME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.94E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	2.57E-003
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	R	1.96E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	R	5.87E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	3.33E+001	mg/L	33.3	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												3.05E+001
												Total Hazard Index Across All Exposure Routes/Pathways	3.05E+001

Table 5-4-43
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\ecs\rskthis\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	M	3.52E-005	mg/kg-day		kg-day/mg	
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	M	1.19E-005	mg/kg-day		kg-day/mg	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	M	1.36E-002	mg/kg-day		kg-day/mg	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	M	7.52E-006	mg/kg-day		kg-day/mg	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	M	1.13E-004	mg/kg-day	1.58E+000	kg-day/mg	1.79E-004
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	M	1.47E-003	mg/kg-day		kg-day/mg	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	M	6.21E-003	mg/kg-day	3.22E-002	kg-day/mg	2.00E-004
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	4.43E-005	mg/kg-day		kg-day/mg	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	M	1.72E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	M	8.37E-005	mg/kg-day	1.10E+000	kg-day/mg	9.21E-005
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	M	2.72E-002	mg/kg-day	1.40E-002	kg-day/mg	3.80E-004
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	M	3.24E-005	mg/kg-day		kg-day/mg	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	M	2.21E-002	mg/kg-day	2.90E-003	kg-day/mg	6.41E-005
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	M	3.26E-004	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	M	3.76E-004	mg/kg-day		kg-day/mg	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	M	1.27E-005	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	1.13E-004	mg/kg-day		kg-day/mg	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	M	4.66E-002	mg/kg-day		kg-day/mg	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	2.29E-005	mg/kg-day	9.50E-004	kg-day/mg	2.18E-008
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	M	1.10E-006	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	M	1.51E-003	mg/kg-day		kg-day/mg	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	M	6.07E-007	mg/kg-day		kg-day/mg	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	M	2.33E-005	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	M	1.83E-003	mg/kg-day		kg-day/mg	

Table 5-4-43
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\ecs\rskdbs\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.27E-004	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	2.09E-006	mg/kg-day		kg-day/mg	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	M	2.75E-005	mg/kg-day		kg-day/mg	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	M	4.07E-004	mg/kg-day		kg-day/mg	
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	M	1.81E-002	mg/kg-day		kg-day/mg	
	(Total)										9.16E-004
										Total Hazard Index Across All Exposure Routes/Pathways	9.16E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-44
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\risk\bis\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	R	1.54E-003	mg/kg-day		mg/kg-day	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	R	2.57E-001	mg/kg-day		mg/kg-day	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	R	2.17E-002	mg/kg-day	2.90E-002	mg/kg-day	6.28E-004
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	R	3.08E-003	mg/kg-day	1.10E+000	mg/kg-day	3.38E-003
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	R	2.03E-001	mg/kg-day		mg/kg-day	
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	R	2.69E-003	mg/kg-day		mg/kg-day	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	R		mg/kg-day		mg/kg-day	

Table 5-4-44
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbbl\LGW5BRME.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.10E-004	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	R	1.40E-004	mg/kg-day		mg/kg-day	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	R	4.19E-004	mg/kg-day		mg/kg-day	
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										4.01E-003
										Total Hazard Index Across All Exposure Routes/Pathways	4.01E-003

Table 5-4-45
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	M	6.66E-005	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	8.32E-004
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	M	2.25E-005	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.25E-004
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	M	2.57E-002	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.57E-002
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	M	1.42E-005	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	3.55E-002
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	M	2.14E-004	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	7.51E-001
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	M	2.77E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.96E-002
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	M	1.17E-002	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	4.35E+000
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	8.37E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.09E-005
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	M	3.25E-006	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	1.63E-001
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	M	1.58E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	M	5.13E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.57E+000
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	M	6.13E-005	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	2.45E+000
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	M	4.18E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.04E-001
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	M	6.16E-004	mg/kg-day	1.50E-003	mg/kg-day	N/A	N/A	4.11E-001
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	M	7.11E-004	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	7.11E-002
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	M	2.40E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.99E-004
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	2.14E-004	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	8.91E-003
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	M	8.81E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.94E-001
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	4.33E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.16E-004
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	M	2.08E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	M	2.86E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.43E-001
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	M	1.15E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	M	4.40E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	4.40E-002
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	M	3.46E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	5.76E-003

Table 5-4-45
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.40E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.20E-003
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	3.95E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.98E-004
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	M	5.20E-005	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	7.43E-003
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	M	7.68E-004	mg/kg-day	1.80E+000	mg/kg-day	N/A	N/A	4.27E-004
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	M	9.37E-005	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	3.12E-004
	(Total)												1.15E+001
												Total Hazard Index Across All Exposure Routes/Pathways	1.15E+001

*Onsite wells screened in the lower aquifer comprised the data set these future risks are based upon

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-46
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskfbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	
Inhalation	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	R	1.89E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	R	3.15E-001	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	1.10E+001
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	R	2.66E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	1.56E+001
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	R	3.77E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	R	2.49E-001	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	8.57E-002
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	R	3.30E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	R		mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-46
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer"
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.57E-004	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	2.26E-003
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	R	1.71E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	R	5.14E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												2.67E+001
												Total Hazard Index Across All Exposure Routes/Pathways	2.67E+001

Table 5-4-47
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskitbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	M	4.75E-006	mg/kg-day		kg-day/mg	
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	M	1.61E-006	mg/kg-day		kg-day/mg	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	M	1.83E-003	mg/kg-day		kg-day/mg	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	M	1.01E-006	mg/kg-day		kg-day/mg	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	M	1.53E-005	mg/kg-day	1.58E+000	kg-day/mg	2.41E-005
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	M	1.98E-004	mg/kg-day		kg-day/mg	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	M	8.39E-004	mg/kg-day	3.22E-002	kg-day/mg	2.70E-005
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	M	5.98E-006	mg/kg-day		kg-day/mg	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	M	2.32E-007	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	M	1.13E-005	mg/kg-day	1.10E+000	kg-day/mg	1.24E-005
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	M	3.67E-003	mg/kg-day	1.40E-002	kg-day/mg	5.13E-005
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	M	4.38E-006	mg/kg-day		kg-day/mg	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	M	2.99E-003	mg/kg-day	2.90E-003	kg-day/mg	8.66E-006
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	M	4.40E-005	mg/kg-day		kg-day/mg	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	M	5.08E-005	mg/kg-day		kg-day/mg	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	M	1.71E-006	mg/kg-day		kg-day/mg	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	M	1.53E-005	mg/kg-day		kg-day/mg	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	M	6.30E-003	mg/kg-day		kg-day/mg	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	M	3.09E-006	mg/kg-day	9.50E-004	kg-day/mg	2.94E-009
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	M	1.49E-007	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	M	2.04E-004	mg/kg-day		kg-day/mg	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	M	8.19E-008	mg/kg-day		kg-day/mg	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	M	3.14E-006	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	M	2.47E-004	mg/kg-day		kg-day/mg	

Table 5-4-47
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbbl\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.71E-005	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	2.82E-007	mg/kg-day		kg-day/mg	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	M	3.72E-006	mg/kg-day		kg-day/mg	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	M	5.49E-005	mg/kg-day		kg-day/mg	
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	M	2.44E-003	mg/kg-day		kg-day/mg	
	(Total)										1.24E-004
										Total Hazard Index Across All Exposure Routes/Pathways	1.24E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-48
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	4-Methyl-2-Pentanone	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Acetone	2.20E-002	mg/L	2.20E-002	mg/L	R	2.69E-004	mg/kg-day		mg/kg-day	
	Aluminum	1.50E+001	mg/L	1.50E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	3.68E+000	mg/L	3.68E+000	mg/L	R	4.51E-002	mg/kg-day		mg/kg-day	
	Antimony	8.30E-003	mg/L	8.30E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arsenic	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	1.62E+000	mg/L	1.62E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	3.10E-001	mg/L	3.10E-001	mg/L	R	3.80E-003	mg/kg-day	2.90E-002	mg/kg-day	1.10E-004
	Benzoic Acid	6.00E-003	mg/L	6.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Beryllium	1.90E-003	mg/L	1.90E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	4.40E-002	mg/L	4.40E-002	mg/L	R	5.39E-004	mg/kg-day	1.10E+000	mg/kg-day	5.93E-004
	bis(2-Ethylhexyl)Phthalate	9.30E-002	mg/L	9.30E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.58E-002	mg/L	3.58E-002	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	2.90E+000	mg/L	2.90E+000	mg/L	R	3.55E-002	mg/kg-day		mg/kg-day	
	Chromium (Total as VI)	3.60E-001	mg/L	3.60E-001	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	cis-1,2-Dichloroethene	3.85E-002	mg/L	3.85E-002	mg/L	R	4.71E-004	mg/kg-day		mg/kg-day	
	Cobalt	1.40E-002	mg/L	1.40E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.25E-001	mg/L	1.25E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	5.15E+001	mg/L	5.15E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	5.00E-003	mg/L	5.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	3.04E-001	mg/L	3.04E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	1.67E+000	mg/L	1.67E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Mercury	6.70E-004	mg/L	6.70E-004	mg/L	R		mg/kg-day		mg/kg-day	
	Nickel	2.57E-001	mg/L	2.57E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.05E+000	mg/L	1.05E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	3.40E-001	mg/L	3.40E-001	mg/L	R		mg/kg-day		mg/kg-day	

Table 5-4-48
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Lower Aquifer*
Exposure Point:	Area 5B, Groundwater (Car Wash)
Receptor Population:	Commercial Worker
Receptor Age:	Adult

File: c:\projects\acs\rskdbls\LGW5BCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	3.00E-003	mg/L	3.00E-003	mg/L	R	3.67E-005	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	R	2.45E-005	mg/kg-day		mg/kg-day	
	Vanadium	3.04E-002	mg/L	3.04E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Xylene (mixed)	6.00E-003	mg/L	6.00E-003	mg/L	R	7.35E-005	mg/kg-day		mg/kg-day	
	Zinc	3.33E+001	mg/L	3.33E+001	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										7.03E-004
										Total Hazard Index Across All Exposure Routes/Pathways	7.03E-004

Table 5-4-49
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\aca\rsk\bls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.28E-003	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.28E-002
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.59E-002	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.77E-001
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	M	7.70E-004	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	8.55E-002
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.24E-003	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	4.13E-002
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	3.15E-003	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.05E-001
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	8.34E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	2.09E-001
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	9.22E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.61E-001
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.59E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.96E-001
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	M	7.21E-004	mg/kg-day	5.00E-002	mg/kg-day	N/A	N/A	1.44E-002
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	1.10E-004	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	1.37E-003
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	4.33E-003	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	1.33E+000
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.46E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.46E-003
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.89E-002	mg/kg-day		mg/kg-day	N/A	N/A	1.04E+000
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	M	2.97E-004	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	5.88E-002
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	4.11E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	4.20E+003
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.13E+001	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	1.34E-004
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	5.35E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.95E-003	mg/kg-day		mg/kg-day	N/A	N/A	3.58E-001
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	7.16E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.46E-001
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.61E-005	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	3.38E+000
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	2.10E-002	mg/kg-day	6.20E-003	mg/kg-day	N/A	N/A	2.05E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	8.21E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.54E-003	mg/kg-day		mg/kg-day	N/A	N/A	

Table 5-4-49
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	M	5.21E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	5.21E-003
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.09E-001	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.47E+000
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	3.05E-004	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	3.81E-004
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	M	4.09E-001	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	4.45E+000
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.66E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	8.85E-001
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	2.21E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.11E+000
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	2.46E-005	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	7.47E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	2.45E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.23E+000
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.76E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.76E-002
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	7.27E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.21E-002
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	3.23E-005	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	6.46E-003
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.87E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	2.68E-001
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	5.46E-001	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.73E+000
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	M	1.05E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.50E-002
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	6.30E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.13E+000	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	6.31E-001
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.59E-003	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.77E-002
	(Total)												4.22E+003

Total Hazard Index Across All Exposure Routes/Pathways 4.22E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-50
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	1.09E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	7.79E-005
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	7.47E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	8.30E-003
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	R	7.35E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu m	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	4.42E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	1.93E-005
	2,2'-oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	2.81E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	6.17E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	9.16E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	0.00E+000	mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	2.19E-004	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	7.67E-003
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	0.00E+000	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	2.04E-001	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	1.20E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	5.99E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	0.00E+000	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu m	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	4.28E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	1.48E-003
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	

Table 5-4-50
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\ace\rsktbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	R	1.37E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu m	4.73E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R	0.00E+000	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	1.35E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	1.57E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	4.33E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	4.82E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	3.00E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	4.34E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	3.81E-002
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	2.08E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	5.27E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.20E+002

Total Hazard Index Across All Exposure Routes/Pathways 1.20E+002

Table 5-4-51
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.37E-005	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.70E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	M	8.25E-006	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.33E-005	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	3.38E-005	mg/kg-day	2.40E-002	kg-day/mg	8.10E-007
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	8.94E-005	mg/kg-day	7.00E-002	kg-day/mg	6.26E-006
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	9.88E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.71E-004	mg/kg-day		kg-day/mg	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	M	7.73E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	1.17E-006	mg/kg-day		kg-day/mg	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	4.64E-005	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.56E-005	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		kg-day/mg	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	4.17E-004	mg/kg-day	2.00E+000	kg-day/mg	8.34E-004
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	M	3.19E-006	mg/kg-day	1.58E+000	kg-day/mg	5.03E-006
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	4.41E-005	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.21E-001	mg/kg-day	3.22E-002	kg-day/mg	3.91E-003
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	5.74E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	2.09E-005	mg/kg-day	1.10E+000	kg-day/mg	2.30E-005
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	7.67E-005	mg/kg-day	1.40E-002	kg-day/mg	1.07E-006
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.73E-007	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	2.25E-004	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	8.80E-004	mg/kg-day	2.90E-003	kg-day/mg	2.55E-006
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.64E-005	mg/kg-day	1.30E-002	kg-day/mg	2.14E-007

Table 5-4-51
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	M	5.58E-007	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.17E-003	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	3.27E-006	mg/kg-day		kg-day/mg	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	M	4.39E-003	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.85E-003	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	2.37E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	2.64E-007	mg/kg-day	1.36E-002	kg-day/mg	3.60E-009
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	2.63E-004	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.96E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	7.79E-005	mg/kg-day		kg-day/mg	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	3.46E-007	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	2.01E-007	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	5.85E-003	mg/kg-day		kg-day/mg	
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	M	1.13E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	6.75E-006	mg/kg-day	1.90E+000	kg-day/mg	1.28E-005
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.21E-002	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.7E-005	mg/kg-day		kg-day/mg	
	(Total)										4.80E-003
										Total Hazard Index Across All Exposure Routes/Pathways	4.80E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-52
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	1.17E-007	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	8.00E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	R	7.87E-008	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	4.74E-008	mg/kg-day	2.20E-002	mg/kg-day	1.04E-009
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	3.01E-006	mg/kg-day	3.50E-002	mg/kg-day	1.05E-007
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	6.61E-008	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	9.81E-009	mg/kg-day		mg/kg-day	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	2.35E-006	mg/kg-day		mg/kg-day	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	R	0.00E+000	mg/kg-day	1.51E+001	mg/kg-day	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	2.19E-003	mg/kg-day	2.90E-002	mg/kg-day	6.35E-005
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	6.42E-007	mg/kg-day	1.10E+000	mg/kg-day	7.06E-007
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	0.00E+000	mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	0.00E+000	mg/kg-day	6.30E+000	mg/kg-day	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	4.59E-005	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E-003	mg/kg-day	

Table 5-4-52
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\UGW1FCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	R	1.47E-005	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	1.45E-006	mg/kg-day	1.65E-003	mg/kg-day	2.39E-009
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	4.64E-008	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	3.22E-008	mg/kg-day		mg/kg-day	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	4.65E-005	mg/kg-day		mg/kg-day	
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	2.22E-008	mg/kg-day	3.00E-001	mg/kg-day	6.67E-009
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	5.65E-005	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	(Total)										6.44E-005
										Total Hazard Index Across All Exposure Routes/Pathways	6.44E-005

Table 5-4-53
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.14E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.14E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.48E-003	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.64E-002
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	M	6.86E-005	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	7.62E-003
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.17E-004	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.89E-003
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	2.93E-004	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	9.77E-003
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	7.27E-004	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.82E-002
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	8.30E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.15E-002
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.53E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.64E-002
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	M	6.45E-005	mg/kg-day	5.00E-002	mg/kg-day	N/A	N/A	1.29E-003
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	9.78E-006	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	1.22E-004
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	3.87E-004	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	1.19E-001
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.27E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.27E-004
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.98E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	M	2.59E-005	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	9.10E-002
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	3.59E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	5.12E-003
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.00E+000	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	3.72E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	4.81E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.20E-005
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.77E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	7.32E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.66E-002
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.41E-006	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	5.63E-002
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	1.89E-003	mg/kg-day	6.20E-003	mg/kg-day	N/A	N/A	3.05E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	7.26E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.82E-002
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.35E-004	mg/kg-day		mg/kg-day	N/A	N/A	

Table 5-4-53
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	M	4.54E-006	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	4.54E-004
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	9.53E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.77E-001
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	2.94E-005	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	3.68E-005
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	M	3.69E-002	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	4.01E-001
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.32E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	7.72E-002
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	1.93E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	9.65E-002
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	2.19E-006	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	6.63E-005
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	2.25E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.12E-001
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.41E-006	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.41E-003
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	6.47E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.08E-003
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	2.81E-006	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	5.63E-004
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.63E-006	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	2.33E-002
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	4.87E-002	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.44E-001
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	M	9.17E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.31E-003
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	5.57E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.02E-001	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	5.69E-002
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.39E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.54E-003
	(Total)												3.74E+002
												Total Hazard Index Across All Exposure Routes/Pathways	3.74E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-54
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	2.09E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	1.49E-004
Inhalation	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	1.43E-004	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	1.59E-002
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	R	1.41E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu m	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	8.48E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	3.70E-005
	2,2'-oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	5.39E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	1.18E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	1.76E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	0.00E+000	mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	4.21E-004	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	1.47E-002
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	0.00E+000	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	3.92E-001	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	2.31E+002
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	1.15E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	0.00E+000	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu m	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	8.21E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	2.83E-003
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	

Table 5-4-54
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	R	2.63E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu m	9.08E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R	0.00E+000	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	2.59E-004	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	3.01E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	8.31E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	9.24E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	5.76E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	8.32E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	7.30E-002
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	3.98E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	1.01E-002	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												2.31E+002
												Total Hazard Index Across All Exposure Routes/Pathways	2.31E+002

Table 5-4-55
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.11E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.45E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	M	6.71E-008	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.14E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	2.87E-007	mg/kg-day	2.40E-002	kg-day/mg	6.88E-009
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	7.12E-007	mg/kg-day	7.00E-002	kg-day/mg	4.98E-008
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	8.12E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.50E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	M	6.31E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	9.57E-009	mg/kg-day		kg-day/mg	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	3.79E-007	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.24E-007	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		kg-day/mg	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.89E-006	mg/kg-day	2.00E+000	kg-day/mg	7.78E-006
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	M	2.54E-008	mg/kg-day	1.58E+000	kg-day/mg	4.01E-008
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	3.51E-007	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	9.83E-004	mg/kg-day	3.22E-002	kg-day/mg	3.17E-005
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	4.71E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.73E-007	mg/kg-day	1.10E+000	kg-day/mg	1.91E-007
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	7.16E-007	mg/kg-day	1.40E-002	kg-day/mg	1.00E-008
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.38E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	1.65E-006	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	7.11E-006	mg/kg-day	2.90E-003	kg-day/mg	2.06E-008
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.32E-007	mg/kg-day	1.30E-002	kg-day/mg	1.72E-009

Table 5-4-55
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	*Current / Future*
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	*Adult*

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	M	4.44E-009	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	9.33E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	2.88E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	M	3.61E-005	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.27E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	1.89E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	2.14E-009	mg/kg-day	1.36E-002	kg-day/mg	2.92E-011
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	2.20E-006	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.35E-009	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	6.33E-007	mg/kg-day		kg-day/mg	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	2.75E-009	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.60E-009	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	4.77E-005	mg/kg-day		kg-day/mg	
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	M	8.97E-009	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	5.45E-008	mg/kg-day	1.90E+000	kg-day/mg	1.04E-007
	Xylene (mixed)	3.00E+000	*mg/L*	3.00E+000	*mg/L*	M	9.97E-005	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.36E-007	mg/kg-day		kg-day/mg	
	(Total)										3.99E-005
										Total Hazard Index Across All Exposure Routes/Pathways	3.99E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-56
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	2.49E-006	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	1.71E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	R	1.68E-006	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	1.01E-006	mg/kg-day	2.20E-002	mg/kg-day	2.22E-008
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	6.42E-005	mg/kg-day	3.50E-002	mg/kg-day	2.25E-006
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	1.41E-006	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	2.09E-007	mg/kg-day		mg/kg-day	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	5.01E-005	mg/kg-day		mg/kg-day	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	R	0.00E+000	mg/kg-day	1.51E+001	mg/kg-day	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	4.67E-002	mg/kg-day	2.90E-002	mg/kg-day	1.35E-003
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	1.37E-005	mg/kg-day	1.10E+000	mg/kg-day	1.50E-005
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	0.00E+000	mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	0.00E+000	mg/kg-day	6.30E+000	mg/kg-day	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	9.78E-004	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E-003	mg/kg-day	

Table 5-4-56
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	R	3.13E-004	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	3.08E-005	mg/kg-day	1.65E-003	mg/kg-day	5.09E-008
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	9.90E-007	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	6.86E-007	mg/kg-day		mg/kg-day	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	9.91E-004	mg/kg-day		mg/kg-day	
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	4.74E-007	mg/kg-day	3.00E-001	mg/kg-day	1.42E-007
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	1.20E-003	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	(Total)										1.37E-003
0.00E+000								Total Hazard Index Across All Exposure Routes/Pathways			1.37E-003

Table 5-4-57
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\vskibis\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	6.87E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	6.87E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	8.92E-003	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	9.91E-002
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	M	4.14E-004	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	4.60E-002
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	7.05E-004	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	2.35E-002
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	1.77E-003	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	5.90E-002
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	4.39E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.10E-001
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	5.01E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.51E-001
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	9.24E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.62E-001
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	M	3.90E-004	mg/kg-day	5.00E-002	mg/kg-day	N/A	N/A	7.79E-003
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	5.91E-005	mg/kg-day	8.00E-002	mg/kg-day	N/A	N/A	7.38E-004
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	2.34E-003	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	7.19E-001
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	7.68E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	7.68E-004
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	2.40E-002	mg/kg-day		mg/kg-day	N/A	N/A	5.50E-001
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	M	1.57E-004	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	3.10E-002
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	2.17E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	2.25E+003
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	6.07E+000	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	7.27E-005
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	2.91E-004	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.07E-003	mg/kg-day		mg/kg-day	N/A	N/A	2.21E-001
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	4.42E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.40E-001
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	8.50E-006	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	1.84E+000
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	1.14E-002	mg/kg-day	6.20E-003	mg/kg-day	N/A	N/A	1.10E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	4.39E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	8.18E-004	mg/kg-day		mg/kg-day			

Table 5-4-57
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	M	2.74E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	2.74E-003
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	5.76E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.88E+000
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	1.78E-004	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	2.22E-004
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	M	2.23E-001	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	2.42E+000
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	1.40E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.66E-001
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	1.17E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.83E-001
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	1.32E-005	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	4.01E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	1.36E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.79E-001
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	1.45E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.45E-002
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	3.91E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	6.52E-003
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	1.70E-005	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	3.40E-003
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	9.87E-006	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.41E-001
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	2.94E-001	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.47E+000
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	M	5.54E-005	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	7.92E-003
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	3.37E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	6.16E-001	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	3.44E-001
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	8.39E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	9.33E-003
	(Total)												2.26E+003
												Total Hazard Index Across All Exposure Routes/Pathways	2.26E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-58
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	6.97E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	4.98E-005
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	4.77E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	5.31E-003
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	R	4.70E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E-003	mg/kg-day	7.00E-003	mg/cu m	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	2.83E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	1.23E-005
	2,2'-oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	1.80E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	3.94E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E-002	mg/kg-day	7.00E-002	mg/cu m	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	5.85E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	0.00E+000	mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	1.40E-004	mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	4.90E-003
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	0.00E+000	mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	1.31E-001	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	7.69E+001
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	3.83E-005	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	0.00E+000	mg/kg-day	5.00E-003	mg/kg-day	1.75E-002	mg/cu m	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	2.74E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	9.44E-004
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	

Table 5-4-58
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	R	8.78E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu m	3.03E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R	0.00E+000	mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	8.63E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	1.00E-004
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	2.77E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	3.08E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	1.92E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	2.77E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	2.43E-002
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	1.33E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	3.37E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												7.69E+001
												Total Hazard Index Across All Exposure Routes/Pathways	7.69E+001

Table 5-4-59
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rskitbls\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	M	1.34E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.75E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	M	8.11E-008	mg/kg-day		kg-day/mg	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.38E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	M	3.47E-007	mg/kg-day	2.40E-002	kg-day/mg	8.32E-009
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	8.60E-007	mg/kg-day	7.00E-002	kg-day/mg	6.02E-008
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	9.81E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	M	1.81E-006	mg/kg-day		kg-day/mg	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	M	7.63E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	M	1.16E-008	mg/kg-day		kg-day/mg	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	4.58E-007	mg/kg-day		kg-day/mg	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	M	1.50E-007	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		kg-day/mg	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	4.70E-006	mg/kg-day	2.00E+000	kg-day/mg	9.41E-006
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	M	3.06E-008	mg/kg-day	1.58E+000	kg-day/mg	4.84E-008
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	M	4.24E-007	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.19E-003	mg/kg-day	3.22E-002	kg-day/mg	3.83E-005
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	M	5.69E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	2.09E-007	mg/kg-day	1.10E+000	kg-day/mg	2.30E-007
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	M	8.65E-007	mg/kg-day	1.40E-002	kg-day/mg	1.21E-008
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.66E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	M	2.23E-006	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	8.59E-006	mg/kg-day	2.90E-003	kg-day/mg	2.49E-008
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.60E-007	mg/kg-day	1.30E-002	kg-day/mg	2.08E-009

Table 5-4-59
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	M	5.37E-009	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	M	1.13E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	3.48E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	M	4.36E-005	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.74E-005	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	2.28E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	M	2.59E-009	mg/kg-day	1.36E-002	kg-day/mg	3.53E-011
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	M	2.66E-006	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.84E-009	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	7.65E-007	mg/kg-day		kg-day/mg	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	M	3.33E-009	mg/kg-day		kg-day/mg	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	M	1.93E-009	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	5.76E-005	mg/kg-day		kg-day/mg	
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	M	1.08E-008	mg/kg-day		kg-day/mg	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	M	6.59E-008	mg/kg-day	1.90E+000	kg-day/mg	1.25E-007
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.20E-004	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.64E-007	mg/kg-day		kg-day/mg	
	(Total)										4.82E-005
								Total Hazard Index Across All Exposure Routes/Pathways			4.82E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-60
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\vskibis\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	2.60E-002	mg/L	2.60E-002	mg/L	R	6.82E-009	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	4.67E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethene(mixture)	1.40E-002	mg/L	1.40E-002	mg/L	R	4.59E-009	mg/kg-day		mg/kg-day	
	1,3-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	1.00E-002	mg/L	1.00E-002	mg/L	R	2.77E-009	mg/kg-day	2.20E-002	mg/kg-day	6.08E-011
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	1.76E-007	mg/kg-day	3.50E-002	mg/kg-day	6.15E-009
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R	3.86E-009	mg/kg-day		mg/kg-day	
	2-Methylnaphthalene	2.70E-002	mg/L	2.70E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	2-Methylphenol (O-Cresol)	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methyl-2-Pentanone	6.00E-003	mg/L	6.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	5.73E-010	mg/kg-day		mg/kg-day	
	Aluminum	2.80E-001	mg/L	2.80E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R	1.37E-007	mg/kg-day		mg/kg-day	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R	0.00E+000	mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	5.71E-002	mg/L	5.71E-002	mg/L	R	0.00E+000	mg/kg-day	1.51E+001	mg/kg-day	
	Barium	7.90E-001	mg/L	7.90E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	1.28E-004	mg/kg-day	2.90E-002	mg/kg-day	3.71E-006
	Benzoic Acid	1.30E-002	mg/L	1.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R	3.75E-008	mg/kg-day	1.10E+000	mg/kg-day	4.12E-008
	bis(2-Ethylhexyl)Phthalate	5.00E-003	mg/L	5.00E-003	mg/L	R	0.00E+000	mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R	0.00E+000	mg/kg-day	6.30E+000	mg/kg-day	
	Chlorobenzene	9.60E-002	mg/L	9.60E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	2.68E-006	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E-003	mg/kg-day	

Table 5-4-60
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Current / Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 1, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UGW1FWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Cyanide	1.00E-002	mg/L	1.00E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Di-n-Octyl Phthalate	2.10E-002	mg/L	2.10E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Ethylbenzene	1.10E+000	mg/L	1.10E+000	mg/L	R	8.59E-007	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Methylene Chloride	1.00E-003	mg/L	1.00E-003	mg/L	R	8.45E-008	mg/kg-day	1.65E-003	mg/kg-day	1.39E-010
	Naphthalene	7.10E-002	mg/L	7.10E-002	mg/L	R	2.71E-009	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	1.66E+000	mg/L	1.66E+000	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R	1.88E-009	mg/kg-day		mg/kg-day	
	Selenium	6.20E-003	mg/L	6.20E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Thallium	3.60E-003	mg/L	3.60E-003	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	2.71E-006	mg/kg-day		mg/kg-day	
	Vanadium	2.02E-002	mg/L	2.02E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	Vinyl Chloride	1.60E-002	mg/L	1.60E-002	mg/L	R	1.30E-009	mg/kg-day	3.00E-001	mg/kg-day	3.89E-010
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	3.30E-006	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	
	(Total)										3.76E-006
										Total Hazard Index Across All Exposure Routes/Pathways	3.76E-006

Table 5-4-61
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	2.95E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.95E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.59E-002	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.77E-001
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	M	5.86E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.95E-003
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	M	2.20E-004	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	2.44E-002
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	9.45E-004	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.15E-002
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	8.34E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	2.09E-001
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	9.22E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.61E-001
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	4.33E-003	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	1.33E+000
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	M	8.33E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	8.33E-003
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	M	1.04E-005	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	2.60E+000
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.89E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	M	2.38E-004	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	8.35E-001
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	M	2.71E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.87E-002
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.13E+001	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	4.20E+003
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	M	1.27E-004	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	6.36E+000
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.95E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	M	2.22E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.11E+000
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.61E-005	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	6.46E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	8.21E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	2.05E-001
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.54E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	M	5.94E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.98E-001
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	M	1.10E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	1.10E-003
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	M	1.82E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.04E-004
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	M	1.14E-004	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	4.73E-003
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	3.05E-004	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	3.81E-004
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	M	2.90E-001	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	3.15E+000
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.66E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	8.85E-001
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	M	1.90E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	9.52E-004
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	M	1.60E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	2.21E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.11E+000
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	M	1.72E-003	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	5.23E-002
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.04E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.18E-002
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.76E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.76E-002

Table 5-4-61
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	7.27E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.21E-002
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	M	2.08E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	2.98E-001
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	5.46E-001	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.73E+000
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	M	2.35E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.18E-003
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	M	1.06E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.51E-002
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	M	3.55E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.32E+000	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	7.36E-001
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.59E-003	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.77E-002
	(Total)												4.22E+003

Total Hazard Index Across All Exposure Routes/Pathways 4.22E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-62
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	R	1.09E-005	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	7.79E-005
Inhalation	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	7.47E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	8.30E-003
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	R	3.46E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu m	2.47E-003
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	R	7.35E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	4.42E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	1.93E-005
	2,2'-oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	2.81E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	9.16E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R		mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	2.04E-001	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	1.20E+002
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	4.28E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	1.48E-003
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	R	3.66E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	R	1.37E-003	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu m	4.73E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R	1.35E-004	mg/kg-day	6.60E-001	mg/kg-day	3.01E+000	mg/cu m	1.57E-004
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	R	4.33E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	4.82E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-62
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\vsk\bls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	4.34E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	3.81E-002
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	R	7.38E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	R	2.08E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	5.27E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.20E+002
												Total Hazard Index Across All Exposure Routes/Pathways	1.20E+002

Table 5-4-63
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskitbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	3.16E-006	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.70E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	M	6.28E-007	mg/kg-day	9.10E-002	kg-day/mg	5.71E-008
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	M	2.36E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.01E-005	mg/kg-day	2.40E-002	kg-day/mg	2.43E-007
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	8.94E-005	mg/kg-day	7.00E-002	kg-day/mg	6.26E-006
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	9.88E-005	mg/kg-day		kg-day/mg	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	4.64E-005	mg/kg-day		kg-day/mg	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	M	8.93E-005	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		kg-day/mg	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	M	1.12E-007	mg/kg-day		kg-day/mg	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	4.17E-004	mg/kg-day	2.00E+000	kg-day/mg	8.34E-004
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	M	2.55E-006	mg/kg-day	1.58E+000	kg-day/mg	4.03E-006
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	M	2.90E-005	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.21E-001	mg/kg-day	3.22E-002	kg-day/mg	3.91E-003
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	M	1.36E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	2.09E-005	mg/kg-day	1.10E+000	kg-day/mg	2.30E-005
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	M	2.38E-004	mg/kg-day	1.40E-002	kg-day/mg	3.33E-006
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.73E-007	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	8.80E-004	mg/kg-day	2.90E-003	kg-day/mg	2.55E-006
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.64E-005	mg/kg-day	1.30E-002	kg-day/mg	2.14E-007
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	M	6.36E-007	mg/kg-day	3.00E-004	kg-day/mg	1.91E-010
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	M	1.18E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	M	1.95E-007	mg/kg-day		kg-day/mg	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	M	1.22E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	3.27E-006	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	M	3.11E-003	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.85E-003	mg/kg-day		kg-day/mg	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	M	2.04E-006	mg/kg-day	9.50E-004	kg-day/mg	1.94E-009
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	M	1.72E-009	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	2.37E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	M	1.85E-005	mg/kg-day	1.36E-002	kg-day/mg	2.52E-007
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.11E-005	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.96E-007	mg/kg-day		kg-day/mg	

Table 5-4-63
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	7.79E-005	mg/kg-day		kg-day/mg	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	M	2.23E-007	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	5.85E-003	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	M	2.52E-007	mg/kg-day		kg-day/mg	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	M	1.13E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	M	3.80E-007	mg/kg-day	1.90E+000	kg-day/mg	7.22E-007
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.41E-002	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.71E-005	mg/kg-day		kg-day/mg	
	(Total)										4.79E-003
										Total Hazard Index Across All Exposure Routes/Pathways	4.79E-003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-64
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	R	1.17E-007	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	8.00E-007	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	R	3.71E-008	mg/kg-day	9.10E-002	mg/kg-day	3.38E-009
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	R	7.87E-008	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	4.74E-008	mg/kg-day	2.20E-002	mg/kg-day	1.04E-009
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	3.01E-006	mg/kg-day	3.50E-002	mg/kg-day	1.05E-007
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	9.81E-009	mg/kg-day		mg/kg-day	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R		mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	2.19E-003	mg/kg-day	2.90E-002	mg/kg-day	6.35E-005
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day	1.10E+000	mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	4.59E-005	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E-003	mg/kg-day	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	R	3.92E-009	mg/kg-day		mg/kg-day	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	R	1.47E-005	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R	1.45E-006	mg/kg-day	1.65E-003	mg/kg-day	2.39E-009
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	R	4.64E-008	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R		mg/kg-day		mg/kg-day	

Table 5-4-64
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\UG4BFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	4.65E-005	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	R	7.90E-008	mg/kg-day		mg/kg-day	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	R	2.22E-008	mg/kg-day	3.00E-001	mg/kg-day	6.67E-009
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	5.65E-005	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										6.37E-005
										Total Hazard Index Across All Exposure Routes/Pathways	6.37E-005

Table 5-4-65
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	2.63E-005	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.63E-004
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	1.48E-003	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.64E-002
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	M	5.22E-006	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.74E-004
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.96E-005	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	2.18E-003
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	8.80E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	2.93E-003
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	7.27E-004	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.82E-002
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	8.30E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.15E-002
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	3.87E-004	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	1.19E-001
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	M	7.26E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	7.26E-004
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	M	9.08E-007	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	2.27E-001
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	3.98E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	M	2.07E-005	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	7.28E-002
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	M	2.36E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.37E-003
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	1.00E+000	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	3.72E+002
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	M	1.11E-005	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	5.55E-001
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.77E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	M	2.27E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.13E-001
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	1.41E-006	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	5.63E-002
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	7.26E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.82E-002
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	1.35E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	M	5.18E-006	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.73E-002
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	M	9.80E-007	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	9.80E-005
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	M	1.59E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.65E-005
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	M	9.90E-006	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	4.12E-004
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	2.94E-005	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	3.68E-005
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	M	2.62E-002	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	2.84E-001
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	2.32E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	7.72E-002
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	M	1.72E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	8.61E-005
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	M	1.40E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	1.93E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	9.65E-002
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	M	1.53E-004	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	4.64E-003
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	M	9.49E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.75E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	2.41E-006	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.41E-003

Table 5-4-65
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	6.47E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	1.08E-003
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	M	1.82E-006	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	2.59E-002
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	4.87E-002	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.44E-001
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	M	2.10E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.05E-004
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	M	9.22E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.32E-003
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	M	3.13E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	1.19E-001	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	6.64E-002
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	M	1.39E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.54E-003
	(Total)												3.74E+002
												Total Hazard Index Across All Exposure Routes/Pathways	3.74E+002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-66
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	R	6.97E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	4.98E-005
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	4.77E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	5.31E-003
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	R	2.21E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu m	1.58E-003
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	R	4.70E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.83E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	1.23E-005
	2,2'-oxybis(1-Chloropropane	3.00E-001	mg/L	3.00E-001	mg/L	R	1.80E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	5.85E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R		mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	1.31E-001	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	7.69E+001
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	2.74E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	9.44E-004
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	R	2.34E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	R	8.78E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu m	3.03E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R	8.63E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	1.00E-004
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.77E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	3.08E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-66
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	2.77E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	2.43E-002
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	R	4.72E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	R	1.33E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	3.37E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												7.69E+001

Total Hazard Index Across All Exposure Routes/Pathways 7.69E+001

Table 5-4-67
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	1,1-Dichloroethane	6.00E-003	mg/L	**********	mg/L	M	9.39E-006	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	**********	mg/L	M	5.28E-004	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	2.00E-003	mg/L	**********	mg/L	M	1.86E-006	mg/kg-day	9.10E-002	kg-day/mg	1.70E-007
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	**********	mg/L	M	7.00E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	3.00E-003	mg/L	**********	mg/L	M	3.14E-005	mg/kg-day	2.40E-002	kg-day/mg	7.54E-007
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	**********	mg/L	M	2.60E-004	mg/kg-day	7.00E-002	kg-day/mg	1.82E-005
	2,4-Dimethylphenol	1.10E-001	mg/L	**********	mg/L	M	2.96E-004	mg/kg-day		kg-day/mg	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	**********	mg/L	M	1.38E-004	mg/kg-day		kg-day/mg	
	Aluminum	1.60E+000	mg/L	**********	mg/L	M	2.59E-004	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	**********	mg/L	M		mg/kg-day		kg-day/mg	
	Antimony	2.00E-003	mg/L	**********	mg/L	M	3.24E-007	mg/kg-day		kg-day/mg	
	Arochlor-1248	2.60E-003	mg/L	**********	mg/L	M	1.42E-003	mg/kg-day	2.00E+000	kg-day/mg	2.84E-003
	Arsenic	4.57E-002	mg/L	**********	mg/L	M	7.41E-006	mg/kg-day	1.58E+000	kg-day/mg	1.17E-005
	Barium	5.20E-001	mg/L	**********	mg/L	M	8.43E-005	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	**********	mg/L	M	3.59E-001	mg/kg-day	3.22E-002	kg-day/mg	1.16E-002
	Beryllium	1.30E-003	mg/L	**********	mg/L	M	3.96E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	**********	mg/L	M	6.33E-005	mg/kg-day	1.10E+000	kg-day/mg	6.96E-005
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	**********	mg/L	M	8.10E-004	mg/kg-day	1.40E-002	kg-day/mg	1.13E-005
	Cadmium (water)	3.10E-003	mg/L	**********	mg/L	M	5.03E-007	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	**********	mg/L	M	2.59E-003	mg/kg-day	2.90E-003	kg-day/mg	7.52E-006
	Chloromethane	6.80E-002	mg/L	**********	mg/L	M	4.84E-005	mg/kg-day	1.30E-002	kg-day/mg	6.29E-007
	Chromium (VI)	1.14E-002	mg/L	**********	mg/L	M	1.85E-006	mg/kg-day	3.00E-004	kg-day/mg	5.55E-010
	cis-1,2-Dichloroethene	2.00E-004	mg/L	**********	mg/L	M	3.50E-007	mg/kg-day		kg-day/mg	
	Cobalt	3.50E-003	mg/L	**********	mg/L	M	5.68E-007	mg/kg-day		kg-day/mg	
	Copper	2.18E-002	mg/L	**********	mg/L	M	3.53E-006	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	**********	mg/L	M	1.05E-005	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.80E-001	mg/L	**********	mg/L	M	9.35E-003	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	**********	mg/L	M	8.27E-003	mg/kg-day		kg-day/mg	
	Isophorone	7.50E-003	mg/L	**********	mg/L	M	6.15E-006	mg/kg-day	9.50E-004	kg-day/mg	5.84E-009
	Lead	7.70E-003	mg/L	**********	mg/L	M	4.99E-009	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.25E+000	mg/L	**********	mg/L	M	6.89E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-002	mg/L	**********	mg/L	M	5.47E-005	mg/kg-day	1.36E-002	kg-day/mg	7.46E-007
	Naphthalene	3.00E-003	mg/L	**********	mg/L	M	3.39E-005	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	**********	mg/L	M	8.59E-007	mg/kg-day		kg-day/mg	

Table 5-4-67
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nitrate/Nitrite	2.30E-002	mg/L	**********	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	**********	mg/L	M	2.31E-004	mg/kg-day		kg-day/mg	
	Thallium	4.00E-003	mg/L	**********	mg/L	M	6.49E-007	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	**********	mg/L	M	1.74E-002	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	4.00E-003	mg/L	**********	mg/L	M	7.49E-007	mg/kg-day		kg-day/mg	
	Vanadium	2.03E-002	mg/L	**********	mg/L	M	3.29E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	9.00E-004	mg/L	**********	mg/L	M	1.12E-006	mg/kg-day	1.90E+000	kg-day/mg	2.13E-006
	Xylene (mixed)	3.00E+000	mg/L	**********	mg/L	M	4.25E-002	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	**********	mg/L	M	4.96E-005	mg/kg-day		kg-day/mg	
	(Total)										1.45E-002
								Total Hazard Index Across All Exposure Routes/Pathways			1.45E-002

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Specify if subchronic.

Table 5-4-68
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\risktbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	R	2.49E-006	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	1.71E-005	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	R	7.91E-007	mg/kg-day	9.10E-002	mg/kg-day	7.20E-008
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	R	1.68E-006	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	1.01E-006	mg/kg-day	2.20E-002	mg/kg-day	2.22E-008
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	6.42E-005	mg/kg-day	3.50E-002	mg/kg-day	2.25E-006
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	2.09E-007	mg/kg-day		mg/kg-day	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R		mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	4.67E-002	mg/kg-day	2.90E-002	mg/kg-day	1.35E-003
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day	1.10E+000	mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	9.78E-004	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E-003	mg/kg-day	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	R	8.35E-008	mg/kg-day		mg/kg-day	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	R	3.13E-004	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R	3.08E-005	mg/kg-day	1.65E-003	mg/kg-day	5.09E-008
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	R	9.90E-007	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R		mg/kg-day		mg/kg-day	

Table 5-4-68
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	9.91E-004	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	R	1.68E-006	mg/kg-day		mg/kg-day	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	R	4.74E-007	mg/kg-day	3.00E-001	mg/kg-day	1.42E-007
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	1.20E-003	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										1.36E-003
										Total Hazard Index Across All Exposure Routes/Pathways	1.36E-003

Table 5-4-69
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\ecs\rskbls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	M	1.59E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.59E-003
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	M	8.92E-003	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	9.91E-002
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	M	3.15E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.05E-003
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	M	1.18E-004	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	1.32E-002
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.31E-004	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.77E-002
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	M	4.39E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.10E-001
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	M	5.01E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.51E-001
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	M	2.34E-003	mg/kg-day	3.25E-003	mg/kg-day	N/A	N/A	7.19E-001
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	M	4.39E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	4.39E-003
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	M	5.49E-006	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	1.37E+000
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	M	2.40E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	M	1.25E-004	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	4.40E-001
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	M	1.43E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	2.04E-002
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	M	6.07E+000	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	2.25E+003
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	M	6.70E-005	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	3.35E+000
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	M	1.07E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	M	1.37E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.85E-001
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	M	8.50E-006	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	3.40E-001
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	M	4.39E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.10E-001
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	M	8.18E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	M	3.13E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.04E-001
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	M	5.92E-006	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	5.92E-004
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	M	9.60E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	1.60E-004
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	M	5.98E-005	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.49E-003
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	M	1.78E-004	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	2.22E-004
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	M	1.58E-001	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	1.72E+000
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	M	1.40E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.66E-001
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	M	1.04E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	5.20E-004
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	M	8.45E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	M	1.17E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.83E-001
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	M	9.25E-004	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	2.80E-002
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.73E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.87E-002
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	M	1.45E-005	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	1.45E-002

Table 5-4-69
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\vsktbls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	M	3.91E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	6.52E-003
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	M	1.10E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	1.57E-001
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	M	2.94E-001	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.47E+000
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	M	1.27E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.34E-004
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	M	5.57E-005	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	7.95E-003
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	M	1.89E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	M	7.18E-001	mg/kg-day	1.79E+000	mg/kg-day	N/A	N/A	4.01E-001
	Zinc	5.1E-001	mg/L	5.10E-001	mg/L	M	8.39E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	9.33E-003
	(Total)												2.26E+003
												Total Hazard Index Across All Exposure Routes/Pathways	2.26E+003

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-70
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	R	6.97E-006	mg/kg-day	1.40E-001	mg/kg-day	4.90E-001	mg/cu m	4.98E-005
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	4.77E-005	mg/kg-day	9.00E-003	mg/kg-day	3.15E-002	mg/cu m	5.31E-003
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	R	2.21E-006	mg/kg-day	1.40E-003	mg/kg-day	4.90E-003	mg/cu m	1.58E-003
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	R	4.70E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.83E-006	mg/kg-day	2.29E-001	mg/kg-day	8.02E-001	mg/cu m	1.23E-005
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	1.80E-004	mg/kg-day		mg/kg-day	NA	mg/cu m	
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	5.85E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R		mg/kg-day	2.86E-002	mg/kg-day	1.00E-001	mg/cu m	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	1.31E-001	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	7.69E+001
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	2.74E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	9.44E-004
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	R	2.34E-007	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	R	8.78E-004	mg/kg-day	2.90E-001	mg/kg-day	1.02E+000	mg/cu m	3.03E-003
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	5.01E-005	mg/cu m	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R	8.63E-005	mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	1.00E-004
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.77E-006	mg/kg-day	9.00E-004	mg/kg-day	3.15E-003	mg/cu m	3.08E-003
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-70
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	2.77E-003	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	2.43E-002
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	R	4.72E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	R	1.33E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	3.37E-003	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												7.69E+001
												Total Hazard Index Across All Exposure Routes/Pathways	7.69E+001

Table 5-4-71
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	1,1-Dichloroethane	6.00E-003	mg/L	**********	mg/L	M	3.11E-008	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.10E-002	mg/L	**********	mg/L	M	1.75E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	2.00E-003	mg/L	**********	mg/L	M	6.17E-009	mg/kg-day	9.10E-002	kg-day/mg	5.62E-010
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	**********	mg/L	M	2.32E-008	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	3.00E-003	mg/L	**********	mg/L	M	1.04E-007	mg/kg-day	2.40E-002	kg-day/mg	2.50E-009
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	**********	mg/L	M	8.60E-007	mg/kg-day	7.00E-002	kg-day/mg	6.02E-008
	2,4-Dimethylphenol	1.10E-001	mg/L	**********	mg/L	M	9.81E-007	mg/kg-day		kg-day/mg	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	**********	mg/L	M	4.58E-007	mg/kg-day		kg-day/mg	
	Aluminum	1.60E+000	mg/L	**********	mg/L	M	8.59E-007	mg/kg-day		kg-day/mg	
	Ammonia	1.10E+001	mg/L	**********	mg/L	M		mg/kg-day		kg-day/mg	
	Antimony	2.00E-003	mg/L	**********	mg/L	M	1.07E-009	mg/kg-day		kg-day/mg	
	Arochlor-1248	2.60E-003	mg/L	**********	mg/L	M	4.70E-006	mg/kg-day	2.00E+000	kg-day/mg	9.41E-006
	Arsenic	4.57E-002	mg/L	**********	mg/L	M	2.45E-008	mg/kg-day	1.58E+000	kg-day/mg	3.87E-008
	Barium	5.20E-001	mg/L	**********	mg/L	M	2.79E-007	mg/kg-day		kg-day/mg	
	Benzene	1.00E+002	mg/L	**********	mg/L	M	1.19E-003	mg/kg-day	3.22E-002	kg-day/mg	3.83E-005
	Beryllium	1.30E-003	mg/L	**********	mg/L	M	1.31E-008	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	**********	mg/L	M	2.09E-007	mg/kg-day	1.10E+000	kg-day/mg	2.30E-007
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	**********	mg/L	M	2.68E-006	mg/kg-day	1.40E-002	kg-day/mg	3.76E-008
	Cadmium (water)	3.10E-003	mg/L	**********	mg/L	M	1.66E-009	mg/kg-day		kg-day/mg	
	Chloroethane	1.90E+000	mg/L	**********	mg/L	M	8.59E-006	mg/kg-day	2.90E-003	kg-day/mg	2.49E-008
	Chloromethane	6.80E-002	mg/L	**********	mg/L	M	1.60E-007	mg/kg-day	1.30E-002	kg-day/mg	2.08E-009
	Chromium (VI)	1.14E-002	mg/L	**********	mg/L	M	6.12E-009	mg/kg-day	3.00E-004	kg-day/mg	1.84E-012
	cis-1,2-Dichloroethene	2.00E-004	mg/L	**********	mg/L	M	1.16E-009	mg/kg-day		kg-day/mg	
	Cobalt	3.50E-003	mg/L	**********	mg/L	M	1.88E-009	mg/kg-day		kg-day/mg	
	Copper	2.18E-002	mg/L	**********	mg/L	M	1.17E-008	mg/kg-day		kg-day/mg	
	Diethylphthalate	9.00E-003	mg/L	**********	mg/L	M	3.48E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.80E-001	mg/L	**********	mg/L	M	3.09E-005	mg/kg-day		kg-day/mg	
	Iron	5.10E+001	mg/L	**********	mg/L	M	2.74E-005	mg/kg-day		kg-day/mg	
	Isophorone	7.50E-003	mg/L	**********	mg/L	M	2.04E-008	mg/kg-day	9.50E-004	kg-day/mg	1.93E-011
	Lead	7.70E-003	mg/L	**********	mg/L	M	1.65E-011	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	4.25E+000	mg/L	**********	mg/L	M	2.28E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-002	mg/L	**********	mg/L	M	1.81E-007	mg/kg-day	1.36E-002	kg-day/mg	2.47E-009
	Naphthalene	3.00E-003	mg/L	**********	mg/L	M	1.12E-007	mg/kg-day		kg-day/mg	
	Nickel	5.30E-002	mg/L	**********	mg/L	M	2.84E-009	mg/kg-day		kg-day/mg	

Table 5-4-71
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rskthls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nitrate/Nitrite	2.30E-002	mg/L	**********	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	2.40E-001	mg/L	**********	mg/L	M	7.65E-007	mg/kg-day		kg-day/mg	
	Thallium	4.00E-003	mg/L	**********	mg/L	M	2.15E-009	mg/kg-day		kg-day/mg	
	Toluene	2.30E+000	mg/L	**********	mg/L	M	5.76E-005	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	4.00E-003	mg/L	**********	mg/L	M	2.48E-009	mg/kg-day		kg-day/mg	
	Vanadium	2.03E-002	mg/L	**********	mg/L	M	1.09E-008	mg/kg-day		kg-day/mg	
	Vinyl Chloride	9.00E-004	mg/L	**********	mg/L	M	3.70E-009	mg/kg-day	1.90E+000	kg-day/mg	7.04E-009
	Xylene (mixed)	3.00E+000	mg/L	**********	mg/L	M	1.41E-004	mg/kg-day		kg-day/mg	
	Zinc	5.10E-001	mg/L	**********	mg/L	M	1.64E-007	mg/kg-day		kg-day/mg	
	(Total)										4.81E-005
										Total Hazard Index Across All Exposure Routes/Pathways	4.81E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-72
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsk\bls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Inhalation	1,1-Dichloroethane	6.00E-003	mg/L	6.00E-003	mg/L	R	6.82E-009	mg/kg-day		mg/kg-day	
	1,2-Dichlorobenzene	5.10E-002	mg/L	5.10E-002	mg/L	R	4.67E-008	mg/kg-day		mg/kg-day	
	1,2-Dichloroethane	2.00E-003	mg/L	2.00E-003	mg/L	R	2.17E-009	mg/kg-day	9.10E-002	mg/kg-day	1.97E-010
	1,2-Dichloroethene(mixture)	4.00E-003	mg/L	4.00E-003	mg/L	R	4.59E-009	mg/kg-day		mg/kg-day	
	1,4-Dichlorobenzene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.77E-009	mg/kg-day	2.20E-002	mg/kg-day	6.08E-011
	2,2'-oxybis(1-Chloropropane)	3.00E-001	mg/L	3.00E-001	mg/L	R	1.76E-007	mg/kg-day	3.50E-002	mg/kg-day	6.15E-009
	2,4-Dimethylphenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	4-Methylphenol (P-Cresol)	7.80E-002	mg/L	7.80E-002	mg/L	R	5.73E-010	mg/kg-day		mg/kg-day	
	Aluminum	1.60E+000	mg/L	1.60E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Ammonia	1.10E+001	mg/L	1.10E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Antimony	2.00E-003	mg/L	2.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Arochlor-1248	2.60E-003	mg/L	2.60E-003	mg/L	R		mg/kg-day	2.00E+000	mg/kg-day	
	Arsenic	4.57E-002	mg/L	4.57E-002	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	5.20E-001	mg/L	5.20E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	1.00E+002	mg/L	1.00E+002	mg/L	R	1.28E-004	mg/kg-day	2.90E-002	mg/kg-day	3.71E-006
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day	1.10E+000	mg/kg-day	
	bis(2-Ethylhexyl)Phthalate	1.55E-002	mg/L	1.55E-002	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Cadmium (water)	3.10E-003	mg/L	3.10E-003	mg/L	R		mg/kg-day	6.30E+000	mg/kg-day	
	Chloroethane	1.90E+000	mg/L	1.90E+000	mg/L	R	2.68E-006	mg/kg-day		mg/kg-day	
	Chloromethane	6.80E-002	mg/L	6.80E-002	mg/L	R	0.00E+000	mg/kg-day	6.30E-003	mg/kg-day	
	Chromium (VI)	1.14E-002	mg/L	1.14E-002	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	cis-1,2-Dichloroethene	2.00E-004	mg/L	2.00E-004	mg/L	R	2.29E-010	mg/kg-day		mg/kg-day	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	2.18E-002	mg/L	2.18E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Diethylphthalate	9.00E-003	mg/L	9.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Ethylbenzene	7.80E-001	mg/L	7.80E-001	mg/L	R	8.59E-007	mg/kg-day		mg/kg-day	
	Iron	5.10E+001	mg/L	5.10E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	7.50E-003	mg/L	7.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	4.25E+000	mg/L	4.25E+000	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R	8.45E-008	mg/kg-day	1.65E-003	mg/kg-day	1.39E-010
	Naphthalene	3.00E-003	mg/L	3.00E-003	mg/L	R	2.71E-009	mg/kg-day		mg/kg-day	
	Nickel	5.30E-002	mg/L	5.30E-002	mg/L	R		mg/kg-day		mg/kg-day	

Table 5-4-72
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 4B, Groundwater
Receptor Population:	Utility Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG4BFWCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	2.40E-001	mg/L	2.40E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Toluene	2.30E+000	mg/L	2.30E+000	mg/L	R	2.71E-006	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	4.00E-003	mg/L	4.00E-003	mg/L	R	4.61E-009	mg/kg-day		mg/kg-day	
	Vanadium	2.03E-002	mg/L	2.03E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Vinyl Chloride	9.00E-004	mg/L	9.00E-004	mg/L	R	1.30E-009	mg/kg-day	3.00E-001	mg/kg-day	3.89E-010
	Xylene (mixed)	3.00E+000	mg/L	3.00E+000	mg/L	R	3.30E-006	mg/kg-day		mg/kg-day	
	Zinc	5.10E-001	mg/L	5.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										3.72E-006
										Total Hazard Index Across All Exposure Routes/Pathways	3.72E-006

Table 5-4-73
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\vsktbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	8.28E-005	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	8.28E-005
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.97E-005	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	2.19E-004
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	1.18E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.95E-004
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	1.03E-004	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	1.14E-002
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	4.34E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.45E-003
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	3.75E-005	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	9.37E-004
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	2.29E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.14E-003
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	2.76E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.38E-003
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	7.89E-006	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	9.86E-006
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	1.35E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.35E-003
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	1.58E-002	mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	8.28E-006	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	2.07E-002
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	4.42E-004	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.47E+000
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	1.50E-003	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	2.14E-002
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	1.18E-002	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	3.95E+000
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.18E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	4.34E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.08E-005
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	1.97E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	2.92E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	1.14E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.72E-003
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	1.18E-006	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	2.37E-003
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	1.66E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	8.28E-003
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	2.84E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	7.10E-003
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	2.43E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.22E-002
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.18E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	7.89E-006	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	7.89E-005
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	1.66E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.76E-004
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	2.89E-004	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	7.22E-003
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	6.86E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	3.43E-003
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	1.85E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	9.27E-003

Table 5-4-73
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	1.39E-006	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	3.48E-001
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	7.42E-005	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	2.60E-001
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	2.52E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	3.60E-003
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	4.86E-002	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	1.80E+001
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.16E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	7.05E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	1.76E-005
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	3.13E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.48E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	1.01E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	5.06E-001
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	1.99E-007	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	7.95E-003
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	1.44E-003	mg/kg-day	6.20E-003	mg/kg-day	N/A	N/A	2.32E-001
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	4.37E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.09E-002
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	4.08E-005	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	2.04E-002
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	8.13E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	1.62E-005	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.62E-004
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	2.78E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	4.64E-005
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	4.85E-005	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.02E-003
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	1.15E-005	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	1.15E-003
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	3.12E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.56E+000
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	2.20E-005	mg/kg-day	8.00E+000	mg/kg-day	N/A	N/A	2.75E-006
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	4.54E-002	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	4.93E-001
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	1.78E-002	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	5.92E-002
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	1.43E-004	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	7.17E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	4.11E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	2.64E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.32E-001
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	6.05E-005	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	1.83E-003
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	8.35E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	2.09E-001
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	4.12E-006	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	4.12E-003
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	8.50E-003	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	2.83E-001

Table 5-4-73
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	7.89E-006	mg/kg-day	8.00E+000	mg/kg-day	N/A	N/A	9.86E-007
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	3.04E-003	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	3.04E-002
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	1.06E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	3.52E-001
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	1.38E-004	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	6.90E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	6.12E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	1.57E-002	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.87E-001
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	6.71E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	1.12E-003
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	5.52E-004	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.38E-002
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	2.45E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.23E-002
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	6.19E-003	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	6.19E-002
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	1.18E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.95E-004
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	2.52E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	4.21E-004
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	1.03E-005	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	2.05E-003
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.18E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	5.92E-005
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	1.02E-004	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.46E-002
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	1.58E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	1.54E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	3.85E-002
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	3.50E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	1.17E-002
	(Total)												6.86E+000
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	1.52E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.52E-004
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	5.77E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	6.41E-003
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	1.30E-005	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	4.33E-004
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	2.11E-004	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	2.34E-002
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	1.31E-003	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	4.37E-002
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	3.36E-005	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	8.40E-004
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	7.61E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	3.81E-003
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	2.33E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.16E-001
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	5.41E-006	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	6.76E-006
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	2.27E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	2.27E-004
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	

Table 5-4-73
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\risktbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	2.84E-004	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	4.74E-004
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	1.72E-006	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	3.45E-004
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.60E-006	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.30E-005
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	1.72E-005	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	2.45E-003
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	2.20E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	2.33E-001	mg/kg-day	3.58E-001	mg/kg-day	N/A	N/A	6.50E-001
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	3.52E-004	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	3.91E-003
	(Total)												2.30E+001
													Total Hazard Index Across All Exposure Routes/Pathways: 2.99E+001

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-74
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\eca\rskbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	1.78E-006	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	4.23E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	2.54E-007	mg/kg-day	9.10E-002	kg-day/mg	2.31E-008
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	2.20E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	9.30E-007	mg/kg-day	2.40E-002	kg-day/mg	2.23E-008
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	8.03E-007	mg/kg-day	7.00E-002	kg-day/mg	5.62E-008
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	4.90E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	5.92E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	1.69E-007	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	2.90E-005	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	3.38E-004	mg/kg-day		kg-day/mg	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	1.78E-007	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	9.47E-006	mg/kg-day	1.50E+000	kg-day/mg	1.42E-005
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	3.21E-005	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	2.54E-004	mg/kg-day	2.90E-002	kg-day/mg	7.35E-006
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.54E-007	mg/kg-day	7.30E-002	kg-day/mg	1.85E-008
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	9.30E-007	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	4.23E-009	mg/kg-day	1.80E+000	kg-day/mg	7.61E-009
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	6.26E-006	mg/kg-day	1.10E+000	kg-day/mg	6.88E-006
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	2.45E-006	mg/kg-day	1.40E-002	kg-day/mg	3.43E-008
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	2.54E-008	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	3.55E-006	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	6.09E-005	mg/kg-day	2.90E-003	kg-day/mg	1.77E-007
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	5.21E-006	mg/kg-day	3.00E-005	kg-day/mg	1.56E-010
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.54E-007	mg/kg-day	7.30E-003	kg-day/mg	1.85E-009
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	1.69E-007	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	3.55E-007	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	6.19E-006	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	1.47E-006	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	3.97E-006	mg/kg-day		kg-day/mg	

Table 5-4-74
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\ecs\rsktbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	1.69E-007	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	6.51E-005	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	2.27E-003	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	2.96E-006	mg/kg-day	9.50E-004	kg-day/mg	2.81E-009
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	1.31E-006	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	3.37E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	1.44E-006	mg/kg-day	7.50E-003	kg-day/mg	1.08E-008
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	1.18E-005	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	5.26E-006	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	1.33E-004	mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	2.54E-007	mg/kg-day	1.20E-001	kg-day/mg	3.04E-008
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	5.41E-006	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	2.20E-007	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.54E-007	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	2.19E-006	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	3.38E-007	mg/kg-day	1.90E+000	kg-day/mg	6.43E-007
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	3.30E-004	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	7.49E-005	mg/kg-day		kg-day/mg	
	(Total)										2.95E-005
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	3.27E-006	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.24E-005	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	2.78E-007	mg/kg-day	9.10E-002	kg-day/mg	2.53E-008
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	4.52E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	2.81E-005	mg/kg-day	2.40E-002	kg-day/mg	6.74E-007
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	7.20E-007	mg/kg-day	7.00E-002	kg-day/mg	5.04E-008
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	1.63E-005	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	4.98E-005	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	1.16E-007	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	4.87E-006	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		kg-day/mg	

Table 5-4-74
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	2.98E-008	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	1.59E-006	mg/kg-day	1.58E+000	kg-day/mg	2.51E-006
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	5.40E-006	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	1.04E-003	mg/kg-day	3.22E-002	kg-day/mg	3.36E-005
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	6.77E-005	mg/kg-day	7.30E-002	kg-day/mg	4.94E-006
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	1.51E-006	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	6.70E-009	mg/kg-day	1.80E+000	kg-day/mg	1.21E-008
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	3.16E-006	mg/kg-day	1.10E+000	kg-day/mg	3.48E-006
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	2.17E-004	mg/kg-day	1.40E-002	kg-day/mg	3.04E-006
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	4.26E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	3.08E-005	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	9.37E-005	mg/kg-day	2.90E-003	kg-day/mg	2.72E-007
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	8.75E-007	mg/kg-day	3.00E-004	kg-day/mg	2.62E-010
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.74E-004	mg/kg-day	1.78E-002	kg-day/mg	3.10E-006
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	3.47E-007	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	5.97E-008	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	1.04E-006	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	2.47E-007	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	6.68E-004	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	4.72E-007	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	9.72E-004	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	3.81E-004	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	3.07E-006	mg/kg-day	9.50E-004	kg-day/mg	2.92E-009
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	8.81E-010	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	5.67E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	1.30E-006	mg/kg-day	1.36E-002	kg-day/mg	1.77E-008
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	1.79E-004	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	8.83E-008	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	1.82E-004	mg/kg-day	1.20E-001	kg-day/mg	2.19E-005

Table 5-4-74
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\aca\rskibls\UG5AFCRM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	6.09E-006	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	3.69E-008	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.58E-008	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	3.68E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	4.72E-007	mg/kg-day	1.90E+000	kg-day/mg	8.97E-007
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	4.99E-003	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	7.55E-006	mg/kg-day		kg-day/mg	
	(Total)										7.45E-005
										Total Hazard Index Across All Exposure Routes/Pathways	1.04E-004

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-75
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskitbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	6.90E-006	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	6.90E-006
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.64E-006	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.83E-005
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	9.86E-007	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.29E-005
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	8.55E-006	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	9.50E-004
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	3.62E-006	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	1.21E-004
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	3.12E-006	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	7.81E-005
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	1.91E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	9.53E-005
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	2.30E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.15E-004
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	6.58E-007	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	8.22E-007
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	1.13E-004	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.13E-004
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	1.32E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	6.90E-007	mg/kg-day	4.00E-004	mg/kg-day	N/A	N/A	1.73E-003
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	3.68E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.23E-001
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	1.25E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.78E-003
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	9.86E-004	mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	3.29E-001
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	9.86E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	3.62E-006	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	9.04E-007
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	1.64E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	2.43E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	9.53E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	4.77E-004
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	9.86E-008	mg/kg-day	5.00E-004	mg/kg-day	N/A	N/A	1.97E-004
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	1.38E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.90E-004
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	2.37E-004	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	5.92E-004
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	2.03E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.01E-003
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	9.86E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	6.58E-007	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	6.58E-006
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	1.38E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	2.30E-005
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	2.41E-005	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	6.02E-004
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	5.72E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.86E-004
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	1.55E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	7.73E-004

Table 5-4-75
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskttbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	6.58E-007	mg/kg-day	8.00E+000	mg/kg-day	N/A	N/A	8.22E-008
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	2.53E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	2.53E-003
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	8.81E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	2.94E-002
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	1.15E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	5.75E-006
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	5.10E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	1.31E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.56E-002
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	5.59E-006	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	9.32E-005
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	4.60E-005	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	1.15E-003
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	2.04E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.02E-003
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	5.16E-004	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	5.16E-003
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	9.86E-007	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.29E-005
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	2.10E-005	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	3.51E-005
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	8.55E-007	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	1.71E-004
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	9.86E-007	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	4.93E-006
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	8.52E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.22E-003
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	1.32E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	1.28E-003	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	3.21E-003
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	2.91E-004	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	9.71E-004
	(Total)												5.72E-001
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	1.51E-005	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.51E-005
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	7.14E-005	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	7.93E-004
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	1.28E-006	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	4.27E-005
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	2.07E-005	mg/kg-day	9.00E-003	mg/kg-day	N/A	N/A	2.30E-003
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	1.62E-004	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	5.40E-003
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	2.40E-006	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	6.00E-005
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	1.25E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	6.24E-004
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	2.88E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.44E-002
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	5.36E-007	mg/kg-day	8.00E-001	mg/kg-day	N/A	N/A	6.70E-007
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	1.62E-005	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.62E-005
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	

Table 5-4-75
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	9.94E-008	mg/kg-day	4.00E-006	mg/kg-day	N/A	N/A	2.49E-002
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	5.30E-006	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	1.86E-002
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	1.80E-005	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	2.57E-004
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	4.54E-003	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	1.68E+000
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.16E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	1.15E-005	mg/kg-day	4.00E+000	mg/kg-day	N/A	N/A	2.88E-006
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	3.87E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	2.57E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	1.25E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	6.26E-002
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	1.42E-008	mg/kg-day	2.50E-005	mg/kg-day	N/A	N/A	5.68E-004
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	2.25E-004	mg/kg-day	6.20E-003	mg/kg-day	N/A	N/A	3.63E-002
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	3.93E-004	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	9.81E-004
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	2.92E-006	mg/kg-day	2.00E-003	mg/kg-day	N/A	N/A	1.46E-003
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.01E-003	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	1.59E-006	mg/kg-day	1.00E-001	mg/kg-day	N/A	N/A	1.59E-005
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	1.99E-007	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.31E-006
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	3.47E-006	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	1.44E-004
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	8.24E-007	mg/kg-day	1.00E-002	mg/kg-day	N/A	N/A	8.24E-005
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	2.23E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.11E-001
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	2.72E-006	mg/kg-day	8.00E+000	mg/kg-day	N/A	N/A	3.40E-007
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	8.50E-003	mg/kg-day	9.20E-002	mg/kg-day	N/A	N/A	9.24E-002
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	1.27E-003	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	4.23E-003
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	2.47E-005	mg/kg-day	2.00E+000	mg/kg-day	N/A	N/A	1.23E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	2.94E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	1.89E-004	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	9.44E-003
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	5.72E-006	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	1.73E-004
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	1.87E-003	mg/kg-day	4.00E-002	mg/kg-day	N/A	N/A	4.69E-002
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	2.94E-007	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	2.94E-004
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day	3.00E-003	mg/kg-day	N/A	N/A	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	1.05E-003	mg/kg-day	3.00E-002	mg/kg-day	N/A	N/A	3.51E-002

Table 5-4-75
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskttbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	2.77E-005	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	4.61E-005
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	1.23E-007	mg/kg-day	5.00E-003	mg/kg-day	N/A	N/A	2.46E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.56E-007	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.28E-006
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	1.23E-006	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.75E-004
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	1.96E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	4.38E-002	mg/kg-day	3.58E-001	mg/kg-day	N/A	N/A	1.22E-001
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	2.52E-005	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	2.80E-004
	(Total)												2.27E+000
												Total Hazard Index Across All Exposure Routes/Pathways	2.84E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-76
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rskbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	1.48E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	3.52E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	2.11E-008	mg/kg-day	9.10E-002	kg-day/mg	1.92E-009
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	1.83E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	7.75E-008	mg/kg-day	2.40E-002	kg-day/mg	1.86E-009
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	6.69E-008	mg/kg-day	7.00E-002	kg-day/mg	4.68E-009
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	4.09E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	4.93E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	1.41E-008	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	2.42E-006	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	2.82E-005	mg/kg-day		kg-day/mg	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	1.48E-008	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	7.89E-007	mg/kg-day	1.50E+000	kg-day/mg	1.18E-006
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	2.68E-006	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	2.11E-005	mg/kg-day	2.90E-002	kg-day/mg	6.13E-007
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.11E-008	mg/kg-day	7.30E-002	kg-day/mg	1.54E-009
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	7.75E-008	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	3.52E-010	mg/kg-day	1.80E+000	kg-day/mg	6.34E-010
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	5.21E-007	mg/kg-day	1.10E+000	kg-day/mg	5.73E-007
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	2.04E-007	mg/kg-day	1.40E-002	kg-day/mg	2.86E-009
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	2.11E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	2.96E-007	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	5.07E-006	mg/kg-day	2.90E-003	kg-day/mg	1.47E-008
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	4.34E-007	mg/kg-day	3.00E-005	kg-day/mg	1.30E-011
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.11E-008	mg/kg-day	7.30E-003	kg-day/mg	1.54E-010
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	1.41E-008	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	2.96E-008	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	5.16E-007	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	1.23E-007	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	3.31E-007	mg/kg-day		kg-day/mg	

Table 5-4-76
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	1.41E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	5.42E-006	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	1.89E-004	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	2.47E-007	mg/kg-day	9.50E-004	kg-day/mg	2.34E-010
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	1.09E-007	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	2.81E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	1.20E-007	mg/kg-day	7.50E-003	kg-day/mg	8.98E-010
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	9.86E-007	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	4.38E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	1.11E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	2.11E-008	mg/kg-day	1.20E-001	kg-day/mg	2.54E-009
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	4.51E-007	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	1.83E-008	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.11E-008	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	1.82E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	2.82E-008	mg/kg-day	1.90E+000	kg-day/mg	5.35E-008
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	2.75E-005	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	6.24E-006	mg/kg-day		kg-day/mg	
	(Total)										2.46E-006
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	3.23E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.53E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	2.74E-008	mg/kg-day	9.10E-002	kg-day/mg	2.50E-009
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	4.44E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	3.47E-006	mg/kg-day	2.40E-002	kg-day/mg	8.34E-008
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	5.15E-008	mg/kg-day	7.00E-002	kg-day/mg	3.60E-009
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	2.67E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	6.17E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	1.15E-008	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	3.48E-007	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		kg-day/mg	

Table 5-4-76
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	2.13E-009	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	1.14E-007	mg/kg-day	1.58E+000	kg-day/mg	1.79E-007
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	3.86E-007	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	9.72E-005	mg/kg-day	3.22E-002	kg-day/mg	3.13E-006
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.11E-005	mg/kg-day	7.30E-002	kg-day/mg	8.07E-007
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	2.47E-007	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	8.29E-010	mg/kg-day	1.80E+000	kg-day/mg	1.49E-009
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	5.51E-007	mg/kg-day	1.10E+000	kg-day/mg	6.06E-007
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	2.68E-005	mg/kg-day	1.40E-002	kg-day/mg	3.76E-007
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	3.04E-010	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	4.83E-006	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	8.41E-006	mg/kg-day	2.90E-003	kg-day/mg	2.44E-008
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	6.25E-008	mg/kg-day	3.00E-004	kg-day/mg	1.87E-011
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.15E-005	mg/kg-day	1.78E-002	kg-day/mg	3.84E-007
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	3.41E-008	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	4.26E-009	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	7.43E-008	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	1.77E-008	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	4.77E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	5.84E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	1.82E-004	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	2.72E-005	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	5.29E-007	mg/kg-day	9.50E-004	kg-day/mg	5.02E-010
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	6.29E-011	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	4.05E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	1.23E-007	mg/kg-day	1.36E-002	kg-day/mg	1.67E-009
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	4.02E-005	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	6.31E-009	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	2.25E-005	mg/kg-day	1.20E-001	kg-day/mg	2.71E-006

Table 5-4-76
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Child

File: c:\projects\acs\rsktbls\UG5AFCCT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	5.93E-007	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	2.64E-009	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.48E-009	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	2.63E-008	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	4.21E-008	mg/kg-day	1.90E+000	kg-day/mg	7.99E-008
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	9.39E-004	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	5.39E-007	mg/kg-day		kg-day/mg	
	(Total)										8.39E-006
										Total Hazard Index Across All Exposure Routes/Pathways	1.08E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-77
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UGSAFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	3.95E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.95E-005
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	9.39E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.04E-005
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	5.64E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.88E-005
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	4.88E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.43E-004
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	2.07E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	6.89E-005
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	1.78E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.46E-005
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	1.09E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.45E-004
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.32E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.58E-005
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	3.76E-007	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	4.70E-006
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	6.44E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.44E-005
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	7.51E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	3.95E-007	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	9.86E-004
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	2.10E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	7.01E-002
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	7.14E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.02E-003
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	5.64E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.88E-001
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.64E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	2.07E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	5.17E-007
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	9.39E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.39E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	5.45E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.72E-004
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	5.64E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.13E-004
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	7.89E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.95E-004
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	1.35E-004	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	3.38E-004
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	1.16E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.86E-003
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.64E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	3.76E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.76E-005
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	7.89E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.32E-005
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	1.38E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.44E-004
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	3.27E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.63E-004
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	8.83E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.41E-004

Table 5-4-77
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskbls\JG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	3.76E-007	mg/kg-day	8.0E-001	mg/kg-day	N/A	N/A	4.70E-007
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	1.45E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.45E-003
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	5.03E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.68E-002
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	6.58E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.29E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	2.91E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	7.50E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.75E-002
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	3.19E-006	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	5.32E-005
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	2.63E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.32E-003
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	1.17E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.84E-004
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	2.95E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.95E-003
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	5.64E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.88E-005
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	1.20E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.00E-005
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	4.88E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	9.77E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.64E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.82E-005
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	4.87E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	6.95E-004
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	7.51E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	7.33E-004	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	3.66E-004
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	1.66E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.55E-004
	(Total)												3.30E-001
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	6.93E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	6.93E-005
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	3.29E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	3.65E-004
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	5.89E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.96E-005
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	9.53E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	1.06E-003
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	7.46E-005	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.49E-003
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	1.11E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.76E-005
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	5.74E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.87E-003
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.32E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.62E-003
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	2.47E-007	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	3.08E-006
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	7.47E-006	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	7.47E-006
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	

Table 5-4-77
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\ecs\rskthis\UG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	4.58E-008	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	1.14E-002
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	2.44E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	8.56E-003
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	8.28E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.18E-004
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	2.09E-003	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	7.73E-001
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.38E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	5.30E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	1.32E-006
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	1.78E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.18E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	5.76E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.88E-002
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	6.54E-009	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	2.62E-004
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	1.04E-004	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	1.67E-002
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	1.81E-004	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	4.52E-004
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	1.34E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	4.47E-003
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	4.63E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	7.33E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	7.33E-005
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	9.15E-008	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.53E-006
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	1.60E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	6.65E-005
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	3.79E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.79E-005
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	1.02E-003	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.12E-002
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	1.25E-006	mg/kg-day	8.0E-001	mg/kg-day	N/A	N/A	1.57E-006
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	3.91E-003	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	4.25E-002
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	5.84E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.95E-003
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	1.14E-005	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	5.68E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	1.35E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	8.70E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.35E-003
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	2.63E-006	mg/kg-day	3.3E-002	mg/kg-day	N/A	N/A	7.98E-005
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	8.63E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.32E-002
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	1.36E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.36E-004
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	4.84E-004	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.61E-002

Table 5-4-77
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	*Future*
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\wktbls\UG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	1.27E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.12E-005
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	5.67E-008	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	1.13E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.18E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.89E-006
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	5.64E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	8.06E-005
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	9.03E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	2.38E-002	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	1.33E-002
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	1.16E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.29E-004
	(Total)												1.03E+000
												Total Hazard Index Across All Exposure Routes/Pathways	1.36E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-78
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\eca\rskfile\UG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	5.64E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.34E-007	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	8.05E-008	mg/kg-day	9.10E-002	kg-day/mg	7.33E-009
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	6.98E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	2.95E-007	mg/kg-day	2.40E-002	kg-day/mg	7.09E-009
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	2.55E-007	mg/kg-day	7.00E-002	kg-day/mg	1.78E-008
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	1.56E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.88E-007	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	5.37E-008	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	9.21E-006	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	1.07E-004	mg/kg-day		kg-day/mg	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	5.64E-008	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	3.01E-006	mg/kg-day	1.50E+000	kg-day/mg	4.51E-006
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	1.02E-005	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	8.05E-005	mg/kg-day	2.90E-002	kg-day/mg	2.33E-006
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	8.05E-008	mg/kg-day	7.30E-002	kg-day/mg	5.88E-009
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	2.95E-007	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	1.34E-009	mg/kg-day	1.80E+000	kg-day/mg	2.42E-009
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.99E-006	mg/kg-day	1.10E+000	kg-day/mg	2.18E-006
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	7.78E-007	mg/kg-day	1.40E-002	kg-day/mg	1.09E-008
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	8.05E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	1.13E-006	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	1.93E-005	mg/kg-day	2.90E-003	kg-day/mg	5.60E-008
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	1.65E-006	mg/kg-day	3.00E-005	kg-day/mg	4.96E-011
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	8.05E-008	mg/kg-day	7.30E-003	kg-day/mg	5.88E-010
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	5.37E-008	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	1.13E-007	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	1.96E-006	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	4.67E-007	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	1.26E-006	mg/kg-day		kg-day/mg	

Table 5-4-78
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risktbls\UG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	5.37E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	2.07E-005	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	7.19E-004	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	9.39E-007	mg/kg-day	9.50E-004	kg-day/mg	8.92E-010
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	4.16E-007	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	1.07E-004	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	4.56E-007	mg/kg-day	7.50E-003	kg-day/mg	3.42E-009
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	3.76E-006	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	1.67E-006	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	4.21E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	8.05E-008	mg/kg-day	1.20E-001	kg-day/mg	9.66E-009
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	1.72E-006	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	6.98E-008	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	8.05E-008	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	6.95E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	1.07E-007	mg/kg-day	1.90E+000	kg-day/mg	2.04E-007
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	1.05E-004	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	2.38E-005	mg/kg-day		kg-day/mg	
	(Total)										9.35E-006
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	9.91E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	4.69E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	8.42E-008	mg/kg-day	9.10E-002	kg-day/mg	7.66E-009
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	1.36E-006	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	1.07E-005	mg/kg-day	2.40E-002	kg-day/mg	2.56E-007
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	1.58E-007	mg/kg-day	7.00E-002	kg-day/mg	1.11E-008
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	8.20E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.89E-005	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	3.52E-008	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	1.07E-006	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		kg-day/mg	

Table 5-4-78
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risk\bis\UG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	6.54E-009	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	3.49E-007	mg/kg-day	1.58E+000	kg-day/mg	5.51E-007
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	1.18E-006	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	2.98E-004	mg/kg-day	3.22E-002	kg-day/mg	9.61E-006
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.39E-005	mg/kg-day	7.30E-002	kg-day/mg	2.48E-006
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	7.57E-007	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	2.55E-009	mg/kg-day	1.80E+000	kg-day/mg	4.58E-009
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.69E-006	mg/kg-day	1.10E+000	kg-day/mg	1.86E-006
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	8.23E-005	mg/kg-day	1.40E-002	kg-day/mg	1.15E-006
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	9.34E-010	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	1.48E-005	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	2.58E-005	mg/kg-day	2.90E-003	kg-day/mg	7.49E-008
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	1.92E-007	mg/kg-day	3.00E-004	kg-day/mg	5.75E-011
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	6.61E-005	mg/kg-day	1.78E-002	kg-day/mg	1.18E-006
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	1.05E-007	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	1.31E-008	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	2.28E-007	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	5.42E-008	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	1.46E-004	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	1.79E-007	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	5.59E-004	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	8.34E-005	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	1.62E-006	mg/kg-day	9.50E-004	kg-day/mg	1.54E-009
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	1.93E-010	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	1.24E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	3.76E-007	mg/kg-day	1.36E-002	kg-day/mg	5.13E-009
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	1.23E-004	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	1.94E-008	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	6.92E-005	mg/kg-day	1.20E-001	kg-day/mg	8.30E-006

Table 5-4-78
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vskbls\UG5AFARM.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	1.82E-006	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	8.09E-009	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.68E-008	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	8.06E-008	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	1.29E-007	mg/kg-day	1.90E+000	kg-day/mg	2.45E-007
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	3.39E-003	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	1.65E-006	mg/kg-day		kg-day/mg	
	(Total)										2.57E-005
										Total Hazard Index Across All Exposure Routes/Pathways	3.51E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-79
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	3.94E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	3.94E-005
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	9.39E-007	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.04E-005
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	5.63E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.88E-005
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	4.88E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	5.43E-004
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	2.07E-006	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	6.89E-005
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	1.78E-006	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	4.46E-005
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	1.09E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.45E-004
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.31E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	6.57E-005
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	3.76E-007	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	4.70E-006
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	6.44E-005	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.44E-005
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	7.51E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	3.94E-007	mg/kg-day	4.0E-004	mg/kg-day	N/A	N/A	9.86E-004
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	2.10E-005	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	7.01E-002
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	7.14E-005	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.02E-003
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	5.63E-004	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	1.88E-001
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.63E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	2.07E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	5.17E-007
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	9.39E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.39E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	5.45E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.72E-004
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	5.63E-008	mg/kg-day	5.0E-004	mg/kg-day	N/A	N/A	1.13E-004
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	7.89E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.94E-004
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	1.35E-004	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	3.38E-004
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	1.16E-005	mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	3.86E-003
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.63E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	3.76E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.76E-005
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	7.89E-007	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.31E-005
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	1.37E-005	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	3.44E-004
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	3.27E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.63E-004
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	8.83E-006	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.41E-004

Table 5-4-79
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risktble\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	3.76E-007	mg/kg-day	8.0E-001	mg/kg-day	N/A	N/A	4.70E-007
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	1.45E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	1.45E-003
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	5.03E-003	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.68E-002
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	6.57E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	3.29E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	2.91E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	7.49E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.75E-002
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	3.19E-006	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	5.32E-005
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	2.63E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	1.31E-003
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	1.17E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.84E-004
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	2.95E-004	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	2.95E-003
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	5.63E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.88E-005
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	1.20E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	2.00E-005
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	4.88E-007	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	9.77E-005
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.63E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.82E-005
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	4.86E-006	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	6.95E-004
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	7.51E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	7.33E-004	mg/kg-day	2.0E+000	mg/kg-day	N/A	N/A	3.66E-004
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	1.66E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	5.55E-004
	(Total)												3.30E-001
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	5.98E-006	mg/kg-day	1.0E-001	mg/kg-day	N/A	N/A	5.98E-005
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	2.83E-005	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	3.15E-004
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	5.08E-007	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.69E-005
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	8.22E-006	mg/kg-day	9.0E-003	mg/kg-day	N/A	N/A	9.13E-004
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	6.43E-005	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	2.14E-003
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	9.53E-007	mg/kg-day	4.0E-002	mg/kg-day	N/A	N/A	2.38E-005
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	4.95E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.47E-003
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	1.14E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.71E-003
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	2.13E-007	mg/kg-day	8.0E-002	mg/kg-day	N/A	N/A	2.66E-006
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	6.44E-006	mg/kg-day	1.0E+000	mg/kg-day	N/A	N/A	6.44E-006
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		mg/kg-day	N/A	N/A	

Table 5-4-79
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UGSAFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	3.94E-008	mg/kg-day	4.0E-006	mg/kg-day	N/A	N/A	9.86E-003
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	2.10E-006	mg/kg-day	2.9E-004	mg/kg-day	N/A	N/A	7.38E-003
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	7.14E-006	mg/kg-day	7.0E-002	mg/kg-day	N/A	N/A	1.02E-004
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	1.80E-003	mg/kg-day	2.7E-003	mg/kg-day	N/A	N/A	6.66E-001
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.05E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	4.57E-006	mg/kg-day	4.0E+000	mg/kg-day	N/A	N/A	1.14E-006
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	1.54E-008	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	1.02E-005	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	4.97E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	2.48E-002
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	5.63E-009	mg/kg-day	2.5E-005	mg/kg-day	N/A	N/A	2.25E-004
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	8.94E-005	mg/kg-day	6.2E-003	mg/kg-day	N/A	N/A	1.44E-002
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	1.56E-004	mg/kg-day	4.0E-001	mg/kg-day	N/A	N/A	3.89E-004
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	1.16E-006	mg/kg-day	3.0E-004	mg/kg-day	N/A	N/A	3.86E-003
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.99E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	6.32E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	6.32E-005
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	7.89E-008	mg/kg-day	6.0E-002	mg/kg-day	N/A	N/A	1.31E-006
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	1.37E-006	mg/kg-day	2.4E-002	mg/kg-day	N/A	N/A	5.73E-005
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	3.27E-007	mg/kg-day	1.0E-002	mg/kg-day	N/A	N/A	3.27E-005
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	8.83E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	4.41E-002
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	1.08E-006	mg/kg-day	8.0E-001	mg/kg-day	N/A	N/A	1.35E-006
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	3.37E-003	mg/kg-day	9.2E-002	mg/kg-day	N/A	N/A	3.67E-002
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	5.03E-004	mg/kg-day	3.0E-001	mg/kg-day	N/A	N/A	1.68E-003
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	9.79E-006	mg/kg-day	2.0E-001	mg/kg-day	N/A	N/A	4.90E-005
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	1.16E-009	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	7.49E-005	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.75E-003
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	2.27E-006	mg/kg-day	3.3E-002	mg/kg-day	N/A	N/A	6.88E-005
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	7.44E-004	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	3.72E-002
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	1.17E-007	mg/kg-day	1.0E-003	mg/kg-day	N/A	N/A	1.17E-004
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day	3.0E-003	mg/kg-day	N/A	N/A	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	4.17E-004	mg/kg-day	3.0E-002	mg/kg-day	N/A	N/A	1.39E-002

Table 5-4-79
CALCULATION OF NONCANCER HAZARDS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\risktbls\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	1.10E-005	mg/kg-day	6.0E-001	mg/kg-day	N/A	N/A	1.83E-005
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	4.88E-006	mg/kg-day	5.0E-003	mg/kg-day	N/A	N/A	9.77E-006
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.01E-007	mg/kg-day	2.0E-002	mg/kg-day	N/A	N/A	5.07E-006
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	4.86E-007	mg/kg-day	7.0E-003	mg/kg-day	N/A	N/A	6.95E-005
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	7.79E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	2.05E-002	mg/kg-day	1.8E+000	mg/kg-day	N/A	N/A	1.14E-002
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	9.99E-006	mg/kg-day	9.0E-002	mg/kg-day	N/A	N/A	1.11E-004
	(Total)												8.89E-001
												Total Hazard Index Across All Exposure Routes/Pathways	1.22E+000

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-80
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\aca\risk\bis\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Ingestion	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	2.11E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	5.03E-008	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	3.02E-008	mg/kg-day	9.10E-002	kg-day/mg	2.75E-009
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	2.62E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	1.11E-007	mg/kg-day	2.40E-002	kg-day/mg	2.66E-009
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	9.56E-008	mg/kg-day	7.00E-002	kg-day/mg	6.69E-009
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	5.84E-007	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	7.05E-008	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	2.01E-008	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	3.45E-006	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M	4.03E-005	mg/kg-day		kg-day/mg	
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	2.11E-008	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	1.13E-006	mg/kg-day	1.50E+000	kg-day/mg	1.69E-006
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	3.82E-006	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	3.02E-005	mg/kg-day	2.90E-002	kg-day/mg	8.76E-007
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.02E-008	mg/kg-day	7.30E-002	kg-day/mg	2.20E-009
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	1.11E-007	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	5.03E-010	mg/kg-day	1.80E+000	kg-day/mg	9.06E-010
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	7.45E-007	mg/kg-day	1.10E+000	kg-day/mg	8.19E-007
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	2.92E-007	mg/kg-day	1.40E-002	kg-day/mg	4.09E-009
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	3.02E-009	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	4.23E-007	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	7.25E-006	mg/kg-day	2.90E-003	kg-day/mg	2.10E-008
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	6.20E-007	mg/kg-day	3.00E-005	kg-day/mg	1.86E-011
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.02E-008	mg/kg-day	7.30E-003	kg-day/mg	2.20E-010
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	2.01E-008	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	4.23E-008	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	7.37E-007	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	1.75E-007	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	4.73E-007	mg/kg-day		kg-day/mg	

Table 5-4-80
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\vsldbs\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	2.01E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	7.75E-006	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	2.70E-004	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	3.52E-007	mg/kg-day	9.50E-004	kg-day/mg	3.35E-010
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	1.56E-007	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	4.02E-005	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	1.71E-007	mg/kg-day	7.50E-003	kg-day/mg	1.28E-009
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	1.41E-006	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	6.26E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M	1.58E-005	mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	3.02E-008	mg/kg-day	1.20E-001	kg-day/mg	3.62E-009
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	6.44E-007	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	2.62E-008	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	3.02E-008	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	2.61E-007	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	4.03E-008	mg/kg-day	1.90E+000	kg-day/mg	7.65E-008
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	3.93E-005	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	8.92E-006	mg/kg-day		kg-day/mg	
	(Total)										3.51E-006
Dermal	1,1-Dichloroethane	2.10E-002	mg/L	2.10E-002	mg/L	M	3.20E-007	mg/kg-day		kg-day/mg	
	1,2-Dichlorobenzene	5.00E-003	mg/L	5.00E-003	mg/L	M	1.52E-006	mg/kg-day		kg-day/mg	
	1,2-Dichloroethane	3.00E-003	mg/L	3.00E-003	mg/L	M	2.72E-008	mg/kg-day	9.10E-002	kg-day/mg	2.48E-009
	1,2-Dichloroethene(mixture)	2.60E-002	mg/L	2.60E-002	mg/L	M	4.40E-007	mg/kg-day		kg-day/mg	
	1,4-Dichlorobenzene	1.10E-002	mg/L	1.10E-002	mg/L	M	3.45E-006	mg/kg-day	2.40E-002	kg-day/mg	8.27E-008
	2,2'-oxybis(1-Chloropropane	9.50E-003	mg/L	9.50E-003	mg/L	M	5.10E-008	mg/kg-day	7.00E-002	kg-day/mg	3.57E-009
	2,4-Dimethylphenol	5.80E-002	mg/L	5.80E-002	mg/L	M	2.65E-006	mg/kg-day		kg-day/mg	
	2-Methylnaphthalene	7.00E-003	mg/L	7.00E-003	mg/L	M	6.12E-006	mg/kg-day		kg-day/mg	
	4-Methyl-2-Pentanone	2.00E-003	mg/L	2.00E-003	mg/L	M	1.14E-008	mg/kg-day		kg-day/mg	
	Aluminum	3.43E-001	mg/L	3.43E-001	mg/L	M	3.45E-007	mg/kg-day		kg-day/mg	
	Ammonia	4.00E+000	mg/L	4.00E+000	mg/L	M		mg/kg-day		kg-day/mg	

Table 5-4-80
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\ecs\rsktbls\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Antimony	2.10E-003	mg/L	2.10E-003	mg/L	M	2.11E-009	mg/kg-day		kg-day/mg	
	Arsenic	1.12E-001	mg/L	1.12E-001	mg/L	M	1.13E-007	mg/kg-day	1.58E+000	kg-day/mg	1.78E-007
	Barium	3.80E-001	mg/L	3.80E-001	mg/L	M	3.82E-007	mg/kg-day		kg-day/mg	
	Benzene	3.00E+000	mg/L	3.00E+000	mg/L	M	9.64E-005	mg/kg-day	3.22E-002	kg-day/mg	3.11E-006
	Benzo(k)Fluoranthene	3.00E-003	mg/L	3.00E-003	mg/L	M	1.10E-005	mg/kg-day	7.30E-002	kg-day/mg	8.01E-007
	Benzoic Acid	1.10E-002	mg/L	1.10E-002	mg/L	M	2.45E-007	mg/kg-day		kg-day/mg	
	Beta-BHC	5.00E-005	mg/L	5.00E-005	mg/L	M	8.23E-010	mg/kg-day	1.80E+000	kg-day/mg	1.48E-009
	bis(2-Chloroethyl)Ether	7.40E-002	mg/L	7.40E-002	mg/L	M	5.47E-007	mg/kg-day	1.10E+000	kg-day/mg	6.01E-007
	bis(2-Ethylhexyl)Phthalate	2.90E-002	mg/L	2.90E-002	mg/L	M	2.66E-005	mg/kg-day	1.40E-002	kg-day/mg	3.73E-007
	Cadmium (water)	3.00E-004	mg/L	3.00E-004	mg/L	M	3.02E-010	mg/kg-day		kg-day/mg	
	Chlorobenzene	4.20E-002	mg/L	4.20E-002	mg/L	M	4.79E-006	mg/kg-day		kg-day/mg	
	Chloroethane	7.20E-001	mg/L	7.20E-001	mg/L	M	8.35E-006	mg/kg-day	2.90E-003	kg-day/mg	2.42E-008
	Chromium (VI)	6.16E-002	mg/L	6.16E-002	mg/L	M	6.20E-008	mg/kg-day	3.00E-004	kg-day/mg	1.86E-011
	Chrysene	3.00E-003	mg/L	3.00E-003	mg/L	M	2.14E-005	mg/kg-day	1.78E-002	kg-day/mg	3.81E-007
	cis-1,2-Dichloroethene	2.00E-003	mg/L	2.00E-003	mg/L	M	3.39E-008	mg/kg-day		kg-day/mg	
	Cobalt	4.20E-003	mg/L	4.20E-003	mg/L	M	4.23E-009	mg/kg-day		kg-day/mg	
	Copper	7.32E-002	mg/L	7.32E-002	mg/L	M	7.37E-008	mg/kg-day		kg-day/mg	
	Cyanide	1.74E-002	mg/L	1.74E-002	mg/L	M	1.75E-008	mg/kg-day		kg-day/mg	
	Di-n-Octyl Phthalate	4.70E-002	mg/L	4.70E-002	mg/L	M	4.73E-005	mg/kg-day		kg-day/mg	
	Diethylphthalate	2.00E-003	mg/L	2.00E-003	mg/L	M	5.79E-008	mg/kg-day		kg-day/mg	
	Ethylbenzene	7.70E-001	mg/L	7.70E-001	mg/L	M	1.81E-004	mg/kg-day		kg-day/mg	
	Iron	2.68E+001	mg/L	2.68E+001	mg/L	M	2.70E-005	mg/kg-day		kg-day/mg	
	Isophorone	3.50E-002	mg/L	3.50E-002	mg/L	M	5.25E-007	mg/kg-day	9.50E-004	kg-day/mg	4.98E-010
	Lead	1.55E-002	mg/L	1.55E-002	mg/L	M	6.24E-011	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	3.99E+000	mg/L	3.99E+000	mg/L	M	4.02E-006	mg/kg-day		kg-day/mg	
	Methylene Chloride	1.70E-002	mg/L	1.70E-002	mg/L	M	1.22E-007	mg/kg-day	1.36E-002	kg-day/mg	1.66E-009
	Naphthalene	1.40E-001	mg/L	1.40E-001	mg/L	M	3.99E-005	mg/kg-day		kg-day/mg	
	Nickel	6.22E-002	mg/L	6.22E-002	mg/L	M	6.26E-009	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	1.57E+000	mg/L	1.57E+000	mg/L	M		mg/kg-day		kg-day/mg	
	Pentachlorophenol	3.00E-003	mg/L	3.00E-003	mg/L	M	2.24E-005	mg/kg-day	1.20E-001	kg-day/mg	2.68E-006

Table 5-4-80
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5A, Groundwater (Outdoor Use)
Receptor Population:	Offsite Resident
Receptor Age:	Adult

File: c:\projects\acs\valdbis\UG5AFACT.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Phenol	6.40E-002	mg/L	6.40E-002	mg/L	M	5.88E-007	mg/kg-day		kg-day/mg	
	Selenium	2.60E-003	mg/L	2.60E-003	mg/L	M	2.62E-009	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	3.00E-003	mg/L	3.00E-003	mg/L	M	5.44E-009	mg/kg-day		kg-day/mg	
	Vanadium	2.59E-002	mg/L	2.59E-002	mg/L	M	2.61E-008	mg/kg-day		kg-day/mg	
	Vinyl Chloride	4.00E-003	mg/L	4.00E-003	mg/L	M	4.17E-008	mg/kg-day	1.90E+000	kg-day/mg	7.93E-008
	Xylene (mixed)	3.90E+000	mg/L	3.90E+000	mg/L	M	1.10E-003	mg/kg-day		kg-day/mg	
	Zinc	8.86E-001	mg/L	8.86E-001	mg/L	M	5.35E-007	mg/kg-day		kg-day/mg	
	(Total)										8.32E-006
										Total Hazard Index Across All Exposure Routes/Pathways	1.18E-005

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Specify if subchronic.

Table 5-4-81
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Dermal	2,6-Dinitrotoluene	9.00E-004	mg/L	9.00E-004	mg/L	M	2.39E-005	mg/kg-day	8.50E-004	mg/kg-day	N/A	N/A	2.82E-002
	Aluminum	3.30E-001	mg/L	3.30E-001	mg/L	M	1.72E-003	mg/kg-day	1.00E+000	mg/kg-day	N/A	N/A	1.72E-003
	Antimony	1.50E-003	mg/L	1.50E-003	mg/L	M	6.56E-005	mg/kg-day	4.00E-005	mg/kg-day	N/A	N/A	1.64E+000
	Arsenic	1.42E-002	mg/L	1.42E-002	mg/L	M	7.40E-005	mg/kg-day	2.85E-004	mg/kg-day	N/A	N/A	2.59E-001
	Barium	1.60E-001	mg/L	1.60E-001	mg/L	M	8.33E-004	mg/kg-day	7.00E-002	mg/kg-day	N/A	N/A	1.19E-002
	Benzene	9.50E+000	mg/L	9.50E+000	mg/L	M	1.08E+000	mg/kg-day	2.70E-003	mg/kg-day	N/A	N/A	3.99E+002
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	M	1.27E-004	mg/kg-day	2.00E-005	mg/kg-day	N/A	N/A	6.36E+000
	bis(2-Chloroethyl)Ether	1.80E-002	mg/L	1.80E-002	mg/L	M	2.20E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	bis(2-Ethylhexyl)Phthalate	4.00E-003	mg/L	4.00E-003	mg/L	M	5.73E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.86E-001
	Bromodichloromethane	9.00E-004	mg/L	9.00E-004	mg/L	M	3.13E-005	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.56E-003
	Chloroethane	1.00E+000	mg/L	1.00E+000	mg/L	M	4.32E-002	mg/kg-day	4.00E-001	mg/kg-day	N/A	N/A	1.08E-001
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	5.00E-005	mg/kg-day	9.55E-003	mg/kg-day	N/A	N/A	5.23E-003
	Chloromethane	3.80E-002	mg/L	3.80E-002	mg/L	M	8.58E-004	mg/kg-day		mg/kg-day	N/A	N/A	
	Chromium (VI)	7.80E-003	mg/L	7.80E-003	mg/L	M	4.06E-005	mg/kg-day	3.00E-004	mg/kg-day	N/A	N/A	1.35E-001
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	M	1.82E-005	mg/kg-day	6.00E-002	mg/kg-day	N/A	N/A	3.04E-004
	Copper	1.34E-002	mg/L	1.34E-002	mg/L	M	6.98E-005	mg/kg-day	2.40E-002	mg/kg-day	N/A	N/A	2.91E-003
	Iron	3.08E+001	mg/L	3.08E+001	mg/L	M	1.60E-001	mg/kg-day	3.00E-001	mg/kg-day	N/A	N/A	5.35E-001
	Isophorone	1.00E-003	mg/L	1.00E-003	mg/L	M	2.54E-005	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	1.27E-004
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	M	1.60E-007	mg/kg-day		mg/kg-day	N/A	N/A	
	Manganese (nonfood)	6.88E-001	mg/L	6.88E-001	mg/L	M	3.58E-003	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	1.79E-001
	Mercury	3.00E-004	mg/L	3.00E-004	mg/L	M	1.56E-006	mg/kg-day		mg/kg-day	N/A	N/A	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	M	1.72E-003	mg/kg-day	3.30E-002	mg/kg-day	N/A	N/A	5.23E-002
	Nickel	1.90E-002	mg/L	1.90E-002	mg/L	M	9.90E-006	mg/kg-day	1.00E-003	mg/kg-day	N/A	N/A	9.90E-003
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	M		mg/kg-day	4.80E-002	mg/kg-day	N/A	N/A	
	Phenol	1.10E-001	mg/L	1.10E-001	mg/L	M	3.33E-003	mg/kg-day	6.00E-001	mg/kg-day	N/A	N/A	5.55E-003
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	M	2.08E-005	mg/kg-day	7.00E-005	mg/kg-day	N/A	N/A	2.98E-001

Table 5-4-81
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskitbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	2.00E-003	mg/L	2.00E-003	mg/L	M	4.75E-004	mg/kg-day	2.00E-001	mg/kg-day	N/A	N/A	2.37E-003
	trans-1,2-Dichloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	5.88E-006	mg/kg-day	2.00E-002	mg/kg-day	N/A	N/A	2.94E-004
	Vanadium	2.40E-003	mg/L	2.40E-003	mg/L	M	1.25E-005	mg/kg-day	7.00E-003	mg/kg-day	N/A	N/A	1.79E-003
	Zinc	4.60E-003	mg/L	4.60E-003	mg/L	M	1.44E-005	mg/kg-day	9.00E-002	mg/kg-day	N/A	N/A	1.60E-004
	(Total)												4.08E+002
												Total Hazard Index Across All Exposure Routes/Pathways	4.08E+002

(2) *Specify if subchronic.*

Table 5-4-82
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
Inhalation	2,6-Dinitrotoluene	9.00E-004	mg/L	9.00E-004	mg/L	R	1.68E-009	mg/kg-day		mg/kg-day	NA	mg/cu m	
	Aluminum	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day	1.00E-003	mg/kg-day	3.50E-003	mg/cu m	
	Antimony	1.50E-003	mg/L	1.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Arsenic	1.42E-002	mg/L	1.42E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Barium	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day	1.40E-004	mg/kg-day	4.90E-004	mg/cu m	
	Benzene	9.50E+000	mg/L	9.50E+000	mg/L	R	1.76E-002	mg/kg-day	1.70E-003	mg/kg-day	5.95E-003	mg/cu m	1.03E+001
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	5.70E-006	mg/kg-day	2.00E-005	mg/cu m	
	bis(2-Chloroethyl)Ether	1.80E-002	mg/L	1.80E-002	mg/L	R	6.74E-006	mg/kg-day		mg/kg-day	NA	mg/cu m	
	bis(2-Ethylhexyl)Phthalate	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Bromodichloromethane	9.00E-004	mg/L	9.00E-004	mg/L	R		mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	
	Chloroethane	1.00E+000	mg/L	1.00E+000	mg/L	R	2.25E-003	mg/kg-day	2.90E+000	mg/kg-day	1.02E+001	mg/cu m	7.77E-004
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	
	Chloromethane	3.80E-002	mg/L	3.80E-002	mg/L	R		mg/kg-day		mg/kg-day	0.00E+000	mg/cu m	
	Chromium (VI)	7.80E-003	mg/L	7.80E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Copper	1.34E-002	mg/L	1.34E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Iron	3.08E+001	mg/L	3.08E+001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Isophorone	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Manganese (nonfood)	6.88E-001	mg/L	6.88E-001	mg/L	R		mg/kg-day	1.43E-005	mg/kg-day	3.01E-004	mg/cu m	
	Mercury	3.00E-004	mg/L	3.00E-004	mg/L	R		mg/kg-day	8.60E-005	mg/kg-day	3.01E-004	mg/cu m	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R		mg/kg-day	8.60E-001	mg/kg-day	3.01E+000	mg/cu m	
	Nickel	1.90E-002	mg/L	1.90E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Phenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	

Table 5-4-82
CALCULATION OF NONCANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Conc.	Reference Conc. Units	Hazard Quotient
	Toluene	2.00E-003	mg/L	2.00E-003	mg/L	R	1.84E-006	mg/kg-day	1.14E-001	mg/kg-day	3.99E-001	mg/cu m	1.62E-005
	trans-1,2-Dichloroethene	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Vanadium	2.40E-003	mg/L	2.40E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	Zinc	4.60E-003	mg/L	4.60E-003	mg/L	R		mg/kg-day		mg/kg-day	NA	mg/cu m	
	(Total)												1.03E+001
												Total Hazard Index Across All Exposure Routes/Pathways	1.03E+001

Table 5-4-83
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rskbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
Dermal	2,6-Dinitrotoluene	9.00E-004	mg/L	9.00E-004	mg/L	M	2.57E-007	mg/kg-day	8.00E-001	kg-day/mg	2.05E-007
	Aluminum	3.30E-001	mg/L	3.30E-001	mg/L	M	1.84E-005	mg/kg-day		kg-day/mg	
	Antimony	1.50E-003	mg/L	1.50E-003	mg/L	M	7.03E-007	mg/kg-day	5.70E+000	kg-day/mg	4.01E-006
	Arsenic	1.42E-002	mg/L	1.42E-002	mg/L	M	7.92E-007	mg/kg-day	1.58E+000	kg-day/mg	1.25E-006
	Barium	1.60E-001	mg/L	1.60E-001	mg/L	M	8.93E-006	mg/kg-day		kg-day/mg	
	Benzene	9.50E+000	mg/L	9.50E+000	mg/L	M	1.15E-002	mg/kg-day	3.22E-002	kg-day/mg	3.72E-004
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	M	1.36E-006	mg/kg-day		kg-day/mg	
	bis(2-Chloroethyl)Ether	1.80E-002	mg/L	1.80E-002	mg/L	M	2.36E-006	mg/kg-day	1.10E+000	kg-day/mg	2.59E-006
	bis(2-Ethylhexyl)Phthalate	4.00E-003	mg/L	4.00E-003	mg/L	M	6.14E-005	mg/kg-day	1.40E-002	kg-day/mg	8.59E-007
	Bromodichloromethane	9.00E-004	mg/L	9.00E-004	mg/L	M	3.35E-007	mg/kg-day	6.20E-002	kg-day/mg	2.08E-008
	Chloroethane	1.00E+000	mg/L	1.00E+000	mg/L	M	4.63E-004	mg/kg-day	2.90E-003	kg-day/mg	1.34E-006
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	M	5.35E-007	mg/kg-day	6.39E-003	kg-day/mg	3.42E-009
	Chloromethane	3.80E-002	mg/L	3.80E-002	mg/L	M	9.19E-006	mg/kg-day	1.30E-002	kg-day/mg	1.19E-007
	Chromium (VI)	7.80E-003	mg/L	7.80E-003	mg/L	M	4.35E-007	mg/kg-day	3.00E-004	kg-day/mg	1.31E-010
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	M	1.95E-007	mg/kg-day		kg-day/mg	
	Copper	1.34E-002	mg/L	1.34E-002	mg/L	M	7.48E-007	mg/kg-day		kg-day/mg	
	Iron	3.08E+001	mg/L	3.08E+001	mg/L	M	1.72E-003	mg/kg-day		kg-day/mg	
	Isophorone	1.00E-003	mg/L	1.00E-003	mg/L	M	2.72E-007	mg/kg-day	9.50E-004	kg-day/mg	2.58E-010
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	M	1.72E-009	mg/kg-day		kg-day/mg	
	Manganese (nonfood)	6.88E-001	mg/L	6.88E-001	mg/L	M	3.84E-005	mg/kg-day		kg-day/mg	
	Mercury	3.00E-004	mg/L	3.00E-004	mg/L	M	1.67E-008	mg/kg-day		kg-day/mg	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	M	1.85E-005	mg/kg-day	1.36E-002	kg-day/mg	2.52E-007
	Nickel	1.90E-002	mg/L	1.90E-002	mg/L	M	1.06E-007	mg/kg-day		kg-day/mg	
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	M		mg/kg-day		kg-day/mg	
	Phenol	1.10E-001	mg/L	1.10E-001	mg/L	M	3.57E-005	mg/kg-day		kg-day/mg	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	M	2.23E-007	mg/kg-day		kg-day/mg	

Table 5-4-83
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risks Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	2.00E-003	mg/L	2.00E-003	mg/L	M	5.09E-006	mg/kg-day		kg-day/mg	
	trans-1,2-Dichloroethene	1.00E-003	mg/L	1.00E-003	mg/L	M	6.30E-008	mg/kg-day		kg-day/mg	
	Vanadium	2.40E-003	mg/L	2.40E-003	mg/L	M	1.34E-007	mg/kg-day		kg-day/mg	
	Zinc	4.60E-003	mg/L	4.60E-003	mg/L	M	1.54E-007	mg/kg-day		kg-day/mg	
	(Total)										3.82E-004
										Total Hazard Index Across All Exposure Routes/Pathways	3.82E-004

(2) Specify if subchronic.

Table 5-4-84
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	2,6-Dinitrotoluene	9.00E-004	mg/L	9.00E-004	mg/L	R	1.80E-011	mg/kg-day		mg/kg-day	
Inhalation	Aluminum	3.30E-001	mg/L	3.30E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Antimony	1.50E-003	mg/L	1.50E-003	mg/L	R		mg/kg-day	5.60E-002	mg/kg-day	
	Arsenic	1.42E-002	mg/L	1.42E-002	mg/L	R		mg/kg-day	1.51E+001	mg/kg-day	
	Barium	1.60E-001	mg/L	1.60E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Benzene	9.50E+000	mg/L	9.50E+000	mg/L	R	1.88E-004	mg/kg-day	2.90E-002	mg/kg-day	5.46E-006
	Beryllium	1.30E-003	mg/L	1.30E-003	mg/L	R		mg/kg-day	8.40E+000	mg/kg-day	
	bis(2-Chloroethyl)Ether	1.80E-002	mg/L	1.80E-002	mg/L	R	7.22E-008	mg/kg-day	1.10E+000	mg/kg-day	7.94E-008
	bis(2-Ethylhexyl)Phthalate	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day	1.40E-002	mg/kg-day	
	Bromodichloromethane	9.00E-004	mg/L	9.00E-004	mg/L	R		mg/kg-day		mg/kg-day	
	Chloroethane	1.00E+000	mg/L	1.00E+000	mg/L	R	2.42E-005	mg/kg-day		mg/kg-day	
	Chloroform	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day	8.10E-002	mg/kg-day	
	Chloromethane	3.80E-002	mg/L	3.80E-002	mg/L	R		mg/kg-day	6.30E-003	mg/kg-day	
	Chromium (VI)	7.80E-003	mg/L	7.80E-003	mg/L	R		mg/kg-day	4.10E+001	mg/kg-day	
	Cobalt	3.50E-003	mg/L	3.50E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Copper	1.34E-002	mg/L	1.34E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Iron	3.08E+001	mg/L	3.08E+001	mg/L	R		mg/kg-day		mg/kg-day	
	Isophorone	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Lead	7.70E-003	mg/L	7.70E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Manganese (nonfood)	6.88E-001	mg/L	6.88E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Mercury	3.00E-004	mg/L	3.00E-004	mg/L	R		mg/kg-day		mg/kg-day	
	Methylene Chloride	7.00E-002	mg/L	7.00E-002	mg/L	R		mg/kg-day	1.65E-003	mg/kg-day	
	Nickel	1.90E-002	mg/L	1.90E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Nitrate/Nitrite	2.30E-002	mg/L	2.30E-002	mg/L	R		mg/kg-day		mg/kg-day	
	Phenol	1.10E-001	mg/L	1.10E-001	mg/L	R		mg/kg-day		mg/kg-day	
	Thallium	4.00E-003	mg/L	4.00E-003	mg/L	R		mg/kg-day		mg/kg-day	

Table 5-4-84
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
American Chemical Service NPL Site

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Upper Aquifer
Exposure Point:	Area 5B, Groundwater
Receptor Population:	Construction Worker
Receptor Age:	Adult

File: c:\projects\acs\rsktbls\UG5BFCW.WK4

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Units	Cancer Risk
	Toluene	2.00E-003	mg/L	2.00E-003	mg/L	R	1.98E-008	mg/kg-day		mg/kg-day	
	trans-1,2-Dichloroethene	1.00E-003	mg/L	1.00E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Vanadium	2.40E-003	mg/L	2.40E-003	mg/L	R		mg/kg-day		mg/kg-day	
	Zinc	4.60E-003	mg/L	4.60E-003	mg/L	R		mg/kg-day		mg/kg-day	
	(Total)										5.54E-006
										Total Hazard Index Across All Exposure Routes/Pathways	5.54E-006