TABLE 3-9.18.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Whitney											
			1,2,4-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			1,3,5-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	9E-04	--	6E-04	1E-03
			Vinyl chloride	9E-06	--	N/A	--	9E-06	Liver	2E-04	--	N/A	2E-04
			Methylene chloride	4E-09	--	N/A	--	4E-09	Liver	6E-05	--	N/A	6E-05
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	5E-05	--	N/A	5E-05
			Trichloroethene	3E-08	--	N/A	--	3E-08	Liver	2E-03	--	N/A	2E-03
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	N/A	2E-05
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	7E-03	--	6E-03	1E-02
			2,4,6-Trichlorophenol	3E-09	--	N/A	--	3E-09	Reproductive	2E-02	--	N/A	2E-02
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	1E-06	--	1E-06	2E-06
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	2E-04	--	2E-04	4E-04
			Benzo(a)Anthracene	2E-07	--	1E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Bis(2-ethylhexyl) phthalate	7E-07	--	N/A	--	7E-07	Liver	2E-02	--	N/A	2E-02
			Benzo(b)Fluoranthene	2E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	1E-08	--	1E-06	--	2E-08	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	2E-06	--	1E-06	--	3E-06	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-07	--	9E-08	--	2E-07	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	3E-07	--	2E-07	--	5E-07	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	N/A	--	N/A	Blood	2E-02	--	N/A	2E-02
			Arsenic	7E-06	--	1E-06	--	9E-06	Skin	1E-01	--	2E-02	2E-01
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	3E-03	--	N/A	3E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	9E-03	--	2E-03	1E-02
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	5E-03	--	N/A	5E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	2E-01	--	N/A	2E-01
			Thallium	N/A	--	N/A	--	N/A	Blood	N/A	--	N/A	N/A
			alpha-Chlordane	3E-05	--	6E-06	--	3E-05	Liver	1E+00	--	3E-01	1E+00
			gamma-Chlordane	2E-05	--	5E-06	--	2E-05	Liver	9E-01	--	2E-01	1E+00
			4,4'-DDE	7E-06	--	N/A	--	7E-06	Developmental	6E-01	--	N/A	6E-01
			4,4'-DDT	2E-05	--	3E-06	--	2E-05	Liver	8E-01	--	1E-01	1E+00

TABLE 3-9.18.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	3E-04	--	2E-04	--	5E-04	Immune System	5E+01	--	4E+01	1E+02
			Aroclor 1254	1E-04	--	1E-04	--	3E-04	Immune System	3E+01	--	2E+01	5E+01
			Aroclor 1260	8E-05	--	7E-05	--	1E-04	Immune System	2E+01	--	1E+01	3E+01
			PCB TEQ*	1E-04	--	9E-05	--	2E-04	N/A	N/A	--	N/A	N/A
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	5E-03	--	N/A	5E-03
			C9-C10 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-02	--	N/A	2E-02
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	9E-02	--	N/A	9E-02
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	3E-03	--	N/A	3E-03
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-01	--	N/A	2E-01
			Chemical Total	7E-04	--	5E-04	--	1E-03		1E+02	--	8E+01	2E+02
			Radionuclide Total										
		Exposure Point Total						1E-03					2E+02
	Exposure Medium Total							1E-03					2E+02
Medium Total								1E-03					2E+02
Soil (0-15 ft)	Indoor Air	Whitney											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	3E-04	--	3E-04
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	9E-04	--	9E-04
			Vinyl chloride	--	6E-07	--	--	6E-07	Liver	--	2E-03	--	2E-03
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	3E-06	--	3E-06
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-04	--	2E-04
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	8E-09	--	--	8E-09	Liver	--	1E-05	--	1E-05
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	1E-04	--	1E-04

TABLE 3-9.18.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	4E-07	--	4E-07
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	8E-05	--	8E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-05	--	7E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Benzene	--	6E-08	--	--	6E-08	Immune System	--	6E-04	--	6E-04
			Trichloroethene	--	1E-06	--	--	1E-06	Nervous System/Liver	--	7E-04	--	7E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	3E-04	--	3E-04
			Toluene	--	N/A	--	--	N/A	Nervous system	--	8E-05	--	8E-05
			Tetrachloroethene	--	6E-08	--	--	6E-08	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	1E-04	--	1E-04
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	6E-06	--	6E-06
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	3E-05	--	3E-05
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	5E-04	--	5E-04
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	5E-01	--	5E-01
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	8E-03	--	8E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	9E-02	--	9E-02
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-01	--	2E-01
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-02	--	3E-02
			Chemical Total	--	2E-06	--	--	2E-06		--	8E-01	--	8E-01
			Radionuclide Total										
		Exposure Point Total						2E-06					8E-01
	Exposure Medium Total							2E-06					8E-01
Medium Total								2E-06					8E-01

TABLE 3-8.18.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Whitney											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	4E-06	--	4E-06
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	2E-07	--	--	2E-07	Liver	--	6E-04	--	6E-04
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-06	--	5E-06
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	8E-07	--	8E-07
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	5E-06	--	5E-06
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	4E-05	--	4E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	1E-07	--	1E-07
			Benzene	--	6E-09	--	--	6E-09	Immune System	--	6E-05	--	6E-05
			Trichloroethene	--	3E-09	--	--	3E-09	Nervous System/Liver	--	2E-06	--	2E-06
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	7E-05	--	7E-05
			Tetrachloroethene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	3E-06	--	3E-06
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	1E-06	--	1E-06
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	2E-06	--	2E-06
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A

TABLE 3-9.18.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	8E-07	--	8E-07
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			Chemical Total	--	2E-07	--	--	2E-07		--	1E-02	--	1E-02
			Radionuclide Total										
		Exposure Point Total						2E-07					1E-02
	Exposure Medium Total							2E-07					1E-02
Medium Total								2E-07					1E-02
Receptor Total								1E-03					2E+02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media	1E-03
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	2E-03
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	1E-03
Total risk assuming California EPA TCE factors	1E-03
Total risk assuming HEAST TCE factors	1E-03

Total Hazard Across All Media	2E+02
Total Skin HI =	2E-01
Total Immune System HI =	2E+02
Total Kidney HI =	1E+00
Total Blood HI =	1E-01
Total Nervous System HI =	2E-01
Total Liver HI =	4E+00
Total Endocrine HI =	N/A
Total Cardiovascular HI =	3E-03
Total Developmental HI =	8E-01
Total General Toxicity HI =	1E-02
Total GI System HI =	N/A
Total Reproductive System HI =	2E-02
Total Respiratory System HI =	9E-04

TABLE 3-9.18.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Whitney											
			1,2,4-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			1,3,5-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	3E-05	--	4E-05	7E-05
			Vinyl chloride	5E-09	--	N/A	--	5E-09	Liver	3E-05	--	N/A	3E-05
			Methylene chloride	3E-11	--	N/A	--	3E-11	Liver	1E-06	--	N/A	1E-06
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	3E-06	--	N/A	3E-06
			Trichloroethene	2E-09	--	N/A	--	2E-09	Liver	4E-04	--	N/A	4E-04
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	8E-07	--	N/A	8E-07
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	3E-04	--	4E-04	6E-04
			2,4,6-Trichlorophenol	7E-11	--	N/A	--	7E-11	Reproductive	2E-03	--	N/A	2E-03
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	2E-07	--	3E-07	6E-07
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	3E-05	--	5E-05	9E-05
			Benzo(a)Anthracene	8E-09	--	1E-08	--	2E-08	N/A	N/A	--	N/A	N/A
			Bis(2-ethylhexyl) phthalate	4E-08	--	N/A	--	4E-08	Liver	3E-03	--	N/A	3E-03
			Benzo(b)Fluoranthene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	7E-10	--	1E-09	--	2E-09	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	8E-08	--	1E-07	--	2E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	6E-09	--	1E-08	--	2E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	2E-08	--	3E-08	--	4E-08	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	N/A	--	N/A	Blood	4E-03	--	N/A	4E-03
			Arsenic	4E-07	--	1E-07	--	5E-07	Skin	2E-02	--	7E-03	3E-02
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	6E-04	--	N/A	6E-04
			Cadmium	N/A	--	N/A	--	N/A	Kidney	1E-03	--	6E-04	2E-03
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	9E-04	--	N/A	9E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	6E-03	--	N/A	6E-03
			Thallium	N/A	--	N/A	--	N/A	Blood	N/A	--	N/A	N/A
			alpha-Chlordane	2E-07	--	1E-07	--	3E-07	Liver	3E-02	--	1E-02	4E-02
			gamma-Chlordane	2E-11	--	1E-11	--	3E-11	Liver	3E-06	--	1E-06	4E-06
			4,4'-DDE	6E-08	--	N/A	--	6E-08	Developmental	1E-02	--	N/A	1E-02
			4,4'-DDT	2E-11	--	8E-12	--	2E-11	Liver	3E-06	--	8E-07	3E-06

TABLE 3-9.18.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	7E-06	--	1E-05	--	2E-05	Immune System	9E+00	--	1E+01	2E+01
			Aroclor 1254	4E-06	--	7E-06	--	1E-05	Immune System	5E+00	--	8E+00	1E+01
			Aroclor 1260	2E-06	--	4E-06	--	6E-06	Immune System	3E+00	--	4E+00	7E+00
			PCB TEQ*	2E-06	--	3E-06	--	5E-06	N/A	N/A	--	N/A	N/A
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	3E-04	--	N/A	3E-04
			C9-C10 Aromatic	N/A	--	N/A	--	N/A	Kidney	4E-03	--	N/A	4E-03
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	6E-03	--	N/A	6E-03
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	2E-04	--	N/A	2E-04
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-02	--	N/A	2E-02
			Chemical Total	2E-05	--	3E-05	--	4E-05		2E+01	--	3E+01	4E+01
			Radionuclide Total										
		Exposure Point Total						4E-05					4E+01
	Exposure Medium Total							4E-05					4E+01
Medium Total								4E-05					4E+01
Soil (0-15 ft)	Indoor Air	Whitney											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	1E-04	--	1E-04
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	3E-04	--	3E-04
			Vinyl chloride	--	6E-08	--	--	6E-08	Liver	--	5E-04	--	5E-04
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	9E-07	--	9E-07
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	4E-05	--	4E-05
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	8E-10	--	--	8E-10	Liver	--	4E-06	--	4E-06
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	3E-05	--	3E-05

TABLE 3-9.18.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	1E-07	--	1E-07
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	3E-05	--	3E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-05	--	2E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Benzene	--	2E-09	--	--	2E-09	Immune System	--	8E-05	--	8E-05
			Trichloroethene	--	1E-07	--	--	1E-07	Nervous System/Liver	--	2E-04	--	2E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	9E-05	--	9E-05
			Toluene	--	N/A	--	--	N/A	Nervous system	--	3E-05	--	3E-05
			Tetrachloroethene	--	6E-09	--	--	6E-09	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	4E-05	--	4E-05
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	2E-06	--	2E-06
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	7E-07	--	7E-07
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respirstory	--	1E-05	--	1E-05
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	2E-04	--	2E-04
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-01	--	2E-01
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-03	--	3E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-02	--	3E-02
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-03	--	2E-03
			Chemical Total	--	2E-07	--	--	2E-07		--	2E-01	--	2E-01
			Radionuclide Total										
		Exposure Point Total						2E-07					2E-01
	Exposure Medium Total							2E-07					2E-01
Medium Total								2E-07					2E-01

TABLE 3-9.18.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Whitney											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	1E-06	--	1E-06
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	5E-09	--	--	5E-09	Liver	--	4E-05	--	4E-05
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	4E-07	--	4E-07
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	6E-08	--	6E-08
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	4E-07	--	4E-07
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	5E-08	--	5E-08
			Benzene	--	2E-10	--	--	2E-10	Immune System	--	5E-06	--	5E-06
			Trichloroethene	--	3E-10	--	--	3E-10	Nervous System/Liver	--	6E-07	--	6E-07
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	5E-06	--	5E-06
			Tetrachloroethene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	3E-07	--	3E-07
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	8E-08	--	8E-08
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	1E-07	--	1E-07
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	6E-07	--	6E-07
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A

TABLE 3-9.18.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	3E-07	--	3E-07
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-04	--	2E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	5E-04	--	5E-04
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			Chemical Total	--	5E-09	--	--	5E-09		--	2E-03	--	2E-03
			Radionuclide Total										
		Exposure Point Total						5E-09					2E-03
	Exposure Medium Total							5E-09					2E-03
Medium Total								5E-09					2E-03
Receptor Total								4E-05					4E+01

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media	4E-05
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	7E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment	4E-05
Total risk assuming California EPA TCE factors	4E-05
Total risk assuming HEAST TCE factors	4E-05

Total Hazard Across All Media	4E+01
Total Skin HI =	3E-02
Total Immune System HI =	4E+01
Total Kidney HI =	2E-01
Total Blood HI =	1E-02
Total Nervous System HI =	7E-03
Total Liver HI =	5E-02
Total Endocrine HI =	N/A
Total Cardiovascular HI =	6E-04
Total Developmental HI =	1E-02
Total General Toxicity HI =	8E-04
Total GI System HI =	N/A
Total Reproductive System HI =	2E-03
Total Respiratory System HI =	3E-04

TABLE 3-9.19.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Whitney											
			Vinyl chloride	2E-09	2E-15	N/A	--	2E-09	Liver	4E-05	2E-10	N/A	4E-05
			Trichloroethene	8E-12	4E-16	N/A	--	8E-12	Liver	5E-06	6E-12	N/A	5E-06
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	3E-04	4E-06	1E-04	5E-04
			Benzo(a)Anthracene	4E-07	8E-12	2E-07	--	6E-07	N/A	N/A	N/A	N/A	N/A
			Benzo(b)Fluoranthene	4E-07	8E-12	2E-07	--	6E-07	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	2E-08	4E-13	8E-09	--	3E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	3E-06	6E-11	1E-06	--	4E-06	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-07	2E-12	5E-08	--	2E-07	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	3E-07	6E-12	1E-07	--	4E-07	N/A	N/A	N/A	N/A	N/A
			Benzo(g,h,i)perylene	N/A	N/A	N/A	--	N/A	General Toxicity	4E-05	5E-07	2E-05	6E-05
			Antimony	N/A	N/A	N/A	--	N/A	Blood	7E-03	N/A	N/A	7E-03
			Arsenic	1E-07	6E-11	1E-08	--	1E-07	Skin	2E-02	N/A	2E-03	2E-02
			Cadmium	N/A	1E-11	N/A	--	1E-11	Kidney	3E-03	N/A	4E-04	3E-03
			Copper	N/A	N/A	N/A	--	N/A	Kidney	4E-04	N/A	N/A	4E-04
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	4E-03	9E-04	N/A	5E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	5E-03	N/A	N/A	5E-03
			Nickel	N/A	N/A	N/A	--	N/A	General Toxicity	1E-03	N/A	N/A	1E-03
			Thallium	N/A	N/A	N/A	--	N/A	Blood	N/A	N/A	N/A	N/A
			Aroclor 1242	1E-08	4E-13	5E-09	--	2E-08	Immune System	2E-02	N/A	9E-03	3E-02
			Aroclor 1248	3E-09	1E-13	1E-09	--	4E-09	Immune System	5E-03	N/A	2E-03	7E-03
			Aroclor 1254	1E-08	5E-11	5E-07	--	2E-08	Immune System	2E+00	N/A	1E+00	3E+00
			Aroclor 1260	3E-07	1E-11	2E-07	--	5E-07	Immune System	6E-01	N/A	3E-01	8E-01
			PCB TEQ*	4E-07	2E-11	2E-07	--	6E-07	N/A	N/A	N/A	N/A	N/A
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	1E-03	2E-06	N/A	1E-03
			Chemical Total	8E-06	2E-10	3E-06	--	9E-06		3E+00	9E-04	1E+00	4E+00
			Radionuclide Total										
		Exposure Point Total						9E-06					4E+00
	Exposure Medium Total							9E-06					4E+00
Medium Total								9E-06					4E+00

TABLE 3-9.19.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Outdoor Air	Whitney											
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-04	--	3E-04
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-05	--	1E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	9E-06	--	9E-06
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-05	--	2E-05
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-05	--	3E-05
			Chemical Total	--	--	--	--	--		--	3E-04	--	3E-04
			Radionuclide Total										
		Exposure Point Total						N/A					3E-04
	Exposure Medium Total							N/A					3E-04
Medium Total								N/A					3E-04
Receptor Total								9E-06					4E+00

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	9E-06
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	1E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment	9E-06
Total risk assuming California EPA TCE factors	9E-06
Total risk assuming HEAST TCE factors	9E-06

Total Hazard Across All Media	4E+00
Total Skin HI =	2E-02
Total Immune System HI =	4E+00
Total Kidney HI =	5E-03
Total Blood HI =	7E-03
Total Nervous System HI =	1E-02
Total Liver HI =	4E-05
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	N/A
Total General Toxicity HI =	2E-03
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.19.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Whitney	Vinyl chloride	7E-10	1E-16	N/A	--	7E-10	Liver	1E-05	8E-12	N/A	1E-05
			Trichloroethene	3E-12	2E-17	N/A	--	3E-12	Liver	1E-06	3E-13	N/A	1E-06
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-05	3E-08	9E-06	3E-05
			Benzo(a)Anthracene	2E-08	8E-14	1E-08	--	4E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(b)Fluoranthene	2E-08	7E-14	1E-08	--	4E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	1E-09	4E-15	6E-10	--	2E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	2E-07	6E-13	9E-08	--	3E-07	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	4E-08	1E-13	2E-08	--	5E-08	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	1E-07	3E-13	4E-08	--	1E-07	N/A	N/A	N/A	N/A	N/A
			Benzo(g,h,i)perylene	N/A	N/A	N/A	--	N/A	General Toxicity	1E-05	2E-08	6E-06	2E-05
			Antimony	N/A	N/A	N/A	--	N/A	Blood	2E-03	N/A	N/A	2E-03
			Arsenic	4E-08	3E-12	4E-09	--	4E-08	Skin	6E-03	N/A	6E-04	6E-03
			Cadmium	N/A	6E-13	N/A	--	6E-13	Kidney	9E-04	N/A	1E-04	1E-03
			Copper	N/A	N/A	N/A	--	N/A	Kidney	1E-04	N/A	N/A	1E-04
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	1E-03	4E-05	N/A	1E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	2E-03	N/A	N/A	2E-03
			Nickel	N/A	N/A	N/A	--	N/A	General Toxicity	4E-04	N/A	N/A	4E-04
			Thallium	N/A	N/A	N/A	--	N/A	Blood	N/A	N/A	N/A	N/A
			Aroclor 1242	2E-09	2E-14	8E-10	--	2E-09	Immune System	6E-03	N/A	3E-03	9E-03
			Aroclor 1248	4E-10	5E-15	2E-10	--	6E-10	Immune System	1E-03	N/A	7E-04	2E-03
			Aroclor 1254	2E-08	2E-13	8E-09	--	3E-08	Immune System	6E-02	N/A	3E-02	9E-02
			Aroclor 1260	9E-09	1E-13	4E-09	--	1E-08	Immune System	3E-02	N/A	1E-02	5E-02
			PCB TEQ*	3E-08	2E-13	1E-08	--	5E-08	N/A	N/A	N/A	N/A	N/A
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	5E-04	7E-08	N/A	5E-04
			Chemical Total	5E-07	5E-12	2E-07	--	7E-07		1E-01	4E-05	5E-02	2E-01
			Radionuclide Total										
		Exposure Point Total						7E-07					2E-01
	Exposure Medium Total							7E-07					2E-01
Medium Total								7E-07					2E-01

TABLE 3-9.19.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Outdoor Air	Whitney											
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	8E-05	--	8E-05
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-06	--	4E-06
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-06	--	3E-06
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	7E-06	--	7E-06
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	1E-05	--	1E-05
			Chemical Total	--	--	--	--	--		--	1E-04	--	1E-04
			Radionuclide Total										
		Exposure Point Total						N/A					1E-04
	Exposure Medium Total							N/A					1E-04
Medium Total								N/A					1E-04
Receptor Total								7E-07					2E-01

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media: 7E-07

Total Hazard Across All Media: 2E-01

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	9E-07
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	7E-07
Total risk assuming California EPA TCE factors	7E-07
Total risk assuming HEAST TCE factors	7E-07

Total Skin HI =	6E-03
Total Immune System HI =	1E-01
Total Kidney HI =	2E-03
Total Blood HI =	2E-03
Total Nervous System HI =	3E-03
Total Liver HI =	1E-05
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	N/A
Total General Toxicity HI =	5E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.20.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Whitney											
			1,2,4-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	N/A	N/A	N/A	N/A
			1,3,5-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	N/A	N/A	N/A	N/A
			Naphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	6E-05	7E-07	3E-05	8E-05
			Vinyl chloride	7E-09	7E-15	N/A	--	7E-09	Liver	1E-04	6E-10	N/A	1E-04
			Methylene chloride	3E-10	3E-15	N/A	--	3E-10	Liver	4E-05	1E-10	N/A	4E-05
			cis-1,2-Dichloroethene	N/A	N/A	N/A	--	N/A	Blood	4E-06	3E-10	N/A	4E-06
			Trichloroethene	3E-09	1E-13	N/A	--	3E-09	Liver	2E-03	2E-09	N/A	2E-03
			Xylenes (total)	N/A	N/A	N/A	--	N/A	General Toxicity	2E-05	5E-10	N/A	2E-05
			2-Methylnaphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	1E-04	1E-06	4E-05	1E-04
			2,4,6-Trichlorophenol	2E-10	1E-14	N/A	--	2E-10	Reproductive	1E-03	N/A	N/A	1E-03
			Acenaphthylene	N/A	N/A	N/A	--	N/A	General Toxicity	9E-08	1E-09	4E-08	1E-07
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	1E-05	2E-07	6E-06	2E-05
			Benzo(a)Anthracene	1E-06	3E-13	5E-09	--	2E-06	N/A	N/A	N/A	N/A	N/A
			Bis(2-ethylhexyl) phthalate	6E-06	N/A	N/A	--	6E-06	Liver	1E-02	N/A	N/A	1E-02
			Benzo(b)Fluoranthene	2E-06	3E-13	7E-09	--	2E-06	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	1E-09	2E-14	4E-10	--	1E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	1E-07	3E-12	5E-08	--	2E-07	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	9E-09	2E-13	4E-09	--	1E-08	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	2E-06	5E-13	1E-06	--	3E-06	N/A	N/A	N/A	N/A	N/A
			Antimony	N/A	N/A	N/A	--	N/A	Blood	2E-02	N/A	N/A	2E-02
			Arsenic	5E-07	3E-10	6E-08	--	6E-07	Skin	9E-02	N/A	9E-03	1E-01
			Barium	N/A	N/A	N/A	--	N/A	Cardiovascular	2E-03	N/A	N/A	2E-03
			Cadmium	N/A	3E-11	N/A	--	3E-11	Kidney	6E-03	N/A	6E-04	7E-03
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	4E-03	8E-04	N/A	4E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	1E-01	N/A	N/A	1E-01
			Thallium	N/A	N/A	N/A	--	N/A	Blood	N/A	N/A	N/A	N/A
			alpha-Chlordane	2E-06	1E-10	3E-07	--	2E-06	Liver	8E-01	1E-05	1E-01	9E-01
			gamma-Chlordane	1E-06	7E-11	2E-07	--	2E-06	Liver	8E-01	7E-06	8E-02	7E-01
			4,4'-DDE	6E-07	N/A	N/A	--	6E-07	Developmental	4E-02	N/A	N/A	4E-02
			4,4'-DDT	1E-06	7E-11	1E-07	--	2E-06	Liver	6E-01	N/A	6E-02	6E-01
			Aroclor 1242	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1248	2E-05	9E-10	1E-05	--	3E-05	Immune System	4E+01	N/A	2E+01	5E+01
			Aroclor 1254	1E-05	5E-10	5E-06	--	2E-05	Immune System	2E+01	N/A	9E+00	3E+01
			Aroclor 1260	6E-06	3E-10	3E-06	--	9E-06	Immune System	1E+01	N/A	5E+00	2E+01
			PCB TEQ*	8E-06	3E-10	4E-06	--	1E-05	N/A	N/A	N/A	N/A	N/A
			C5-C8 Aliphatic	N/A	N/A	N/A	--	N/A	Nervous System	4E-04	1E-07	N/A	4E-04
			C9-C10 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	2E-03	2E-06	N/A	2E-03
			C9-C18 Aliphatic	N/A	N/A	N/A	--	N/A	Liver and Blood	6E-03	5E-06	N/A	6E-03
			C19-C36 Aliphatic	N/A	N/A	N/A	--	N/A	Liver	7E-04	N/A	N/A	7E-04
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	1E-02	1E-05	N/A	1E-02
			Chemical Total	5E-05	2E-09	2E-05	--	7E-05		7E+01	9E-04	3E+01	1E+02
			Radionuclide Total										
		Exposure Point Total						7E-05					1E+02
	Exposure Medium Total							7E-05					1E+02
Medium Total								7E-05					1E+02

TABLE 3-9.20 RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Shallow Ground Water	Whitney											
			1,1,2-Trichloroethane	N/A	--	N/A	--	N/A	Nervous system	N/A	--	N/A	N/A
			1,1-Dichloroethane	N/A	--	N/A	--	N/A	Kidney	3E-05	--	1E-04	1E-04
			1,1-Dichloroethene	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			1,2,4-Trichlorobenzene	N/A	--	N/A	--	N/A	Liver	6E-05	--	2E-03	2E-03
			1,3-Dichlorobenzene	N/A	--	N/A	--	N/A	N/A	5E-04	--	2E-02	2E-02
			1,4-Dichlorobenzene	N/A	--	N/A	--	N/A	Liver	2E-04	--	4E-03	4E-03
			Benzene	2E-08	--	1E-07	--	1E-07	Immune System	2E-03	--	1E-02	2E-02
			Bromomethane	N/A	--	N/A	--	N/A	Respiratory	N/A	--	N/A	N/A
			Chlorobenzene	N/A	--	N/A	--	N/A	Liver	2E-05	--	3E-04	4E-04
			Chlorodibromomethane	3E-10	--	7E-10	--	1E-09	N/A	1E-06	--	3E-06	4E-06
			Chloroethane	N/A	--	N/A	--	N/A	Developmental	N/A	--	N/A	N/A
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	1E-03	--	7E-03	8E-03
			Ethylbenzene	N/A	--	N/A	--	N/A	Developmental	1E-05	--	2E-04	3E-04
			Methyl tert-butyl ether	6E-09	--	7E-09	--	1E-08	Liver/Kidney	N/A	--	N/A	N/A
			Methylene chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Tetrachloroethene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Toluene	N/A	--	N/A	--	N/A	Nervous system	1E-04	--	2E-03	3E-03
			trans-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	2E-04	--	1E-03	1E-03
			Trichloroethene	3E-09	--	2E-08	--	2E-08	Nervous System/Liver	2E-03	--	1E-02	1E-02
			Vinyl chloride	2E-08	--	7E-08	--	9E-08	Liver	3E-02	--	1E-01	1E-01
			Xylenes (total)	N/A	--	N/A	--	N/A	Nervous system	4E-05	--	1E-03	1E-03
			Acetophenone	N/A	--	N/A	--	N/A	N/A	3E-06	--	N/A	3E-06
			4-Methylphenol	N/A	--	N/A	--	N/A	N/A	9E-05	--	4E-04	5E-04
			Naphthalene	N/A	--	N/A	--	N/A	Respiratory	1E-05	--	4E-04	4E-04
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Acenaphthylene	N/A	--	N/A	--	N/A	Respiratory	4E-06	--	2E-04	2E-04
			Phenanthrene	N/A	--	N/A	--	N/A	Respiratory	4E-06	--	3E-04	3E-04
			Benzo(a)Pyrene	4E-10	--	2E-07	--	2E-07	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	1E-10	--	1E-07	--	1E-07	N/A	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Kidney	1E-05	--	N/A	1E-05
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Liver/Kidney	N/A	--	N/A	N/A
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	N/A	6E-06	--	N/A	6E-06
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Kidney	3E-04	--	N/A	3E-04
			Arsenic	1E-06	--	1E-08	--	2E-08	N/A	2E-03	--	2E-03	4E-03
			Chromium	N/A	--	N/A	--	N/A	N/A	3E-06	--	2E-04	2E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	N/A	2E-02	--	4E-01	4E-01
			PCB TEQ*	7E-10	--	4E-07	--	4E-07	N/A	N/A	--	N/A	N/A
			Dieldrin	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			4,4'-DDD	5E-10	--	9E-08	--	9E-08	N/A	7E-06	--	1E-03	1E-03
			Chemical Total	2E-08	--	8E-08	--	1E-05		6E-02	--	5E-01	6E-01
			Radionuclide Total										
		Exposure Point Total						1E-05					6E-01
	Exposure Medium Total							1E-05					6E-01
Medium Total								1E-05					6E-01

TABLE 3-9.20.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Outdoor Air	Whitney	C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-03	--	4E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-04	--	2E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	9E-04	--	9E-04
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-04	--	2E-04
			Chemical Total	--	--	--	--	--		--	7E-03	--	7E-03
			Radionuclide Total										
		Exposure Point Total						N/A					7E-03
	Exposure Medium Total							N/A					7E-03
Medium Total								N/A					7E-03
Ground Water	Outdoor Air	Whitney	C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-05	--	1E-05
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-05	--	6E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-05	--	2E-05
			Chemical Total	--	--	--	--	--		--	9E-05	--	9E-05
			Radionuclide Total										
		Exposure Point Total						N/A					9E-05
	Exposure Medium Total							N/A					9E-05
Medium Total								N/A					9E-05
Receptor Total								9E-05					1E+02

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media: 9E-05

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to: 1E-04

Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment: 9E-05

Total risk assuming California EPA TCE factors: 9E-05

Total risk assuming HEAST TCE factors: 9E-05

Total Hazard Across All Media: 1E+02

Total Skin HI =	1E-01
Total Immune System HI =	1E+02
Total Kidney HI =	3E-02
Total Blood HI =	2E-02
Total Nervous System HI =	1E-01
Total Liver HI =	2E+00
Total Endocrine HI =	N/A
Total Cardiovascular HI =	2E-03
Total Developmental HI =	4E-02
Total General Toxicity HI =	3E-04
Total GI System HI =	N/A
Total Reproductive System HI =	1E-03
Total Respiratory System HI =	9E-04

TABLE 3-9.20.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Whitney											
			1,2,4-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	N/A	N/A	N/A	N/A
			1,3,5-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	N/A	N/A	N/A	N/A
			Naphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	4E-06	6E-09	2E-06	5E-06
			Vinyl chloride	2E-09	3E-16	N/A	--	2E-09	Liver	4E-05	3E-11	N/A	4E-05
			Methylene chloride	1E-11	2E-17	N/A	--	1E-11	Liver	2E-06	1E-12	N/A	2E-06
			cis-1,2-Dichloroethene	N/A	N/A	N/A	--	N/A	Blood	4E-07	5E-12	N/A	4E-07
			Trichloroethene	9E-10	8E-15	N/A	--	9E-10	Liver	5E-04	1E-10	N/A	5E-04
			Xylenes (total)	N/A	N/A	N/A	--	N/A	General Toxicity	1E-06	5E-12	N/A	1E-06
			2-Methylnaphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	7E-06	1E-08	3E-06	1E-05
			2,4,6-Trichlorophenol	3E-11	2E-15	N/A	--	3E-11	Reproductive	2E-04	N/A	N/A	2E-04
			Acenaphthylene	N/A	N/A	N/A	--	N/A	General Toxicity	3E-06	5E-11	1E-06	4E-06
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	5E-06	8E-09	2E-06	7E-06
			Benzo(a)Anthracene	4E-09	1E-14	2E-09	--	6E-09	N/A	N/A	N/A	N/A	N/A
			Bis(2-ethylhexyl) phthalate	2E-06	N/A	N/A	--	2E-06	Liver	5E-03	N/A	N/A	5E-03
			Benzo(b)Fluoranthene	5E-09	1E-14	2E-09	--	7E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	3E-10	1E-15	1E-10	--	5E-10	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	4E-06	1E-13	2E-06	--	6E-06	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	3E-09	9E-15	1E-09	--	4E-09	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	8E-09	2E-14	3E-09	--	1E-08	N/A	N/A	N/A	N/A	N/A
			Antimony	N/A	N/A	N/A	--	N/A	Blood	5E-03	N/A	N/A	5E-03
			Arsenic	2E-07	1E-11	2E-08	--	2E-07	Skin	3E-02	N/A	3E-03	3E-02
			Barium	N/A	N/A	N/A	--	N/A	Cardiovascular	7E-04	N/A	N/A	7E-04
			Cadmium	N/A	1E-12	N/A	--	1E-12	Kidney	2E-03	N/A	3E-04	2E-03
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	1E-03	4E-05	N/A	1E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	8E-03	N/A	N/A	8E-03
			Thallium	N/A	N/A	N/A	--	N/A	Blood	N/A	N/A	N/A	N/A
			alpha-Chlordane	1E-07	7E-13	1E-08	--	1E-07	Liver	4E-02	7E-08	5E-03	4E-02
			gamma-Chlordane	1E-11	7E-17	1E-12	--	1E-11	Liver	4E-06	7E-12	5E-07	4E-06
			4,4'-DDE	3E-08	N/A	N/A	--	3E-08	Developmental	2E-03	N/A	N/A	2E-03
			4,4'-DDT	6E-12	8E-17	8E-13	--	9E-12	Liver	3E-06	N/A	3E-07	4E-06
			Aroclor 1242	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1248	3E-06	4E-11	2E-06	--	5E-06	Immune System	1E+01	N/A	5E+00	2E+01
			Aroclor 1254	2E-06	2E-11	8E-07	--	3E-06	Immune System	8E+00	N/A	3E+00	9E+00
			Aroclor 1260	1E-06	1E-11	5E-07	--	1E-06	Immune System	4E+00	N/A	2E+00	5E+00
			PCB TEQ*	9E-07	5E-12	4E-07	--	1E-06	N/A	N/A	N/A	N/A	N/A
			C5-C8 Aliphatic	N/A	N/A	N/A	--	N/A	Nervous System	4E-05	2E-09	N/A	4E-05
			C9-C10 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	5E-04	8E-08	N/A	5E-04
			C9-C18 Aliphatic	N/A	N/A	N/A	--	N/A	Liver and Blood	9E-04	1E-07	N/A	9E-04
			C19-C36 Aliphatic	N/A	N/A	N/A	--	N/A	Liver	8E-05	N/A	N/A	8E-05
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	2E-03	4E-07	N/A	2E-03
			Chemical Total	8E-06	1E-10	3E-06	--	1E-05		2E+01	4E-05	1E+01	3E+01
			Radionuclide Total										
		Exposure Point Total						1E-05					3E+01
	Exposure Medium Total							1E-05					3E+01
Medium Total								1E-05					3E+01

TABLE 3-9.20 CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Shallow Ground Water	Whitney	1,1,2-Trichloroethane	N/A	--	N/A	--	N/A	Nervous system	N/A	--	N/A	N/A
			1,1-Dichloroethane	N/A	--	N/A	--	N/A	Kidney	2E-06	--	4E-05	4E-05
			1,1-Dichloroethene	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			1,2,4-Trichlorobenzene	N/A	--	N/A	--	N/A	Liver	5E-06	--	7E-04	7E-04
			1,3-Dichlorobenzene	N/A	--	N/A	--	N/A	N/A	4E-05	--	5E-03	5E-03
			1,4-Dichlorobenzene	N/A	--	N/A	--	N/A	Liver	1E-05	--	1E-03	1E-03
			Benzene	1E-09	--	4E-08	--	4E-08	Immune System	1E-04	--	5E-03	5E-03
			Bromomethane	N/A	--	N/A	--	N/A	Respiratory	N/A	--	N/A	N/A
			Chlorobenzene	N/A	--	N/A	--	N/A	Liver	2E-06	--	1E-04	1E-04
			Chlorodibromomethane	1E-10	--	2E-10	--	3E-10	N/A	4E-07	--	1E-06	1E-06
			Chloroethene	N/A	--	N/A	--	N/A	Developmental	N/A	--	N/A	N/A
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	8E-05	--	2E-03	2E-03
			Ethylbenzene	N/A	--	N/A	--	N/A	Developmental	8E-07	--	8E-05	8E-05
			Methyl tert-butyl ether	5E-10	--	2E-09	--	3E-09	Liver/Kidney	N/A	--	N/A	N/A
			Methylene chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Tetrachloroethene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Toluene	N/A	--	N/A	--	N/A	Nervous system	1E-05	--	8E-04	8E-04
			trans-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	2E-05	--	4E-04	4E-04
			Trichloroethene	9E-10	--	6E-09	--	7E-09	Nervous System/Liver	5E-04	--	4E-03	4E-03
			Vinyl chloride	1E-07	--	2E-06	--	2E-06	Liver	2E-03	--	3E-02	4E-02
			Xylenes (total)	N/A	--	N/A	--	N/A	Nervous system	1E-05	--	4E-04	4E-04
			Acetophenone	N/A	--	N/A	--	N/A	N/A	9E-07	--	N/A	9E-07
			4-Methylphenol	N/A	--	N/A	--	N/A	N/A	3E-05	--	1E-04	2E-04
			Naphthalene	N/A	--	N/A	--	N/A	Respiratory	4E-06	--	1E-04	1E-04
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Acenaphthylene	N/A	--	N/A	--	N/A	Respiratory	1E-06	--	8E-05	8E-05
			Phenanthrene	N/A	--	N/A	--	N/A	Respiratory	1E-06	--	9E-05	9E-05
			Benzo(a)Pyrene	1E-10	--	7E-08	--	7E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	5E-11	--	4E-08	--	4E-08	N/A	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Kidney	4E-06	--	N/A	4E-06
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Liver/Kidney	N/A	--	N/A	N/A
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	N/A	1E-06	--	N/A	1E-06
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Kidney	3E-05	--	N/A	3E-05
			Arsenic	4E-09	--	3E-09	--	7E-09	N/A	7E-04	--	5E-04	1E-03
			Chromium	N/A	--	N/A	--	N/A	N/A	1E-06	--	5E-05	5E-05
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	N/A	8E-03	--	1E-01	1E-01
			PCB TEQ*	1E-10	--	1E-07	--	1E-07	N/A	N/A	--	N/A	N/A
			Dieldrin	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			4,4'-DDD	8E-11	--	3E-08	--	3E-08	N/A	1E-06	--	4E-04	4E-04
			Chemical Total	2E-07	--	3E-06	--	3E-06		9E-03	--	2E-01	2E-01
			Radionuclide Total										
		Exposure Point Total						3E-06					2E-01
	Exposure Medium Total							3E-06					2E-01
Medium Total								3E-06					2E-01

TABLE 3-9.20 CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Outdoor Air	Whitney	C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	5E-05	--	5E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-04	--	3E-04
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	5E-04	--	5E-04
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	8E-05	--	8E-05
			Chemical Total	--	--	--	--	--		--	2E-03	--	2E-03
			Radionuclide Total										
		Exposure Point Total						N/A					2E-03
	Exposure Medium Total							N/A					2E-03
Medium Total								N/A					2E-03
Ground Water	Outdoor Air	Whitney	C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-05	--	2E-05
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-04	--	1E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-05	--	4E-05
			Chemical Total	--	--	--	--	--		--	2E-04	--	2E-04
			Radionuclide Total										
		Exposure Point Total						N/A					2E-04
	Exposure Medium Total							N/A					2E-04
Medium Total								N/A					2E-04
Receptor Total								1E-05					3E+01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	1E-05
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	2E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment	1E-05
Total risk assuming California EPA TCE factors	1E-05
Total risk assuming HEAST TCE factors	1E-05

Total Hazard Across All Media	3E+01
Total Skin HI =	3E-02
Total Immune System HI =	3E+01
Total Kidney HI =	7E-03
Total Blood HI =	8E-03
Total Nervous System HI =	1E-02
Total Liver HI =	9E-02
Total Endocrine HI =	N/A
Total Cardiovascular HI =	7E-04
Total Developmental HI =	2E-03
Total General Toxicity HI =	2E-05
Total GI System HI =	N/A
Total Reproductive System HI =	2E-04
Total Respiratory System HI =	3E-04

TABLE 3-9.21.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy											
			Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Trichloroethene	1E-08	--	N/A	--	1E-08	Liver	3E-04	--	N/A	3E-04
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	7E-05	--	1E-04	2E-04
			Benzo(a)Anthracene	2E-07	--	3E-07	--	4E-07	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	1E-07	--	3E-07	--	4E-07	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	6E-09	--	1E-08	--	2E-08	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-06	--	2E-06	--	3E-06	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	4E-07	--	7E-07	--	1E-06	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	1E-07	--	2E-07	--	4E-07	N/A	N/A	--	N/A	N/A
			Benzo(g,h,i)perylene	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	3E-05	5E-05
			Antimony	N/A	--	N/A	--	N/A	Blood	2E-03	--	N/A	2E-03
			Arsenic	1E-06	--	4E-07	--	1E-06	Skin	7E-03	--	3E-03	9E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	7E-04	--	4E-04	1E-03
			Copper	N/A	--	N/A	--	N/A	Kidney	3E-04	--	N/A	3E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	N/A	1E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	N/A	1E-03
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	2E-04	--	N/A	2E-04
			Thallium	N/A	--	N/A	--	N/A	Blood	2E-02	--	N/A	2E-02
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1254	4E-07	--	7E-07	--	1E-06	Immune System	3E-02	--	5E-02	8E-02
			Aroclor 1260	9E-09	--	2E-08	--	2E-08	Immune System	6E-04	--	1E-03	2E-03
			PCB TEQ*	8E-10	--	1E-09	--	2E-09	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	3E-02	--	N/A	3E-02
			Chemical Total	3E-06	--	4E-06	--	8E-06		9E-02	--	5E-02	1E-01
			Radionuclide Total										
		Exposure Point Total						8E-06					1E-01
	Exposure Medium Total							8E-06					1E-01
Medium Total								8E-06					1E-01

TABLE 3-9.21.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-15 ft)	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	1E-01	--	1E-01
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	2E-01	--	2E-01
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	6E-03	--	6E-03
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	2E-02	--	2E-02
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-05	--	5E-05
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	3E-07	--	--	3E-07	Liver	--	5E-04	--	5E-04
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	6E-03	--	6E-03
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-02	--	5E-02
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	5E-04	--	5E-04
			Benzene	--	8E-07	--	--	8E-07	Immune System	--	1E-02	--	1E-02
			Trichloroethene	--	1E-05	--	--	1E-05	Nervous System/Liver	--	7E-03	--	7E-03
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	2E-03	--	2E-03
			Tetrachloroethene	--	1E-06	--	--	1E-06	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	3E-04	--	3E-04
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	2E-03	--	2E-03
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	3E-04	--	3E-04
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	7E-02	--	7E-02
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	6E-01	--	6E-01
			Chemical Total	--	1E-05	--	--	1E-05		--	1E+00	--	1E+00
			Radionuclide Total										
		Exposure Point Total						1E-05					1E+00
	Exposure Medium Total							1E-05					1E+00
Medium Total								1E-05					1E+00

TABLE 3-9.21.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-05	--	5E-05
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	1E-06	--	--	1E-06	Liver	--	4E-03	--	4E-03
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	1E-04	--	1E-04
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	3E-06	--	3E-06
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-05	--	7E-05
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	4E-10	--	--	4E-10	Liver	--	7E-07	--	7E-07
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-05	--	5E-05
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	4E-05	--	4E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	8E-04	--	8E-04
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-05	--	2E-05
			Benzene	--	5E-09	--	--	5E-09	Immune System	--	6E-05	--	6E-05
			Trichloroethene	--	7E-07	--	--	7E-07	Nervous System/Liver	--	4E-04	--	4E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	1E-04	--	1E-04
			Toluene	--	N/A	--	--	N/A	Nervous system	--	1E-05	--	1E-05
			Tetrachloroethene	--	1E-08	--	--	1E-08	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	3E-06	--	3E-06
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	2E-06	--	2E-06
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	2E-05	--	2E-05

TABLE 3-8.21.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-02	--	4E-02
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-04	--	5E-04
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-01	--	4E-01
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-04	--	3E-04
			Chemical Total	--	2E-06	--	--	2E-06		--	4E-01	--	4E-01
			Radionuclide Total										
		Exposure Point Total						2E-06					4E-01
	Exposure Medium Total							2E-06					4E-01
Medium Total								2E-06					4E-01
Receptor Total								2E-05					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media: 2E-05

Total Hazard Across All Media: 2E+00

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	2E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment	1E-05
Total risk assuming California EPA TCE factors	1E-05
Total risk assuming HEAST TCE factors	1E-05

Total Skin HI =	9E-03
Total Immune System HI =	9E-02
Total Kidney HI =	1E+00
Total Blood HI =	2E-02
Total Nervous System HI =	1E-02
Total Liver HI =	7E-02
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	3E-04
Total General Toxicity HI =	4E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	3E-01

TABLE 3-9.21.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy	Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Trichloroethene	2E-09	--	N/A	--	2E-09	Liver	1E-04	--	N/A	1E-04
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	9E-06	--	2E-06	2E-05
			Benzo(a)Anthracene	3E-08	--	5E-08	--	7E-08	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	1E-09	--	2E-09	--	3E-09	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	2E-07	--	3E-07	--	5E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-08	--	2E-08	--	4E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	2E-08	--	4E-08	--	6E-08	N/A	N/A	--	N/A	N/A
			Benzo(g,h,i)perylene	N/A	--	N/A	--	N/A	General Toxicity	8E-06	--	1E-05	2E-05
			Antimony	N/A	--	N/A	--	N/A	Blood	1E-03	--	N/A	1E-03
			Arsenic	2E-07	--	7E-06	--	3E-07	Skin	3E-03	--	1E-03	4E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	3E-04	--	2E-04	5E-04
			Copper	N/A	--	N/A	--	N/A	Kidney	1E-04	--	N/A	1E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	7E-04	--	N/A	7E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	7E-04	--	N/A	7E-04
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	N/A	1E-04
			Thallium	N/A	--	N/A	--	N/A	Blood	6E-03	--	N/A	6E-03
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1254	7E-09	--	1E-08	--	2E-08	Immune System	3E-03	--	5E-03	8E-03
			Aroclor 1260	7E-10	--	1E-09	--	2E-09	Immune System	3E-04	--	5E-04	8E-04
			PCB TEQ*	1E-10	--	2E-10	--	4E-10	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	1E-02	--	N/A	1E-02
			Chemical Total	4E-07	--	5E-07	--	1E-06		3E-02	--	7E-03	4E-02
			Radionuclide Total										
		Exposure Point Total						1E-06					4E-02
	Exposure Medium Total							1E-06					4E-02
Medium Total								1E-06					4E-02

TABLE 3-9.21.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-15 ft)	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	3E-02	--	3E-02
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	2E-01	--	2E-01
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-03	--	5E-03
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	4E-05	--	4E-05
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	8E-08	--	--	8E-08	Liver	--	4E-04	--	4E-04
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-03	--	5E-03
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	9E-04	--	9E-04
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-03	--	2E-03
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	4E-04	--	4E-04
			Benzene	--	3E-07	--	--	3E-07	Immune System	--	9E-03	--	9E-03
			Trichloroethene	--	4E-06	--	--	4E-06	Nervous System/Liver	--	6E-03	--	6E-03
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	1E-03	--	1E-03
			Tetrachloroethane	--	1E-07	--	--	1E-07	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	3E-04	--	3E-04
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	1E-03	--	1E-03
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	3E-04	--	3E-04
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-02	--	6E-02
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-01	--	5E-01
			Chemical Total	--	4E-06	--	--	4E-06		--	8E-01	--	8E-01
			Radionuclide Total										
		Exposure Point Total						4E-06					8E-01
	Exposure Medium Total							4E-06					8E-01
Medium Total								4E-06					8E-01

TABLE 3-9.21.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	4E-05	--	4E-05
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	4E-07	--	--	4E-07	Liver	--	3E-03	--	3E-03
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	1E-04	--	1E-04
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	2E-06	--	2E-06
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	6E-05	--	6E-05
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	1E-10	--	--	1E-10	Liver	--	6E-07	--	6E-07
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-05	--	5E-05
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	4E-05	--	4E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-04	--	7E-04
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-05	--	2E-05
			Benzene	--	2E-09	--	--	2E-09	Immune System	--	6E-05	--	6E-05
			Trichloroethene	--	2E-07	--	--	2E-07	Nervous System/Liver	--	4E-04	--	4E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	8E-05	--	8E-05
			Toluene	--	N/A	--	--	N/A	Nervous system	--	1E-05	--	1E-05
			Tetrachloroethene	--	4E-09	--	--	4E-09	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	2E-06	--	2E-06
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	2E-05	--	2E-05

TABLE 3-9.21.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Commercial Worker					Non-Carcinogenic Hazard Quotient Commercial Worker				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-02	--	3E-02
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-04	--	5E-04
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-01	--	3E-01
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-04	--	3E-04
			Chemical Total	--	6E-07	--	--	6E-07		--	4E-01	--	4E-01
			Radionuclide Total										
		Exposure Point Total						6E-07					4E-01
	Exposure Medium Total							6E-07					4E-01
Medium Total								6E-07					4E-01
Receptor Total								5E-06					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media: 6E-06

Total Hazard Across All Media: 1E+00

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to: 6E-06

Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment: 2E-06

Total risk assuming California EPA TCE factors: 2E-06

Total risk assuming HEAST TCE factors: 2E-06

Total Skin HI =	4E-03
Total Immune System HI =	2E-02
Total Kidney HI =	1E+00
Total Blood HI =	9E-03
Total Nervous System HI =	1E-02
Total Liver HI =	2E-02
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	3E-04
Total General Toxicity HI =	1E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	2E-01

TABLE 3-9.22.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Trespasser (Older Child)					Non-Carcinogenic Hazard Quotient Trespasser (Older Child)				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy											
			Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Trichloroethene	2E-09	--	N/A	--	2E-09	Liver	2E-04	--	N/A	2E-04
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	3E-05	--	6E-05	1E-04
			Benzo(a)Anthracene	2E-08	--	4E-08	--	6E-08	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	3E-08	--	4E-08	--	6E-08	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	7E-10	--	2E-09	--	2E-09	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-07	--	3E-07	--	4E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	5E-08	--	1E-07	--	2E-07	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	2E-08	--	4E-08	--	5E-08	N/A	N/A	--	N/A	N/A
			Benzo(g,h,i)perylene	N/A	--	N/A	--	N/A	General Toxicity	6E-06	--	2E-05	3E-05
			Antimony	N/A	--	N/A	--	N/A	Blood	1E-03	--	N/A	1E-03
			Arsenic	1E-07	--	7E-08	--	2E-07	Skin	3E-03	--	2E-03	5E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	4E-04	--	3E-04	6E-04
			Copper	N/A	--	N/A	--	N/A	Kidney	1E-04	--	N/A	1E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	7E-04	--	N/A	7E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	7E-04	--	N/A	7E-04
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	N/A	1E-04
			Thallium	N/A	--	N/A	--	N/A	Blood	9E-03	--	N/A	9E-03
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1254	5E-08	--	1E-07	--	2E-07	Immune System	1E-02	--	3E-02	5E-02
			Aroclor 1260	1E-09	--	3E-09	--	4E-09	Immune System	3E-04	--	8E-04	1E-03
			PCB TEQ*	9E-11	--	2E-10	--	3E-10	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-02	--	N/A	2E-02
			Chemical Total	4E-07	--	7E-07	--	1E-06		5E-02	--	4E-02	8E-02
			Radionuclide Total										
		Exposure Point Total						1E-06					8E-02
	Exposure Medium Total							1E-06					8E-02
Medium Total								1E-06					8E-02
Receptor Total								1E-06					8E-02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media: 1E-06

Total Hazard Across All Media: 8E-02

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to: 1E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment: 1E-06
Total risk assuming California EPA TCE factors: 1E-05
Total risk assuming HEAST TCE factors: 1E-06

Total Skin HI =	5E-03
Total Immune System HI =	3E-02
Total Kidney HI =	2E-02
Total Blood HI =	1E-02
Total Nervous System HI =	1E-03
Total Liver HI =	2E-04
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	N/A
Total General Toxicity HI =	3E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.22.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Trespasser (Older Child)					Non-Carcinogenic Hazard Quotient Trespasser (Older Child)				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy	Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Trichloroethene	1E-10	--	N/A	--	1E-10	Liver	4E-05	--	N/A	4E-05
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	2E-06	--	1E-05	1E-05
			Benzo(a)Anthracene	2E-09	--	7E-09	--	9E-09	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	6E-10	--	3E-09	--	3E-09	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	6E-11	--	3E-10	--	3E-10	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-08	--	5E-08	--	6E-08	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	8E-10	--	4E-09	--	5E-09	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	1E-09	--	6E-09	--	8E-09	N/A	N/A	--	N/A	N/A
			Benzo(g,h,i)perylene	N/A	--	N/A	--	N/A	General Toxicity	2E-06	--	1E-05	1E-05
			Antimony	N/A	--	N/A	--	N/A	Blood	3E-04	--	N/A	3E-04
			Arsenic	1E-08	--	1E-08	--	2E-08	Skin	8E-04	--	9E-04	2E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	9E-05	--	1E-04	2E-04
			Copper	N/A	--	N/A	--	N/A	Kidney	4E-05	--	N/A	4E-05
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	2E-04	--	N/A	2E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	2E-04	--	N/A	2E-04
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	3E-05	--	N/A	3E-05
			Thallium	N/A	--	N/A	--	N/A	Blood	2E-03	--	N/A	2E-03
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1254	4E-10	--	2E-09	--	2E-09	Immune System	7E-04	--	4E-03	4E-03
			Aroclor 1260	4E-11	--	2E-10	--	3E-10	Immune System	8E-05	--	4E-04	5E-04
			PCB TEQ*	8E-12	--	4E-11	--	5E-11	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	4E-03	--	N/A	4E-03
			Chemical Total	3E-08	--	8E-08	--	1E-07		9E-03	--	5E-03	1E-02
			Radionuclide Total										
		Exposure Point Total						1E-07					1E-02
	Exposure Medium Total							1E-07					1E-02
Medium Total								1E-07					1E-02
Receptor Total								1E-07					1E-02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media: 1E-07

Total Hazard Across All Media: 1E-02

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to: 1E-07
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment: 1E-07
Total risk assuming California EPA TCE factors: 1E-07
Total risk assuming HEAST TCE factors: 1E-07

Total Skin HI =	2E-03
Total Immune System HI =	5E-03
Total Kidney HI =	4E-03
Total Blood HI =	3E-03
Total Nervous System HI =	4E-04
Total Liver HI =	4E-05
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	N/A
Total General Toxicity HI =	5E-05
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.23.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Trespasser (Older Child)					Non-Carcinogenic Hazard Quotient Trespasser (Older Child)				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Murphy Wetland	Chromium	--	--	N/A	--	N/A	GI System	--	--	3E-03	3E-03
			Manganese	--	--	N/A	--	N/A	Nervous System	--	--	6E-03	6E-03
			Chemical Total	--	--	--	--	--		--	--	1E-02	1E-02
			Radionuclide Total										
		Exposure Point Total						N/A					1E-02
	Exposure Medium Total							N/A					1E-02
Medium Total								N/A					1E-02
Sediment	Sediment	Murphy Wetland	Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	3E-04	4E-04
			Vinyl chloride	3E-09	--	N/A	--	3E-09	Liver	7E-06	--	N/A	7E-06
			Trichloroethene	4E-10	--	N/A	--	4E-10	Liver	4E-05	--	N/A	4E-05
			Ethylenedibromide	9E-06	--	N/A	--	9E-06	N/A	N/A	--	N/A	N/A
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	1E-05	--	N/A	1E-05
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	3E-05	--	N/A	3E-05
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	4E-06	--	N/A	4E-06
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	4E-04	--	9E-04	1E-03
			Benzo(a)Anthracene	2E-08	--	6E-08	--	8E-08	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	2E-08	--	5E-08	--	8E-08	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	3E-07	--	6E-07	--	9E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	3E-08	--	6E-08	--	8E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	1E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	9E-02	--	N/A	9E-02
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	6E-04	--	N/A	6E-04
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	2E-03	--	N/A	2E-03
			Chromium (VI)	N/A	--	N/A	--	N/A	GI System	2E-03	--	N/A	2E-03
			Antimony	N/A	--	N/A	--	N/A	Blood	4E-02	--	N/A	4E-02
			Arsenic	9E-06	--	1E-07	--	2E-07	Skin	2E-03	--	3E-03	5E-03
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	2E-03	--	N/A	2E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	4E-04	--	3E-04	6E-04
			Chromium	N/A	--	N/A	--	N/A	GI System	5E-01	--	N/A	5E-01
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	6E-04	--	N/A	6E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	4E-03	--	N/A	4E-03
			Vanadium	N/A	--	N/A	--	N/A	Kidney	7E-03	--	N/A	7E-03
			PCB TEQ*	3E-07	--	7E-07	--	1E-06	N/A	N/A	--	N/A	N/A
			gamma-Chlordane	7E-09	--	5E-09	--	1E-08	Liver	5E-04	--	3E-04	8E-04
			Aroclor 1254	2E-06	--	5E-06	--	7E-06	Immune System	6E-01	--	1E+00	2E+00
			Aroclor 1260	1E-06	--	2E-06	--	3E-06	Immune System	3E-01	--	7E-01	1E+00

TABLE 3-9.23.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Older Child

			Chemical Total	1E-05	--	9E-06	--	2E-05		2E+00	--	2E+00	4E+00
			Radionuclide Total										
		Exposure Point Total						2E-05					4E+00
	Exposure Medium Total							2E-05					4E+00
Medium Total								2E-05					4E+00
Receptor Total								2E-05					4E+00

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	2E-05
Total Hazard Across All Media	4E+00

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	3E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	2E-05
Total risk assuming California EPA TCE factors	2E-05
Total risk assuming HEAST TCE factors	2E-05

Total Skin HI =	5E-03
Total Immune System HI =	3E+00
Total Kidney HI =	9E-02
Total Blood HI =	4E-02
Total Nervous System HI =	1E-02
Total Liver HI =	4E-03
Total Endocrine HI =	N/A
Total Cardiovascular HI =	2E-03
Total Developmental HI =	N/A
Total General Toxicity HI =	2E-03
Total GI System HI =	5E-01
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.23.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Trespasser (Older Child)					Non-Carcinogenic Hazard Quotient Trespasser (Older Child)				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Murphy Wetland	Chromium	--	--	N/A	--	N/A	GI System	--	--	9E-04	9E-04
			Manganese	--	--	N/A	--	N/A	Nervous System	--	--	2E-03	2E-03
			Chemical Total	--	--	--	--	--		--	--	2E-03	2E-03
			Radionuclide Total										
		Exposure Point Total						N/A					2E-03
	Exposure Medium Total							N/A					2E-03
Medium Total								N/A					2E-03
Sediment	Sediment	Murphy Wetland	Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	7E-06	--	3E-05	4E-05
			Vinyl chloride	2E-10	--	N/A	--	2E-10	Liver	2E-06	--	N/A	2E-06
			Trichloroethene	3E-11	--	N/A	--	3E-11	Liver	9E-06	--	N/A	9E-06
			Ethylenedibromide	1E-07	--	N/A	--	1E-07	N/A	N/A	--	N/A	N/A
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	7E-07	--	N/A	7E-07
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	2E-06	--	N/A	2E-06
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	1E-06	--	N/A	1E-06
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	4E-04	5E-04
			Benzo(a)Anthracene	1E-09	--	5E-09	--	6E-09	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	1E-09	--	5E-09	--	6E-09	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-08	--	5E-08	--	6E-08	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-09	--	5E-09	--	6E-09	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	8E-09	--	4E-08	--	5E-08	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-02	--	N/A	2E-02
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	1E-04	--	N/A	1E-04
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	5E-04	--	N/A	5E-04
			Chromium (VI)	N/A	--	N/A	--	N/A	GI System	6E-04	--	N/A	6E-04
			Antimony	N/A	--	N/A	--	N/A	Blood	2E-03	--	N/A	2E-03
			Arsenic	8E-09	--	2E-08	--	2E-08	Skin	6E-04	--	1E-03	2E-03
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	5E-04	--	N/A	5E-04
			Cadmium	N/A	--	N/A	--	N/A	Kidney	9E-05	--	1E-04	2E-04
			Chromium	N/A	--	N/A	--	N/A	GI System	1E-01	--	N/A	1E-01
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	2E-04	--	N/A	2E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	9E-04	--	N/A	9E-04
			Vanadium	N/A	--	N/A	--	N/A	Kidney	2E-03	--	N/A	2E-03
			PCB TEQ*	2E-06	--	1E-07	--	1E-07	N/A	N/A	--	N/A	N/A
			gamma-Chlordane	8E-10	--	8E-10	--	1E-09	Liver	1E-04	--	2E-04	3E-04
			Aroclor 1254	8E-08	--	4E-07	--	5E-07	Immune System	1E-01	--	7E-01	8E-01
			Aroclor 1260	4E-08	--	2E-07	--	2E-07	Immune System	7E-02	--	4E-01	4E-01

TABLE 3-9.23.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Older Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Trespasser (Older Child)					Non-Carcinogenic Hazard Quotient Trespasser (Older Child)				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chemical Total	3E-07	--	9E-07	--	1E-06		4E-01	--	1E+00	1E+00
			Radionuclide Total										
		Exposure Point Total						1E-06					1E+00
	Exposure Medium Total							1E-06					1E+00
Medium Total								1E-06					1E+00
Receptor Total								1E-06					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	1E-06
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	2E-06
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	1E-06
Total risk assuming California EPA TCE factors	1E-06
Total risk assuming HEAST TCE factors	1E-06

Total Hazard Across All Media	1E+00
Total Skin HI =	2E-03
Total Immune System HI =	1E+00
Total Kidney HI =	2E-02
Total Blood HI =	2E-03
Total Nervous System HI =	3E-03
Total Liver HI =	1E-03
Total Endocrine HI =	N/A
Total Cardiovascular HI =	5E-04
Total Developmental HI =	N/A
Total General Toxicity HI =	6E-04
Total GI System HI =	1E-01
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-8.24.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy											
			Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Trichloroethene	3E-06	--	N/A	--	3E-06	Liver	2E-03	--	N/A	2E-03
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	4E-04	--	3E-04	7E-04
			Benzo(a)Anthracene	3E-07	--	3E-07	--	6E-07	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	3E-07	--	2E-07	--	5E-07	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	1E-06	--	1E-06	--	2E-06	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	2E-06	--	2E-06	--	4E-06	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	6E-07	--	7E-07	--	2E-06	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	3E-07	--	2E-07	--	5E-07	N/A	N/A	--	N/A	N/A
			Benzo(g,h,i)perylene	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	7E-05	2E-04
			Antimony	N/A	--	N/A	--	N/A	Blood	1E-02	--	N/A	1E-02
			Arsenic	2E-06	--	4E-07	--	3E-06	Skin	4E-02	--	6E-03	5E-02
			Cadmium	N/A	--	N/A	--	N/A	Kidney	4E-03	--	9E-04	5E-03
			Copper	N/A	--	N/A	--	N/A	Kidney	2E-03	--	N/A	2E-03
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	8E-03	--	N/A	8E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	8E-03	--	N/A	8E-03
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	1E-03	--	N/A	1E-03
			Thallium	N/A	--	N/A	--	N/A	Blood	1E-01	--	N/A	1E-01
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1254	8E-07	--	7E-07	--	1E-06	Immune System	2E-01	--	1E-01	3E-01
			Aroclor 1260	2E-06	--	2E-06	--	3E-06	Immune System	3E-03	--	3E-03	6E-03
			PCB TEQ*	2E-09	--	1E-09	--	3E-09	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-01	--	N/A	2E-01
			Chemical Total	7E-06	--	4E-06	--	1E-05		5E-01	--	1E-01	6E-01
			Radionuclide Total										
		Exposure Point Total						1E-05					6E-01
	Exposure Medium Total							1E-05					6E-01
Medium Total								1E-05					6E-01

TABLE 3-9.24.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southeast Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-15 ft)	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	1E-02	--	1E-02
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	2E-02	--	2E-02
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-04	--	5E-04
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-06	--	5E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	3E-08	--	--	3E-08	Liver	--	5E-05	--	5E-05
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	6E-04	--	6E-04
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	1E-04	--	1E-04
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-03	--	5E-03
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	5E-05	--	5E-05
			Benzene	--	1E-07	--	--	1E-07	Immune System	--	1E-03	--	1E-03
			Trichloroethene	--	1E-06	--	--	1E-06	Nervous System/Liver	--	7E-04	--	7E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	2E-04	--	2E-04
			Tetrachloroethene	--	2E-07	--	--	2E-07	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	3E-05	--	3E-05
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	2E-04	--	2E-04
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	3E-05	--	3E-05
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-03	--	6E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-04	--	2E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C16 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-02	--	5E-02
			Chemical Total	--	2E-06	--	--	2E-06		--	1E-01	--	1E-01
			Radionuclide Total										
		Exposure Point Total						2E-06					1E-01
	Exposure Medium Total							2E-06					1E-01
Medium Total								2E-06					1E-01

TABLE 3-9.24.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-06	--	5E-06
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	1E-07	--	--	1E-07	Liver	--	4E-04	--	4E-04
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	1E-05	--	1E-05
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	3E-07	--	3E-07
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-06	--	7E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	4E-11	--	--	4E-11	Liver	--	7E-08	--	7E-08
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-06	--	5E-06
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	4E-06	--	4E-06
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	8E-05	--	8E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-06	--	2E-06
			Benzene	--	6E-10	--	--	6E-10	Immune System	--	5E-06	--	5E-06
			Trichloroethene	--	6E-08	--	--	6E-08	Nervous System/Liver	--	4E-05	--	4E-05
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	9E-06	--	9E-06
			Toluene	--	N/A	--	--	N/A	Nervous system	--	1E-06	--	1E-06
			Tetrachloroethene	--	1E-09	--	--	1E-09	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	3E-07	--	3E-07
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	2E-07	--	2E-07
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	2E-06	--	2E-06

TABLE 3-9.24.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-03	--	3E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-05	--	5E-05
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-02	--	4E-02
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-05	--	3E-05
			Chemical Total	--	2E-07	--	--	2E-07		--	4E-02	--	4E-02
			Radionuclide Total										
		Exposure Point Total						2E-07					4E-02
	Exposure Medium Total							2E-07					4E-02
Medium Total								2E-07					4E-02
Receptor Total								1E-05					8E-01

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media	1E-05
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	1E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	1E-05
Total risk assuming California EPA TCE factors	1E-05
Total risk assuming HEAST TCE factors	1E-05

Total Hazard Across All Media	8E-01
Total Skin HI =	5E-02
Total Immune System HI =	3E-01
Total Kidney HI =	3E-01
Total Blood HI =	1E-01
Total Nervous System HI =	2E-02
Total Liver HI =	9E-03
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	3E-05
Total General Toxicity HI =	2E-03
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	3E-02

TABLE 3-9.24.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy											
			Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Trichloroethene	1E-09	--	N/A	--	1E-09	Liver	3E-04	--	N/A	3E-04
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	3E-05	5E-05
			Benzo(a)Anthracene	2E-08	--	3E-08	--	4E-08	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	6E-09	--	1E-08	--	2E-08	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	6E-10	--	1E-09	--	2E-09	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	9E-09	--	1E-08	--	2E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	1E-08	--	2E-08	--	4E-08	N/A	N/A	--	N/A	N/A
			Benzo(g,h,i)perylene	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	2E-05	4E-05
			Antimony	N/A	--	N/A	--	N/A	Blood	2E-03	--	N/A	2E-03
			Arsenic	1E-07	--	4E-06	--	2E-07	Skin	6E-03	--	2E-03	9E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	7E-04	--	3E-04	1E-03
			Copper	N/A	--	N/A	--	N/A	Kidney	3E-04	--	N/A	3E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	N/A	1E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	N/A	1E-03
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	2E-04	--	N/A	2E-04
			Thallium	N/A	--	N/A	--	N/A	Blood	2E-02	--	N/A	2E-02
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1254	4E-09	--	7E-09	--	1E-08	Immune System	5E-03	--	8E-03	1E-02
			Aroclor 1260	5E-10	--	8E-10	--	1E-09	Immune System	6E-04	--	9E-04	1E-03
			PCB TEQ*	6E-11	--	1E-10	--	2E-10	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	3E-02	--	N/A	3E-02
			Chemical Total	3E-07	--	3E-07	--	6E-07		7E-02	--	1E-02	8E-02
			Radionuclide Total										
		Exposure Point Total						6E-07					8E-02
	Exposure Medium Total							6E-07					8E-02
Medium Total								6E-07					8E-02

TABLE 3-9.24.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil (0-15 ft)	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	9E-04	--	9E-04
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	6E-03	--	6E-03
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	2E-04	--	2E-04
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	4E-04	--	4E-04
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	3E-09	--	--	3E-09	Liver	--	2E-05	--	2E-05
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-04	--	2E-04
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	3E-05	--	3E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-05	--	7E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-05	--	2E-05
			Benzene	--	1E-06	--	--	1E-06	Immune System	--	3E-04	--	3E-04
			Trichloroethene	--	1E-07	--	--	1E-07	Nervous System/Liver	--	2E-04	--	2E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	5E-05	--	5E-05
			Tetrachloroethene	--	5E-09	--	--	5E-09	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	1E-05	--	1E-05
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	5E-05	--	5E-05
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	1E-05	--	1E-05
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-05	--	6E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-02	--	2E-02
			Chemical Total	--	1E-07	--	--	1E-07		--	3E-02	--	3E-02
			Radionuclide Total										
		Exposure Point Total						1E-07					3E-02
	Exposure Medium Total							1E-07					3E-02
Medium Total								1E-07					3E-02

TABLE 3-9.24.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	2E-06	--	2E-06
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	1E-06	--	--	1E-06	Liver	--	1E-04	--	1E-04
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	4E-06	--	4E-06
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	9E-06	--	9E-06
			1,1-Dichloroethane	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	4E-12	--	--	4E-12	Liver	--	2E-06	--	2E-06
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Kidney	--	1E-06	--	1E-06
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	3E-05	--	3E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	7E-07	--	7E-07
			Benzene	--	6E-11	--	--	6E-11	Immune System	--	2E-06	--	2E-06
			Trichloroethene	--	6E-09	--	--	6E-09	Nervous System/Liver	--	1E-05	--	1E-05
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	3E-06	--	3E-06
			Toluene	--	N/A	--	--	N/A	Nervous system	--	4E-07	--	4E-07
			Tetrachloroethene	--	1E-10	--	--	1E-10	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	9E-06	--	9E-06
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	8E-06	--	8E-06
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	7E-07	--	7E-07

TABLE 3-9.24.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-04	--	4E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-05	--	2E-05
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	1E-05	--	1E-05
			Chemical Total	--	2E-08	--	--	2E-08		--	1E-02	--	1E-02
			Radionuclide Total										
		Exposure Point Total						2E-08					1E-02
	Exposure Medium Total							2E-08					1E-02
Medium Total								2E-08					1E-02
Receptor Total								7E-07					1E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	7E-07
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	7E-07
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assessment	8E-07
Total risk assuming California EPA TCE factors	8E-07
Total risk assuming HEAST TCE factors	6E-07

Total Hazard Across All Media	1E-01
Total Skin HI =	9E-03
Total Immune System HI =	2E-02
Total Kidney HI =	7E-02
Total Blood HI =	2E-02
Total Nervous System HI =	3E-03
Total Liver HI =	1E-03
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	1E-05
Total General Toxicity HI =	3E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	7E-03

TABLE 3-9.25.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Murphy Wetland	Chromium	--	--	N/A	--	N/A	GI System	--	--	2E-02	2E-02
			Manganese	--	--	N/A	--	N/A	Nervous System	--	--	2E-02	2E-02
			Chemical Total	--	--	--	--	--		--	--	5E-02	5E-02
			Radionuclide Total										
		Exposure Point Total						N/A					5E-02
	Exposure Medium Total							N/A					5E-02
Medium Total								N/A					5E-02
Sediment	Sediment	Murphy	Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	1E-03	--	1E-03	2E-03
			Vinyl chloride	4E-08	--	N/A	--	4E-08	Liver	8E-05	--	N/A	8E-05
			Trichloroethene	6E-09	--	N/A	--	6E-09	Liver	4E-04	--	N/A	4E-04
			Ethylenedibromide	1E-04	--	N/A	--	1E-04	N/A	N/A	--	N/A	N/A
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	2E-04	--	N/A	2E-04
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	4E-04	--	N/A	4E-04
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	5E-05	--	N/A	5E-05
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	4E-03	--	3E-03	8E-03
			Benzo(a)Anthracene	4E-07	--	3E-07	--	7E-07	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	4E-07	--	3E-07	--	7E-07	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	4E-06	--	3E-06	--	8E-06	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	4E-07	--	3E-07	--	7E-07	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	2E-06	--	1E-06	--	3E-06	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	1E+00	--	N/A	1E+00
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	7E-03	--	N/A	7E-03
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	2E-02	--	N/A	2E-02
			Chromium (VI)	N/A	--	N/A	--	N/A	GI System	3E-02	--	N/A	3E-02
			Antimony	N/A	--	N/A	--	N/A	Blood	4E-01	--	N/A	4E-01
			Arsenic	2E-06	--	6E-07	--	2E-06	Skin	3E-02	--	9E-03	4E-02
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	2E-02	--	N/A	2E-02
			Cadmium	N/A	--	N/A	--	N/A	Kidney	4E-03	--	1E-03	5E-03
			Chromium	N/A	--	N/A	--	N/A	GI System	6E+00	--	N/A	6E+00
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	7E-03	--	N/A	7E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	4E-02	--	N/A	4E-02
			Vanadium	N/A	--	N/A	--	N/A	Kidney	8E-02	--	N/A	8E-02
			PCB TEQ*	5E-06	--	4E-06	--	9E-06	N/A	N/A	--	N/A	N/A
			gamma-Chlordane	1E-07	--	3E-08	--	1E-07	Liver	5E-03	--	1E-03	6E-03
			Aroclor 1254	3E-05	--	3E-05	--	6E-05	Immune System	6E+00	--	5E+00	1E+01
			Aroclor 1260	2E-05	--	1E-05	--	3E-05	Immune System	3E+00	--	3E+00	6E+00

TABLE 3-9.25.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chemical Total	2E-04	--	5E-05	--	3E-04		2E+01	--	8E+00	2E+01
			Radionuclide Total										
		Exposure Point Total						3E-04					2E+01
	Exposure Medium Total							3E-04					2E+01
Medium Total								3E-04					2E+01
Receptor Total								3E-04					2E+01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	3E-04
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	3E-04
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	3E-04
Total risk assuming California EPA TCE factors	3E-04
Total risk assuming HEAST TCE factors	3E-04

Total Hazard Across All Media	2E+01
Total Skin HI =	4E-02
Total Immune System HI =	2E+01
Total Kidney HI =	1E+00
Total Blood HI =	4E-01
Total Nervous System HI =	7E-02
Total Liver HI =	4E-02
Total Endocrine HI =	N/A
Total Cardiovascular HI =	2E-02
Total Developmental HI =	N/A
Total General Toxicity HI =	1E-02
Total GI System HI =	6E+00
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.25.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Murphy Wetland	Chromium	--	--	N/A	--	N/A	GI System	--	--	4E-03	4E-03
			Manganese	--	--	N/A	--	N/A	Nervous System	--	--	4E-03	4E-03
			Chemical Total	--	--	--	--	--		--	--	8E-03	8E-03
			Radionuclide Total										
		Exposure Point Total						N/A					8E-03
	Exposure Medium Total							N/A					8E-03
Medium Total								N/A					8E-03
Sediment	Sediment	Murphy	Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	5E-05	--	8E-05	1E-04
			Vinyl chloride	2E-09	--	N/A	--	2E-09	Liver	1E-05	--	N/A	1E-05
			Trichloroethene	3E-10	--	N/A	--	3E-10	Liver	7E-05	--	N/A	7E-05
			Ethylenedibromide	1E-06	--	N/A	--	1E-06	N/A	N/A	--	N/A	N/A
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	5E-06	--	N/A	5E-06
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	1E-05	--	N/A	1E-05
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	8E-06	--	N/A	8E-06
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	7E-04	--	1E-03	2E-03
			Benzo(a)Anthracene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Benzo(b)Fluoranthene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	9E-08	--	1E-07	--	2E-07	N/A	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-01	--	N/A	2E-01
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	1E-03	--	N/A	1E-03
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	4E-03	--	N/A	4E-03
			Chromium (VI)	N/A	--	N/A	--	N/A	GI System	4E-03	--	N/A	4E-03
			Antimony	N/A	--	N/A	--	N/A	Blood	1E-02	--	N/A	1E-02
			Arsenic	8E-08	--	5E-08	--	1E-07	Skin	5E-03	--	3E-03	7E-03
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	4E-03	--	N/A	4E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	7E-04	--	3E-04	1E-03
			Chromium	N/A	--	N/A	--	N/A	GI System	1E+00	--	N/A	1E+00
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	N/A	1E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	7E-03	--	N/A	7E-03
			Vanadium	N/A	--	N/A	--	N/A	Kidney	1E-02	--	N/A	1E-02
			PCB TEQ*	3E-07	--	5E-07	--	7E-07	N/A	N/A	--	N/A	N/A
			gamma-Chlordane	6E-09	--	3E-09	--	9E-09	Liver	9E-04	--	4E-04	1E-03
			Aroclor 1254	6E-07	--	1E-06	--	2E-06	Immune System	1E+00	--	2E+00	3E+00
			Aroclor 1260	4E-07	--	6E-07	--	1E-06	Immune System	5E-01	--	9E-01	1E+00

TABLE 3-9.25.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chemical Total	3E-06	--	3E-06	--	6E-06		3E+00	--	3E+00	5E+00
			Radionuclide Total										
		Exposure Point Total						6E-06					5E+00
	Exposure Medium Total							6E-06					5E+00
Medium Total								6E-06					5E+00
Receptor Total								6E-06					5E+00

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media: 6E-06

Total Hazard Across All Media: 5E+00

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	1E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	6E-06
Total risk assuming California EPA TCE factors	6E-06
Total risk assuming HEAST TCE factors	6E-06

Total Skin HI =	7E-03
Total Immune System HI =	4E+00
Total Kidney HI =	2E-01
Total Blood HI =	2E-02
Total Nervous System HI =	1E-02
Total Liver HI =	6E-03
Total Endocrine HI =	N/A
Total Cardiovascular HI =	4E-03
Total Developmental HI =	N/A
Total General Toxicity HI =	2E-03
Total GI System HI =	1E+00
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.25.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Murphy											
			1,2,4-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	3E-04	--	N/A	3E-04
			1,3,5-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	N/A	1E-04
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	3E-04	--	2E-04	5E-04
			Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Methylene chloride	4E-09	--	N/A	--	4E-09	Liver	6E-05	--	N/A	6E-05
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	3E-04	--	N/A	3E-04
			Trichloroethene	2E-08	--	N/A	--	2E-08	Liver	1E-03	--	N/A	1E-03
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	3E-05	--	N/A	3E-05
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	4E-04	--	3E-04	7E-04
			2,4,6-Trichlorophenol	N/A	--	N/A	--	N/A	Reproductive	N/A	--	N/A	N/A
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	8E-05	2E-04
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	1E-04	--	9E-05	2E-04
			Benzo(a)Anthracene	2E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Bis(2-ethylhexyl) phthalate	3E-08	--	N/A	--	3E-08	Liver	8E-04	--	N/A	8E-04
			Benzo(b)Fluoranthene	2E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	2E-08	--	2E-08	--	4E-08	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	2E-06	--	2E-06	--	4E-06	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	2E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	5E-07	--	4E-07	--	9E-07	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	N/A	--	N/A	Blood	1E-02	--	N/A	1E-02
			Arsenic	1E-06	--	2E-07	--	1E-06	Skin	2E-02	--	3E-03	2E-02
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	7E-03	--	N/A	7E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	2E-03	--	4E-04	2E-03
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	4E-03	--	N/A	4E-03
			Mercury	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	N/A	1E-03
			Thallium	N/A	--	N/A	--	N/A	Blood	2E-01	--	N/A	2E-01
			alpha-Chlordane	7E-09	--	2E-09	--	9E-09	Liver	3E-04	--	8E-05	4E-04
			gamma-Chlordane	7E-09	--	2E-09	--	9E-09	Liver	3E-04	--	8E-05	4E-04
			4,4'-DDE	N/A	--	N/A	--	N/A	Developmental	N/A	--	N/A	N/A
			4,4'-DDT	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A

TABLE 3-9.26.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Aroclor 1248	2E-07	--	2E-07	--	4E-07	Immune System	4E-02	--	3E-02	8E-02
			Aroclor 1254	7E-08	--	6E-08	--	1E-07	Immune System	1E-02	--	1E-02	2E-02
			Aroclor 1260	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			PCB TEQ*	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	4E-05	--	N/A	4E-05
			C9-C10 Aromatic	N/A	--	N/A	--	N/A	Kidney	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	N/A	--	N/A	N/A
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	3E-01	--	N/A	3E-01
			Chemical Total	4E-06	--	3E-06	--	7E-06		6E-01	--	5E-02	6E-01
			Radionuclide Total										
		Exposure Point Total						7E-06					6E-01
	Exposure Medium Total							7E-06					6E-01
Medium Total								7E-06					6E-01
Soil (0-15 ft)	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	1E-02	--	1E-02
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	2E-02	--	2E-02
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-04	--	5E-04
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-06	--	5E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	3E-08	--	--	3E-08	Liver	--	5E-05	--	5E-05
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	6E-04	--	6E-04

TABLE 3-9.26.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	1E-04	--	1E-04
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-03	--	5E-03
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	5E-05	--	5E-05
			Benzene	--	1E-07	--	--	1E-07	Immune System	--	1E-03	--	1E-03
			Trichloroethene	--	1E-06	--	--	1E-06	Nervous System/Liver	--	7E-04	--	7E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	2E-04	--	2E-04
			Tetrachloroethene	--	2E-07	--	--	2E-07	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	3E-05	--	3E-05
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	2E-04	--	2E-04
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	3E-05	--	3E-05
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-03	--	6E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-04	--	2E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-02	--	5E-02
			Chemical Total	--	2E-06	--	--	2E-06		--	1E-01	--	1E-01
			Radionuclide Total										
		Exposure Point Total						2E-06					1E-01
	Exposure Medium Total							2E-06					1E-01
Medium Total								2E-06					1E-01

TABLE 3-9.26.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-06	--	5E-06
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	1E-07	--	--	1E-07	Liver	--	4E-04	--	4E-04
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	1E-05	--	1E-05
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	3E-07	--	3E-07
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-06	--	7E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	4E-11	--	--	4E-11	Liver	--	7E-08	--	7E-08
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	5E-06	--	5E-06
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	4E-06	--	4E-06
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	8E-05	--	8E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-06	--	2E-06
			Benzene	--	6E-10	--	--	6E-10	Immune System	--	6E-06	--	6E-06
			Trichloroethene	--	8E-08	--	--	8E-08	Nervous System/Liver	--	4E-05	--	4E-05
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	9E-06	--	9E-06
			Toluene	--	N/A	--	--	N/A	Nervous system	--	1E-06	--	1E-06
			Tetrachloroethene	--	1E-09	--	--	1E-09	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	3E-07	--	3E-07
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	2E-07	--	2E-07
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A

TABLE 3-9.26.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	2E-06	--	2E-06
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-03	--	3E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	5E-05	--	5E-05
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-02	--	4E-02
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-05	--	3E-05
			Chemical Total	--	2E-07	--	--	2E-07		--	4E-02	--	4E-02
			Radionuclide Total										
		Exposure Point Total						2E-07					4E-02
	Exposure Medium Total							2E-07					4E-02
Medium Total								2E-07					4E-02
Receptor Total								9E-06					8E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media: 9E-06

Total Hazard Across All Media: 8E-01

Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment: 8E-06

Total risk assuming California EPA TCE factors: 8E-06

Total risk assuming HEAST TCE factors: 8E-06

Total Skin HI =	2E-02
Total Immune System HI =	1E-01
Total Kidney HI =	4E-01
Total Blood HI =	2E-01
Total Nervous System HI =	6E-03
Total Liver HI =	1E-02
Total Endocrine HI =	N/A
Total Cardiovascular HI =	7E-03
Total Developmental HI =	3E-05
Total General Toxicity HI =	2E-03
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	3E-02

TABLE 3-9.26.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Murphy											
			1,2,4-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	5E-05	--	N/A	5E-05
			1,3,5-Trimethylbenzene	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	N/A	2E-05
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	4E-05	--	6E-05	1E-04
			Vinyl chloride	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Methylene chloride	2E-10	--	N/A	--	2E-10	Liver	1E-05	--	N/A	1E-05
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	5E-05	--	N/A	5E-05
			Trichloroethene	1E-09	--	N/A	--	1E-09	Liver	2E-04	--	N/A	2E-04
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	5E-06	--	N/A	5E-06
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	6E-05	--	9E-05	2E-04
			2,4,6-Trichlorophenol	N/A	--	N/A	--	N/A	Reproductive	N/A	--	N/A	N/A
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	3E-05	5E-05
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	2E-05	--	3E-05	5E-05
			Benzo(a)Anthracene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Bis(2-ethylhexyl) phthalate	2E-09	--	N/A	--	2E-09	Liver	1E-04	--	N/A	1E-04
			Benzo(b)Fluoranthene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Benzo(k)Fluoranthene	1E-09	--	2E-09	--	3E-09	N/A	N/A	--	N/A	N/A
			Benzo(a)Pyrene	1E-07	--	2E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-08	--	2E-08	--	3E-08	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	3E-08	--	4E-08	--	7E-08	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	N/A	--	N/A	Blood	2E-03	--	N/A	2E-03
			Arsenic	6E-08	--	2E-08	--	8E-08	Skin	3E-03	--	1E-03	4E-03
			Barium	N/A	--	N/A	--	N/A	Cardiovascular	1E-03	--	N/A	1E-03
			Cadmium	N/A	--	N/A	--	N/A	Kidney	3E-04	--	1E-04	4E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	4E-04	--	N/A	4E-04
			Mercury	N/A	--	N/A	--	N/A	Nervous System	2E-04	--	N/A	2E-04
			Thallium	N/A	--	N/A	--	N/A	Blood	3E-02	--	N/A	3E-02
			alpha-Chlordane	4E-10	--	2E-10	--	6E-10	Liver	6E-05	--	3E-05	8E-05
			gamma-Chlordane	4E-10	--	2E-10	--	6E-10	Liver	6E-05	--	3E-05	8E-05
			4,4'-DDE	N/A	--	N/A	--	N/A	Developmental	N/A	--	N/A	N/A
			4,4'-DDT	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Aroclor 1242	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A

TABLE 3-9.26.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Aroclor 1248	8E-09	--	1E-08	--	2E-08	Immune System	7E-03	--	1E-02	2E-02
			Aroclor 1254	2E-09	--	3E-09	--	5E-09	Immune System	2E-03	--	4E-03	6E-03
			Aroclor 1260	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			PCB TEQ*	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	6E-06	--	N/A	6E-06
			C8-C10 Aromatic	N/A	--	N/A	--	N/A	Kidney	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	N/A	--	N/A	N/A
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	5E-02	--	N/A	5E-02
			Chemical Total	2E-07	--	3E-07	--	5E-07		1E-01	--	2E-02	1E-01
			Radionuclide Total										
		Exposure Point Total						5E-07					1E-01
	Exposure Medium Total							5E-07					1E-01
Medium Total								5E-07					1E-01
Soil (0-15 ft)	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	9E-04	--	9E-04
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	6E-03	--	6E-03
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	2E-04	--	2E-04
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	4E-04	--	4E-04
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	3E-09	--	--	3E-09	Liver	--	2E-05	--	2E-05
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-04	--	2E-04

TABLE 3-9.26.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	3E-05	--	3E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-05	--	7E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-05	--	2E-05
			Benzene	--	1E-08	--	--	1E-08	Immune System	--	3E-04	--	3E-04
			Trichloroethene	--	1E-07	--	--	1E-07	Nervous System/Liver	--	2E-04	--	2E-04
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	5E-05	--	5E-05
			Tetrachloroethene	--	5E-09	--	--	5E-09	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	1E-05	--	1E-05
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	5E-05	--	5E-05
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	1E-05	--	1E-05
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-05	--	6E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-02	--	2E-02
			Chemical Total	--	1E-07	--	--	1E-07		--	3E-02	--	3E-02
			Radionuclide Total										
		Exposure Point Total						1E-07					3E-02
	Exposure Medium Total							1E-07					3E-02
Medium Total								1E-07					3E-02

TABLE 3-9.26.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Indoor Air	Murphy											
			1,2,4-Trimethylbenzene	--	N/A	--	--	N/A	Respirstory	--	N/A	--	N/A
			1,2-Dichloroethene (total)	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3,5-Trimethylbenzene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			n-Butylbenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	2E-06	--	2E-06
			p-Isopropyltoluene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Chloromethane	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Vinyl chloride	--	1E-08	--	--	1E-08	Liver	--	1E-04	--	1E-04
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	4E-06	--	4E-06
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	9E-08	--	9E-08
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Methylene chloride	--	4E-12	--	--	4E-12	Liver	--	2E-08	--	2E-08
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-06	--	2E-06
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	1E-06	--	1E-06
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	3E-05	--	3E-05
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	7E-07	--	7E-07
			Benzene	--	6E-11	--	--	6E-11	Immune System	--	2E-06	--	2E-06
			Trichloroethene	--	8E-09	--	--	8E-09	Nervous System/Liver	--	1E-05	--	1E-05
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	3E-06	--	3E-06
			Toluene	--	N/A	--	--	N/A	Nervous system	--	4E-07	--	4E-07
			Tetrachloroethene	--	1E-10	--	--	1E-10	N/A	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	9E-08	--	9E-08
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	8E-08	--	8E-08
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	N/A	--	N/A
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Dibenzofuran	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A

TABLE 3-9.26.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Recreational User
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	7E-07	--	7E-07
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-03	--	1E-03
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	4E-04	--	4E-04
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-05	--	2E-05
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-02	--	1E-02
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	1E-05	--	1E-05
			Chemical Total	--	2E-08	--	--	2E-08		--	1E-02	--	1E-02
			Radionuclide Total										
		Exposure Point Total						2E-08					1E-02
	Exposure Medium Total							2E-08					1E-02
Medium Total								2E-08					1E-02
Receptor Total								7E-07					2E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media: 7E-07

Total Hazard Across All Media: 2E-01

Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment: 6E-07

Total risk assuming California EPA TCE factors: 6E-07

Total risk assuming HEAST TCE factors: 6E-07

Total Skin HI = 4E-03

Total Immune System HI = 3E-02

Total Kidney HI = 9E-02

Total Blood HI = 3E-02

Total Nervous System HI = 9E-04

Total Liver HI = 1E-03

Total Endocrine HI = N/A

Total Cardiovascular HI = 1E-03

Total Developmental HI = 1E-05

Total General Toxicity HI = 4E-04

Total GI System HI = N/A

Total Reproductive System HI = N/A

Total Respiratory System HI = 7E-03

TABLE 3-9.27.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy											
			Vinyl chloride	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			Trichloroethene	2E-09	1E-13	N/A	--	2E-09	Liver	1E-03	2E-09	N/A	1E-03
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	3E-05	3E-07	1E-05	4E-05
			Benzo(a)Anthracene	3E-08	5E-13	1E-08	--	4E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(b)Fluoranthene	2E-08	5E-13	1E-08	--	3E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	9E-10	2E-14	4E-10	--	1E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	2E-07	3E-12	7E-08	--	2E-07	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	7E-08	1E-12	3E-08	--	9E-08	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	2E-08	4E-13	9E-09	--	3E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(g,h,i)perylene	N/A	N/A	N/A	--	N/A	General Toxicity	7E-06	7E-08	3E-06	1E-05
			Antimony	N/A	N/A	N/A	--	N/A	Blood	9E-03	N/A	N/A	9E-03
			Arsenic	2E-07	6E-11	2E-08	--	2E-07	Skin	3E-02	N/A	3E-03	3E-02
			Cadmium	N/A	1E-11	N/A	--	1E-11	Kidney	3E-03	N/A	4E-04	3E-03
			Copper	N/A	N/A	N/A	--	N/A	Kidney	1E-04	N/A	N/A	1E-04
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	6E-03	1E-03	N/A	7E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	6E-03	N/A	N/A	6E-03
			Nickel	N/A	N/A	N/A	--	N/A	General Toxicity	8E-04	N/A	N/A	8E-04
			Thallium	N/A	N/A	N/A	--	N/A	Blood	7E-03	N/A	N/A	7E-03
			Aroclor 1242	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1248	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1254	6E-08	3E-12	3E-08	--	9E-08	Immune System	1E-01	N/A	5E-02	2E-01
			Aroclor 1260	1E-09	6E-14	6E-10	--	2E-09	Immune System	2E-03	N/A	1E-03	4E-03
			PCB TEQ*	1E-10	5E-15	6E-11	--	2E-10	N/A	N/A	N/A	N/A	N/A
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	1E-02	1E-05	N/A	1E-02
			Chemical Total	5E-07	1E-10	2E-07	--	7E-07		2E-01	1E-03	5E-02	2E-01
			Radionuclide Total										
		Exposure Point Total						7E-07					2E-01
	Exposure Medium Total							7E-07					2E-01
Medium Total								7E-07					2E-01

TABLE 3-9.27.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Outdoor Air	Murphy											
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-05	--	3E-05
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-06	--	1E-06
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-04	--	3E-04
			Chemical Total	--	--	--	--	--		--	3E-04	--	3E-04
			Radionuclide Total										
		Exposure Point Total						N/A					3E-04
	Exposure Medium Total							N/A					3E-04
Medium Total								N/A					3E-04
Receptor Total								7E-07					2E-01

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media: 7E-07

Total Hazard Across All Media: 2E-01

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	7E-07
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	7E-07
Total risk assuming California EPA TCE factors	7E-07
Total risk assuming HEAST TCE factors	7E-07

Total Skin HI =	3E-02
Total Immune System HI =	2E-01
Total Kidney HI =	2E-02
Total Blood HI =	2E-02
Total Nervous System HI =	1E-02
Total Liver HI =	1E-03
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	N/A
Total General Toxicity HI =	9E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-8.27.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Murphy											
			Vinyl chloride	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			Trichloroethene	7E-10	5E-15	N/A	--	7E-10	Liver	4E-04	7E-11	N/A	4E-04
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-06	4E-09	1E-06	3E-06
			Benzo(a)Anthracene	8E-09	2E-14	3E-09	--	1E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(b)Fluoranthene	3E-09	9E-15	1E-09	--	4E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	3E-10	9E-16	1E-10	--	4E-10	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	5E-08	2E-13	2E-08	--	7E-08	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	4E-08	1E-14	2E-09	--	6E-09	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	7E-09	2E-14	3E-09	--	1E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(g,h,i)perylene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-06	4E-09	9E-07	3E-06
			Antimony	N/A	N/A	N/A	--	N/A	Blood	3E-03	N/A	N/A	3E-03
			Arsenic	5E-08	4E-12	5E-09	--	6E-08	Skin	8E-03	N/A	8E-04	9E-03
			Cadmium	N/A	6E-13	N/A	--	6E-13	Kidney	9E-04	N/A	1E-04	1E-03
			Copper	N/A	N/A	N/A	--	N/A	Kidney	4E-05	N/A	N/A	4E-05
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	2E-03	6E-05	N/A	2E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	2E-03	N/A	N/A	2E-03
			Nickel	N/A	N/A	N/A	--	N/A	General Toxicity	3E-04	N/A	N/A	3E-04
			Thallium	N/A	N/A	N/A	--	N/A	Blood	2E-03	N/A	N/A	2E-03
			Aroclor 1242	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1248	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			Aroclor 1254	2E-09	3E-14	9E-10	--	3E-09	Immune System	7E-03	N/A	3E-03	1E-02
			Aroclor 1260	2E-10	3E-15	1E-10	--	3E-10	Immune System	8E-04	N/A	4E-04	1E-03
			PCB TEQ*	4E-11	2E-16	2E-11	--	6E-11	N/A	N/A	N/A	N/A	N/A
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	4E-03	6E-07	N/A	4E-03
			Chemical Total	1E-07	5E-12	4E-08	--	2E-07		3E-02	7E-05	5E-03	4E-02
			Radionuclide Total										
		Exposure Point Total						2E-07					4E-02
	Exposure Medium Total							2E-07					4E-02
Medium Total								2E-07					4E-02

TABLE 3-9.27.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Outdoor Air	Murphy											
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	9E-06	--	9E-06
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-07	--	3E-07
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	9E-05	--	9E-05
			Chemical Total	--	--	--	--	--		--	1E-04	--	1E-04
			Radionuclide Total										
		Exposure Point Total						N/A					1E-04
	Exposure Medium Total							N/A					1E-04
Medium Total								N/A					1E-04
Receptor Total								2E-07					4E-02

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	2E-07
Total Hazard Across All Media	4E-02

Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	2E-07
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	2E-07
Total risk assuming California EPA TCE factors	2E-07
Total risk assuming HEAST TCE factors	2E-07

Total Skin HI =	9E-03
Total Immune System HI =	1E-02
Total Kidney HI =	5E-03
Total Blood HI =	5E-03
Total Nervous System HI =	4E-03
Total Liver HI =	4E-04
Total Endocrine HI =	N/A
Total Cardiovascular HI =	N/A
Total Developmental HI =	N/A
Total General Toxicity HI =	3E-04
Total GI System HI =	N/A
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.28.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Murphy											
			1,2,4-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-05	3E-06	N/A	2E-05
			1,3,5-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	9E-06	1E-06	N/A	9E-06
			Naphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-05	2E-07	8E-06	3E-05
			Vinyl chloride	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			Methylene chloride	3E-10	3E-15	N/A	--	3E-10	Liver	4E-05	1E-10	N/A	4E-05
			cis-1,2-Dichloroethene	N/A	N/A	N/A	--	N/A	Blood	2E-05	2E-09	N/A	2E-05
			Trichloroethene	2E-09	7E-14	N/A	--	2E-09	Liver	9E-04	1E-09	N/A	9E-04
			Xylenes (total)	N/A	N/A	N/A	--	N/A	General Toxicity	2E-05	7E-10	N/A	2E-05
			2-Methylnaphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	5E-06	6E-08	2E-06	8E-06
			2,4,6-Trichlorophenol	N/A	N/A	N/A	--	N/A	Reproductive	N/A	N/A	N/A	N/A
			Acenaphthylene	N/A	N/A	N/A	--	N/A	General Toxicity	8E-06	9E-08	3E-06	1E-05
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	9E-06	1E-07	4E-06	1E-05
			Benzo(a)Anthracene	2E-08	3E-13	6E-09	--	2E-08	N/A	N/A	N/A	N/A	N/A
			Bis(2-ethylhexyl) phthalate	2E-09	N/A	N/A	--	2E-09	Liver	6E-04	N/A	N/A	6E-04
			Benzo(b)Fluoranthene	2E-08	3E-13	7E-09	--	2E-08	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	2E-09	4E-14	8E-10	--	3E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	2E-07	3E-12	7E-08	--	2E-07	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	2E-08	3E-13	7E-09	--	2E-08	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	4E-08	6E-13	2E-08	--	6E-08	N/A	N/A	N/A	N/A	N/A
			Antimony	N/A	N/A	N/A	--	N/A	Blood	7E-03	N/A	N/A	7E-03
			Arsenic	8E-08	4E-11	8E-08	--	9E-08	Skin	1E-02	N/A	1E-03	1E-02
			Barium	N/A	N/A	N/A	--	N/A	Cardiovascular	5E-03	N/A	N/A	5E-03
			Cadmium	N/A	5E-12	N/A	--	5E-12	Kidney	1E-03	N/A	2E-04	1E-03
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	3E-03	6E-04	N/A	3E-03
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	7E-04	N/A	N/A	7E-04
			Thallium	N/A	N/A	N/A	--	N/A	Blood	1E-02	N/A	N/A	1E-02
			alpha-Chlordane	6E-10	3E-14	8E-11	--	7E-10	Liver	2E-04	3E-09	3E-05	3E-04
			gamma-Chlordane	6E-10	3E-14	8E-11	--	7E-10	Liver	2E-04	3E-09	3E-05	3E-04
			4,4'-DDE	N/A	N/A	N/A	--	N/A	Developmental	N/A	N/A	N/A	N/A
			4,4'-DDT	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			Aroclor 1242	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A

TABLE 3-9.28.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Aroclor 1248	2E-08	7E-13	8E-09	--	3E-08	Immune System	3E-02	N/A	1E-02	4E-02
			Aroclor 1254	5E-09	2E-13	3E-09	--	8E-09	Immune System	1E-02	N/A	4E-03	1E-02
			Aroclor 1260	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			PCB TEQ*	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			C5-C8 Aliphatic	N/A	N/A	N/A	--	N/A	Nervous System	2E-06	8E-10	N/A	2E-06
			C9-C10 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	N/A	N/A	N/A	N/A
			C9-C18 Aliphatic	N/A	N/A	N/A	--	N/A	Liver and Blood	N/A	N/A	N/A	N/A
			C19-C36 Aliphatic	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	2E-02	2E-05	N/A	2E-02
			Chemical Total	4E-07	5E-11	1E-07	--	5E-07		1E-01	6E-04	2E-02	1E-01
			Radionuclide Total										
		Exposure Point Total						5E-07					1E-01
	Exposure Medium Total							5E-07					1E-01
Medium Total								5E-07					1E-01
Ground Water	Shallow Ground Water	Murphy											
			1,1,2-Trichloroethane	8E-11	--	3E-10	--	4E-10	Liver	2E-06	--	9E-06	1E-05
			1,1-Dichloroethane	N/A	--	N/A	--	N/A	Liver	2E-05	--	2E-04	2E-04
			1,1-Dichloroethene	N/A	--	N/A	--	N/A	Liver	4E-05	--	3E-04	3E-04
			1,2,4-Trichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	N/A	--	N/A	N/A
			1,3-Dichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	N/A	--	N/A	N/A
			1,4-Dichlorobenzene	N/A	--	N/A	--	N/A	Developmental	N/A	--	N/A	N/A
			Benzene	1E-09	--	2E-08	--	3E-08	Immune System	1E-04	--	3E-03	3E-03
			Bromomethane	N/A	--	N/A	--	N/A	GI System	2E-05	--	3E-05	5E-05
			Chlorobenzene	N/A	--	N/A	--	N/A	Liver	1E-06	--	2E-05	2E-05
			Chlorodibromomethane	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Chloroethane	N/A	--	N/A	--	N/A	Developmental	2E-05	--	1E-04	1E-04
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	2E-03	--	3E-02	3E-02
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	2E-06	--	1E-04	1E-04
			Methyl tert-butyl ether	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A

TABLE 3-9.28.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Methylene chloride	4E-10	--	5E-09	--	5E-09	Liver	6E-05	--	7E-04	8E-04
			Tetrachloroethene	5E-10	--	1E-08	--	1E-08	Liver	2E-05	--	3E-04	4E-04
			Toluene	N/A	--	N/A	--	N/A	Liver/Kidney	2E-06	--	1E-04	1E-04
			trans-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	2E-04	--	2E-03	2E-03
			Trichloroethene	5E-08	--	4E-07	--	4E-07	Liver	3E-02	--	2E-01	3E-01
			Vinyl chloride	1E-06	--	1E-05	--	1E-05	Liver	2E-02	--	2E-01	2E-01
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	4E-05	--	3E-03	3E-03
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			4-Methylphenol	N/A	--	N/A	--	N/A	Nervous System	5E-04	--	5E-03	6E-03
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	1E-05	--	8E-04	8E-04
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	7E-06	--	6E-04	6E-04
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	7E-06	--	9E-04	9E-04
			Benzo(a)Pyrene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	2E-04	--	N/A	2E-04
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	3E-04	--	N/A	3E-04
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	3E-04	--	N/A	3E-04
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	7E-05	--	N/A	7E-05
			Arsenic	3E-07	--	5E-07	--	8E-07	Skin	4E-02	--	8E-02	1E-01
			Chromium	N/A	--	N/A	--	N/A	GI System	6E-06	--	7E-04	8E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	5E-03	--	6E-02	7E-02
			PCB TEQ*	6E-10	--	3E-07	--	3E-07	N/A	N/A	--	N/A	N/A
			Dieldrin	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			4,4'-DDD	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Chemical Total	1E-06	--	1E-05	--	1E-05		9E-02	--	6E-01	7E-01
			Radionuclide Total										
		Exposure Point Total						1E-05					7E-01
	Exposure Medium Total							1E-05					7E-01
Medium Total								1E-05					7E-01

TABLE 3-9.28.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Outdoor Air	Murphy											
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-05	--	3E-05
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-06	--	1E-06
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	4E-03	--	4E-03
			Chemical Total	--	--	--	--	--		--	4E-03	--	4E-03
			Radionuclide Total										
		Exposure Point Total						N/A					4E-03
	Exposure Medium Total							N/A					4E-03
Medium Total								N/A					4E-03
Ground Water	Outdoor Air	Murphy											
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	5E-04	--	5E-04
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	3E-07	--	3E-07
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-05	--	3E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	6E-07	--	6E-07
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-05	--	2E-05

TABLE 3-9.28.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chemical Total	--	--	--	--	--		--	6E-04	--	6E-04
			Radionuclide Total										
		Exposure Point Total						N/A					6E-04
	Exposure Medium Total							N/A					6E-04
Medium Total								N/A					6E-04
Receptor Total								1E-05					8E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	1E-05
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	1E-05
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	1E-05
Total risk assuming California EPA TCE factors	1E-05
Total risk assuming HEAST TCE factors	1E-05

Total Hazard Across All Media	8E-01
Total Skin HI =	1E-01
Total Immune System HI =	6E-02
Total Kidney HI =	3E-02
Total Blood HI =	5E-02
Total Nervous System HI =	8E-02
Total Liver HI =	4E-01
Total Endocrine HI =	N/A
Total Cardiovascular HI =	5E-03
Total Developmental HI =	1E-04
Total General Toxicity HI =	6E-03
Total GI System HI =	8E-04
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-9.28.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Subsurface Soil	Murphy											
			1,2,4-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	7E-06	1E-09	N/A	7E-06
			1,3,5-Trimethylbenzene	N/A	N/A	N/A	--	N/A	General Toxicity	3E-06	6E-10	N/A	3E-06
			Naphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	6E-06	1E-08	2E-06	8E-06
			Vinyl chloride	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			Methylene chloride	9E-11	1E-16	N/A	--	9E-11	Liver	1E-05	7E-12	N/A	1E-05
			cis-1,2-Dichloroethene	N/A	N/A	N/A	--	N/A	Blood	7E-06	9E-11	N/A	7E-06
			Trichloroethene	5E-10	3E-15	N/A	--	5E-10	Liver	3E-04	6E-11	N/A	3E-04
			Xylenes (total)	N/A	N/A	N/A	--	N/A	General Toxicity	6E-06	3E-11	N/A	6E-06
			2-Methylnaphthalene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-06	3E-09	7E-07	2E-06
			2,4,6-Trichlorophenol	N/A	N/A	N/A	--	N/A	Reproductive	N/A	N/A	N/A	N/A
			Acenaphthylene	N/A	N/A	N/A	--	N/A	General Toxicity	2E-06	4E-09	1E-06	4E-06
			Phenanthrene	N/A	N/A	N/A	--	N/A	General Toxicity	3E-06	5E-09	1E-06	4E-06
			Benzo(a)Anthracene	5E-09	1E-14	2E-09	--	7E-09	N/A	N/A	N/A	N/A	N/A
			Bis(2-ethylhexyl) phthalate	7E-10	N/A	N/A	--	7E-10	Liver	2E-04	N/A	N/A	2E-04
			Benzo(b)Fluoranthene	5E-09	1E-14	2E-09	--	7E-09	N/A	N/A	N/A	N/A	N/A
			Benzo(k)Fluoranthene	6E-10	2E-15	3E-10	--	8E-10	N/A	N/A	N/A	N/A	N/A
			Benzo(a)Pyrene	5E-08	2E-13	2E-08	--	7E-08	N/A	N/A	N/A	N/A	N/A
			Indeno(1,2,3-cd)pyrene	5E-09	1E-14	2E-09	--	7E-09	N/A	N/A	N/A	N/A	N/A
			Dibenz(a,h) anthracene	1E-08	4E-14	5E-09	--	2E-08	N/A	N/A	N/A	N/A	N/A
			Antimony	N/A	N/A	N/A	--	N/A	Blood	2E-03	N/A	N/A	2E-03
			Arsenic	3E-08	2E-12	3E-09	--	3E-08	Skin	4E-03	N/A	4E-04	5E-03
			Barium	N/A	N/A	N/A	--	N/A	Cardiovascular	2E-03	N/A	N/A	2E-03
			Cadmium	N/A	3E-13	N/A	--	3E-13	Kidney	4E-04	N/A	5E-05	4E-04
			Lead	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			Manganese	N/A	N/A	N/A	--	N/A	Nervous System	5E-04	2E-05	N/A	6E-04
			Mercury	N/A	N/A	N/A	--	N/A	Nervous System	2E-04	N/A	N/A	2E-04
			Thallium	N/A	N/A	N/A	--	N/A	Blood	3E-03	N/A	N/A	3E-03
			alpha-Chlordane	2E-10	1E-15	3E-11	--	2E-10	Liver	8E-05	1E-10	1E-05	9E-05
			gamma-Chlordane	2E-10	1E-15	3E-11	--	2E-10	Liver	8E-05	1E-10	1E-05	9E-05
			4,4'-DDE	N/A	N/A	N/A	--	N/A	Developmental	N/A	N/A	N/A	N/A
			4,4'-DDT	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			Aroclor 1242	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A

TABLE 3-9.28.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Aroclor 1248	3E-09	3E-14	1E-09	--	4E-09	Immune System	1E-02	N/A	4E-03	1E-02
			Aroclor 1254	9E-10	1E-14	4E-10	--	1E-09	Immune System	3E-03	N/A	1E-03	4E-03
			Aroclor 1260	N/A	N/A	N/A	--	N/A	Immune System	N/A	N/A	N/A	N/A
			PCB TEQ*	N/A	N/A	N/A	--	N/A	N/A	N/A	N/A	N/A	N/A
			C5-C8 Aliphatic	N/A	N/A	N/A	--	N/A	Nervous System	8E-07	4E-11	N/A	8E-07
			C8-C10 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	N/A	N/A	N/A	N/A
			C9-C18 Aliphatic	N/A	N/A	N/A	--	N/A	Liver and Blood	N/A	N/A	N/A	N/A
			C19-C36 Aliphatic	N/A	N/A	N/A	--	N/A	Liver	N/A	N/A	N/A	N/A
			C11-C22 Aromatic	N/A	N/A	N/A	--	N/A	Kidney	7E-03	1E-06	N/A	7E-03
			Chemical Total	1E-07	2E-12	4E-08	--	1E-07		3E-02	2E-05	6E-03	4E-02
			Radionuclide Total										
		Exposure Point Total						1E-07					4E-02
	Exposure Medium Total							1E-07					4E-02
Medium Total								1E-07					4E-02
Ground Water	Shallow Ground Water	Murphy											
			1,1,2-Trichloroethane	3E-11	--	1E-10	--	1E-10	Liver	8E-07	--	3E-06	4E-06
			1,1-Dichloroethane	N/A	--	N/A	--	N/A	Liver	6E-06	--	7E-05	7E-05
			1,1-Dichloroethene	N/A	--	N/A	--	N/A	Liver	1E-05	--	9E-05	1E-04
			1,2,4-Trichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	N/A	--	N/A	N/A
			1,3-Dichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	N/A	--	N/A	N/A
			1,4-Dichlorobenzene	N/A	--	N/A	--	N/A	Developmental	N/A	--	N/A	N/A
			Benzene	4E-10	--	8E-09	--	8E-09	Immune System	4E-05	--	8E-04	9E-04
			Bromomethane	N/A	--	N/A	--	N/A	GI System	5E-06	--	9E-06	1E-05
			Chlorobenzene	N/A	--	N/A	--	N/A	Liver	4E-07	--	5E-06	5E-06
			Chlorodibromomethane	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			Chloroethane	N/A	--	N/A	--	N/A	Developmental	8E-06	--	3E-05	4E-05
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	5E-04	--	9E-03	1E-02
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	6E-07	--	5E-05	5E-05
			Methyl tert-butyl ether	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A

TABLE 3-9.28.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Methylene chloride	1E-10	--	2E-09	--	2E-09	Liver	2E-05	--	2E-04	3E-04
			Tetrachloroethene	2E-10	--	3E-09	--	3E-09	Liver	5E-06	--	1E-04	1E-04
			Toluene	N/A	--	N/A	--	N/A	Liver/Kidney	7E-07	--	3E-05	3E-05
			trans-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	5E-05	--	7E-04	7E-04
			Trichloroethene	1E-08	--	1E-07	--	1E-07	Liver	9E-03	--	7E-02	8E-02
			Vinyl chloride	3E-07	--	3E-06	--	3E-06	Liver	5E-03	--	5E-02	5E-02
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	1E-05	--	1E-03	1E-03
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			4-Methylphenol	N/A	--	N/A	--	N/A	Nervous System	2E-04	--	2E-03	2E-03
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	4E-06	--	2E-04	2E-04
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	2E-06	--	2E-04	2E-04
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	N/A	--	N/A	N/A
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	2E-06	--	3E-04	3E-04
			Benzo(a)Pyrene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	7E-05	--	N/A	7E-05
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	1E-04	--	N/A	1E-04
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	1E-04	--	N/A	1E-04
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	2E-05	--	N/A	2E-05
			Arsenic	9E-06	--	2E-07	--	2E-07	Skin	1E-02	--	2E-02	4E-02
			Chromium	N/A	--	N/A	--	N/A	GI System	2E-06	--	2E-04	2E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	1E-03	--	2E-02	2E-02
			PCB TEQ*	2E-10	--	1E-07	--	1E-07	N/A	N/A	--	N/A	N/A
			Dieldrin	N/A	--	N/A	--	N/A	Liver	N/A	--	N/A	N/A
			4,4'-DDD	N/A	--	N/A	--	N/A	Immune System	N/A	--	N/A	N/A
			Chemical Total	4E-07	--	4E-06	--	4E-06		3E-02	--	2E-01	2E-01
			Radionuclide Total										
		Exposure Point Total						4E-06					2E-01
	Exposure Medium Total							4E-06					2E-01
Medium Total								4E-06					2E-01

TABLE 3-9.28.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Subsurface Soil	Outdoor Air	Murphy											
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	9E-06	--	9E-06
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-07	--	3E-07
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	1E-03	--	1E-03
			Chemical Total	--	--	--	--	--		--	1E-03	--	1E-03
			Radionuclide Total										
		Exposure Point Total						N/A					1E-03
	Exposure Medium Total							N/A					1E-03
Medium Total								N/A					1E-03
Ground Water	Outdoor Air	Murphy											
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	9E-04	--	9E-04
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	6E-07	--	6E-07
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-05	--	6E-05
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	1E-06	--	1E-06
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-05	--	2E-05

TABLE 3-9.28.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult					Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chemical Total	--	--	--	--	--		--	9E-04	--	9E-04
			Radionuclide Total										
		Exposure Point Total						N/A					9E-04
	Exposure Medium Total							N/A					9E-04
Medium Total								N/A					9E-04
Receptor Total								4E-06					3E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media	4E-06
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	5E-06
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	4E-06
Total risk assuming California EPA TCE factors	4E-06
Total risk assuming HEAST TCE factors	4E-06

Total Hazard Across All Media	3E-01
Total Skin HI =	4E-02
Total Immune System HI =	2E-02
Total Kidney HI =	1E-02
Total Blood HI =	2E-02
Total Nervous System HI =	2E-02
Total Liver HI =	1E-01
Total Endocrine HI =	N/A
Total Cardiovascular HI =	2E-03
Total Developmental HI =	4E-05
Total General Toxicity HI =	2E-03
Total GI System HI =	3E-04
Total Reproductive System HI =	N/A
Total Respiratory System HI =	N/A

TABLE 3-8.29.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Tap water/Shower head Off-site	Combined Data											
			1,1,2-Trichloroethane	4E-07	--	N/A	--	4E-07	Liver	1E-02	--	N/A	1E-02
			1,1-Dichloroethane	N/A	--	N/A	--	N/A	Liver	2E-01	--	N/A	2E-01
			1,1-Dichloroethene	N/A	--	N/A	--	N/A	Liver	2E-02	--	N/A	2E-02
			1,2,4-Trichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	2E-01	--	2E-01	4E-01
			1,3-Dichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	2E+00	--	1E+00	3E+00
			1,4-Dichlorobenzene	N/A	--	N/A	--	N/A	Developmental	6E-01	--	3E-01	9E-01
			Benzene	8E-05	--	1E-05	--	9E-05	Immune System	2E+00	--	2E-01	2E+00
			Bromomethane	N/A	--	N/A	--	N/A	GI System	7E-02	--	N/A	7E-02
			Chlorobenzene	N/A	--	N/A	--	N/A	Liver	9E-02	--	2E-02	1E-01
			Chlorodibromomethane	2E-06	--	N/A	--	2E-06	Liver	7E-03	--	N/A	7E-03
			Chloroethane	N/A	--	N/A	--	N/A	Developmental	1E-02	--	N/A	1E-02
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	2E+01	--	N/A	2E+01
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	4E-02	--	1E-02	5E-02
			Methyl tert-butyl ether	3E-05	--	N/A	--	3E-05	N/A	N/A	--	N/A	N/A
			Methylene chloride	1E-05	--	N/A	--	1E-05	Liver	1E-01	--	N/A	1E-01
			Tetrachloroethene	1E-05	--	7E-06	--	2E-05	Liver	3E-01	--	1E-01	5E-01
			Toluene	N/A	--	N/A	--	N/A	Liver/Kidney	6E-01	--	1E-01	7E-01
			trans-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	1E-01	--	N/A	1E-01
			Trichloroethene	1E-03	--	2E-04	--	1E-03	Liver	5E+01	--	6E+00	6E+01
			Vinyl chloride	2E-02	--	N/A	--	2E-02	Liver	2E+01	--	N/A	2E+01
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	5E-02	--	2E-02	7E-02
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	1E-03	--	N/A	1E-03
			4-Methylphenol	N/A	--	N/A	--	N/A	Nervous System	5E-01	--	N/A	5E-01
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	1E-01	--	5E-02	2E-01
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	3E-01	--	2E-01	5E-01
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	2E-02	--	1E-02	3E-02
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	5E-02	--	9E-02	1E-01
			Benzo(a)Pyrene	2E-06	--	4E-05	--	4E-05	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	2E-06	--	5E-05	--	5E-05	N/A	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	3E+00	--	N/A	3E+00
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	4E+00	--	N/A	4E+00
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	1E+00	--	N/A	1E+00

TABLE 3-9.29.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	1E+00	--	N/A	1E+00
			Arsenic	5E-03	--	N/A	--	5E-03	Skin	6E+01	--	N/A	6E+01
			Chromium	N/A	--	N/A	--	N/A	GI System	9E-03	--	3E-03	1E-02
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	1E+01	--	N/A	1E+01
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	4E-01	--	N/A	4E-01
			PCB TEQ*	8E-06	--	1E-04	--	1E-04	N/A	N/A	--	N/A	N/A
			Dieldrin	4E-06	--	2E-06	--	6E-06	Liver	3E-02	--	1E-02	4E-02
			4,4'-DDD	2E-06	--	1E-05	--	2E-05	Immune System	3E-02	--	N/A	3E-02
			Chemical Total	2E-02	--	4E-04	--	2E-02		2E+02	--	8E+00	2E+02
			Radionuclide Total										
		Exposure Point Total						2E-02					2E+02
	Exposure Medium Total							2E-02					2E+02
Medium Total								2E-02					2E+02
Ground Water	Indoor Air	Tap water/Shower head Off-site											
			1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	3E-03	--	3E-03
			1,1,2-Trichloro-1,2,2-trifluoroetha	--	N/A	--	--	N/A	General Toxicity	--	N/A	--	N/A
			1,1,2-Trichloroethane	--	4E-04	--	--	4E-04	Nervous system	--	6E-06	--	6E-06
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	2E-02	--	2E-02
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	2E-03	--	2E-03
			1,2,4-Trichlorobenzene	--	N/A	--	--	N/A	Liver	--	4E-03	--	4E-03
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	1E-02	--	1E-02
			2-Butanone (MEK)	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Benzene	--	1E-05	--	--	1E-05	Immune System	--	1E-01	--	1E-01
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	1E-02	--	1E-02
			Carbon disulfide	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	1E-02	--	1E-02

TABLE 3-9.29.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	3E-04	--	3E-04
			Chloroform	--	5E-08	--	--	5E-08	N/A	--	9E-05	--	9E-05
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	4E-01	--	4E-01
			Cyclohexane	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Dichlorodifluoromethane	--	N/A	--	--	N/A	None Observed	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	2E-03	--	2E-03
			Isopropylbenzene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	7E-03	--	7E-03
			Methylene chloride	--	9E-07	--	--	9E-07	Liver	--	1E-03	--	1E-03
			Tetrachloroethene	--	4E-06	--	--	4E-06	N/A	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	1E-01	--	1E-01
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	7E-03	--	7E-03
			Trichloroethene	--	3E-04	--	--	3E-04	Nervous System/Liver	--	2E-01	--	2E-01
			Vinyl chloride	--	1E-04	--	--	1E-04	Liver	--	3E-01	--	3E-01
			Xylenes (total)	--	N/A	--	--	N/A	Nervous system	--	5E-02	--	5E-02
			Acetophenone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	3E-01	--	3E-01
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,1'-Biphenyl	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	2E-02	--	2E-02
			Acenaphthene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Fluorene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	2E-02	--	2E-02
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	6E-01	--	6E-01

TABLE 3-9.29.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	8E-01	--	8E-01
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	1E-01	--	1E-01
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-01	--	2E-01
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-02	--	2E-02
			Chemical Total	--	9E-04	--	--	9E-04		--	3E+00	--	3E+00
			Radionuclide Total										
		Exposure Point Total						9E-04					3E+00
	Exposure Medium Total							9E-04					3E+00
Medium Total								9E-04					3E+00
Receptor Total								2E-02					2E-02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media	2E-02
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	2E-02
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	2E-02
Total risk assuming California EPA TCE factors	2E-02
Total risk assuming HEAST TCE factors	2E-02

Total Hazard Across All Media	2E+02
Total Skin HI =	6E+01
Total Immune System HI =	2E+00
Total Kidney HI =	6E+00
Total Blood HI =	2E+01
Total Nervous System HI =	1E+01
Total Liver HI =	8E+01
Total Endocrine HI =	4E+00
Total Cardiovascular HI =	N/A
Total Developmental HI =	9E-01
Total General Toxicity HI =	1E+00
Total GI System HI =	8E-02
Total Reproductive System HI =	N/A
Total Respiratory System HI =	3E-01

TABLE 3-9.29.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ground Water	Tap water/Shower head Off-site	Combined Data											
			1,1,2-Trichloroethane	8E-08	--	N/A	--	8E-08	Liver	6E-03	--	N/A	6E-03
			1,1-Dichloroethane	N/A	--	N/A	--	N/A	Liver	1E-02	--	N/A	1E-02
			1,1-Dichloroethene	N/A	--	N/A	--	N/A	Liver	5E-03	--	N/A	5E-03
			1,2,4-Trichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	4E-02	--	3E-02	7E-02
			1,3-Dichlorobenzene	N/A	--	N/A	--	N/A	Endocrine	4E-01	--	2E-01	6E-01
			1,4-Dichlorobenzene	N/A	--	N/A	--	N/A	Developmental	2E-02	--	8E-03	3E-02
			Benzene	8E-07	--	N/A	--	8E-07	Immune System	5E-02	--	N/A	5E-02
			Bromomethane	N/A	--	N/A	--	N/A	GI System	4E-02	--	N/A	4E-02
			Chlorobenzene	N/A	--	N/A	--	N/A	Liver	2E-02	--	4E-03	2E-02
			Chlorodibromomethane	4E-07	--	N/A	--	4E-07	Liver	4E-03	--	N/A	4E-03
			Chloroethane	N/A	--	N/A	--	N/A	Developmental	1E-03	--	N/A	1E-03
			cis-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Blood	6E-01	--	N/A	6E-01
			Ethylbenzene	N/A	--	N/A	--	N/A	Liver/Kidney	2E-03	--	6E-04	2E-03
			Methyl tert-butyl ether	2E-07	--	N/A	--	2E-07	N/A	N/A	--	N/A	N/A
			Methylene chloride	1E-07	--	N/A	--	1E-07	Liver	4E-03	--	N/A	4E-03
			Tetrachloroethene	5E-07	--	3E-07	--	8E-07	Liver	4E-02	--	2E-02	6E-02
			Toluene	N/A	--	N/A	--	N/A	Liver/Kidney	8E-03	--	2E-03	1E-02
			trans-1,2-Dichloroethene	N/A	--	N/A	--	N/A	Liver	1E-02	--	N/A	1E-02
			Trichloroethene	2E-05	--	2E-06	--	2E-05	Liver	2E+00	--	2E-01	2E+00
			Vinyl chloride	2E-04	--	N/A	--	2E-04	Liver	6E-01	--	N/A	6E-01
			Xylenes (total)	N/A	--	N/A	--	N/A	General Toxicity	2E-03	--	7E-04	3E-03
			Acetophenone	N/A	--	N/A	--	N/A	General Toxicity	7E-04	--	N/A	7E-04
			4-Methylphenol	N/A	--	N/A	--	N/A	Nervous System	6E-02	--	N/A	6E-02
			Naphthalene	N/A	--	N/A	--	N/A	General Toxicity	1E-02	--	5E-03	2E-02
			2-Methylnaphthalene	N/A	--	N/A	--	N/A	General Toxicity	7E-02	--	6E-02	1E-01
			Acenaphthylene	N/A	--	N/A	--	N/A	General Toxicity	9E-03	--	9E-03	2E-02
			Phenanthrene	N/A	--	N/A	--	N/A	General Toxicity	1E-02	--	2E-02	4E-02
			Benzo(a)Pyrene	4E-07	--	7E-06	--	7E-06	N/A	N/A	--	N/A	N/A
			Dibenz(a,h) anthracene	3E-07	--	9E-06	--	9E-06	N/A	N/A	--	N/A	N/A
			C9-C18 Aliphatic	N/A	--	N/A	--	N/A	Liver and Blood	7E-02	--	N/A	7E-02
			C11-C22 Aromatic	N/A	--	N/A	--	N/A	Kidney	2E-01	--	N/A	2E-01
			C19-C36 Aliphatic	N/A	--	N/A	--	N/A	Liver	3E-02	--	N/A	3E-02

TABLE 3-9.29.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			C5-C8 Aliphatic	N/A	--	N/A	--	N/A	Nervous System	8E-02	--	N/A	8E-02
			Arsenic	4E-05	--	N/A	--	4E-05	Skin	1E+00	--	N/A	1E+00
			Chromium	N/A	--	N/A	--	N/A	GI System	4E-04	--	7E-05	5E-04
			Lead	N/A	--	N/A	--	N/A	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	--	N/A	Nervous System	1E+00	--	N/A	1E+00
			Nickel	N/A	--	N/A	--	N/A	General Toxicity	2E-02	--	N/A	2E-02
			PCB TEQ*	7E-07	--	1E-05	--	1E-05	N/A	N/A	--	N/A	N/A
			Dieldrin	8E-07	--	4E-07	--	1E-06	Liver	2E-02	--	7E-03	2E-02
			4,4'-DDD	2E-07	--	9E-07	--	1E-06	Immune System	5E-03	--	N/A	5E-03
			Chemical Total	2E-04	--	3E-05	--	3E-04		7E+00	--	6E-01	8E+00
			Radionuclide Total										
		Exposure Point Total						3E-04					8E+00
	Exposure Medium Total							3E-04					8E+00
Medium Total								3E-04					8E+00
Ground Water	Indoor Air	Tap water/Shower head Off-site	1,1,1-Trichloroethane	--	N/A	--	--	N/A	Nervous system	--	2E-04	--	2E-04
			1,1,2-Trichloro-1,2,2-trifluoroethe	--	N/A	--	--	N/A	General Toxicity	--	N/A	--	N/A
			1,1,2-Trichloroethane	--	1E-04	--	--	1E-04	Nervous system	--	9E-05	--	9E-05
			1,1-Dichloroethane	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			1,1-Dichloroethene	--	N/A	--	--	N/A	Liver	--	1E-03	--	1E-03
			1,2,4-Trichlorobenzene	--	N/A	--	--	N/A	Liver	--	1E-03	--	1E-03
			1,2-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,3-Dichlorobenzene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	--	N/A	Liver	--	5E-04	--	5E-04
			2-Butanone (MEK)	--	N/A	--	--	N/A	Developmental	--	N/A	--	N/A
			Acetone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Benzene	--	2E-07	--	--	2E-07	Immune System	--	7E-03	--	7E-03
			Bromomethane	--	N/A	--	--	N/A	Respiratory	--	5E-02	--	5E-02
			Carbon disulfide	--	N/A	--	--	N/A	Nervous system	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	--	N/A	Liver	--	5E-03	--	5E-03

TABLE 3-8.29.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			Chloroethane	--	N/A	--	--	N/A	Developmental	--	4E-05	--	4E-05
			Chloroform	--	7E-07	--	--	7E-07	N/A	--	5E-03	--	5E-03
			cis-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	3E-02	--	3E-02
			Cyclohexane	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Dichlorodifluoromethane	--	N/A	--	--	N/A	None Observed	--	N/A	--	N/A
			Ethylbenzene	--	N/A	--	--	N/A	Developmental	--	1E-04	--	1E-04
			Isopropylbenzene	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Methyl cyclohexane	--	N/A	--	--	N/A	Kidney	--	N/A	--	N/A
			Methyl tert-butyl ether	--	N/A	--	--	N/A	Liver/Kidney	--	2E-04	--	2E-04
			Methylene chloride	--	1E-08	--	--	1E-08	Liver	--	6E-05	--	6E-05
			Tetrachloroethene	--	2E-07	--	--	2E-07	N/A	--	N/A	--	N/A
			Toluene	--	N/A	--	--	N/A	Nervous system	--	3E-03	--	3E-03
			trans-1,2-Dichloroethene	--	N/A	--	--	N/A	Liver	--	1E-03	--	1E-03
			Trichloroethene	--	7E-06	--	--	7E-06	Nervous System/Liver	--	1E-02	--	1E-02
			Vinyl chloride	--	2E-06	--	--	2E-06	Liver	--	2E-02	--	2E-02
			Xylenes (total)	--	N/A	--	--	N/A	Nervous system	--	3E-03	--	3E-03
			Acetophenone	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Naphthalene	--	N/A	--	--	N/A	Respiratory	--	5E-02	--	5E-02
			2-Methylnaphthalene	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			1,1'-Biphenyl	--	N/A	--	--	N/A	N/A	--	N/A	--	N/A
			Acenaphthylene	--	N/A	--	--	N/A	Respiratory	--	2E-02	--	2E-02
			Acenaphthene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Fluorene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			Phenanthrene	--	N/A	--	--	N/A	Respiratory	--	1E-02	--	1E-02
			Anthracene	--	N/A	--	--	N/A	Respiratory	--	N/A	--	N/A
			C9-C18 Aliphatic	--	N/A	--	--	N/A	Kidney	--	3E-02	--	3E-02

TABLE 3-9.29.CT

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY

Southwest Properties, Wells G & H Superfund Site Operable Unit 2, Woburn, Massachusetts

Scenario Timeframe: Future
Receptor Population: Off-site Resident
Receptor Age: Young Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult					Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	External (Radiation)	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
			C11-C22 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	8E-02	--	8E-02
			C5-C8 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-02	--	2E-02
			C9-C10 Aromatic	--	N/A	--	--	N/A	Liver/Kidney	--	2E-02	--	2E-02
			C9-C12 Aliphatic	--	N/A	--	--	N/A	Kidney	--	2E-03	--	2E-03
			Chemical Total	--	2E-04	--	--	2E-04		--	4E-01	--	4E-01
			Radionuclide Total										
		Exposure Point Total						2E-04					4E-01
	Exposure Medium Total							2E-04					4E-01
Medium Total								2E-04					4E-01
Receptor Total								4E-04					8E+00

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across All Media	4E-04
Should the dioxin slope factor be revised as proposed, the risk for this receptor would increase to	5E-04
Total risk assuming low-end of range from EPA's 2001 TCE Health Risk Assesment	4E-04
Total risk assuming California EPA TCE factors	4E-04
Total risk assuming HEAST TCE factors	4E-04

Total Hazard Across All Media	8E+00
Total Skin HI =	1E+00
Total Immune System HI =	7E-02
Total Kidney HI =	4E-01
Total Blood HI =	7E-01
Total Nervous System HI =	1E+00
Total Liver HI =	3E+00
Total Endocrine HI =	7E-01
Total Cardiovascular HI =	N/A
Total Developmental HI =	3E-02
Total General Toxicity HI =	2E-01
Total GI System HI =	4E-02
Total Reproductive System HI =	N/A
Total Respiratory System HI =	1E-01