

**Appendix A**  
**Table 5—Physical and Toxicological Properties**  
**A. Organic Regulated Substances**

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>1</sup>	RfCi (mg/m <sup>3</sup> )	IUR (µg/m <sup>3</sup> ) <sup>1</sup>	Koc	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from Subsurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K) (yr <sup>-1</sup> )					
ACENAPHTHENE	83-32-9	0.06	I			4900	X	3.8	1,5,6	17220	20833		279	1.24					
ACENAPHTHYLENE	208-96-8	0.06	S <sup>1</sup>			4500	X	16.1	5,6,7	16493	19776		280	2.11					
ACEPHATE	30560-19-1	0.0012	O			3		818000	6				340						
ACETALDEHYDE	75-07-0			0.009	I	4.1	X	1000000	1	13010	14945	X	20						
ACETONE	67-64-1	0.9	I	[31]	[D]	0.31	X	1000000	1	13007	14942	X	56	18.07					
ACETONITRILE	75-05-8			0.06	I	0.5	X	1000000	1	13020	14958	X	82	4.50					
ACETOPHENONE	98-86-2	0.1	I			170		5500	1			X	203						
ACETYLAMINO-FLUORENE, 2- (2AAF)	53-96-3			3.8	C	1600		10.13	7				303	0.69					
ACROLEIN	107-02-8	0.0005	I		0.00002	0.56	X	208000	1,2,4	13012	14948	X	53	4.50					
ACRYLAMIDE	79-06-1	0.002	I	0.5	I	0.006	I	2151000	4	12981	14906		193						
ACRYLIC ACID	79-10-7	0.5	I		[0.001]	29	X	1000000	2	12978	14902	X	141	1.39					
					[0.0002]														
					[I]														
					[P <sup>2</sup> ]														
ACRYLONITRILE	107-13-1	[0.04]	[0.01]	D	0.54	I	0.002	I	0.000068	I	11	X	73500	1	13004	14939	X	77	5.50
ALACHLOR	15972-60-8	0.01	I	0.056	C	110		140	2				378						
ALDICARB	116-06-3	0.001	I			22		6000	2				287	0.40					
ALDICARB SULFONE	1646-88-4	0.001	I			10		8000	5				317						
ALDICARB SULFOXIDE	1646-87-3	0.001	M			0.22		330000	5				307						
ALDRIN	309-00-2	0.00003	I	17	I	48000		0.02	4,5,6				330	0.22					
ALLYL ALCOHOL	107-18-6	[0.005]	[0.004]	[I]		0.0001	X	1000000	2	13003	14937	X	97	18.07					
AMETRYN	834-12-8	0.009	I			389		185	5				345						
AMINOBIIPHENYL, 4-	92-67-1			21	C	110		1200	5				302	18.07					
AMITROLE	61-82-5			0.94	C	120		280000	4				258	0.69					
AMMONIA	7664-41-7	[0.85]	[H]		0.5	I		3	X	310000	2,5,7	13098	15059	X	-33				
AMMONIUM SULFAMATE	7773-06-0	0.2	I			3		2160000	10				603						
ANILINE	62-53-3	0.007	P	0.0057	I	0.001	I	0.0000016	C	190	X	33800	1	12959	14876	X	184		
ANTHRACENE	120-12-7	0.3	I			21000	X	0.066	1,5,6,7,8,9	30838	44562		340	0.28					
ATRAZINE	1912-24-9	[0.035]	[0.003]	[I]	0.23	C		130					313						
AZINPHOS-METHYL (GUTHION)	86-50-0	0.0015	O		0.01	D		407.4	31.5	1, 2			421						
BAYGON (PROPOXUR)	114-26-1	0.004	I			31		2000	2,4,5				decomp.	4.50					
BENOMYL	17804-35-2	0.05	I	0.0024	O	1,900		2	5				520						
BENTAZON	25057-89-0	0.03	I			13		500	2				415						
BENZENE	71-43-2	0.004	I	0.055	I	0.03	I	0.0000078	I	58	X	1780.5	1,2,3,4	13053	15000	X	81	0.35	
BENZIDINE	92-87-5	0.003	I	230	I	0.067	I	530,000	520	1,2,4			400	15.81					
BENZO[A]ANTHRACENE	56-55-3			[0.7]	[0.1]	[X]		[0.00011]	[C]	[R]			438	0.19					
								[0.00006]											
BENZO[A]PYRENE	50-32-8	0.0003	I	1	I	0.000002	I	0.0006	I	910000		0.0038	1,5,6				495	0.24	

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**R = EPA 1993 Relative Potency Factors**

S<sup>1</sup> Acenaphthene surrogate

S<sup>2</sup> Trans-Crotonaldehyde surrogate

S<sup>3</sup> Endosulfan surrogate

S<sup>4</sup> Naphthalene surrogate

S<sup>5</sup> 2-Naphthylamine surrogate

S<sup>6</sup> 4-Nitrophenol surrogate

S<sup>7</sup> Total PCBs surrogate

S<sup>8</sup> Anthracene surrogate

S<sup>9</sup> O-Toluidine surrogate

S<sup>10</sup> 1,2,4-Trichlorobenzene surrogate

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Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>1</sup>	RfCi (mg/m <sup>3</sup> )	IUR (µg/m <sup>3</sup> ) <sup>1</sup>	Koc	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from Subsurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K) (yr <sup>-1</sup> )
BENZO[B]FLUORANTHENE	205-99-2		[1.2] 0.1 [C] R		[0.00011] 0.00006 [C] R	550000		0.0012	5,6,7				357	0.21
BENZO[GHI]PERYLENE	191-24-2	0.06 S <sup>1</sup>				2800000		0.00026	1,5,6				500	0.19
BENZO[K]FLUORANTHENE	207-08-9		[1.2] 0.01 [C] R		[0.00011] 0.000006 [C] R	4400000		0.00055	5,6,7				480	0.06
BENZOIC ACID	65-85-0	4 I				32	X	2700	2,3,4,5	12985	14913		249	
BENZOTRICHLORIDE	98-07-7		13 I			920	X	53	1,5,13	13494	15606	X	221	121413.60
BENZYL ALCOHOL	100-51-6	0.1 P				100		40000	1,2,3			X	205	
BENZYL CHLORIDE	100-44-7	0.002 P	0.17 I	0.001 P	0.000049 C	190	X	493	1	12940	14846	X	179	20.90
BETA PROPIOLACTONE	57-57-8		14 C		0.004 C	4	X	370000	2	13008	14937	X	162	0.01
BHC, ALPHA	319-84-6	0.008 D	6.3 I		0.0018 I	1800		1.7	4,5,6,7				288	0.94
BHC, BETA-	319-85-7		1.8 I		0.00053 I	2300		0.1	6				304	1.02
BHC, GAMMA (LINDANE)	58-89-9	[0.0003] 0.00001 [I] D <sup>2</sup>	1.1 C		0.00031 C	1400		7.3	4,5,6				323	1.05
BIPHENYL, 1,1-	92-52-4	[0.05] 0.5 I	0.008 I	0.0004 X		1,700	X	7.2	1	14027	16325		255	18.07
BIS(2-CHLORO ETHOXY)METHANE	111-91-1	0.003 P				61		100500	4,6,7,9,10,11			X	218	
BIS(2-CHLOROETHYL)ETHER	111-44-4		1.1 I		0.00033 I	76	X	10200	1,4,5	12942	14849	X	179	0.69
BIS(2-CHLORO-ISOPROPYL)ETHER	108-60-1	0.04 I	[0.07] [H]		[0.00001] [H]	62	X	1700	5	12947	14856	X	189	0.69
BIS(CHLOROMETHYL)ETHER	542-88-1		220 I		0.062 I	16	X	22000	6	12992	14922	X	105	57270.57
BIS[2-ETHYLHEXYL]PHTHALATE	117-81-7	0.02 I	0.014 I		0.0000024 C	87000		0.285	4,5,6			X	384	0.65
BISPHENOL A	80-05-7	0.05 I				1,500		120	4				220	0.69
BROMACIL	314-40-9	0.1 M				58		815	2				421	
BROMOBENZENE	108-86-1	0.008 I		0.06 I		268	X	445	1,2	12954	14866	X	156.1	
BROMOCHLOROMETHANE	74-97-5	0.01 M		0.04 X		27	X	16700	4	13007	14942	X	68	
BROMODICHLOROMETHANE	75-27-4	[0.02] 0.008 [I] P <sup>2</sup>	0.062 I		0.000037 C	93	X	4500	6	12984	14910	X	87	
BROMOMETHANE	74-83-9	0.0014 I		0.005 I		170	X	17500	2	13039	14981	X	4	6.66
BROMOXYNIL	1689-84-5	0.015 O	0.103 O			300		130	2				329	
BROMOXYNIL OCTANOATE	1689-99-2	0.015 O	0.103 O			18,000		0.08	12				414	5.75
BUTADIENE, 1,3-	106-99-0		0.6 C	0.002 I	0.00003 I	120	X	735	1	13115	15041	X	-4.5	4.50
BUTYL ALCOHOL, N-	71-36-3	0.1 I				3,2	X	74000	1	12998	14930	X	118	4.68
BUTYLATE	2008-41-5	0.05 I				540	X	45	2	13430	15519	X	138	
BUTYLBENZENE, N-	104-51-8	0.05 P				2,500	X	15	1,6,7	12943	14851	X	183	
BUTYLBENZENE, SEC-	135-98-8	0.1 X				890	X	17	1,6,7	12983	14910	X	174	
BUTYLBENZENE, TERT-	98-06-6	0.1 X				680	X	30	1,6,7	12979	14904	X	169	
BUTYLBENZYL PHTHALATE	85-68-7	0.2 I	0.0019 P			34000		2.69	4,5,6			X	370	1.39
CAPTAN	133-06-2	0.13 I	0.0023 C		0.00000066 C	200		0.5	4				259	589.39
CARBARYL	63-25-2	0.1 I				190		120	2,4,5				315	4.22

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<b>[CARBAZOLE]</b>	<b>[86-74-8]</b>		<b>[0.02]</b>	<b>[H]</b>		<b>[2,500]</b>		<b>[1.2]</b>	<b>[1,5,6]</b>				<b>[355]</b>					
CARBOFURAN	1563-66-2	0.005	I			43		700	2				311					
CARBON DISULFIDE	75-15-0	0.1	I		0.7	I		300	X	2100	1,2,3	13022	14961	X	46			
CARBON TETRACHLORIDE	56-23-5	0.004	I	0.07	I	0.1	I	0.000006	I	160	X	795	1,2,3	13117	15083	X	77	0.07
CARBOXIN	5234-68-4	0.1	I					260		170	5,6,8				407			
CHLORAMBEN	133-90-4	0.015	I					20		700	2				210			
CHLORDANE	57-74-9	0.0005	I	0.35	I	0.0007	I	0.0001	I	98000	0.056	4.5,7			351	0.09		
CHLORO-1,1-DIFLUOROETHANE, 1-	75-68-3				50	I		22	X	1400	4	13117	15041	X	-9			
CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE)	107-05-1			0.021	C	0.001	I	0.000006	C	48	X	3300	1,3,5,7,10	13142	15116	X	45	18.07
CHLOROACETALDEHYDE	107-20-0			0.27	X			3.2	X	1000000	9	13004	14938	X	85			
CHLOROACETOPHENONE, 2-	532-27-4				0.00003	I		76		1100	3				247	4.50		
CHLOROANILINE, P-	106-47-8	<b>[0.004]</b> <b>0.0005</b>	<b>[I]</b> <b>P<sup>2</sup></b>	0.2	P			460	X	3900	1	13139	15127		232			
CHLOROBENZENE	108-90-7	0.02	I		0.05	P		200	X	490	3	12992	14922	X	132	0.84		
CHLOROBENZILATE	510-15-6	0.02	I	0.11	C			2600		13	4				415	3.60		
CHLOROBUTANE, 1-	109-69-3	0.04	P					580	X	680	1,2,3,4	13007	14942	X	79			
CHLORODIBROMOMETHANE	124-48-1	0.02	I	0.084	I			83	X	4200	4,6,7,9	12973	14895	X	116	1.39		
CHLORODIFLUOROMETHANE	75-45-6				50	I		59	X	2899	4	13141	15113	X	-41			
CHLOROETHANE	75-00-3				<b>[10] 4</b>	<b>[I]</b> <b>P<sup>2</sup></b>		42	X	5700	1	13101	15038	X	12	4.50		
CHLOROFORM	67-66-3	0.01	I	0.031	C	0.3	C	0.000023	I	56	X	8000	1,2,3	13044	14988	X	61	0.01
CHLORONAPHTHALENE, 2-	91-58-7	0.08	I					8500	X	11.7	1	19021	23532		256			
CHLORONITROBENZENE, P-	100-00-5	0.0007	P	0.06	P	0.002	P	480	X	220	1	13190	15196		242			
CHLOROPHENOL, 2-	95-57-8	0.005	I					400	X	24000	1,3,4	13053	15009	X	175			
CHLOROPRENE	126-99-8	<b>[0.02]</b>	<b>[H]</b>		0.02	I	0.0003	I	50	X	1736	9	13116	15075	X	59	0.69	
<b>[CHLOROPROPANE, 2-]</b>	<b>[75-29-6]</b>				<b>[0.1001]</b>	<b>[H]</b>		<b>[260]</b>	<b>[X]</b>	<b>[3100]</b>	<b>[1,3,5]</b>	<b>[13055]</b>	<b>[15002]</b>	<b>[X]</b>	<b>[47]</b>			
CHLOROTHALONIL	1897-45-6	0.015	I	0.017	C			980		0.6	2				350			
CHLOROTOLUENE, O-	95-49-8	0.02	I					760	X	422	1,4,5	12941	14848	X	159			
CHLOROTOLUENE, P-	106-43-4	0.02	X					375	X	106	12	12961	14877	X	162			
CHLORPYRIFOS	2921-88-2	0.001	D					4600		1.12	2,4,6,7				377			
CHLORSULFURON	64902-72-3	<b>[0.02] 0.05</b>	O					11		192	2,5,6,8,9				531			
CHLORTHAL-DIMETHYL (DACTHAL) (DCPA)	1861-32-1	0.01	I					6,500		0.5	2,5,7				360	1.37		
CHRYSENE	218-01-9			<b>[0.12]</b> <b>0.001</b>	<b>[C]</b> <b>R</b>			<b>[0.000011]</b> <b>0.0000006</b>	<b>[C] R</b>	490000		0.0019	1		448	0.13		
CRESOL(S)	1319-77-3	0.1	D		0.06	C		25	X	20000	2	12976	14899	X	139	5.16		
CRESOL, DINITRO-O-, 4,6-	534-52-1	0.00008	X					257	X	150	4	13025	14970		312	6.02		
CRESOL, O- (METHYLPHENOL, 2-)	95-48-7	0.05	I					22	X	2500	3,5,6	12974	14896		191	18.07		

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CRESOL, M (METHYLPHENOL, 3-)	108-39-4	0.05	I			35		2500	2			X	202	5.16				
CRESOL, P (METHYLPHENOL, 4-)	106-44-5	[0.005] 0.02	[H] P			49		22000	6				202	9.03				
CRESOL, P-CHLORO-M-	59-50-7	0.1	X			780		3846	2				235					
CROTONALDEHYDE	4170-30-3	0.001	S <sup>2</sup>	[1.9]	[S <sup>2</sup> ]	5.6	X	180000	3	12998	14931	X	104	18.07				
CROTONALDEHYDE, TRANS-	123-73-9	0.001	P	[1.9]	[H]	6.1	X	156000	1	13006	14940	X	104	18.07				
CUMENE (ISOPROPYL BENZENE)	98-82-8	0.1	I			0.4	I	2800	X	50	1,5,6	X	152	15.81				
CYANAZINE	21725-46-2	0.002	[H] M	[0.84]	[H]			199		171	2,5		369					
CYCLOHEXANE	110-82-7					6	I	479	X	55	1,2,4,5,6	X	81					
CYCLOHEXANONE	108-94-1	5	I			0.7	P	66	X	36500	1,2,4,5	X	157					
CYFLUTHRIN	68359-37-5	0.025	I					130,000		0.001			448					
CYROMAZINE	66215-27-8	0.5	O					1,200		11000			222					
DDD, 4,4'-	72-54-8	[0.003] 0.0005	[X] D	0.24	I			0.000069	C	44000	0.16	5,6,7	350	0.02				
DDE, 4,4'-	72-55-9	[0.0003] 0.0005	[X] D	0.34	I			0.000097	C	87000	0.04	5	348	0.02				
DDT, 4,4'-	50-29-3	0.0005	I	0.34	I			0.000097	I	240000	0.0055	5,6,7	260	0.02				
DI(2-ETHYLHEXYL)ADIPATE	103-23-1	0.6	I	0.0012	I			47,000,000		200	5	X	214	4.50				
DIALATE	2303-16-4			0.061	H			190		40	2,4,6,8	X	328	1.39				
DIAMINOTOLUENE, 2,4-	95-80-7			4	C			0.0011	C	36	7470		292	0.69				
DIAZINON	333-41-5	0.0007	D					500		50	2,4,6,8	X	306					
DIBENZO[A,H]ANTHRACENE	53-70-3			[4.1] 1	[C] R			[0.0012] 0.0006	[C] R	1800000	0.0006	1,5,6	524	0.13				
DIBENZOFURAN	132-64-9	0.001	X					10233	X	4.48	1,6,7,9	23885	31445	287	7.23			
DIBROMO-3-CHLOROPROPANE, 1,2-	96-12-8	0.0002	P	0.8	P	0.0002	I	0.006	P	140	X	1000	4	12946	14856	X	196	0.69
DIBROMOBENZENE, 1,4-	106-37-6	0.01	I					1,600		20	1		220					
DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE)	106-93-4	0.009	I	2	I	0.009	I	0.0006	I	54	X	4150	1,2,3,5	12972	14893	X	131	2.11
DIBROMOMETHANE	74-95-3	[0.01]	[H]			0.004	X			110	X	11400	1	12948	14858	X	96	4.50
DIBUTYL PHTHALATE, N-	84-74-2	0.1	I					1600		400	1,2,3	X	340	11.00				
DICAMBA	1918-00-9	0.03	I					0.27		5600	4,5,6,8,10		329					
DICHLOROACETIC ACID	76-43-6	0.004	I	0.05	I			8.1	X	1000000	1	12994	14924	X	194			
DICHLORO-2-BUTENE, 1,4-	764-41-0							0.0042	P	180	X	850	9	12943	14851	X	156	
DICHLORO-2-BUTENE, TRANS-1,4-	110-57-6							0.0042	P	215	X	850	9	12940	14847	X	155	
DICHLOROBENZENE, 1,2-	95-50-1	0.09	I			0.2	H			350	X	147	1,4,5,6,7	12946	14855	X	180	0.69
DICHLOROBENZENE, 1,3-	541-73-1	0.09	M					360	X	106	1	12942	14849	X	173	0.69		
DICHLOROBENZENE, P-	106-46-7	0.07	D	0.0054	C	0.8	I	0.000011	C	510	X	82.9	1	12943	14850		174	0.69
DICHLOROBENZIDINE, 3,3'-	91-94-1			0.45	I			0.00034	C	22000		3.11	4,5,6		368	0.69		

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Toxicity Value Appendix

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**Factors**

S<sup>1</sup> Acenaphthene surrogate

S<sup>2</sup> Trans-Crotonaldehyde surrogate

S<sup>3</sup> Endosulfan surrogate

S<sup>4</sup> Naphthalene surrogate

S<sup>5</sup> 2-Naphthylamine surrogate

S<sup>6</sup> 4-Nitrophenol surrogate

S<sup>7</sup> Total PCBs surrogate

S<sup>8</sup> Anthracene surrogate

S<sup>9</sup> O-Toluidine surrogate

S<sup>10</sup> 1,2,4-Trichlorobenzene surrogate

**Appendix A**  
**Table 5—Physical and Toxicological Properties**  
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Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>1</sup>	RfCi (mg/m <sup>3</sup> )	IUR (µg/m <sup>3</sup> ) <sup>1</sup>	Koc	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from Subsurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K) (yr <sup>-1</sup> )				
DICHLORODIFLUOROMETHANE (FREON 12)	75-71-8	0.2	I		0.1	X				360	X	280	1	13115	15041	X	-30	0.69
DICHLOROETHANE, 1,1-	75-34-3	0.2	P	0.0057	C	[0.5]	[H]	0.0000016	C	52	X	5000	2	13051	14998	X	57	0.16
DICHLOROETHANE, 1,2-	107-06-2	0.006	X	0.091	I	0.007	P	0.000026	I	38	X	8412	1,2,3,4	13010	14945	X	83	0.07
DICHLOROETHYLENE, 1,1-	75-35-4	0.05	I			0.2	I			65	X	2500	1,4,5	13145	15119	X	32	0.19
DICHLOROETHYLENE, CIS-1,2-	156-59-2	0.002	I			0.04	P			49	X	3500	1	13037	14979	X	60	0.01
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	0.02	I			0.04	P			47	X	6300	1	13053	15000	X	48	0.01
DICHLOROMETHANE (METHYLENE CHLORIDE)	75-09-2	0.006	I	0.002	I	0.6	I	0.00000001	I	16	X	20000	1,2,3	13071	15023	X	40	4.50
DICHLOROPHENOL, 2,4-	120-83-2	0.003	I							160		4500	1				210	5.88
DICHLOROPHOXYACETIC ACID, 2,4-(2,4-D)	94-75-7	0.01	I							59		677	4,5,6,7,10				215	1.39
DICHLOROPROPANE, 1,2-	78-87-5	0.04	P	0.037	P	0.004	I	[0.0037] 0.0000037	P	47	X	2700	1,3,4	13016	14954	X	96	0.10
DICHLOROPROPENE, 1,3-	542-75-6	0.03	I	0.1	I	0.02	I	0.000004	I	27	X	2700	6	13038	14981	X	108	22.38
DICHLOROPROPIONIC ACID, 2,2-(DALAPON)	75-99-0	0.03	I							62	X	500000	5	12949	14860	X	190	2.11
DICHLORVOS	62-73-7	0.0005	I	0.29	I	0.0005	I	0.000083	C	50		10000	2,4,5			X	234	
DICYCLOPENTADIENE	77-73-6	0.008	P			0.0003	X			810	X	40	5	12957	14870		167	
DIELDRIN	60-57-1	0.00005	I	16	I			0.0046	I	11000		0.17	4,5,6				385	0.12
DIETHANOLAMINE	111-42-2	0.002	P			0.0002	P			4		1000000	2,3,9			X	269	
DIETHYL PHTHALATE	84-66-2	0.8	I							81		1080	4,5,6			X	298	2.25
DIFLUBENZURON	35367-38-5	0.02	I							1,000		0.2	2				201	
DIISOPROPYL METHYLPHOSPHONATE	1445-75-6	0.08	I							10	X	160000	9	12978	14903	X	190	
DIMETHOATE	60-51-5	0.0022	O							110		25000	4				361	2.26
DIMETHOXYBENZIDINE, 3,3-	119-90-4			1.6	P					1,300		60	9				331	0.69
DIMETHRIN	70-38-2	0.3	M							27,000		0.036	13				353	
DIMETHYLAMINOAZOBENZENE, P-	60-11-7			4.6	C			0.0013	C	1000		13.6	7				335	4.50
DIMETHYLANILINE, N,N-	121-69-7	0.002	I	0.027	P					180	X	1200	5,6,7,9	12944	14852	X	192	0.69
DIMETHYLBENZIDINE, 3,3-	119-93-7			11	P					22,000		1300	10				300	18.07
DIMETHYL METHYLPHOSPHONATE	756-79-6	0.06	P	0.0017	P					5	X	1000000	14	12998	14930	X	181	
DIMETHYLPHENOL, 2,4-	105-67-9	0.02	I							130		7869	1,4,6,7			X	211	18.07
DINITROBENZENE, 1,3-	99-65-0	0.0001	I							150		523	3,5,6,7				291	0.69
DINITROPHENOL, 2,4-	51-28-5	0.002	I							0.79		5600	2,4,5,6,7				332	0.48
DINITROTOLUENE, 2,4-	121-14-2	0.002	I	0.31	C			0.000089	C	51		270	4,5,6				300	0.69
DINITROTOLUENE, 2,6-(2,6-DNT)	606-20-2	0.0003	X	1.5	P					74		200	6				300	0.69
DINOSEB	88-85-7	0.001	I							120		50	5				223	1.03
DIOXANE, 1,4-	123-91-1	0.03	I	0.1	I	0.03	I	0.000005	I	7.8	X	1000000	5	12996	14928	X	101	0.69
DIPHENAMID	957-51-7	0.03	I							200		260	5				210	

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DIPHENYLAMINE	122-39-4	0.1	O			190		300	3				302	4.50				
DIPHENYLHYDRAZINE, 1,2-	122-66-7			0.8	I			0.00022	I	660	X	0.252	6	13375	15446		309	0.69
DIQUAT	[85-00-7] 2764-72-9	0.0022	I					2.6		700000			5				355	
DISULFOTON	298-04-4	0.00004	I					1000		25		4,5,6			X		332	6.02
DITHIANE, 1,4-	505-29-3	0.01	I					22.7	X	3000		15	12976		14899		199	
DIURON	330-54-1	0.002	I					300		42		2,4,5					354	
ENDOSULFAN	115-29-7	0.006	I					2,000		0.48		4					401	2.78
ENDOSULFAN I (ALPHA)	959-98-8	0.006	S <sup>3</sup>					2000		0.5		6					401	
ENDOSULFAN II (BETA)	33213-65-9	0.006	S <sup>3</sup>					2300		0.45		6					390	
ENDOSULFAN SULFATE	1031-07-8	0.006	S <sup>3</sup>					2300		0.117		7,9					409	
ENDOTHALL	145-73-3	0.02	I					120		100000		2					350	
ENDRIN	72-20-8	0.0003	I					11000		0.23		4,6,7,9					245	
EPICHLOROHYDRIN	106-89-8	0.006	P	0.0099	I	0.001	I	0.0000012	I	35	X	65800	1,3,4	12972	14893	X	116	4.50
ETHEPHON	16672-87-0	0.005	I					2		1240000		12					201	
ETHION	563-12-2	0.0005	I					8700		0.85		4,6,9,10				X	415	
ETHOXYETHANOL, 2- (EGEE)	110-80-5	0.09	P			[0.2] 0.04	[I] P <sup>2</sup>			12	X	1000000	2	13100	15040	X	136	4.50
ETHYL ACETATE	141-78-6	[0.9] 0.7	[I] P <sup>2</sup>			0.07	P			59	X	80800	1,2,3,4,5,6	12963	14881	X	77	18.07
ETHYL ACRYLATE	140-88-5	0.005	P	[0.048]	[H]	0.008	P			110	X	15000	1,2,6	12951	14863	X	100	18.07
ETHYL BENZENE	100-41-4	[0.1] 0.05	[I] P <sup>2</sup>	0.011	C	1	I	0.0000025	C	220	X	161	1,3,4	13004	15000	X	136	1.11
ETHYL DIPROPYLTHIOCARBAMATE, S- (EPTC)	759-94-4	0.05	O							240	X	365	2	13056	15014	X	127	
ETHYL ETHER	60-29-7	0.2	I					68	X	60400		1	12982		14908	X	35	
ETHYL METHACRYLATE	97-63-2	[0.09]	[H]			0.3	P			22	X	4635.5	9,10	12991	14921	X	117	
ETHYLENE CHLORHYDRIN	107-07-3	0.02	P					1	X	1000000		9	13006		14941	X	128	
ETHYLENE GLYCOL	107-21-1	[2] 0.8	[I] D <sup>2</sup>			0.4	C			4.4	X	1000000	2	13004	14938	X	198	10.54
ETHYLENE THIOUREA (ETU)	96-45-7	0.00008	I	0.045	C			0.000013	C	0.23		20000	2				347	4.50
ETHYL P-NITROPHENYL PHENYLPHOSPHORO THIOATE	2104-64-5	0.00001	I					1,200		3.1		4					215	
FENAMIPHOS	22224-92-6	0.00025	I					300		329		2					390	
FENVALERATE (PYDRIN)	51630-58-1	0.025	I					4,400		0.085		5				X	300	
FLUOMETURON	2164-17-2	0.013	I					68		97.5		2,5,6,8					318	
FLUORANTHENE	206-44-0	0.04	I					49000		0.26		1,5,6					375	0.29
FLUORENE	86-73-7	0.04	I					7900	X	1.9		1	20155		25294		298	2.11

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FLUOROTRICHLOROMETHANE (FREON 11)	75-69-4	0.3	I		[0.7] [H]	130	X	1090	1,4,5,6	13107	15060	X	24	0.35					
FONOFOS	944-22-9	0.002	I			1100		13	5,6,8			X	324						
FORMALDEHYDE	50-00-0	0.2	I	0.021	C	0.009	C	0.000013	I	3.6	X	55000	1	13046	14990	X	-21	18.07	
FORMIC ACID	64-18-6	0.9	P			0.0003	X			0.54	X	1000000	2	12940	14846	X	101	18.07	
FOSETYL-AL	39148-24-8	2.5	O					310		120000			2					464	
FURAN	110-00-9	0.001	I			130	X	10000		1	13019	14956	X	31	2.25				
FURFURAL	98-01-1	0.003	I	0.0349	O	0.05	H			6.3	X	91000	1,2,3	12998	14930	X	162		
GLYPHOSATE	1071-83-6	0.1	I			3500		12000		1,5,6				417					
HEPTACHLOR	76-44-8	[0.0005] 0.0001	[I] D <sup>2</sup>	4.5	I			0.0013	I	6800			0.18	4,6,7			310	46.84	
HEPTACHLOR EPOXIDE	1024-57-3	0.000013	I	9.1	I			0.0026	I	21000			0.311	4,6,7,9			341	0.23	
HEXACHLOROBENZENE	118-74-1	[0.0008] 0.00001	[I] P <sup>2</sup>	1.6	I			0.00046	I	3800			0.006	1,4,5			319	0.06	
HEXACHLOROBUTADIENE	87-68-3	0.001	P	0.078	I			0.000022	I	4700			2.89	4,5,6,7			X	215	0.69
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.006	I			0.0002	I			7200			1.8	5,6,7			X	239	4.50
HEXACHLOROETHANE	67-72-1	0.0007	I	0.04	I	0.03	I	0.000011	C	2200	X	50	1	14825	17421			187	0.69
HEXAFLUOROPROPYLENE OXIDE (HFPO) DIMER ACID	13252-13-6	0.000003	M					12	X	751000			23	12974	14896	X		129	
HEXAFLUOROPROPYLENE OXIDE (HFPO) DIMER ACID AMMONIUM SALT (GEN-X)	62037-80-3	0.000003	M					12		739000			23				X	108	
HEXANE	110-54-3	[0.06]	[H]			0.7	I			3600	X	9.5	1,5,6	13105	15056	X		69	
HEXAZINONE	51235-04-2	0.033	I					41					330000	1,2				408	
HEXYTHIAZOX (SAVEY)	78587-05-0	0.025	I					6,500					0.5	2				539	
HMX	2691-41-0	0.05	I					4					5	16				436	
HYDRAZINE/HYDRAZINE SULFATE	302-01-2			3	I	0.00003	P	0.0049	I	0.0053	X	1000000	2	13026	14966	X		114	18.07
HYDROQUINONE	123-31-9	0.04	P	0.06	P			10					70000	2,3,5				285	18.07
INDENO[1,2,3-CD]PYRENE	193-39-5			[1.2] 0.1	[C] R			[0.00011] 0.00006	[C] R	31000000			0.062	5				536	0.17
IPRODIONE	36734-19-7	0.04	I	0.0439	O					1,100			13	2				545	
ISOBUTYL ALCOHOL	78-83-1	0.3	I					60	X	81000			1,2,3,4,5	12954	14866	X		108	17.57
ISOPHORONE	78-59-1	0.2	I	0.00095	I	2	C			31			12000	2,4,5			X	215	4.5
ISOPROPYL METHYLPHOSPHONATE	1832-54-8	0.1	I					1.84					50000	13			X	230	
KEPONE	143-50-0	0.0003	I	10	I			0.0046	C	55000			7.6	4				350	0.17
MALATHION	121-75-5	0.02	I					1300					143	4			X	351	2.46
MALEIC HYDRAZIDE	123-33-1	0.5	I					2.8					6000	4				260	
MANEB	12427-38-2	0.005	I	0.0601	O			1					23	9,13				351	
MERPHOS OXIDE	78-48-8	0.0005	D					53,000					2.3	8,10,12			X	392	
METHACRYLONITRILE	126-98-7	0.0001	I			0.03	P			21	X	25700	1	12994	14925	X		90	

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S<sup>5</sup> 2-Naphthylamine surrogate

S<sup>6</sup> 4-Nitrophenol surrogate

S<sup>7</sup> Total PCBs surrogate

S<sup>8</sup> Anthracene surrogate

S<sup>9</sup> O-Tolidine surrogate

S<sup>10</sup> 1,2,4-Trichlorobenzene surrogate

**Appendix A**  
**Table 5—Physical and Toxicological Properties**  
**A. Organic Regulated Substances**

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>1</sup>	RfCi (mg/m <sup>3</sup> )	IUR (µg/m <sup>3</sup> ) <sup>1</sup>	Koc	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from Subsurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K) (yr <sup>-1</sup> )				
METHAMIDOPHOS	10265-92-6	0.00005	I			5		2000000	5				223					
METHANOL	67-56-1	2	I		20	2.8	X	1000000	2	13025	14964	X	65	36.14				
METHOMYL	16752-77-5	0.025	I			20		58000	2				228					
METHOXYCHLOR	72-43-5	0.005	I			63000		0.045	4,5,6				346	0.69				
METHOXYETHANOL, 2-	109-86-4	0.005	P		[0.02] [0.007]	[I] [P <sup>2</sup> ]		1000000	2	13141	15115	X	124	4.50				
METHYL ACETATE	79-20-9	1	X			30	X	243500	4,5,6	12982	14908	X	57					
METHYL ACRYLATE	96-33-3	[0.03]	[H]		0.02	P		52000	1,2,5	12971	14892	X	70	18.07				
METHYL CHLORIDE	74-87-3			[0.013]	[H]	0.09	I	[0.0000018]	[H]	6	X	6180	1,2,3,4	13103	15038	X	-24	4.50
METHYL ETHYL KETONE	78-93-3	0.6	I		5	I		32	X	275000	1,2,3,4,5	12974	14897	X	80	2.57		
METHYL HYDRAZINE	60-34-4	0.001	P		0.00002	X	0.001	X	1	X	1000000	2	13011	14947	X	88	5.27	
METHYL ISOBUTYL KETONE	108-10-1	[0.08]	[H]		3	I		17	X	19550	1,2,4,5	12983	14910	X	117	18.07		
METHYL ISOCYANATE	624-83-9				0.001	C		10	X	100000	7	13021	14959	X	40			
METHYL N-BUTYL KETONE (2- HEXANONE)	591-78-6	0.005	I		0.03	I		54	X	17500	1	12955	14868	X	128			
METHYL METHACRYLATE	80-62-6	1.4	I		0.7	I		10	X	15600	1	13001	14934	X	100	4.50		
METHYL METHANESULFONATE	66-27-3			0.099	C			5.2		200000	2			X	203			
METHYL PARATHION	298-00-0	0.00025	I			790		25	4,5,6				348	3.61				
METHYL STYRENE (MIXED ISOMERS)	25013-15-4	0.006	H		0.04	H		2,200	X	89	9	12945	14853	X	163			
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4			0.0018	C	3	I	0.00000026	C	12	X	45000	1,2,4,6	13014	14950	X	55	0.69
METHYLCHLOROPHENOXYACETIC ACID (MCPA)	94-74-6	0.0005	I			112		1000	5,6,8,9				287	1.39				
METHYLENE BIS(2-CHLOROANILINE), 4,4'-	101-14-4	0.002	P	0.1	P			0.00043	C	3,000		13.9	10		379			
METHYLNAPHTHALENE, 2-	91-57-6	0.004	I		0.003	S <sup>4</sup>		16000	X	25	1	12955	14870		241			
METHYLSTYRENE, ALPHA	98-83-9	0.07	H			660	X	560	9	12942	14850	X	165					
METOLACHLOR	51218-45-2	0.15	I			182	X	530	1,5	13035	14985	X	100					
METRIBUZIN	21087-64-9	0.025	I			95		1200	1,5				367					
MEVINPHOS	7786-34-7	0.000025	O			44	X	600000	6	12947	14856		<b>106</b>					
MONOCHLOROACETIC ACID	79-11-8	[0.002] 0.01	[H] [M]			0.24	X	858000	17	13008	14943		189					
NAPHTHALENE	91-20-3	0.02	I	0.12	C	0.003	I	0.000034	C	950	X	30	3	13284	15323		218	0.98
NAPHTHYLAMINE, 1-	134-32-7			1.8	S <sup>5</sup>			3200	X	1690	2	15517	18386		301	0.69		
NAPHTHYLAMINE, 2-	91-59-8			1.8	C			87		6.4	6		306	0.69				
NAPROPAMIDE	15299-99-7	0.12	O			880		70	2				399					
NITROANILINE, O-	88-74-4	0.01	X		0.00005	X		27	X	1200	6	12967	14886		284			
NITROANILINE, P-	100-01-6	0.004	P	0.02	P	0.006	P	15		800	2		332					
NITROBENZENE	98-95-3	0.002	I		0.009	I		0.00004	I	130	X	2000	2	12940	14847	X	211	0.64
NITROGUANIDINE	556-88-7	0.1	I			0.13		4400	9				231					

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Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>1</sup>	RfCi (mg/m <sup>3</sup> )	IUR (µg/m <sup>3</sup> ) <sup>1</sup>	Koc	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from Subsurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K) (yr <sup>-1</sup> )		
NITROPHENOL, 2-	88-75-5	0.008	S <sup>6</sup>			37	X	2100	1,2,3,4,5,6	12966	14884		215	9.01		
NITROPHENOL, 4-	100-02-7	0.008	M			230	X	16000	2	12960	14878		279	25.81		
NITROPROPANE, 2-	79-46-9			0.02	I	[0.0027] 0.00058	[H] P	20	X	16700	1,3,4,5	X	120	0.69		
NITROSODIETHYLAMINE, N-	55-18-5		150	I		0.043	I	26	X	93000	10	12974	14896	X	176	0.69
NITROSODIMETHYLAMINE, N-	62-75-9	0.000008	P	51	I	0.00004	X	8.5	X	1000000	2	13001	14934	X	154	0.69
NITROSO-DI-N-BUTYLAMINE, N-	924-16-3		5.4	I		0.0016	I	450	X	1200	9, 10, 11	13008	14946	X	235	0.69
NITROSODI-N-PROPYLAMINE, N-	621-64-7		7	I		0.002	C	11	X	9900	6	12986	14914	X	206	0.69
NITROSODIPHENYLAMINE, N-	86-30-6		0.0049	I		0.0000026	C	580	X	35	1	13148	15140		269	3.72
NITROSO-N-ETHYLUREA, N-	759-73-9		27	C		0.0077	C	2		13000	9				223	1734.48
OCTYL PHTHALATE, DI-N-	117-84-0	0.01	P					980000000		3	5		X	234	0.69	
OXAMYL (VYDATE)	23135-22-0	0.025	I			7.1		280000		2				334		
PARAQUAT	1910-42-5	0.0045	I			16200		660000		6,8				352		
PARATHION	56-38-2	0.00003	O			2300		20		2,4,5,6,7		X	375			
PCBS, TOTAL (POLYCHLORINATED BIPHENYLS) (AROCLORS)	1336-36-3		2	I		0.0001	I	78100		0.0505	10,13			360		
PCB-1016 (AROCLOR)	12674-11-2	0.00007	I			110000		0.25		5		X	325			
PCB-1221 (AROCLOR)	11104-28-2		2	S <sup>7</sup>		0.0001	S <sup>7</sup>	1900	X	0.59	5	13810	16032	X	275	
PCB-1232 (AROCLOR)	11141-16-5		2	S <sup>7</sup>		0.0001	S <sup>7</sup>	1500		1.45	7			X	290	
PCB-1242 (AROCLOR)	53469-21-9		2	S <sup>7</sup>		0.0001	S <sup>7</sup>	48000		0.1	5			X	325	
PCB-1248 (AROCLOR)	12672-29-6		2	S <sup>7</sup>		0.0001	S <sup>7</sup>	190000		0.054	7,9,11			X	340	
PCB-1254 (AROCLOR)	11097-69-1	0.00002	I			810000		0.057		5		X	365			
PCB-1260 (AROCLOR)	11096-82-5		2	S <sup>7</sup>		0.0001	S <sup>7</sup>	1800000		0.08	5			385		
PEBULATE	1114-71-2	[0.05] 0.0007	[H] O			630		92		5		X	303			
PENTACHLOROBENZENE	608-93-5	0.0008	I			32000		0.74		1,5,6,7				277	0.37	
PENTACHLOROETHANE	76-01-7		0.09	P		1905	X	480		1,3	13120	15102	X	160		
PENTACHLORONITROBENZENE	82-68-8	0.003	I	0.26	H	7900		0.44		4,6,8				328	0.36	
PENTACHLOROPHENOL	87-86-5	0.005	I	0.4	I	0.0000051	C	20000		14	1,2,4,5			310	0.17	
PERFLUOROBUTANE SULFONATE (PFBS)	375-73-5	0.0003	P					[61.7] 260	X	56600	9		X	[211] 152		
PERFLUOROBUTANOIC ACID (PFBA)	375-22-4	0.001	I			76	X	49000		25		X	120			
PERFLUOROHEXANOIC ACID (PFHxA)	307-24-4	0.0005	I			120	X	160000		25		X	168			
PERFLUOROCTANE SULFONATE (PFOS)	1763-23-1	[0.00002] 0.0000031	M	[0.07]	[M]			[2.57] 370		680	19,20,21,22,23			258		
PERFLUOROCTANOIC ACID (PFOA)	335-67-1	[0.00002] 0.0000039	M					[2.06] 120	X	9500	24			192		
PHENACETIN	62-44-2		0.0022	C		0.00000063	C	110		763	2,3,9			341	4.50	
PHENANTHRENE	85-01-8	0.3	S <sup>6</sup>			38000	X	1.1		1,4,5	41808	70721		341	0.63	

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PHENOL	108-95-2	0.3	I			0.2	C			22	X	84300	1,2,3,4	12977	14901		182	36.14
PHENYL MERCAPTAN	108-98-5	0.001	P							562	X	653	5,9	13039	14989	X	170	
PHENYLENEDIAMINE, M-	108-45-2	0.006	I							12		351000	3				286	4.50
PHENYLPHENOL, 2-	90-43-7			0.00194	H					5,700		700	5				280	18.07
PHORATE	298-02-2	<b>[0.0002] 0.00017</b>	O							810		50	2			X	319	
PHTHALIC ANHYDRIDE	85-44-9	2	I			0.02	C			79	X	6170	2	13018	14956		285	13490.40
PICLORAM	1918-02-1	0.07	I							15		430	2				373	
<b>POTASSIUM PERFLUOROBUTANE SULFONATE</b>	<b>29420-49-3</b>	<b>0.0003</b>	<b>M</b>							<b>260</b>		<b>46</b>	<b>9</b>				<b>447</b>	
PROMETON	1610-18-0	0.015	I							346		750	2,5				347	
PRONAMIDE	23950-58-5	0.075	I							200		15	2				321	
PROPACHLOR	1918-16-7	0.013	I							139	X	<b>613</b>	<b>8</b>	12952	14865		110	1.73
PROPANIL	709-98-8	0.005	I							160		225	2				355	
PROPANOL, 2- (ISOPROPYL ALCOHOL)	67-63-0	2	P			0.2	P			25	X	1000000	2	12981	14906	X	82	
PROPazine	139-40-2	0.02	I							155		8.6	1,5			X	318	
PROPHAM	122-42-9	0.02	I							51		250	5				257	
PROPYLBENZENE, N-	103-65-1	0.1	X			1	X			720	X	52	6	12971	14891	X	159	
PROPYLENE OXIDE	75-56-9	0.001	O	0.24	I	0.03	I	0.0000037	I	25	X	405000	1	13239	15057	X	34	
PYRENE	129-00-0	0.03	I							68000		0.132	1				393	0.07
PYRETHRUM	8003-34-7	0.044	O							5.62	X	0.35	13			X	170	
PYRIDINE	110-86-1	0.001	I							0.0066	X	1000000	2	13142	15114	X	115	18.07
QUINOLINE	91-22-5			3	I					1,300		60000	1,3,5			X	238	12.65
QUIZALOFOP (ASSURE)	76578-14-8	0.009	I							580		0.3	2				220	
RDX	121-82-4	0.004	I	0.08	I					70		59.9	1,9				353	
RESORCINOL	108-46-3	2	TE							2		717000					280	
RONNEL	299-84-3	0.05	H							580		40	2				349	
SIMAZINE	122-34-9	0.005	I	0.12	H					110		5	5				225	
STRYCHNINE	57-24-9	0.0003	I							280		143	5				270	4.50
STYRENE	100-42-5	0.2	I			1	I			910	X	300	5	12942	14850	X	145	1.20
TEBUTHIURON	34014-18-1	0.07	I							620		2500	2				394	
TERBACIL	5902-51-2	0.013	I							53		710	2				396	
TERBUFOS	13071-79-9	0.000025	H							510		5	6			X	332	
TETRACHLOROBENZENE, 1,2,4,5-	95-94-3	<b>[0.0003] 0.00003</b>	<b>[I] P<sup>2</sup></b>							1,800		0.583	1,5,6,7				245	0.69
TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD)	1746-01-6	0.000000007	I	130000	C	0.00000004	C	38	C	4300000		0.0000193	6				412	0.21
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	0.03	I	0.026	I			0.0000074	I	980	X	1100	1	12990	14921	X	131	3.79
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	0.02	I	0.2	I			0.000058	I	79	X	2860	2	12957	14871	X	147	0.56

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TETRACHLOROETHYLENE (PCE)	127-18-4	0.006	I	0.0021	I	0.04	I	0.0000026	I	300	X	162	1,2,3,4,5	13017	14955	X	121	0.03
TETRACHLOROPHENOL, 2,3,4,6-	58-90-2	0.03	I							6200		183	6				288	0.69
TETRAETHYL LEAD	78-00-2	0.0000001	I							4900		0.8	5			X	202	4.50
TETRAETHYLDITHIOPYROPHOSPHATE	3689-24-5	0.0005	I							550		25	2			X	349	
TETRAHYDROFURAN	109-99-9	0.9	I	0.0076	I	2	I	0.00000194	I	43	X	300000	1,6,7	12970	14891	X	66	
THIOFANOX	39196-18-4	0.0003	H							0.022		5200	9				280	
THIRAM	137-26-8	0.015	O							1000		30	4				339	
TOLUENE	108-88-3	0.08	I			5	I			130	X	532.4	1,2,3,4	13016	14953	X	111	9.01
TOLUIDINE, M-	108-44-1			0.016	S <sup>9</sup>			0.000051	S	140		15030	6			X	203	
TOLUIDINE, O-	95-53-4			0.016	P			0.000051	C	410		15000	1,3,5			X	200	18.07
TOLUIDINE, P-	106-49-0	0.004	X	0.03	P					320		7410	1,2,3				200	
TOXAPHENE	8001-35-2	0.00009	P	1.1	I			0.00032	I	1500		3	2,4,5				432	
TRIALATE	2303-17-5	0.025	O	[0.717] 0.0717	O					2,000		4	5			X	343	
TRIBROMOMETHANE (BROMOFORM)	75-25-2	0.02	I	0.0079	I			0.0000011	I	130	X	3050	1,2,3,4	12942	14849	X	149	0.69
TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2-	76-13-1	30	I			5	P			1,200	X	170	1	13064	15014	X	48	0.35
TRICHLOROACETIC ACID	76-03-9	0.02	I	0.07	I					20	X	1200000	2,3,5,9	13291	15077		196	
TRICHLOROBENZENE, 1,2,4-	120-82-1	0.01	I	0.029	P	0.002	P			1500	X	44.4	1,4,6,7	13217	15233	X	213	0.69
TRICHLOROBENZENE, 1,3,5-	108-70-3	0.006	M			0.002	S <sup>10</sup>			3100	X	5.8	5	15677	18611		208	
TRICHLOROETHANE, 1,1,1-	71-55-6	2	I			5	I			100	X	1495	1,4,5,6	13116	15082	X	74	0.05
TRICHLOROETHANE, 1,1,2-	79-00-5	0.004	I	0.057	I	0.0002	X	0.000016	I	76	X	4420	1	12982	14909	X	114	0.03
TRICHLOROETHYLENE (TCE)	79-01-6	0.0005	I	0.046	I	0.002	I	0.000004	I	93	X	1100	1	13070	15022	X	87	0.02
TRICHLOROPHENOL, 2,4,5-	95-95-4	0.1	I							2400		1000	1,2,4				246	0.14
TRICHLOROPHENOL, 2,4,6-	88-06-2	0.001	P	0.011	I			0.0000031	I	1100		850	1,2,4,5				246	0.14
TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T)	93-76-5	0.01	I							43		278	2,4,5				279	1.39
TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5-TP)(SILVEX)	93-72-1	0.008	I							1700		140	2				353	
TRICHLOROPROPANE, 1,1,2-	598-77-6	0.005	I							24	X	2700	14	13145	15119	X	117	
TRICHLOROPROPANE, 1,2,3-	96-18-4	0.004	I	30	I	0.0003	I			280	X	1896	1,4,6	12974	14896	X	157	0.35
TRICHLOROPROPENE, 1,2,3-	96-19-5	0.003	X			0.0003	P			190	X	2700	14	13047	14992	X	142	
TRIETHYLAMINE	121-44-8					0.007	I			51	X	55000	1,4	12951	14862	X	90	
TRIETHYLENE GLYCOL	112-27-6	2	P							6		1000000	12			X	285	
TRIFLURALIN	1582-09-8	0.0075	I	0.0077	I					720		4	2,5,6,7				382	
TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-)	95-63-6	0.01	I			0.06	I			2,200	X	56	1	12978	14904	X	169	4.50
TRIMETHYLBENZENE, 1,3,5-	108-67-8	0.01	I			0.06	I			660	X	48.9	1	12961	14876	X	165	

<sup>1</sup>Aqueous solubility references are keyed to the numbered list found at § 250.304(f) (relating to MSCs for groundwater). Where there are multiple sources cited, the table value is the median of the values in the individual references.

<sup>2</sup>Values recommended by USEPA Superfund program in May 2021 memo "Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments."

Toxicity Value Sources:

C = California EPA  
D = ATSDR Minimal Risk Level  
H = Health Effects Assessment Summary Table (HEAST)  
I = Integrated Risk information System (IRIS)  
M = EPA Drinking Water Regulations and Health Advisories

O = EPA Office of Pesticide Programs Human Health Benchmarks for Pesticides  
P = EPA Provisional Peer-Reviewed Toxicity Value  
TE = TERA ITER Peer-Reviewed Value  
X = EPA Provisional Peer-Reviewed Toxicity Value Appendix

**R = EPA 1993 Relative Potency Factors**

S<sup>1</sup> Acenaphthene surrogate  
S<sup>2</sup> Trans-Crotonaldehyde surrogate  
S<sup>3</sup> Endosulfan surrogate  
S<sup>4</sup> Naphthalene surrogate  
S<sup>5</sup> 2-Naphthylamine surrogate

S<sup>6</sup> 4-Nitrophenol surrogate  
S<sup>7</sup> Total PCBs surrogate  
S<sup>8</sup> Anthracene surrogate  
S<sup>9</sup> O-Toluidine surrogate  
S<sup>10</sup> 1,2,4-Trichlorobenzene surrogate

**Appendix A**  
**Table 5—Physical and Toxicological Properties**  
**A. Organic Regulated Substances**

Regulated Substance	CAS	RfDo (mg/kg-d)		CSFo (mg/kg-d) <sup>1</sup>		RfCi (mg/m <sup>3</sup> )		IUR (µg/m <sup>3</sup> ) <sup>1</sup>		Koc	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from Subsurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K) (yr <sup>1</sup> )
TRINITROGLYCEROL (NITROGLYCERIN)	55-63-0	0.0001	P	0.017	P					116	X	1800	2,3,5	12941	14848	X	190	18.07
TRINITROTOLUENE, 2,4,6-	118-96-7	0.0005	I	0.03	I					1		100	2				240	
VINYL ACETATE	108-05-4	1	H			0.2	I			2.8	X	20000	1	13017	14955	X	73	
VINYL BROMIDE (BROMOETHENE)	593-60-2					0.003	I	[0.000032] 0.000015	[H] P	150	X	4180	12	13086	15043	X	16	0.09
VINYL CHLORIDE	75-01-4	0.003	I	1.5	I	[0.1] 0.08	[I] P <sup>2</sup>	0.0000088	I	10	X	2700	1	13109	15040	X	-13	0.09
WARFARIN	81-81-2	0.0003	I							910		17	4				356	4.50
XYLENES (TOTAL)	1330-20-7	0.2	I			0.1	I			350	X	175	13	12982	14909	X	140	0.69
ZINEB	12122-67-7	0.05	I							19		10	4				474	

<sup>1</sup>Aqueous solubility references are keyed to the numbered list found at § 250.304(f) (relating to MSCs for groundwater). Where there are multiple sources cited, the table value is the median of the values in the individual references.

<sup>2</sup>Values recommended by USEPA Superfund program in May 2021 memo "Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments."

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S<sup>7</sup> Total PCBS surrogate  
S<sup>8</sup> Anthracene surrogate  
S<sup>9</sup> O-Toluidine surrogate  
S<sup>10</sup> 1,2,4-Trichlorobenzene surrogate