Annotated Table of Contents for DRAFT 2002 PPRG Spreadsheets

As noted below, the receptors evaluated, the exposure pathways and exposure parameters are all consistent with those evaluated in the 2002 RSALS.
The only exception is that the plant uptake pathway for non-radionuclides has not yet been incorporated into the final PPRG for the rural resident receptor.
The reason for this, as shown in the column (2002PRG Calcs $AO), where the plant ingestion pathway was incorporated for the nonradionuclide noncarcinogens is that the PPRG values for some organics are extremely low. They are so low that they do not seem reasonable.
The accuracy of these plant ingestion calculations for the nonradionuclides still need to be confirmed.
The site-specific Volatilization Factor (VF) used to calculate the inhalation of volatiles was calculated according to the methodology in the 1996 Soil Screening Guidance, using soil parameters obtained from Rocky Flats OU2 data. This VF is less conservative that that calculated using EPA's default soil values.

Note: There are 10 worksheets in this workbook of PPRGs. They are designe
reduce duplicate entry of information that is entered by the user. In general, a
value is entered only once in a master cell. Any place it appears afterward is i
formula.

Table	Worksheet Name	Notes
1	newToxicity	The Toxicity sheet is the master list of chemical names and toxicity values. Ch to chemical names or toxicity values should be made to this sheet only. If they made anywhere else, they will not be propagated throughout the workbook.
2	newChem&trans	This sheet is the master sheet for all chemical-specific physical factors, other t toxicity values. Changes to these values should be made to this sheet only. If are made anywhere else, they will not be propagated throughout the workbook
3	Tox&Chem Notes	Contains footnotes for the Toxicity and the Chem&Trans sheets.
3	Exposure	There are four Exposure sheets, and they contain the master list of exposure parameter values. During the annual PPRG review, changes to exposure input should be made to these sheets only. Exposure pathways and exposure param in all scenarios are consistent with those evaluated in the 2002 RSALS.
4		**Exposure Scenario** / **Worksheet**
		Rural Residential / ExpRRSSoil
		Office Worker / ExpOWSSoil
		Ecological Researcher / Exposure Eco
		Construction Worker / Exposure CW
5		Open Space Surface Soil / ExpOSSSsoil
6		Wildlife Refuge Worker / ExpWLRWSSoil
6	PPRGeq	The PPRGeq sheet illustrates the equations used to calculate noncarcinogenic carcinogenic PRGs for each of the three exposure scenarios. The final PRG is on the minimum value of these two effects. PRGs for the Open Space exposu scenario are
7		Open Space Surface Water / ExpOS SW
8	2002PRG CALCS	All calculations are performed on this sheet. All the intermediate steps are in h columns to make comparison of PRGs between receptors more easily done. the hidden columns, highlight the columns on both sides of the missing ones, cl Format, and then on Columns and Unhide. To hide the columns again, highligh columns you want to hide, click on Format, Columns and Hide. The calculation to toxicity values and to chemical and physical constants on either the newToxi newChem&trans sheets or on the specific Exposure sheets for the receptor be evaluated. PRGs based on multiple pathways are calculated in a consistent m with the 2002 RSAL calculations.
9	PPRGeq	Shows equations used in the calculations.
	PRGSUMb	The PRGSUMb sheet provides a summary printout table of PRGs with the che names grouped by chemical classes (e.g., metals, organics, inorganics, radionuclides). No calculations are made on this sheet. Cell references are us repeat the column of

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Table 5 - Toxicity Values Used for the RFETS PPRGs [a]

Target Analyte List Chemical		CAS Number	Oral RfD (mg/kg-day)	Oral/Ingestion Slope Factor $(mg/kg-day)^{-1}$
Acenaphthene	(V)	83-32-9	6.00E-02 I	
Acetone	(V)	67-64-1	1.00E-01 I	
Aldrin		309-00-2	3.00E-05 I	1.70E+01 I
Aluminum		7429-90-5	1.00E+00 E	
Anthracene	(V)	120-12-7	3.00E-01 I	
Antimony		7440-36-0	4.00E-04 I	
Aroclor 1016		12674-11-2	7.00E-05 I	7.00E-02 I
Aroclor 1221		11104-28-2		2.00E+00 I
Aroclor 1232		11141-16-5		2.00E+00 I
Aroclor 1242		53469-21-9		2.00E+00 I
Aroclor 1248		12672-29-6		2.00E+00 I
Aroclor 1254		11097-69-1	2.00E-05	2.00E+00 I
Aroclor 1260		11096-82-5		2.00E+00 I
Arsenic		7440-38-2	3.00E-04 I	1.50E+00 I
Barium		7440-39-3	7.00E-02 I	
Benzene	(V)	71-43-2	3.00E-03 E	5.50E-02 I
alpha-BHC		319-84-6		6.30E+00
beta-BHC		319-85-7		1.80E+00
delta-BHC		319-86-8		
gamma-BHC (Lindane)		58-89-9	3.00E-04	1.30E+00 b
Benzo(a)anthracene		56-55-3		7.30E-01 E
Benzo(a)pyrene		50-32-8		7.30E+00 I
Benzo(b)fluoranthene		205-99-2		7.30E-01 E
Benzo(k)fluoranthene		207-08-9		7.30E-02 E
Benzoic Acid (at pH 7)		65-85-0	4.00E+00 I	
Benzyl Alcohol		100-51-6	3.00E-01 H	
Beryllium		7440-41-7	2.00E-03 I	
bis(2-chloroethyl)ether	(V)	111-44-4		1.10E+00 I
bis(2-chloroisopropyl)ether	(V)	[illegible]	4.00E-02 I	7.00E-02 H
bis(2-ethylhexyl)phthalate		117-81-7	2.00E-02 I	1.40E-02 I
Bromodichloromethane	(V)	75-27-4	2.00E-02 I	6.20E-02 I
Bromoform	(V)	75-25-2	2.00E-02 I	7.9E-03 I
Bromomethane (methyl bromide)	(V)	74-83-9	1.40E-03 I	
2-Butanone (methyl ethyl ketone)	(V)	78-93-3	6.00E-01 I	
Butylbenzylphthalate		85-68-7	2.00E-01 I	
Cadmium (water)		7440-43-9	5.00E-04 I	
Cadmium (food)		7440-43-9	1.00E-03 I	
Carbon disulfide	(V)	75-15-0	1.00E-01 I	
Carbon tetrachloride	(V)	56-23-5	7.00E-04 I	1.30E-01 I
alpha-Chlordane		5103-71-9	5.00E-04 I	3.50E-01 I
beta-Chlordane		5103-74-2	5.00E-04 I	3.50E-01 I
gamma-Chlordane		12789-03-6	5.00E-04 I	3.50E-01 I
4-Chloroaniline		106-47-8	4.00E-03	
Chlorobenzene	(V)	108-90-7	2.00E-02 I	
Chloroethane (ethyl chloride)	(V)	75-00-3	4.00E-01 E	2.90E-03 E
Chloroform	(V)	67-66-3	1.00E-02 I	
Chloromethane (methyl chloride)	(V)	74-87-3		1.30E-02 H
2-Chloronaphthalene	(V)	91-58-7	8.00E-02	
2-Chlorophenol	(V)	95-57-8	5.00E-03 I	
Chromium III		16065-83-1	1.50E+00 I	
Chromium VI		18540-29-9	3.00E-03 I	
Chrysene		218-01-9		7.30E-03 E
Cobalt		7440-48-4	2.00E-02 E	
Copper		7440-50-8	4.00E-02 H	
Cyanide		57-12-5	2.00E-02 I	
4,4-DDD		72-54-8		2.40E-01 I
4,4-DDE		72-55-9		3.40E-01 I
4,4-DDT		50-29-3	5.00E-04 I	3.40E-01 I
Dibenz(a,h)anthracene		53-70-3		7.30E+00 E
Dibenzofuran		132-64-9	4.00E-03 E	
Dibromochloromethane		124-48-1	2.00E-02 I	8.40E-02 I
Di-n-butylphthalate		84-74-2	1.00E-01 I	
1,2-Dichlorobenzene (o-)	(V)	95-50-1	9.00E-02 I	
1,4-Dichlorobenzene (p-)	(V)	106-46-7	3.00E-02 E	2.40E-02 H
3,3-Dichlorobenzidine		91-94-1		4.50E-01 I
1,1-Dichloroethane	(V)	75-34-3	1.00E-01 H	
1,2-Dichloroethane	(V)	107-06-2	3.00E-02 E	9.10E-02 I
1,1-Dichloroethene	(V)	75-35-4	9.00E-03 I	6.00E-01 I
1,2-Dichloroethene (total)	(V)	540-59-0	9.00E-03 H	
2,4-Dichlorophenol (at pH 6.8)		120-83-2	3.00E-03 I	
1,2-Dichloropropane	(V)	78-87-5		6.80E-02 H
cis-1,3-Dichloropropene	(V)	10061-01-5	3.00E-02 I	1.00E-01 I
trans-1,3-Dichloropropene	(V)	10061-02-6	3.00E-02 I	1.00E-01 I
Dieldrin		60-57-1	5.00E-05 I	1.60E+01 I
Diethylphthalate		84-66-2	8.00E-01 I	
2,4-Dimethylphenol	(V)	105-67-9	2.00E-02 I	
Dimethylphthalate		131-11-3	1.00E+01 W	
4,6-Dinitro-2-methylphenol (4,6-dinitro-o-cresol)	(V)	534-52-1	1.00E-03 E	
2,4-Dinitrophenol		51-28-5	2.00E-03 I	
2,4-Dinitrotoluene		121-14-2	2.00E-03 I	6.80E-01 I
2,6-Dinitrotoluene		606-20-2	1.00E-03 H	6.80E-01 I
Di-n-octylphthalate		117-84-0	2.00E-02 H	
Endosulfan I		959-98-8	6.00E-03 I	
Endosulfan II		33213-65-9	6.00E-03 I	
Endosulfan sulfate		1031-07-8	6.00E-03 I	
Endosulfan (technical)		115-29-7	6.00E-03 I	
Endrin (technical)		72-20-8	3.00E-04 I	
Ethylbenzene	(V)	100-41-4	1.00E-01 I	
Fluoranthene		206-44-0	4.00E-02 I	
Fluorene	(V)	86-73-7	6.00E-02 I	
Heptachlor		76-44-8	5.00E-04 I	4.50E+00 I
Heptachlor epoxide		1024-57-3	1.30E-05 I	9.10E+00 I
Hexachlorobenzene		118-74-1	8.00E-04 I	1.60E+00 I
Hexachlorobutadiene		87-68-3	2.00E-04 H	7.80E-02 I
Hexachlorocyclopentadiene		77-47-4	6.00E-03 I	
Hexachloroethane		67-72-1	1.00E-03 I	1.40E-02 I
Indeno(1,2,3-cd)pyrene		193-39-5		7.30E-01 E
Iron		7439-89-6	3.00E-01 E	
Isophorone		78-59-1	2.00E-01 I	9.50E-04 I
Lead		7439-92-1		
Lithium		7439-93-2	2.00E-02 E	
Magnesium		7439-95-4		
Manganese		7439-96-5	2.00E-02	
Mercury (elemental)		7439-97-6		
Methoxychlor		72-43-5	5.00E-03 I	
Methylene chloride (dichloromethane)	(V)	75-09-2	6.00E-02 I	7.50E-03 I
2-Methylnaphthalene	(V)	91-57-6	2.00E-02 E	
4-Methyl-2-pentanone (methyl isobutyl ketone)	(V)	108-10-1	8.00E-02 b	
2-Methylphenol (o-cresol)		95-48-7	5.00E-02 I	
4-Methylphenol (p-cresol)		106-44-5	5.00E-03 H	
Molybdenum		7439-98-7	5.00E-03 I	
Naphthalene	(V)	91-20-3	2.00E-02 I	
Nickel (soluble)		7440-02-0	2.00E-02 I	
2-Nitroaniline		88-74-4		
Nitrobenzene	(V)	98-95-3	5.00E-04 I	
4-Nitrophenol	(V)	100-02-7	8.00E-03 E	
n-Nitrosodiphenylamine	(V)	86-30-6		4.90E-03 I
n-Nitrosodipropylamine		621-64-7		7.00E+00 I
Pentachlorophenol		87-86-5	3.00E-02 I	1.20E-01 I
Phenol		108-95-2	6.00E-01 I	
Pyrene		129-00-0	3.00E-02 I	
Selenium		7782-49-2	5.00E-03 I	
Silver		7440-22-4	5.00E-03 I	
Strontium		7440-24-6	6.00E-01 I	
Stryene	(V)	100-42-5	2.00E-01 I	
1,1,2,2-Tetrachloroethane	(V)	79-34-5	6.00E-02 E	2.00E-01 I
Tetrachloroethene	(V)	127-18-4	1.00E-02 I	5.20E-02 E
Tin		7440-31-5	6.00E-01 H	
Toluene	(V)	108-88-3	2.00E-01 I	
Toxaphene		8001-35-2		1.10E+00 I
1,2,4-Trichlorobenzene	(V)	120-82-1	1.00E-02 I	
1,1,1-Trichloroethane	(V)	71-55-6	2.80E-01 E	
1,1,2-Trichloroethane	(V)	79-00-5	4.00E-03 I	5.70E-02 I
Trichloroethene	(V)	79-01-6	3.00E-04 E	4.00E-01 E
2,4,5-Trichlorophenol		95-95-4	1.00E-01 I	
2,4,6-Trichlorophenol		88-06-2		1.10E-02 I
Vanadium		7440-62-2	7.00E-03 H	
Vinyl acetate		108-05-4	1.00E+00 H	

Table 5 - Toxicity Values Used for the RFETS PPRGs [a]

Vinyl chloride	(V)	75-01-4	3.00E-03	I	1.40E+00	I					>50	EPA,2001	no	1.00E-01	8.80E-06	2.80E-02	3.08E-02					1.13E+03		3.84E+03	6.25E+01	5.00E-01	ppm	1.28E+00	acute	inhal	develop
Xylene (total)	(V)	1330-20-7	2.00E+00	I							>50	EPA,2001	no												1.06E+02	1.00E+00	ppm	4.34E+00	acute	inhal	neurol
Zinc		7440-66-6	3.00E-01	I							highly variable	EPA,2001	no										1.49E+07								
																							1.49E+07								
Nitrate		14797-55-8	1.60E+00	I							100	EPA,2001	no										1.49E+07								
Nitrite		14797-65-0	1.00E-01	I							100	EPA,2001	no										1.49E+07								
																							1.49E+07								
Ammonium (as Ammonia)		7664-41-7									100	EPA,2001	no	1.00E-01		2.86E-02							1.49E+07		1.70E+01	5.00E-01	ppm	3.48E-01	acute	inhal	resp
Fluoride (as fluorine)		7782-41-4	6.00E-02	I							100	EPA,2001	no										1.49E+07								
							soil ingestion	soil ingestion	water ingestion	food ingestion																					
					(Risk/pCi)		(Risk/pCi)	(Risk/pCi)	(Risk/pCi)	(Risk/pCi)							(Risk/pCi)		(Risk/pCi)			(Risk/yr/pCi/g)									
Am-241		14596-10-2			3.28E-10	b	2.17E-10	9.1E-11	1.04E-10	1.34E-10	100	EPA,2001	no				3.85E-08	b	2.81E-08	4.59E-09	b	2.76E-08	1.49E+07								
Pu-239		15117-48-3			3.16E-10	b	2.77E-10	1.21E-10	1.35E-10	1.74E-10	100	EPA,2001	no				2.78E-08	b	3.33E-08	1.26E-11	b	2.00E-10	1.49E+07								
Pu-240		14119-33-6			3.15E-10	b	2.77E-10	1.21E-10	1.35E-10	1.74E-10	100	EPA,2001	no				2.78E-08	b	3.33E-08	1.87E-11	b	6.98E-11	1.49E+07								
U-233		13968-55-3	3.00E-03	I	4.48E-11	b	1.6E-10		7.18E-11	9.69E-11	100	EPA,2001	no				1.41E-08	b	1.18E-08	3.52E-11	b	3.83E-10	1.49E+07								
U-234		13966-29-5	3.00E-03	I	4.44E-11	b	1.58E-10	5.11E-11	7.07E-11	9.55E-11	100	EPA,2001	no				1.40E-08	b	1.14E-08	2.14E-11	b	2.52E-10	1.49E+07								
U-235		15117-96-1	3.00E-03	I	4.70E-11	b	1.57E-10	4.93E-11	6.96E-11	9.44E-11	100	EPA,2001	no				1.30E-08	b	1.01E-08	2.65E-07	b	5.18E-07	1.49E+07								
U-235+D		15117-96-1(+D)	3.00E-03	I	4.70E-11	b	1.63E-10	4.95E-11	7.18E-11	9.76E-11	100	EPA,2001	no				1.30E-08	b	1.01E-08	2.65E-07	b	5.43E-07	1.49E+07								
U-238		7440-61-1	3.00E-03	I	6.20E-11	b	1.43E-10	4.66E-11	6.4E-11	8.66E-11	100	EPA,2001	no				1.24E-08	b	9.32E-09	6.57E-08	b	4.99E-11	1.49E+07								
U-238+D		7440-61-1(+D)	3.00E-03	I	6.20E-11	b	2.1E-10	4.68E-11	8.71E-11	1.21E-10	100	EPA,2001	no				1.24E-08	b	9.35E-09	6.57E-08	b	1.14E-07	1.49E+07								

Notes:

Only those constituents in ALF are included.

Sources. I = IRIS H = HEAST A = HEAST Alternate W = Withdrawn from IRIS or HEAST

E = EPA-NCEA provisional value O = other

(V) = Chemicals listed are volatile.

a = All toxicity values and notes are from IRIS, 1999 unless otherwise noted. Several inhalation slope factors have been derived by multiplying the inhalation unit risk from IRIS by a conversion factor of 3500: [SFi = (Inh Unit Risk x 70kg x 1,000 ug/mg) / 20 m^3/d].

Several inhalation reference doses have been derived by multiplying the inhalation reference concentration by a conversion factor of 0.2857: [RfDi = (RfCi x 20 m^3/d) / 70 kg].

Several oral slope factors have been derived by multiplying the drinking water unit risk by a conversion factor of 35,000: [SFo = (DW Unit Risk x 70 kg x 1,000 ug/mg) / 2 L/day].

b = Value from HEAST, 1997.

c = Values given are for PCBs.

d = Values given are for chlordane (CAS no. 12789-03-6).

e = Values given are for 1,3-dichloropropene.

[redacted]

i = Value given for arsenic is calculated from an oral unit risk of 5E-05 (L/µg).

j = Values given for chemicals were calculated from HEAST, 1997.

k = Values given for PAHs were found in EPA, 1993.

l = Value given is from an EPA memo from the Office of Research and Development, National Center for Environmental Assessment (NCEA).

[redacted]

o = Value based on the copper drinking water standard of 1.3 mg/L.

q = The upper-bound slope factor for high risk and persistence is recommended by EPA for the oral slope factor of PCB environmental mixtures.

r = Dual oral RfDs available for cadmium. 5E-04 is representative of pathways involving water and 1E-03 is representative of pathways involving food (soil).

s = According to IRIS, 1998, the oral RfD of 0.14 represents total oral intake of manganese. It is recommended that a modifying factor of three be applied (resulting oral RfD = 0.047) if oral RfD is used for assessments involving nondietary exposures (ingesting soil or drinking water)

u = Values given for 70 percent bis(2-chloro-1-methyl ethyl) ether and 30 percent bis(2-chloroisopropyl) ether.

w = Value given has been withdrawn by EPA; greater uncertainty is associated with this toxicity value than values listed in IRIS and HEAST.

x = Ammonia oral RfD specifically related to organoleptic threshold.

y = NCEA (as referenced in EPA, 1997).

z = Values given for Endosulfan (technical).

aa = Value given is for naphthalene. NCEA, 1999 recommends using the RfD for naphthalene as a surrogate for its methylated derivative, 2-methylnaphthalene until additional studies are available.

bb = Value given is the upper range of average intake for children, which is recommended by NCEA, 1999 in lieu of an oral RfD, given the ubiquitous nature of cobalt and the relatively well characterized intake of cobalt in food.

cc = Value given is the higher of two possible provisional RfDs provided by NCEA. Higher value was chosen for more conservatism.

dd = Value given is the high end of the range provided of acceptable URFs. This value was chosen for more conservatism.

ee = Value given is Region VIII EPA RfC for cadmium.

ff = Value given is Iris RfC for chromium VI in particulates, the likely form in RFETS soils.

gg = New slope factors from draft (May 24, 2000) Heast Table update, using Federal Guidance Report No. 13 morbidity risk coefficients.

References:

EPA, 1993 = U.S. Environmental Protection Agency. 1993. Research and Development-Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons. Prepared for the Office of Health and Environmental Assessment by the Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Cincinnati, OH. Final Draft. ECAO-CIN-842. March.

EPA, 1997 = U.S. Environmental Protection Agency. 1997. Region III Risk-Based Concentration Table. Philadelphia, PA. October 22.

HEAST, 1997 = U.S. Environmental Protection Agency. 1997. Health Effects Assessment Summary Tables, FY-1997 Annual. Office of Solid Waste and Emergency Response, Washington, D.C. EPA/540/R-97/036. July.

IRIS, 1998 = U.S. Environmental Protection Agency. 1998. Integrated Risk Information System. On-line database. Office of Research and Development, Cincinnati, OH. April.

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Cell: C35
Comment: Win Chromec:
check Cas #

Cell: A109
Comment: Win Chromec:
THIS IS THE RfD FOR NON-FOOD. THE RfD FOR FOOD SHOULD BE ADDED AND USED FOR ANY FOOD SCENARIOS.

Cell: F145
Comment: Win Chromec:
THIS IS THE SF FOR EARLYLIFE, ADULT SF IS 0.72.

The **Rural Residential Surface Soil Exposure Scenario** consists of the following pathways: ingestion of surface soil, inhalation of dust

Exposure Parameter	Variable	Unit	Pt Est	Source				
General Assumptions								
Target hazard index	THI	--	1	EPA, 1991a				
Target excess lifetime cancer risk	TR	--	1E-06	EPA, 1991a				
Adult body weight	BW_A	kg	70	EPA, 1991b				
Child body weight	BW_C	kg	15	?				
Residential Exposure Scenario Assumptions								
Averaging time - noncarcinogenic	AT_NC	yr	30	EPA, 1991b				
Child resident Averaging time - noncarcinogenic	AT_NC_C	yr	6					
Averaging time - carcinogenic	AT_C	yr	70	EPA, 1991b				
Contact rate - surface water	CR_SW_RR	L/hr	0					
Exposure frequency	EF_RR	day/yr	350	EPA, 1991b				
Exposure frequency - surface water	EF_SW_RR	events/yr	0					
Exposure duration	ED_A	yr	30	EPA, 1991b				
Exposure time - surface water	ET_SW_RR	hr/day	0					
Exposure time Surface soil	ET_SS_RR	hr/day	24	RSALs, 2001				
Exposure duration-child	ED_C	yr	6	EPA, 1991b				
Daily indoor inhalation rate adult	IR_AI_RR	m3/day	20	EPA, 1991b				
Daily outdoor inhalation rate adult	IR_AO_RR	m3/day	20					
Daily indoor inhalation rate child	IR_CI_RR	m3/day	8.3	RSALs, 2001				
Daily outdoor inhalation rate child	IR_CO_RR	m3/day	8.3					
Daily age averaged inhalation rate (0-30 y)	IR_ageav_RR	m3/day	17.7	RSALs, 2001				
Daily age averaged inhalation factor (non-rads)	IF_ageav_RR	m3y/kgd	10.18	calc				
Mass Loading, (PM10) for inhalation	ML	kg/m3	6.7 E-8	RSALs, 2001	67	ug/m3	6.92E-05	g/m3
Site-specific PEF based on ML	PEF	m3/kg	14925373	RSALs, 2001				
Daily water ingestion rate	IRw	L/day	2	EPA, 1991b				
Child Soil Ingestion Rate	SIR_C_RR	mg/day	200	EPA, 1991b				
Adult Soil Ingestion Rate	SIR_A_RR	mg/day	100	EPA, 1991b				
Age-adjusted soil ingestion factor (non-rads)	SIF_ageav_RR	mg-yr/kg-day	114	EPA, 1991b				
Age-adjusted soil ingestion rate for radionuclides	SIR_ageavRAD_RR	mg/day	120	EPA, 2000				
Gamma shielding factor (1-Se)	GSF	--	0.4	EPA, 2000				
Area Correction Factor	ACF		0.9	EPA,2000				
Exposure time fraction, outdoor	Eto_RR	--	0.15	EPA, 2000				
Exposure time fraction, indoor	Eti_RR	--	0.85	EPA, 2000				
Dilution factor, indoor inhalation	DFi		0.7	EPA, 2000				
Homegrown vegetable consumption rate, child	CRv_C	kg/yr	10.57	RSALs, 2001				
Homegrown vegetable consumption rate factor, child (non-rads)	CFv_C	g y/kg d	12.07996	calc.				
Homegrown vegetable consumption rate, adult	CRv_A	kg/yr	50	RSALs, 2001				
Homegrown vegetable consumption rate factor, adult (non-rads)	CFv_A	g y/kg d	48.97959	calc.				
Age-adjusted vegetable consumption rate	CRv_ageav	kg/yr	42.1	RSALs, 2001				
Age-adjusted vegetable consumption rate factor (non-rads)	CFv_ageav	g y/kg d	61.1	calc.				
Homegrown fruit consumption rate, child	CRf_C	kg/yr	12.2	RSALs, 2001				
Homegrown fruit consumption rate factor, child (non-rads)	CFf_C	g y/kg d	13.9428	calc.				
Homegrown fruit consumption rate, adult	CRf_A	kg/yr	57	RSALs, 2001				
Homegrown fruit consumption rate factor, adult (non-rads)	CFf_A	g y/kg d	48.97959	calc.				

Age-adjusted fruit consumption rate	CRf_ageav	kg/yr	48.0	RSALs, 2001	
Age-adjusted fruit consumption rate factor (non-rads)	CFf_ageav	g y/kg d	69.8	calc.	
Total grain consumption rate, child	CRg_C	kg/yr	23.65	RSALs, 2001	
Total grain consumption rate factor, child (non-rads)	CFg_C	g y/kg d	27.02856	calc.	
Total grain consumption rate, adult	CRg_A	kg/yr	110	RSALs, 2001	
Total grain consumption rate factor, adult (non-rads)	CFg_A	g y/kg d	107.7551	calc.	
Homegrown fraction of grain	HGg	unitless	0.01	RSALs, 2001	
Age-adjusted grain consumption rate	CRg_ageav	kg/yr	0.93	RSALs, 2001	
Age-adjusted grain consumption rate factor (non-rads)	CFg_ageav	g y/kg d	1.3	calc.	
Total consumption rate (veg + fruit + grain)	CRfood_ageav	kg/yr	91.0	RSALs, 2001	
Total age-averaged consumption rate factor (veg + fruit + grain) (non-rad	CFfood_ageav	g y/kg d	132.2	calc.	
Soil-plant conc factor, veg	Bv	unitless	chem-specific	RSALs, 2001	
Soil-plant conc factor, roots	Br	unitless	chem-specific	RSALs, 2001	
Dry weight conversion, veg	DWCv	unitless	0.07	RSALs, 2001	
Dry weight conversion, roots	DWCr	unitless	0.20	RSALs, 2001	
Fraction diet leafy veg	Fv_lfy	unitless	0.149	RSALs, 2001	
Fraction diet exposed above ground fruits and veg	Fv_eag	unitless	0.148	EFH,1997&R6Combustor, 2000	
Fraction diet protected above ground fruits and veg	Fv_pag	unitless	0.564	EFH,1997&R6Combustor, 2000	
Fraction diet below ground fruits and veg	Fv_bg	unitless	0.139	EFH,1997&R6Combustor, 2000	
Fraction diet non-leafy veg and fruits	Fv_nonlfy	unitless	0.851	RSALs, 2001	
Conc in plant (veg)	Cpv	pCi/kg	chem-specific	RSALs, 2001	
Conc in plant (root)	Cpr	pCi/kg	chem-specific	RSALs, 2001	
Mass loading on plant	MLp	g/m3	1.67E-04	RSALs, 2001	167 ug/m3
Lumping term for deposition	LT	m3/kg	1.12E+03	RSALs, 2001	
Conc on plant (deposition)	Cpd	pCi/kg	#NAME?	RSALs, 2001	
Total concentration in plant	Cp	pCi/kg	chem-specific	RSALs, 2001	
Residential child skin-soil adherence factor	AF_C_RR	mg/cm2-event	2.00E-01	EPA, 2001	
Residential adult skin-soil adherence factor	AF_A_RR	mg/cm2-event	0.07	EPA, 2001	
Residential age-averaged skin-soil adherence factor	SFSageav_RR	mgy/kg-event	361.00	EPA, 2001	
Event frequency	EV	events/d	1.00	EPA, 2001	
Residential child skin surface area (exposed)	SA_C	cm2	2800.00	EPA, 2001	
Residential adult skin surface area (exposed)	SA_A		5700.00	EPA, 2001	
Dermal absorption fraction	ABS		chemical-specific	EPA, 2001	

Toxicity Values

Oral reference dose	RfDo	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA
Oral cancer slope factor	CSFo	risk/(mg/kgd)	chemical-specific	IRIS, HEAST or NCEA
Ingestion cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13
Inhalation reference dose	RfDi	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA
Inhalation cancer slope factor	CSFi	risk/(mg/kgd)	chemical-specific	IRIS, HEAST or NCEA
Inhalation cancer slope factor - radiological effects	$CSFi_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13
External irradiation cancer slope factor - radiological effects	$CSFe_{RAD}$	risk/y/pCi/g	chemical-specific	HEAST, FRG13
Food cancer slope factor - radiological effects	$CSFf_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13

Sources:

EPA, 1991a = U.S. Environmental Protection Agency. 1991. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals. Interim. Office of Emergency and Remedial Response, Washington, D.C. Publication 9285.7-01B. December.

EPA, 1991b = U.S. Environmental Protection Agency. 1991. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER Directive 9285.6-03. March 25.

EPA, 2000 = U.S. Environmental Protection Agency. 2000. Soil Screening Guidance for Radionuclides: Technical Background Document. Office of Radiation and Indoor Air, Washington, D.C. Publication EPA/540-R-00-006. October, 2000.

EPA, 2000b = U.S. Environmental Protection Agency. Risk Assessment Guidance for Superfund Vol. I: Human Health Evaluation Manual

EPA, 2000b = U.S. Environmental Protection Agency. "Risk Assessment Guidance for Superfund Vol. 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim Guidance. Office of Emergency and Remedial Response, Washington, D.C.
EPA, 2001 = U.S. Environmental Protection Agency. 2001. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Peer Review Draft. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER 9355.4-24. March.
RSAL 2001 = U.S. DOE, U.S. EPA and CDPHE, 2001. Draft Task 3 Report: Calculation of Surface Radionuclide Soil Action Levels for Plutonium and Americium. October.

Cell: D30
Comment: Philip E. Goodrum:
weighted by age-specific ED

Cell: D48
Comment: Philip E. Goodrum:
mean from EFH (1997) Table 13-33, West, seasonal, consumer only, homegrown, kg/yr = g/kg-day x 0.001 g/kg x mean body weight

Cell: D49
Comment: dmniedzw:
Mean vegetable consumption rate, child, converted to allow for non-rad RBC calculation.
(10.57(kg/y)/(15(kg) x 0.001 (kg/g) x 350(d/y))x6(y))=12.08(gy/kgd).

Cell: D50
Comment: Philip E. Goodrum:
mean from EFH (1997) Table 13-33, West, seasonal, consumer only, homegrown, kg/yr = g/kg-day x 0.001 g/kg x mean body weight

Cell: D51
Comment: dmniedzw:
Mean vegetable consumption rate, adult, converted to allow for non-rad RBC calculation.
(10.57(kg/y)/(70(kg) x 0.001 (kg/g) x 350(d/y))x24(y))=48.98
(gy/kgd).

Cell: D52
Comment: Philip E. Goodrum:
weighted by age-specific ED

Cell: D53
Comment: dmniedzw:
homegrown veg consumption rate factor child + homegrown veg consumption rate factor adult

Cell: D54
Comment: Philip E. Goodrum:
mean from EFH (1997) Table 13-33, West, seasonal, consumer only, homegrown, kg/yr = g/kg-day x 0.001 g/kg x mean body weight

Cell: D55
Comment: dmniedzw:
Mean fruit consumption rate, child, converted to allow for non-rad RBC calculation.
(12.2(kg/y)/(15(kg) x 0.001 (kg/g) x 350(d/y))x6(y))=13.94(gy/kgd).

Cell: D56
Comment: Philip E. Goodrum:
mean from EFH (1997) Table 13-33, West, seasonal, consumer only, homegrown, kg/yr = g/kg-day x 0.001 g/kg x mean body weight

Cell: D57
Comment: dmniedzw:
Mean fruit consumption rate, adult, converted to allow for non-rad RBC calculation.
(57(kg/y)/(70(kg) x 0.001 (kg/g) x 350(d/y)) x 24(y))=48.98
(gy/kgd).

Cell: D58
Comment: Philip E. Goodrum:
weighted by age-specific ED

Cell: D59
Comment: dmniedzw:
homegrown fruit consumption rate factor child + homegrown fruit consumption rate factor adult

Cell: D60
Comment: Philip E. Goodrum:
mean from EFH (1997) Table 12-1, West, per capita; kg/yr = g/kg-day x 0.001 g/kg x mean body weight

Cell: D61
Comment: dmniedzw:
Mean grain consumption rate, child, converted to allow for non-rad RBC calculation.
(23.65(kg/y)/(15(kg) x 0.001 (kg/g) x 350(d/y))x6(y))=27.03
(gy/kgd).

Cell: D62
Comment: Philip E. Goodrum:
mean from EFH (1997) Table 12-1, West, per capita; kg/yr = g/kg-day x 0.001 g/kg x mean body weight

Cell: D63
Comment: dmniedzw:
Mean grain consumption rate, adult, converted to allow for non-rad RBC calculation.
(110(kg/y)/(70(kg) x 0.001 (kg/g) x 350(d/y)) x24(y))=107.76
(gy/kgd).

Cell: D64
Comment: Philip E. Goodrum:
judgment

Cell: D65
Comment: Philip E. Goodrum:
weighted by age-specific ED

Cell: D66

Comment: dmniedzw:
(homegrown grain consumption rate factor child + homegrown grain consumption rate factor adult) x homegrown fraction of grain

Cell: D67
Comment: Philip Goodrum:
Sum of consumption rates for home-grown vegetables, fruit, and grain

Cell: D68
Comment: dmniedzw:
Sum of veg, fruit and grain age-av'd consumption rate factors

Cell: D71
Comment: Philip E. Goodrum:
changed from 1.0 to 0.07, the Baes 1984 value (Argonne report, Table 2) recommended by Ward Whicker and adopted by workgroup per 7/16/01 e-mail from Sandi MacLeod

Cell: D72
Comment: Philip E. Goodrum:
changed from 0.428 to 0.2, mean of root veg, fruits, corn and peas, per Carl Spreng e-mail to Susan Griffin 7/01

Cell: D73
Comment: goodrum:
EPA EFH (1997), Table 9-21 for West - fraction of total produce consumed that is leafy = 45 / 303 g/day = 0.149

Cell: D74
Comment: dmniedzw:
Calculated from fraction of total produce in diet (exposed aboveground - leafy, 0.297-0.149) (0.297 is from EFH Tables 13-61 to 13-65, and R6 Combustion Guidance Table C-1-2). (0.149 is from EFH Table 9-21 for West).

Cell: D75
Comment: dmniedzw:
Calculated from % of diet (protected
aboveground) EFH 13-61 to 13-65, and R6 Combustion Guidance Table C-1-2.

Cell: D76
Comment: dmniedzw:
Calculated from % of diet (belowground produce) EFH Tables 13-61 to 13-65 & R6 Combustion Guidance Table C-1-2.

Cell: D80
Comment: Philip Goodrum:

MLp = 2.5 x MLi - note that units for MLi or micrograms per m^3, and units for MLp are grams per m^3

Cell: D81
Comment: Philip Goodrum:
Vd x r/4 x (t_.5)/ ln2 = .002 x .32 x 1745000
per Diane N.

Cell: D82
Comment: Philip E. Goodrum:
Deposition = Cs x ML x LT
included as a factor for all food groups, per Diane N. 4/9 e-mail

Exposure Parameter	Variable	Unit	Pt Est used in 2001 RSALs	Source		
General Assumptions						
Target hazard index	THI	--	1	EPA, 1991a		
Target excess lifetime cancer risk	TR	--	1E-06	EPA, 1991a		
Adult body weight	BW_A	kg	70	EPA, 1991b		
Wildlife Refuge Worker Exposure Scenario Assumptions						
Averaging time - noncarcinogenic	AT_NC	yr	18.7	RSALs, 2001, 95th%		
Averaging time - carcinogenic	AT_C	yr	70	EPA, 1991b		
Contact rate - surface water	CR_SW_WRW	L/hr	0			
Exposure frequency	EF_WRW	day/yr	250	RSALS, 2001, 95th%		
Exposure frequency - surface water	EF_SW_WRW	events/yr	0			
Exposure duration	ED_WRW	yr	18.7	RSALS, 2001, 95th%		
Exposure time - surface water	ET_SW_WRW	hr/day	0			
Exposure time Surface soil	ET_SS_WRW	hr/day	8	RSALs, 2001		
Daily indoor inhalation rate adult	IR_AI_WRW	m3/day	20	EPA, 1991b		
Daily outdoor inhalation rate adult	IR_AO_WRW	m3/day	20			
Hourly inhalation rate adult worker	HIR_A_WRW	m3/hr	1.30	EPA, 1997		
Mass Loading, (PM10) for inhalation	ML	kg/m3	6.7 E-8	RSALs, 2001	67	ug/m3
Site-specific PEF based on ML	PEF	m3/kg	14925373	RSALs, 2001		
Daily water ingestion rate	IRw	L/day	2	EPA, 1991b		
Adult Soil Ingestion Rate	SIR_A_WRW	mg/day	100	EPA, 1991b		
Gamma shielding factor (1-Se)	GSF	--	0.4	EPA, 2000		
Area Correction Factor	ACF	--	0.9	EPA,2000		
Exposure time fraction, outdoor	Eto_WRW	--	0.5	RSALs, 2001		
Exposure time fraction, indoor	Eti_WRW	--	0.5	RSALs, 2001		
Dilution factor, indoor inhalation	DFi		0.7	RSALs, 2001		
Wildlife Refuge Worker skin-soil adherence factor	AF_A_WRW	mg/cm2-event	0.117	EPA, 2001	farmer	
Event frequency	EV	events/d	1.00	EPA, 2001		
Wildlife Refuge Worker skin surface area	SA_A_WRW	cm2	3300.00	EPA, 2001		
Dermal absorption fraction	ABS	--	chemical-specific	EPA, 2001		
Toxicity Values						
Oral reference dose	RfDo	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA		
Oral cancer slope factor	CSFo	$(mg/kg\text{-}day)^{-1}$	chemical-specific	IRIS, HEAST or NCEA		
Ingestion cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13		
Inhalation reference dose	RfDi	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA		
Inhalation cancer slope factor	CSFi	(mg/kg-day)-1	chemical-specific	IRIS, HEAST or NCEA		
Inhalation cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13		
External irradiation cancer slope factor - radiological effects	$CSFe_{RAD}$	risk/y/pCi/g	chemical-specific	HEAST, FRG13		

Sources:

EPA, 1991a = U.S. Environmental Protection Agency. 1991. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals. Interim. Office of Emergency and Remedial Response, Washington, D.C. Publication 9285.7-01B. December.

EPA, 1991b = U.S. Environmental Protection Agency. 1991. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER Directive 9285.6-03. March 25.

EPA, 2000 = U.S. Environmental Protection Agency. 2000. Soil Screening Guidance for Radionuclides: Technical Background Document. Office of Radiation and Indoor Air, Washington, D.C. Publication EPA/540-R-00-006. October, 2000.

EPA, 2000b = U.S. Environmental Protection Agency. Risk Assessment Guidance for Superfund Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim Guidance. Office of Emergency and Remedial Response, Washington, D.C.

EPA, 2001 = U.S. Environmental Protection Agency. 2001. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Peer Review Draft. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER 9355.4-24.

Exposure Parameter	Variable	Unit	Pt Est used in 2001 RSALs	Source	
General Assumptions					
Target hazard index	THI	--	1	EPA, 1991a	
Target excess lifetime cancer risk	TR	--	1E-06	EPA, 1991a	
Adult body weight	BW_A	kg	70	EPA, 1991b	
Office Worker Exposure Scenario Assumptions					
Averaging time - noncarcinogenic	AT_NC	yr	25	RSALs, 2001	
Averaging time - carcinogenic	AT_C	yr	70	EPA, 1991b	
Contact rate - surface water	CR_SW_OW	L/hr	0		
Exposure frequency	EF_OW	day/yr	250	EPA, 1997	
Exposure frequency - surface water	EF_SW_OW	events/yr	0		
Exposure duration	ED_OW	yr	25	RSALs, 2001	
Exposure time - surface water	ET_SW_OW	hr/day	0		
Exposure time Surface soil	ET_SS_OW	hr/day	8	RSALs, 2001	
Daily indoor inhalation rate adult	IR_AI_OW	m3/day	20	EPA, 1991b	
Daily outdoor inhalation rate adult	IR_AO_OW	m3/day	20		
Hourly inhalation rate adult worker	HIR_A_OW	m3/hr	1.10	EPA, 1997	
Mass Loading, (PM10) for inhalation	ML	kg/m3	6.7 E-8	RSALs, 2001	67 ug/m3
Site-specific PEF based on ML	PEF	m3/kg	14925373	RSALs, 2001	
Daily water ingestion rate	IRw	L/day	2	EPA, 1991b	
Adult Soil Ingestion Rate	SIR_A_OW	mg/day	50	EPA, 1991b	
Gamma shielding factor (1-Se)	GSF	--	0.4	EPA, 2000	
Area Correction Factor	ACF	--	0.9	EPA,2000	
Exposure time fraction, outdoor	Eto	--	0	RSALs, 2001	
Exposure time fraction, indoor	Eti	--	1	RSALs, 2001	
Dilution factor, indoor inhalation	DFi		0.4	RSALs, 2001	
Office Worker skin-soil adherence factor	AF_A_OW	mg/cm2-event	0.020	EPA, 2001	groundskeeper, commercial
Event frequency	EV	events/d	1.00	EPA, 2001	
Office Worker skin surface area	SA_A_OW	cm2	3300.00	EPA, 2001	
Dermal absorption fraction	ABS	--	chemical-specific	EPA, 2001	
Toxicity Values					
Oral reference dose	RfDo	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA	
Oral cancer slope factor	CSFo	$(mg/kg\text{-}day)^{-1}$	chemical-specific	IRIS, HEAST or NCEA	
Ingestion cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13	
Inhalation reference dose	RfDi	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA	
Inhalation cancer slope factor	CSFi	(mg/kg-day)-1	chemical-specific	IRIS, HEAST or NCEA	
Inhalation cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13	
External irradiation cancer slope factor - radiological effec	$CSFe_{RAD}$	risk/y/pCi/g	chemical-specific	HEAST, FRG13	

Sources:

EPA, 1991a = U.S. Environmental Protection Agency. 1991. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals. Interim. Office of Emergency
EPA, 1991a = U.S. Environmental Protection Agency. 1991. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals. Interim. Office of Emergency
and Remedial Response, Washington, D.C. Publication 9285.7-01B. December.
EPA, 1991b = U.S. Environmental Protection Agency. 1991. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER Directive 9285.6-03. March 25.
EPA, 2000 = U.S. Environmental Protection Agency. 2000. Soil Screening Guidance for Radionuclides: Technical Background Document. Office of Radiation and Indoor Air, Washington, D.C. Publication EPA/540-R-00-006. October, 2000.
EPA, 2000b = U.S. Environmental Protection Agency. Risk Assessment Guidance for Superfund Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim Guidance. Office of Emergency and Remedial Response, Washington, D.C.
EPA, 2001 = U.S. Environmental Protection Agency. 2001. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Peer Review Draft. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER 9355.4-24.

The **Open Space Surface Soil Exposure Scenario** consists of the following pathways: ingestion of surface soil, inhalation of dust, and

Exposure Parameter	Variable	Unit	Traditional Pt Est	Source	
General Assumptions					
Target hazard index	THI	--	1	EPA, 1991a	
Target excess lifetime cancer risk	TR	--	1E-06	EPA, 1991a	
Adult body weight	BW_A	kg	70	EPA, 1991b	
Child body weight	BW_C	kg	15	?	
Residential Exposure Scenario Assumptions					
Averaging time - noncarcinogenic	AT_NC_A	yr	30	EPA, 1991b	
Child resident Averaging time - noncarcinogenic	AT_NC_C	yr	6		
Averaging time - carcinogenic	AT_C	yr	70	EPA, 1991b	
Exposure frequency	EF_OS	day/yr	100	Jeffco, 1996 95th%	
Exposure duration	ED_OS	yr	30	EPA, 1991b	
Exposure time Surface soil	ET_SS_OS	hr/day	2.5	RSALs, 2001	
Exposure duration-child	ED_C_OS	yr	6	EPA, 1991b	
Daily indoor inhalation rate adult	IR_AI_OS	m3/day	0	EPA, 1991b	
Daily outdoor inhalation rate adult	IR_AO_OS	m3/day	20		
Hourly inhalation rate, adult open space visitor	HIR_A_OS	m3/hr	2.4	RSALs, 2001	
Daily indoor inhalation rate child	IR_CI_OS	m3/day	0.0	RSALs, 2001	
Daily outdoor inhalation rate child	IR_CO_OS	m3/day	8.3		
Hourly inhalation rate, child open space visitor	HIR_C_OS	m3/hr	1.6	RSALs, 2001	
Age-averaged hourly inhalation factor (non-radionuclides)	HIF_ageav_OS	m3y/kgd	3.657		
Age-averaged hourly inhalation rate (radionuclides)	HIR_ageav_OS	m3/hr	2.24	RSALs, 2001	
Mass Loading, (PM10) for inhalation	ML	kg/m3	6.7 E-8	RSALs, 2001	67 ug/m3
Site-specific PEF based on ML	PEF	m3/kg	14925373	RSALs, 2001	
Child Soil Ingestion Rate	SIR_C_OS	mg/day	100	EPA, 1991b	
Adult Soil Ingestion Rate	SIR_A_OS	mg/day	50	EPA, 1991b	
Age-adjusted soil ingestion factor	SIF_ageav_OS	mg-yr/kg-day	57	EPA, 1991b	
Age-adjusted soil ingestion rate for radionuclides	SIR_ageavRAD_OS	mg/day	60	EPA, 2000	
Gamma shielding factor (1-Se)	GSF	--	0.4	EPA, 2000	
Area Correction Factor	ACF		0.9	EPA,2000	
Exposure time fraction, outdoor	Eto	--	1	EPA, 2000	
Exposure time fraction, indoor	Eti	--	0	EPA, 2000	
Dilution factor, indoor inhalation	DFi		0.7	EPA, 2000	
Open Space child skin-soil adherence factor (same as residential)	AF_C_OS	mg/cm2-event	2.00E-01	EPA, 2000b	
Open Space adult skin-soil adherence factor (same as residential)	AF_A_OS	mg/cm2-event	0.07	EPA, 2000b	
Open Space age-averaged skin-soil adherence factor (same as residenti	SFSageav_OS	mgy/kg-event	361.00	EPA, 2000b	
Event frequency	EV	events/d	1.00	EPA, 2000b	
Open Space child skin surface area (exposed) (same as residential)	SA_C	cm2	2800.00	EPA, 2000b	
Open Space adult skin surface area (exposed) (same as residential)	SA_A		5700.00	EPA, 2000b	
Dermal absorption fraction	ABS		chemical-specific	EPA, 2000b	

Toxicity Values

Oral reference dose	RfDo	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA
Oral cancer slope factor	CSFo	$(mg/kg\text{-}day)^{-1}$	chemical-specific	IRIS, HEAST or NCEA
Ingestion cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13
Inhalation reference dose	RfDi	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA
Inhalation cancer slope factor	CSFi	(mg/kg-day)-1	chemical-specific	IRIS, HEAST or NCEA
Inhalation cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13
External irradiation cancer slope factor - radiological effects	$CSFe_{RAD}$	risk/y/pCi/g	chemical-specific	HEAST, FRG13

Sources:

EPA, 1991a = U.S. Environmental Protection Agency. 1991. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals. Interim. Office of Emergency and Remedial Response, Washington, D.C. Publication 9285.7-01B. December.

EPA, 1991b = U.S. Environmental Protection Agency. 1991. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER Directive 9285.6-03. March 25.

EPA, 2000 = U.S. Environmental Protection Agency. 2000. Soil Screening Guidance for Radionuclides: Technical Background Document. Office of Radiation and Indoor Air, Washington, D.C. Publication EPA/540-R-00-006. October, 2000.

EPA, 2000b = U.S. Environmental Protection Agency. Risk Assessment Guidance for Superfund Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim Guidance. Office of Emergency and Remedial Response, Washington, D.C.

JeffCo, 1996 = Jefferson County Parks and Open Space Study. Jefferson County, CO. 1996.

Cell: D29
Comment: Philip E. Goodrum:
weighted by age-specific ED

The **Open Space Surface Water Exposure Scenario** consists of the following pathway: incidental ingestion of surface water for an open

Exposure Parameter	Variable	Unit	Value	Source
General Assumptions				
Target hazard index	THI	--	1	EPA, 1991a
Target excess lifetime cancer risk	TR	--	1E-06	EPA, 1991a
Adult body weight	BW_A	kg	70	EPA, 1991b
Child body weight	BWc	kg	15	EPA, 1991b
Open Space Exposure Scenario Assumptions				
Averaging time - noncarcinogenic	AT_NC	yr	30	EPA, 1991b
Averaging time - carcinogenic	AT_C	yr	70	EPA, 1991b
Contact rate -- surface water	CR_SW_OS	L/hr	0.05	(1)
Exposure time	ET	hr/d	2.5	JeffCo, 1996?
Exposure frequency	EF	d/yr	100	JeffCo, 1996?
Exposure time	ET_OS	hr/day	1	(2)
Exposure frequency	EF_OS	day/yr	100	JeffCo, 1996
Exposure duration	ED_OS	yr	30	EPA, 1991b
Exposure duration (adult)	EDa	yrs	24	EPA, 1991b
Exposure duration (child)	EDc	yrs	6	EPA, 1991b
Inhalation rate	IRa_h	m^3/hr	1.7	JeffCo, 1996
Inhalation rate (calculated)	IRa	m^3/d	4.25	JeffCo, 1996
PM_{10}	PM_{10}	ug/m^3 [a]	#REF!	
Particulate Emission Factor	PEF	m^3/kg	#REF!	EPA, 1996
Soil ingestion rate (adult)	IRs_a	mg/day	50	Staten, 1995
Soil ingestion rate (child)	IRs_c	mg/day	1.00E+02	Staten, 1995
Age-adjusted soil ingestion factor = [(IRs_a x EDa) / BW] + [(IRs_c x EDc) / BWc]	IFs	mg-yr/kg-day	57	EPA, 1991a
Age-adjusted soil ingestion factor - radiation = (IRs_a x EDa) + (IRs_c x EDc)	IFs_RAD	mg-yr/day	1800	EPA, 1991a
Gamma shielding factor	Se	--	0	EPA, 1991a
Gamma exposure factor (annual) [a]	Te_A	--	100/365	EPA, 1991a
Gamma exposure factor (daily)	Te_D	--	2.5/24	EPA, 1991a

Toxicity Values				
Oral reference dose	RfDo	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA
Oral cancer slope factor	CSFo	$(mg/kg\text{-}day)^{-1}$	chemical-specific	IRIS, HEAST or NCEA
Ingestion cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13
Inhalation reference dose	RfDi	mg/kg-day	chemical-specific	IRIS, HEAST or NCEA
Inhalation cancer slope factor	CSFi	(mg/kg-day)-1	chemical-specific	IRIS, HEAST or NCEA
Inhalation cancer slope factor - radiological effects	$CSFo_{RAD}$	risk/pCi	chemical-specific	HEAST, FRG13
External irradiation cancer slope factor - radiological effects	$CSFe_{RAD}$	risk/y/pCi/g	chemical-specific	HEAST, FRG13

Sources:

EPA, 1991a = U.S. Environmental Protection Agency. 1991. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals. Interim. Office of Emergency and Remedial Response, Washington, D.C. Publication 9285.7-01B. December.
EPA, 1991b = U.S. Environmental Protection Agency. 1991. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Solid Waste and Emergency Response, Washington, D.C. OSWER Directive 9285.6-03. March 25.
EPA, 2000 = U.S. Environmental Protection Agency. 2000. Soil Screening Guidance for Radionuclides: Technical Background Document. Office of Radiation and Indoor Air, Washington, D.C. Publication EPA/540-R-00-006. October, 2000.
EPA, 2000b = U.S. Environmental Protection Agency. Risk Assessment Guidance for Superfund Vol. I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim Guidance. Office of Emergency and Remedial Response, Washington, D.C.
JeffCo, 1996 = Jefferson County Parks and Open Space Study. Jefferson County, CO. 1996.

Sources:
(1) Surface Water Ingestion Rate based upon open-space recreational user wading at Denver's Lowry Landfill Superfund Site (50 mL/day, RME; 25 mL/day, CT). For comparison, a single value of 35 mL/day is specified for DOE's Fernald Site (wading in shallow Paddy's Run).
(2) Exposure Time based upon DOE's Fernald Site recreational use (0.5 hr/day, CT) and on the Clear Creek/Central City Superfund Site recreational user (1.0 hr/day, RME, assuming that wading time would be the same as swimming time).

DRAFT PPRGs for 2002

Target Analyte List Chemical		CAS Number	Rural Resident NC GW PRG (mg/L)	Rural Resident C GW PRG (mg/L)	Rural Resident Groundwater PPRG (mg/L)	
Acenaphthene	(V)	83-32-9	2.19E+00		**2.19E+00**	
Acetone	(V)	67-64-1	3.65E+00		**3.65E+00**	
Aldrin		309-00-2	1.10E-03	5.01E-06	**5.01E-06**	
Aluminum		7429-90-5	3.65E+01		**3.65E+01**	
Anthracene	(V)	120-12-7	1.10E+01		**1.10E+01**	
Antimony		7440-36-0	1.46E-02		**1.46E-02**	
Aroclor 1016		12674-11-2	2.56E-03	1.22E-03	**1.22E-03**	
Aroclor 1221		11104-28-2		4.26E-05	**4.26E-05**	
Aroclor 1232		11141-16-5		4.26E-05	**4.26E-05**	
Aroclor 1242		53469-21-9		4.26E-05	**4.26E-05**	
Aroclor 1248		12672-29-6		4.26E-05	**4.26E-05**	
Aroclor 1254		11097-69-1	7.30E-04	4.26E-05	**4.26E-05**	
Aroclor 1260		11096-82-5		4.26E-05	**4.26E-05**	
Arsenic		7440-38-2	1.10E-02	5.68E-05	**5.68E-05**	
Barium		7440-39-3	2.56E+00		**2.56E+00**	
Benzene	(V)	71-43-2	1.10E-01	1.55E-03	**1.55E-03**	
alpha-BHC		319-84-6		1.35E-05	**1.35E-05**	
beta-BHC		319-85-7		4.73E-05	**4.73E-05**	
delta-BHC		319-86-8				
gamma-BHC (Lindane)		58-89-9	1.10E-02	6.55E-05	**6.55E-05**	
Benzo(a)anthracene		56-55-3		1.17E-04	**1.17E-04**	
Benzo(a)pyrene		50-32-8		1.17E-05	**1.17E-05**	
Benzo(b)fluoranthene		205-99-2		1.17E-04	**1.17E-04**	
Benzo(k)fluoranthene		207-08-9		1.17E-03	**1.17E-03**	
Benzoic Acid (at pH 7)		65-85-0	1.46E+02		**1.46E+02**	
Benzyl Alcohol		100-51-6	1.10E+01		**1.10E+01**	
Beryllium		7440-41-7	7.30E-02		**7.30E-02**	
bis(2-chloroethyl)ether	(V)	111-44-4		7.74E-05	**7.74E-05**	
bis(2-chloroisopropyl)ether	(V)	39638-32-9	1.46E+00	1.22E-03	**1.22E-03**	
bis(2-ethylhexyl)phthalate		117-81-7	7.30E-01	6.08E-03	**6.08E-03**	
Bromodichloromethane	(V)	75-27-4	7.30E-01	1.37E-03	**1.37E-03**	
Bromoform	(V)	75-25-2	7.30E-01	1.08E-02	**1.08E-02**	
Bromomethane (methyl bromide)	(V)	74-83-9	5.11E-02		**5.11E-02**	
2-Butanone (methyl ethyl ketone)	(V)	78-93-3	2.19E+01		**2.19E+01**	
Butylbenzylphthalate		85-68-7	7.30E+00		**7.30E+00**	
Cadmium (water)		7440-43-9	1.83E-02		**1.83E-02**	
Cadmium (food)		7440-43-9	3.65E-02		**3.65E-02**	
Carbon disulfide	(V)	75-15-0	3.65E+00		**3.65E+00**	
Carbon tetrachloride	(V)	56-23-5	2.56E-02	6.55E-04	**6.55E-04**	
alpha-Chlordane		5103-71-9	1.83E-02	2.43E-04	**2.43E-04**	
beta-Chlordane		5103-74-2	1.83E-02	2.43E-04	**2.43E-04**	
gamma-Chlordane		12789-03-6	1.83E-02	2.43E-04	**2.43E-04**	
4-Chloroaniline		106-47-8	1.46E-01		**1.46E-01**	
Chlorobenzene	(V)	108-90-7	7.30E-01		**7.30E-01**	
Chloroethane (ethyl chloride)	(V)	75-00-3	1.46E+01	2.94E-02	**2.94E-02**	
Chloroform	(V)	67-66-3	3.65E-01		**3.65E-01**	
Chloromethane (methyl chloride)	(V)	74-87-3		6.55E-03	**6.55E-03**	
2-Chloronaphthalene	(V)	91-58-7	2.92E+00		**2.92E+00**	
2-Chlorophenol	(V)	95-57-8	1.83E-01		**1.83E-01**	
Chromium III		16065-83-1	5.48E+01		**5.48E+01**	
Chromium VI		18540-29-9	1.10E-01		**1.10E-01**	
Chrysene		218-01-9		1.17E-02	**1.17E-02**	
Cobalt		7440-48-4	7.30E-01		**7.30E-01**	
Copper		7440-50-8	1.46E+00		**1.46E+00**	

Age-av Residential NC oral soil denom	Age-av Residential NC inhal soil denom (site-spec. VF)	Age-av. Leafy plant ingestion component	Age-av. Exposed above ground plant ingestion component	Age-av. Protected above ground plant ingestion component	Age-av. Root plant ingestion component	Age-av Residential NC plant inges soil denom
6.65E-01		4.86E+01	5.86E+00	2.23E+01	1.52E+02	1.77E+02
3.99E-01		1.18E-02	1.54E+03	5.87E+03	1.89E+04	1.22E+04
1.33E+03		1.65E+07	3.08E-01	1.17E+00	7.59E+02	2.54E+10
3.99E-02	1.78E-01	4.17E-02	1.92E-02	7.33E-02	1.81E-02	1.57E-02
1.33E-01		3.02E+02	2.99E+00	1.14E+01	7.67E+01	6.07E+01
9.98E+01		2.09E+00	8.88E-01	3.38E+00	8.34E-01	8.53E+02
5.70E+02		7.84E+02	8.61E-01	3.28E+00	4.03E+02	7.88E+05
2.00E+03		6.27E+02	2.96E-01	1.13E+00	3.95E+02	2.37E+06
1.33E+02		4.17E-01	1.07E+00	4.06E+00	2.22E-01	9.18E+02
5.70E-01	1.24E+00	1.56E+00	4.44E-01	1.69E+00	4.17E-01	2.85E+00
1.33E+01	1.36E+02	2.00E-02	6.66E+01	2.54E+02	7.42E+02	1.64E+04
		9.56E+02	7.31E+00	2.79E+01	3.20E+02	
		2.03E+04	6.99E+00	2.66E+01	2.78E+02	
1.33E+02						2.88E+01
		1.79E+05	5.98E-01	2.28E+00	5.87E+01	
		2.35E+06	3.29E-01	1.25E+00	3.50E+01	
		3.81E-03	2.98E-01	1.14E+00	4.61E+01	
		5.63E+06	2.99E-01	1.14E+00	4.61E+01	
9.98E-03			9.38E+01	3.58E+02	6.48E+04	7.54E+02
1.33E-01		2.28E+01	2.65E+02	1.01E+03	2.16E+03	5.33E+02
2.00E+01	3.11E+01	1.04E-01	4.44E-02	1.69E-01	0.00E+00	1.17E+01
		6.64E-01	2.03E+02	7.73E+02	3.17E+02	
9.98E-01		4.63E-01	3.70E+01	1.41E+02	5.50E+02	8.43E+02
2.00E+00		1.85E+07	1.12E+00	4.29E+00	5.92E+01	4.27E+07
2.00E+00		2.64E-02	7.73E+01	2.94E+02	7.62E+02	2.62E+03
2.00E+00		3.01E-01	5.03E+01	1.92E+02	4.70E+02	1.65E+03
2.85E+01	2.34E+02	6.33E-04	2.60E+02	9.92E+02	2.47E+03	1.23E+05
6.65E-02	1.86E-01	3.21E-02	7.90E+02	3.01E+03	7.95E+03	9.06E+02
2.00E-01		1.52E+04	3.23E+00	1.23E+01	1.19E+02	3.55E+03
7.98E+01		5.74E+00	1.08E+01	4.11E+01	1.78E+00	5.51E+03
3.99E+01	2.07E+00	5.74E+00	1.08E+01	4.11E+01	1.78E+00	2.75E+03
3.99E-01	2.95E+00	6.17E-03	7.99E+01	3.05E+02	7.76E+02	5.37E+02
5.70E+01	5.67E+02	1.59E-02	3.08E+01	1.17E+02	6.39E+02	5.21E+04
7.98E+01	8.89E-01	4.65E+04	4.23E-01	1.61E+00	4.70E+02	4.35E+06
7.98E+01	8.89E-01	4.65E+04	4.23E-01	1.61E+00	4.70E+02	4.35E+06
7.98E+01	8.89E-01	4.65E+04	4.23E-01	1.61E+00	4.70E+02	4.35E+06
9.98E+00		4.86E+01	9.53E+01	3.63E+02	8.67E+02	1.59E+04
2.00E+00	1.79E+01	1.24E-01	2.80E+01	1.07E+02	4.84E+02	1.43E+03
9.98E-02	4.60E-01	6.31E+00	1.85E+01	7.05E+01	4.73E+02	6.57E+01
3.99E+00		1.72E-02	8.55E+01	3.26E+02	7.17E+02	5.22E+03
		1.18E-04	3.43E+02	1.31E+03	3.45E+03	
4.99E-01		8.82E+01	5.09E+00	1.94E+01	1.25E+02	1.38E+02
7.98E+00		7.05E+00	6.45E+01	2.46E+02	1.22E+02	4.07E+03
2.66E-02	3.11E+02	7.82E-02	2.22E-01	8.46E-01	1.25E-01	4.50E-02
1.33E+01		7.82E-02	2.22E-01	8.46E-01	1.25E-01	2.25E+01
		6.23E+05	5.52E-01	2.10E+00	5.70E+01	
2.00E+00		2.09E-01	2.07E-01	7.90E-01	1.95E-01	3.67E+00
9.98E-01		4.17E+00	7.40E+00	2.82E+01	6.98E+00	5.43E+01

Age-av Residential NC dermal soil denom	Age-av Resid. NC oral soil single pathway RBC (mg/kg)	Age-av Resid. NC inhal. Single pathway RBC, site-specVF, (mg/kg)	Age-av Resid. NC dermal single pathway RBC (mg/kg)	Age-averaged Residential NC Soil PRG w plants/site-spec VF (mg/kg)	Age-averaged Resid. NC Soil PRG w/o plants(non-rads) site-spec VF (mg/kg)
2.74E-01	1.65E+04		4.00E+04	**6.16E+01**	**1.17E+04**
	2.74E+04			**9.00E-01**	**2.74E+04**
4.21E+02	8.23E+00			**4.31E-07**	**6.25E+00**
	2.74E+05	6.16E+04		**4.69E+04**	**5.03E+04**
5.48E-02	8.23E+04			**1.80E+02**	**5.83E+04**
	1.10E+02			**1.15E+01**	**1.10E+02**
2.53E+02	1.92E+01			**1.39E-02**	**1.33E+01**
8.84E+02	5.49E+00			**4.62E-03**	**3.80E+00**
1.26E+01	8.23E+01			**1.03E+01**	**7.52E+01**
	1.92E+04	8.80E+03		**2.35E+03**	**6.03E+03**
	8.23E+02	8.05E+01		**6.62E-01**	**7.34E+01**
1.68E+01	8.23E+01			**6.13E+01**	**7.31E+01**
	1.10E+06			**1.45E+01**	**1.10E+06**
	8.23E+04			**2.05E+01**	**8.23E+04**
	5.49E+02	3.52E+02		**1.74E+02**	**2.14E+02**
	1.10E+04			**1.30E+01**	**1.10E+04**
6.32E-01	5.49E+03			**2.56E-04**	**4.17E+03**
	5.49E+03			**4.17E+00**	**5.49E+03**
	5.49E+03			**6.64E+00**	**5.49E+03**
	3.84E+02	4.68E+01		**8.89E-02**	**4.17E+01**
	1.65E+05	5.89E+04		**1.21E+01**	**4.34E+04**
6.32E-02	5.49E+04			**3.08E+00**	**4.17E+04**
	1.37E+02			**1.96E+00**	**1.37E+02**
5.05E-02	2.74E+02	5.29E+03		**3.92E+00**	**2.61E+02**
	2.74E+04	3.71E+03		**2.03E+01**	**3.27E+03**
	1.92E+02	1.93E+01		**2.08E-01**	**1.76E+01**
1.01E+01	1.37E+02	1.23E+04		**2.52E-03**	**1.21E+02**
1.01E+01	1.37E+02	1.23E+04		**2.52E-03**	**1.21E+02**
1.01E+01	1.37E+02	1.23E+04		**2.52E-03**	**1.21E+02**
3.16E+00	1.10E+03			**6.88E-01**	**8.34E+02**
	5.49E+03	6.11E+02		**7.55E+00**	**5.50E+02**
	1.10E+05	2.38E+04		**1.65E+02**	**1.96E+04**
	2.74E+03			**2.09E+00**	**2.74E+03**
	2.20E+04			**7.93E+01**	**2.20E+04**
	1.37E+03			**2.68E+00**	**1.37E+03**
	4.12E+05	3.52E+01		**3.51E+01**	**3.52E+01**
	8.23E+02			**3.06E+02**	**8.23E+02**
	5.49E+03			**1.93E+03**	**5.49E+03**
	1.10E+04			**1.98E+02**	**1.10E+04**

Age-av Residential Carc. oral soil denom	Age-av Residential Carc. radionuclide oral soil denom	Age-av Residential Carc. inhal denom (site-spec. VF)	Age-av Residential Carc. radionuclide inhal. denom	Age-av. Leafy plant ingestion component	Age-av. Exposed above ground plant ingestion component	Age-av. Protected above ground plant ingestion component
				4.86E+01	5.86E+00	2.23E+01
				1.18E-02	1.54E+03	5.87E+03
6.78E-01		3.02E-03		1.65E+07	3.08E-01	1.17E+00
				4.17E-02	1.92E-02	7.33E-02
				3.02E+02	2.99E+00	1.14E+01
				2.09E+00	8.88E-01	3.38E+00
2.79E-03		3.56E-04		7.84E+02	8.61E-01	3.28E+00
7.98E-02		3.56E-04				
7.98E-02		3.56E-04				
7.98E-02		3.56E-04				
7.98E-02		3.56E-04				
7.98E-02		3.56E-04		6.27E+02	2.96E-01	1.13E+00
7.98E-02		3.56E-04				
5.99E-02		2.68E-03		4.17E-01	1.07E+00	4.06E+00
				1.56E+00	4.44E-01	1.69E+00
2.19E-03		6.70E-03		2.00E-02	6.66E+01	2.54E+02
2.51E-01		1.12E-03		9.56E+02	7.31E+00	2.79E+01
7.18E-02		3.20E-04		2.03E+04	6.99E+00	2.66E+01
5.19E-02						
2.91E-02				1.79E+05	5.98E-01	2.28E+00
2.91E-01		5.51E-05		2.35E+06	3.29E-01	1.25E+00
2.91E-02				3.81E-03	2.98E-01	1.14E+00
2.91E-03				5.63E+06	2.99E-01	1.14E+00
					9.38E+01	3.58E+02
				2.28E+01	2.65E+02	1.01E+03
		1.49E-03		1.04E-01	4.44E-02	1.69E-01
4.39E-02				6.64E-01	2.03E+02	7.73E+02
2.79E-03				4.63E-01	3.70E+01	1.41E+02
5.59E-04		2.49E-06		1.85E+07	1.12E+00	4.29E+00
2.47E-03				2.64E-02	7.73E+01	2.94E+02
3.15E-04		1.20E-04		3.01E-01	5.03E+01	1.92E+02
				6.33E-04	2.60E+02	9.92E+02
				3.21E-02	7.90E+02	3.01E+03
				1.52E+04	3.23E+00	1.23E+01
		1.12E-03		5.74E+00	1.08E+01	4.11E+01
		1.12E-03		5.74E+00	1.08E+01	4.11E+01
				6.17E-03	7.99E+01	3.05E+02
5.19E-03		1.72E-02		1.59E-02	3.08E+01	1.17E+02
1.40E-02		6.22E-05		4.65E+04	4.23E-01	1.61E+00
1.40E-02		6.22E-05		4.65E+04	4.23E-01	1.61E+00
1.40E-02		6.22E-05		4.65E+04	4.23E-01	1.61E+00
				4.86E+01	9.53E+01	3.63E+02
				1.24E-01	2.80E+01	1.07E+02
1.16E-04				6.31E+00	1.85E+01	7.05E+01
		1.88E-02		1.72E-02	8.55E+01	3.26E+02
5.19E-04		8.28E-03		1.18E-04	3.43E+02	1.31E+03
				8.82E+01	5.09E+00	1.94E+01
				7.05E+00	6.45E+01	2.46E+02
				7.82E-02	2.22E-01	8.46E-01
		7.47E-03		7.82E-02	2.22E-01	8.46E-01
2.91E-04		5.51E-07		6.23E+05	5.52E-01	2.10E+00
				2.09E-01	2.07E-01	7.90E-01
				4.17E+00	7.40E+00	2.82E+01

Age-av. Root plant ingestion component	Age-av Residential Carc. plant inges soil denom	Age-av Residential Carc. radionuclide plant inges soil denom	Age-av Residential Carc. dermal soil denom	Age-av Residential Carc. ext. irrad. denom	Age-av Resid.Carc oral soil single pathway RBC	Age-av Resid. Carc RAD oral soil single pathway RBC
1.52E+02						
1.89E+04						
7.59E+02	1.30E+07		2.15E-01		3.77E-02	
1.81E-02						
7.67E+01						
8.34E-01						
4.03E+02	3.86E+00		1.24E-03		9.15E+00	
	1.73E-02		3.54E-02		3.20E-01	
	1.73E-02		3.54E-02		3.20E-01	
	1.73E-02		3.54E-02		3.20E-01	
	1.73E-02		3.54E-02		3.20E-01	
3.95E+02	9.47E+01		3.54E-02		3.20E-01	
	1.73E-02		3.54E-02		3.20E-01	
2.22E-01	4.13E-01		5.69E-03		4.27E-01	
4.17E-01						
7.42E+02	2.70E+00				1.16E+01	
3.20E+02	3.82E+02		3.18E-02		1.02E-01	
2.78E+02	1.72E+03		9.10E-03		3.56E-01	
	1.12E-02		6.57E-03		4.93E-01	
5.87E+01	6.06E+03		1.20E-02		8.77E-01	
3.50E+01	7.93E+05		1.20E-01		8.77E-02	
4.61E+01	1.61E+00		1.20E-02		8.77E-01	
4.61E+01	1.90E+04		1.20E-03		8.77E+00	
6.48E+04						
2.16E+03						
0.00E+00						
3.17E+02	6.58E+01				5.82E-01	
5.50E+02	2.36E+00				9.15E+00	
5.92E+01	1.20E+04		1.77E-04		4.57E+01	
7.62E+02	3.25E+00				1.03E+01	
4.70E+02	2.60E-01				8.11E+01	
2.47E+03						
7.95E+03						
1.19E+02						
1.78E+00						
1.78E+00						
7.76E+02						
6.39E+02	4.74E+00				4.93E+00	
4.70E+02	7.61E+02		1.77E-03		1.83E+00	
4.70E+02	7.61E+02		1.77E-03		1.83E+00	
4.70E+02	7.61E+02		1.77E-03		1.83E+00	
8.67E+02						
4.84E+02						
4.73E+02	7.62E-02				2.21E+02	
7.17E+02						
3.45E+03	3.07E+00				4.93E+01	
1.25E+02						
1.22E+02						
1.25E-01						
1.25E-01						
5.70E+01	2.10E+02		1.20E-04		8.77E+01	
1.95E-01						
6.98E+00						

Age-av Resid.Carc inhal. Single pathway RBC, site-specVF,	Age-av Resid. Carc RAD inhal. single pathway RBC, site-spec. VF	Age-av Resid.Carc dermal single pathway RBC	Age-av Resid. Carc ext.irrad. single pathway RBC	Age-averaged Residential C Soil PRG site-spec VF (mg/kg)	Age-averaged Resid C soil PRG site-spec VF w/o plant(non-rads) (mg/kg) **		Adult WLRW NC oral soil denom
							1.11E-01
							6.68E-02
8.45E+00		1.19E-01		**1.97E-09**	**2.85E-02**		2.23E+02
							6.68E-03
							2.23E-02
							1.67E+01
7.18E+01		2.06E+01		**6.61E-03**	**5.82E+00**		9.54E+01
7.18E+01		7.22E-01		**1.92E-01**	**2.21E-01**		
7.18E+01		7.22E-01		**1.92E-01**	**2.21E-01**		
7.18E+01		7.22E-01		**1.92E-01**	**2.21E-01**		
7.18E+01		7.22E-01		**1.92E-01**	**2.21E-01**		
7.18E+01		7.22E-01		**2.70E-04**	**2.21E-01**		3.34E+02
7.18E+01		7.22E-01		**1.92E-01**	**2.21E-01**		
9.55E+00		4.49E+00		**5.31E-02**	**3.75E-01**		2.23E+01
							9.54E-02
3.81E+00				**9.42E-03**	**2.87E+00**		2.23E+00
2.28E+01		8.02E-01		**6.68E-05**	**8.99E-02**		
7.98E+01		2.81E+00		**1.49E-05**	**3.15E-01**		
		3.89E+00		**3.67E-01**	**4.37E-01**		2.23E+01
		2.13E+00		**4.22E-06**	**6.21E-01**		
4.63E+02		2.13E-01		**3.22E-08**	**6.21E-02**		
		2.13E+00		**1.54E-02**	**6.21E-01**		
		2.13E+01		**1.34E-06**	**6.21E+00**		
							1.67E-03
							2.23E-02
1.71E+01				**1.71E+01**	**1.71E+01**		3.34E+00
				3.88E-04	**5.82E-01**		
				1.08E-02	**9.15E+00**		1.67E-01
1.03E+04		1.44E+02		**2.14E-06**	**3.46E+01**		3.34E-01
				7.85E-03	**1.03E+01**		3.34E-01
2.13E+02				**9.80E-02**	**5.87E+01**		3.34E-01
							4.77E+00
							1.11E-02
							3.34E-02
2.28E+01				**2.28E+01**	**2.28E+01**		1.34E+01
2.28E+01				**2.28E+01**	**2.28E+01**		6.68E+00
							6.68E-02
1.49E+00				**5.37E-03**	**1.14E+00**		9.54E+00
4.10E+02		1.44E+01		**3.36E-05**	**1.62E+00**		1.34E+01
4.10E+02		1.44E+01		**3.36E-05**	**1.62E+00**		1.34E+01
4.10E+02		1.44E+01		**3.36E-05**	**1.62E+00**		1.34E+01
							1.67E+00
							3.34E-01
				3.35E-01	**2.21E+02**		1.67E-02
1.36E+00				**1.36E+00**	**1.36E+00**		6.68E-01
3.09E+00				**8.31E-03**	**2.90E+00**		
							8.35E-02
							1.34E+00
							4.45E-03
3.42E+00				**3.42E+00**	**3.42E+00**		2.23E+00
4.63E+04		2.13E+02		**1.21E-04**	**6.21E+01**		
							3.34E-01
							1.67E-01

Adult WLRW NC inhal soil denom (site-spec. VF)	Adult WLRW NC dermal soil denom	Adult WLRW NC single pathway oral soil RBC (mg/kg)	Adult WLRW NC single pathway inhal. RBC (mg/kg)	Adult WLRW NC single pathway dermal RBC (mg/kg)	Adult WLRW NC Soil PRG Site-spec VF (mg/kg)		Adult WLRW Carcinogen oral soil denom	Adult WLRW Carcin. radionuclide oral soil denom
	5.59E-02	6.13E+04		1.22E+05	**4.08E+04**			
		1.02E+05			**1.02E+05**			
	8.60E+01	3.07E+01		7.94E+01	**2.21E+01**		1.14E-01	
3.96E-02		1.02E+06	1.73E+05		**1.48E+05**			
	1.12E-02	3.07E+05		6.11E+05	**2.04E+05**			
		4.09E+02			**4.09E+02**			
	5.16E+01	7.15E+01		1.32E+02	**4.64E+01**		4.68E-04	
							1.34E-02	
							1.34E-02	
							1.34E-02	
							1.34E-02	
	1.81E+02	2.04E+01		3.78E+01	**1.33E+01**		1.34E-02	
							1.34E-02	
	2.58E+00	3.07E+02		2.65E+03	**2.75E+02**		1.00E-02	
2.77E-01		7.15E+04	2.47E+04		**1.83E+04**			
3.02E+01		3.07E+03	2.26E+02		**2.10E+02**		3.67E-04	
							4.21E-02	
							1.20E-02	
	3.44E+00	3.07E+02		1.99E+03	**2.66E+02**		8.68E-03	
							4.88E-03	
							4.88E-02	
							4.88E-03	
							4.88E-04	
		4.09E+06			**4.09E+06**			
		3.07E+05			**3.07E+05**			
6.93E+00		2.04E+03	9.85E+02		**6.65E+02**			
							7.35E-03	
		4.09E+04			**4.09E+04**		4.68E-04	
	1.29E-01	2.04E+04		5.29E+04	**1.47E+04**		9.35E-05	
		2.04E+04			**2.04E+04**		4.14E-04	
		2.04E+04			**2.04E+04**		5.28E-05	
5.21E+01		1.43E+03	1.31E+02		**1.20E+02**			
4.14E-02		6.13E+05	1.65E+05		**1.30E+05**			
	1.29E-02	2.04E+05		5.29E+05	**1.47E+05**			
		5.11E+02			**5.11E+02**			
4.60E-01	1.03E-02	1.02E+03	1.48E+04	6.62E+05	**9.55E+02**			
6.57E-01		1.02E+05	1.04E+04		**9.43E+03**			
1.26E+02		7.15E+02	5.41E+01		**5.03E+01**		8.68E-04	
1.98E-01	2.06E+00	5.11E+02	3.45E+04	3.31E+03	**4.37E+02**		2.34E-03	
1.98E-01	2.06E+00	5.11E+02	3.45E+04	3.31E+03	**4.37E+02**		2.34E-03	
1.98E-01	2.06E+00	5.11E+02	3.45E+04	3.31E+03	**4.37E+02**		2.34E-03	
	6.45E-01	4.09E+03		1.06E+04	**2.95E+03**			
3.98E+00		2.04E+04	1.71E+03		**1.58E+03**			
1.02E-01		4.09E+05	6.67E+04		**5.74E+04**		1.94E-05	
		1.02E+04			**1.02E+04**			
							8.68E-05	
		8.18E+04			**8.18E+04**			
		5.11E+03			**5.11E+03**			
6.93E+01		1.53E+06	9.85E+01		**9.85E+01**			
		3.07E+03			**3.07E+03**			
							4.88E-05	
		2.04E+04			**2.04E+04**			
		4.09E+04			**4.09E+04**			

Adult WLRW Carcin. Rad oral soil denom Adult CSForal	Adult WLRW Carcinogen inhalation denom (site-spec. VF)	Adult WLRW Carcin. radionuclide inhalation denom	Adult WLRW Carcinogen dermal soil denom	Adult WLRW Carcin radionuclide ext irrad denom	Adult WLRW Carc single pathway oral soil RBC (mg/kg)	Adult WLRW Carc RAD single pathway oral soil RBC (pCi/g)	Adult WLRW Carc single pathway inhal. RBC (mg/kg)
	6.72E-04		4.38E-02		2.25E-01		3.80E+01
	7.91E-05		2.53E-04		5.47E+01		3.23E+02
	7.91E-05		7.22E-03		1.91E+00		3.23E+02
	7.91E-05		7.22E-03		1.91E+00		3.23E+02
	7.91E-05		7.22E-03		1.91E+00		3.23E+02
	7.91E-05		7.22E-03		1.91E+00		3.23E+02
	7.91E-05		7.22E-03		1.91E+00		3.23E+02
	7.91E-05		7.22E-03		1.91E+00		3.23E+02
	5.95E-04		1.16E-03		2.55E+00		4.29E+01
	1.49E-03				6.96E+01		1.71E+01
	2.49E-04		6.50E-03		6.07E-01		1.03E+02
	7.12E-05		1.86E-03		2.13E+00		3.59E+02
			1.34E-03		2.94E+00		
			2.45E-03		5.24E+00		
	1.23E-05		2.45E-02		5.24E-01		2.08E+03
			2.45E-03		5.24E+00		
			2.45E-04		5.24E+01		
	3.32E-04						7.69E+01
					3.48E+00		
					5.47E+01		
	5.54E-07		3.61E-05		2.73E+02		4.61E+04
					6.17E+01		
	2.67E-05				4.84E+02		9.56E+02
	2.49E-04						1.03E+02
	2.49E-04						1.03E+02
	3.82E-03				2.94E+01		6.70E+00
	1.38E-05		3.61E-04		1.09E+01		1.85E+03
	1.38E-05		3.61E-04		1.09E+01		1.85E+03
	1.38E-05		3.61E-04		1.09E+01		1.85E+03
					1.32E+03		
	4.18E-03						6.12E+00
	1.84E-03				2.94E+02		1.39E+01
	1.66E-03						1.54E+01
	1.23E-07		2.45E-05		5.24E+02		2.08E+05

Adult WLRW Carc RAD single pathway inhal. RBC (pCi/g)	Adult WLRW Carc single pathway dermal RBC (mg/kg)	Adult WLRW Carc single pathway ext irrad RBC (pCi/kg)	Adult WLRW Carcinogen Soil PRG site-spec VF (mg/kg)	Adult WLRW Carcinogen Soil PRG rads Adult CSForal (pCi/g)		Adult OW NC oral soil denom	Adult OW NC inhal soil denom (site-spec. VF)	Adult OW NC dermal soil denom
						7.44E-02		1.28E-02
						4.46E-02		
	5.83E-01		**1.62E-01**			1.49E+02		1.96E+01
						4.46E-03	2.11E-02	
						1.49E-02		2.55E-03
						1.12E+01		
	1.01E+02		**3.20E+01**			6.38E+01		1.18E+01
	3.54E+00		**1.24E+00**					
	3.54E+00		**1.24E+00**					
	3.54E+00		**1.24E+00**					
	3.54E+00		**1.24E+00**					
	3.54E+00		**1.24E+00**			2.23E+02		4.13E+01
	3.54E+00		**1.24E+00**					
	2.20E+01		**2.17E+00**			1.49E+01		5.89E-01
						6.38E-02	1.47E-01	
			1.37E+01			1.49E+00	1.61E+01	
	3.93E+00		**5.23E-01**					
	1.38E+01		**1.83E+00**					
	1.91E+01		**2.55E+00**			1.49E+01		7.86E-01
	1.04E+01		**3.49E+00**					
	1.04E+00		**3.49E-01**					
	1.04E+01		**3.49E+00**					
	1.04E+02		**3.49E+01**					
						1.12E-03		
						1.49E-02		
			7.69E+01			2.23E+00	3.69E+00	
			3.48E+00					
			5.47E+01			1.12E-01		
	7.08E+02		**1.96E+02**			2.23E-01		2.95E-02
			6.17E+01			2.23E-01		
			3.21E+02			2.23E-01		
						3.19E+00	2.77E+01	
						7.44E-03	2.20E-02	
						2.23E-02		2.95E-03
			1.03E+02			8.93E+00		
			1.03E+02			4.46E+00	2.45E-01	2.36E-03
						4.46E-02	3.50E-01	
			5.46E+00			6.38E+00	6.71E+01	
	7.08E+01		**9.42E+00**			8.93E+00	1.05E-01	4.71E-01
	7.08E+01		**9.42E+00**			8.93E+00	1.05E-01	4.71E-01
	7.08E+01		**9.42E+00**			8.93E+00	1.05E-01	4.71E-01
						1.12E+00		1.47E-01
						2.23E-01	2.12E+00	
			1.32E+03			1.12E-02	5.45E-02	
			6.12E+00			4.46E-01		
			1.32E+01					
						5.58E-02		
						8.93E-01		
						2.98E-03	3.69E+01	
			1.54E+01			1.49E+00		
	1.04E+03		**3.48E+02**					
						2.23E-01		
						1.12E-01		

Adult OW NC single pathway oral soil RBC (mg/kg)	Adult OW NC single pathway inhal. RBC (mg/kg)	Adult OW NC single pathway dermal RBC (mg/kg)	Adult OW NC Soil PRG Site-spec VF (mg/kg)		Adult OW Carcinogen oral soil denom	Adult OW Carcin radionuclide oral soil denom	Adult OW Carcin. Rad oral soil denom Adult CSForal	Adult OW Carcinogen inhal soil denom (site-spec. VF)
1.23E+05		7.15E+05	**1.05E+05**					
2.04E+05			**2.04E+05**					
6.13E+01		4.65E+02	**5.42E+01**		7.59E-02			3.58E-04
2.04E+06	4.33E+05		**3.58E+05**					
6.13E+05		3.57E+06	**5.23E+05**					
8.18E+02			**8.18E+02**					
1.43E+02		7.74E+02	**1.21E+02**		3.13E-04			4.21E-05
					8.93E-03			4.21E-05
					8.93E-03			4.21E-05
					8.93E-03			4.21E-05
					8.93E-03			4.21E-05
4.09E+01		2.21E+02	**3.45E+01**		8.93E-03			4.21E-05
					8.93E-03			4.21E-05
6.13E+02		1.55E+04	**5.90E+02**		6.70E-03			3.17E-04
1.43E+05	6.19E+04		**4.32E+04**					
6.13E+03	5.67E+02		**5.19E+02**		2.46E-04			7.94E-04
					2.81E-02			1.33E-04
					8.04E-03			3.79E-05
6.13E+02		1.16E+04	**5.82E+02**		5.80E-03			
					3.26E-03			
					3.26E-02			6.53E-06
					3.26E-03			
					3.26E-04			
8.18E+06			**8.18E+06**					
6.13E+05			**6.13E+05**					
4.09E+03	2.47E+03		**1.54E+03**					1.77E-04
					4.91E-03			
8.18E+04			**8.18E+04**		3.13E-04			
4.09E+04		3.10E+05	**3.61E+04**		6.25E-05			2.95E-07
4.09E+04			**4.09E+04**		2.77E-04			
4.09E+04			**4.09E+04**		3.53E-05			1.42E-05
2.86E+03	3.29E+02		**2.95E+02**					
1.23E+06	4.14E+05		**3.10E+05**					
4.09E+05		3.10E+06	**3.61E+05**					
1.02E+03			**1.02E+03**					1.33E-04
2.04E+03	3.73E+04	3.87E+06	**1.94E+03**					1.33E-04
2.04E+05	2.61E+04		**2.31E+04**					
1.43E+03	1.36E+02		**1.24E+02**		5.80E-04			2.03E-03
1.02E+03	8.67E+04	1.94E+04	**9.60E+02**		1.56E-03			7.37E-06
1.02E+03	8.67E+04	1.94E+04	**9.60E+02**		1.56E-03			7.37E-06
1.02E+03	8.67E+04	1.94E+04	**9.60E+02**		1.56E-03			7.37E-06
8.18E+03		6.19E+04	**7.22E+03**					
4.09E+04	4.30E+03		**3.89E+03**					
8.18E+05	1.68E+05		**1.39E+05**		1.29E-05			
2.04E+04			**2.04E+04**					2.22E-03
					5.80E-05			9.80E-04
1.64E+05			**1.64E+05**					
1.02E+04			**1.02E+04**					
3.07E+06	2.47E+02		**2.47E+02**					
6.13E+03			**6.13E+03**					8.84E-04
					3.26E-05			6.53E-08
4.09E+04			**4.09E+04**					
8.18E+04			**8.18E+04**					

Adult OW Carcin radionuclide inhal soil denom	Adult OW Carcinogen dermal soil denom	Adult OW Carcin radionuclide ext irrad denom	Adult OW Carc single pathway oral soil RBC (mg/kg)	Adult OW Carc RAD single pathway oral soil RBC (pCi/g)	Adult OW Carc single pathway inhal. RBC (mg/kg)	Adult OW Carc RAD single pathway inhal. RBC (pCi/g)	Adult OW Carc single pathway dermal RBC (mg/kg)
	1.00E-02		3.37E-01		7.14E+01		2.55E+00
	5.78E-05		8.18E+01		6.07E+02		4.42E+02
	1.65E-03		2.86E+00		6.07E+02		1.55E+01
	1.65E-03		2.86E+00		6.07E+02		1.55E+01
	1.65E-03		2.86E+00		6.07E+02		1.55E+01
	1.65E-03		2.86E+00		6.07E+02		1.55E+01
	1.65E-03		2.86E+00		6.07E+02		1.55E+01
	1.65E-03		2.86E+00		6.07E+02		1.55E+01
	2.65E-04		3.82E+00		8.06E+01		9.64E+01
			1.04E+02		3.22E+01		
	1.49E-03		9.08E-01		1.93E+02		1.72E+01
	4.24E-04		3.18E+00		6.74E+02		6.02E+01
	3.06E-04		4.40E+00				8.34E+01
	5.59E-04		7.84E+00				4.57E+01
	5.59E-03		7.84E-01		3.91E+03		4.57E+00
	5.59E-04		7.84E+00				4.57E+01
	5.59E-05		7.84E+01				4.57E+02
					1.44E+02		
			5.20E+00				
			8.18E+01				
	8.25E-06		4.09E+02		8.67E+04		3.10E+03
			9.23E+01				
			7.24E+02		1.79E+03		
					1.93E+02		
					1.93E+02		
			4.40E+01		1.26E+01		
	8.25E-05		1.64E+01		3.47E+03		3.10E+02
	8.25E-05		1.64E+01		3.47E+03		3.10E+02
	8.25E-05		1.64E+01		3.47E+03		3.10E+02
			1.97E+03				
					1.15E+01		
			4.40E+02		2.61E+01		
					2.89E+01		
	5.59E-06		7.84E+02		3.91E+05		4.57E+03

Adult OW Carc single pathway ext irrad RBC (pCi/kg)	Adult OW Carcinogen Soil PRG site-spec VF (mg/kg)	Adult OW Carcinogen Soil PRG rads Adult CSForal (mg/kg)			Age-av Open Space NC oral soil denom	Age-av Open space NC inhal soil denom (site-spec. VF)	Age-av Open Space NC dermal soil denom	Age-av OS NC single pathway oral soil RBC (mg/kg)
					9.50E-02		7.82E-02	1.15E+05
					5.70E-02			1.92E+05
	2.96E-01				1.90E+02		1.20E+02	5.76E+01
					5.70E-03	2.45E-02		1.92E+06
					1.90E-02		1.56E-02	5.76E+05
					1.43E+01			7.68E+02
	6.20E+01				8.14E+01		7.22E+01	1.34E+02
	2.41E+00							
	2.41E+00							
	2.41E+00							
	2.41E+00							
	2.41E+00				2.85E+02		2.53E+02	3.84E+01
	2.41E+00							
	3.51E+00				1.90E+01		3.61E+00	5.76E+02
					8.14E-02	1.72E-01		1.34E+05
	2.46E+01				1.90E+00	1.87E+01		5.76E+03
	8.59E-01							
	3.01E+00							
	4.18E+00				1.90E+01		4.81E+00	5.76E+02
	6.69E+00							
	6.69E-01							
	6.69E+00							
	6.69E+01							
					1.43E-03			7.68E+06
					1.90E-02			5.76E+05
	1.44E+02				2.85E+00	4.29E+00		3.84E+03
	5.20E+00							
	8.18E+01				1.43E-01			7.68E+04
	3.60E+02				2.85E-01		1.81E-01	3.84E+04
	9.23E+01				2.85E-01			3.84E+04
	5.16E+02				2.85E-01			3.84E+04
					4.07E+00	3.23E+01		2.69E+03
					9.50E-03	2.56E-02		1.15E+06
					2.85E-02		1.81E-02	3.84E+05
	1.93E+02				1.14E+01			9.61E+02
	1.93E+02				5.70E+00	2.85E-01	1.44E-02	1.92E+03
					5.70E-02	4.07E-01		1.92E+05
	9.78E+00				8.14E+00	7.81E+01		1.34E+03
	1.55E+01				1.14E+01	1.23E-01	2.89E+00	9.61E+02
	1.55E+01				1.14E+01	1.23E-01	2.89E+00	9.61E+02
	1.55E+01				1.14E+01	1.23E-01	2.89E+00	9.61E+02
					1.43E+00		9.03E-01	7.68E+03
					2.85E-01	2.47E+00		3.84E+04
	1.97E+03				1.43E-02	6.34E-02		7.68E+05
	1.15E+01				5.70E-01			1.92E+04
	2.46E+01							
					7.13E-02			1.54E+05
					1.14E+00			9.61E+03
					3.80E-03	4.29E+01		2.88E+06
	2.89E+01				1.90E+00			5.76E+03
	6.68E+02							
					2.85E-01			3.84E+04
					1.43E-01			7.68E+04

Age-av OS NC single pathway inhal. RBC (mg/kg)	Age-av OS NC single pathway dermal RBC (mg/kg)	Age-av Open Space NC Soil PRG Site-spec VF (mg/kg)		Age-av Open Space carcin oral soil denom	Age-av open space Carcinogenic radionuclide oral soil denom	Age-av Open space carcin inhal soil denom (site-spec. VF)	Age-av open space Carcinogenic radionuclide inhalation denom
	1.40E+05	**6.32E+04**					
		1.92E+05					
	9.10E+01	**3.53E+01**		9.69E-02		4.17E-04	
4.47E+05		**3.63E+05**					
	7.00E+05	**3.16E+05**					
		7.68E+02					
	1.52E+02	**7.13E+01**		3.99E-04		4.90E-05	
				1.14E-02		4.90E-05	
				1.14E-02		4.90E-05	
				1.14E-02		4.90E-05	
				1.14E-02		4.90E-05	
	4.33E+01	**2.04E+01**		1.14E-02		4.90E-05	
				1.14E-02		4.90E-05	
	3.03E+03	**4.84E+02**		8.55E-03		3.69E-04	
6.38E+04		**4.33E+04**					
5.84E+02		**5.31E+02**		3.14E-04		9.24E-04	
				3.59E-02		1.54E-04	
				1.03E-02		4.41E-05	
	2.27E+03	**4.60E+02**		7.41E-03			
				4.16E-03			
				4.16E-02		7.60E-06	
				4.16E-03			
				4.16E-04			
		7.68E+06					
		5.76E+05					
2.55E+03		**1.53E+03**				2.06E-04	
				6.27E-03		#VALUE!	
		7.68E+04		3.99E-04		#VALUE!	
	6.07E+04	**2.35E+04**		7.98E-05		3.43E-07	
		3.84E+04		3.53E-04			
		3.84E+04		4.50E-05		1.66E-05	
3.40E+02		**3.01E+02**					
4.27E+05		**3.12E+05**					
	6.07E+05	**2.35E+05**					
		9.61E+02				1.54E-04	
3.84E+04	7.58E+05	**1.83E+03**				1.54E-04	
2.69E+04		**2.36E+04**					
1.40E+02		**1.27E+02**		7.41E-04		2.36E-03	
8.94E+04	3.79E+03	**7.60E+02**		2.00E-03		8.58E-06	
8.94E+04	3.79E+03	**7.60E+02**		2.00E-03		8.58E-06	
8.94E+04	3.79E+03	**7.60E+02**		2.00E-03		8.58E-06	
	1.21E+04	**4.70E+03**					
4.44E+03		**3.98E+03**					
1.73E+05		**1.41E+05**		1.65E-05			
		1.92E+04				2.59E-03	
				7.41E-05		1.14E-03	
		1.54E+05					
		9.61E+03					
2.55E+02		**2.55E+02**					
		5.76E+03				1.03E-03	
				4.16E-05		7.60E-08	
		3.84E+04					
		7.68E+04					

Age-av Open Space carcin dermal soil denom	Age-av open space Carcinogenic radionuclide ext. irrad. denom	Age-av OS Carc. single pathway oral soil RBC (mg/kg)	Age-av OS Carc. single pathway inhal. RBC (mg/kg)	Age-av OS Carc. single pathway dermal RBC (mg/kg)	Age-av Open Space carcin soil PRG Site-spec VF (mg/kg)
6.14E-02		2.64E-01	6.13E+01	4.16E-01	**1.61E-01**
3.54E-04		6.40E+01	5.21E+02	7.22E+01	**3.19E+01**
1.01E-02		2.24E+00	5.21E+02	2.53E+00	**1.19E+00**
1.01E-02		2.24E+00	5.21E+02	2.53E+00	**1.19E+00**
1.01E-02		2.24E+00	5.21E+02	2.53E+00	**1.19E+00**
1.01E-02		2.24E+00	5.21E+02	2.53E+00	**1.19E+00**
1.01E-02		2.24E+00	5.21E+02	2.53E+00	**1.19E+00**
1.01E-02		2.24E+00	5.21E+02	2.53E+00	**1.19E+00**
1.62E-03		2.99E+00	6.93E+01	1.57E+01	**2.42E+00**
		8.15E+01	2.77E+01		**2.07E+01**
9.10E-03		7.12E-01	1.66E+02	2.81E+00	**5.66E-01**
2.60E-03		2.49E+00	5.79E+02	9.83E+00	**1.98E+00**
1.88E-03		3.45E+00		1.36E+01	**2.75E+00**
3.43E-03		6.14E+00		7.46E+00	**3.37E+00**
3.43E-02		6.14E-01	3.36E+03	7.46E-01	**3.37E-01**
3.43E-03		6.14E+00		7.46E+00	**3.37E+00**
3.43E-04		6.14E+01		7.46E+01	**3.37E+01**
			1.24E+02		**1.24E+02**
		4.07E+00	#VALUE!		**#VALUE!**
		6.40E+01	#VALUE!		**#VALUE!**
5.05E-05		3.20E+02	7.45E+04	5.06E+02	**1.96E+02**
		7.23E+01			**7.23E+01**
		5.67E+02	1.54E+03		**4.15E+02**
			1.66E+02		**1.66E+02**
			1.66E+02		**1.66E+02**
		3.45E+01	1.08E+01		**8.23E+00**
5.05E-04		1.28E+01	2.98E+03	5.06E+01	**1.02E+01**
5.05E-04		1.28E+01	2.98E+03	5.06E+01	**1.02E+01**
5.05E-04		1.28E+01	2.98E+03	5.06E+01	**1.02E+01**
		1.55E+03			**1.55E+03**
			9.88E+00		**9.88E+00**
		3.45E+02	2.24E+01		**2.10E+01**
			2.48E+01		**2.48E+01**
3.43E-05		6.14E+02	3.36E+05	7.46E+02	**3.36E+02**

Cyanide		57-12-5	7.30E-01		**7.30E-01**	
4,4-DDD		72-54-8		3.55E-04	**3.55E-04**	
4,4-DDE		72-55-9		2.50E-04	**2.50E-04**	
4,4-DDT		50-29-3	1.83E-02	2.50E-04	**2.50E-04**	
Dibenz(a,h)anthracene		53-70-3		1.17E-05	**1.17E-05**	
Dibenzofuran		132-64-9	1.46E-01		**1.46E-01**	
Dibromochloromethane		124-48-1	7.30E-01	1.01E-03	**1.01E-03**	
Di-n-butylphthalate		84-74-2	3.65E+00		**3.65E+00**	
1,2-Dichlorobenzene (o-)	(V)	95-50-1	3.29E+00		**3.29E+00**	
1,4-Dichlorobenzene (p-)	(V)	106-46-7	1.10E+00	3.55E-03	**3.55E-03**	
3,3-Dichlorobenzidine		91-94-1		1.89E-04	**1.89E-04**	
1,1-Dichloroethane	(V)	75-34-3	3.65E+00		**3.65E+00**	
1,2-Dichloroethane	(V)	107-06-2	1.10E+00	9.36E-04	**9.36E-04**	
1,1-Dichloroethene	(V)	75-35-4	3.29E-01	1.42E-04	**1.42E-04**	
1,2-Dichloroethene (total)	(V)	540-59-0	3.29E-01		**3.29E-01**	
2,4-Dichlorophenol (at pH 6.8)		120-83-2	1.10E-01		**1.10E-01**	
1,2-Dichloropropane	(V)	78-87-5		1.25E-03	**1.25E-03**	
cis-1,3-Dichloropropene	(V)	10061-01-5	1.10E+00	8.52E-04	**8.52E-04**	
trans-1,3-Dichloropropene	(V)	10061-02-6	1.10E+00	8.52E-04	**8.52E-04**	
Dieldrin		60-57-1	1.83E-03	5.32E-06	**5.32E-06**	
Diethylphthalate		84-66-2	2.92E+01		**2.92E+01**	
2,4-Dimethylphenol	(V)	105-67-9	7.30E-01		**7.30E-01**	
Dimethylphthalate		131-11-3	3.65E+02		**3.65E+02**	
4,6-Dinitro-2-methylphenol (4,6-dinitro-o-cresol)	(V)	534-52-1	3.65E-02		**3.65E-02**	
2,4-Dinitrophenol		51-28-5	7.30E-02		**7.30E-02**	
2,4-Dinitrotoluene		121-14-2	7.30E-02	1.25E-04	**1.25E-04**	
2,6-Dinitrotoluene		606-20-2	3.65E-02	1.25E-04	**1.25E-04**	
Di-n-octylphthalate		117-84-0	7.30E-01		**7.30E-01**	
Endosulfan I		959-98-8	2.19E-01		**2.19E-01**	
Endosulfan II		33213-65-9	2.19E-01		**2.19E-01**	
Endosulfan sulfate		1031-07-8	2.19E-01		**2.19E-01**	
Endosulfan (technical)		115-29-7	2.19E-01		**2.19E-01**	
Endrin (technical)		72-20-8	1.10E-02		**1.10E-02**	
Ethylbenzene	(V)	100-41-4	3.65E+00		**3.65E+00**	
Fluoranthene		206-44-0	1.46E+00		**1.46E+00**	
Fluorene	(V)	86-73-7	2.19E+00		**2.19E+00**	
Heptachlor		76-44-8	1.83E-02	1.89E-05	**1.89E-05**	
Heptachlor epoxide		1024-57-3	4.75E-04	9.36E-06	**9.36E-06**	
Hexachlorobenzene		118-74-1	2.92E-02	5.32E-05	**5.32E-05**	
Hexachlorobutadiene		87-68-3	7.30E-03	1.09E-03	**1.09E-03**	
Hexachlorocyclopentadiene		77-47-4	2.19E-01		**2.19E-01**	
Hexachloroethane		67-72-1	3.65E-02	6.08E-03	**6.08E-03**	
Indeno(1,2,3-cd)pyrene		193-39-5		1.17E-04	**1.17E-04**	
Iron		7439-89-6	1.10E+01		**1.10E+01**	
Isophorone		78-59-1	7.30E+00	8.96E-02	**8.96E-02**	
Lead		7439-92-1				
Lithium		7439-93-2	7.30E-01		**7.30E-01**	
Magnesium		7439-95-4				
Manganese		7439-96-5	7.30E-01		**7.30E-01**	
Mercury (elemental)		7439-97-6				
Methoxychlor		72-43-5	1.83E-01		**1.83E-01**	
Methylene chloride (dichloromethane)	(V)	75-09-2	2.19E+00	1.14E-02	**1.14E-02**	
2-Methylnaphthalene	(V)	91-57-6	7.30E-01		**7.30E-01**	
4-Methyl-2-pentanone (methyl isobutyl ketone)	(V)	108-10-1	2.92E+00		**2.92E+00**	
2-Methylphenol (o-cresol)		95-48-7	1.83E+00		**1.83E+00**	
4-Methylphenol (p-cresol)		106-44-5	1.83E-01		**1.83E-01**	
Molybdenum		7439-98-7	1.83E-01		**1.83E-01**	
Naphthalene	(V)	91-20-3	7.30E-01		**7.30E-01**	
Nickel (soluble)		7440-02-0	7.30E-01		**7.30E-01**	
2-Nitroaniline		88-74-4				

2.00E+00						4.33E-01
		3.86E+05	3.32E-01	1.26E+00	7.28E+02	
		2.17E+04	2.77E-01	1.06E+00	4.92E+02	
7.98E+01		3.16E+04	3.55E-01	1.35E+00	4.50E+01	2.93E+06
		4.88E+08	1.88E-01	7.17E-01	3.98E-03	
9.98E+00						2.16E+00
2.00E+00						4.33E-01
3.99E-01		4.34E+04	2.14E+00	8.17E+00	1.79E+01	2.01E+04
4.43E-01	7.76E-01	1.29E+00	1.17E+01	4.46E+01	8.06E+02	4.44E+02
1.33E+00	2.17E-01	8.97E-01	1.22E+01	4.66E+01	4.73E+02	8.21E+02
		1.80E+05	9.83E+00	3.74E+01	4.39E+02	
3.99E-01	1.81E+00	8.22E-03	1.05E+02	4.02E+02	6.23E+02	5.23E+02
1.33E+00	1.08E+02	1.65E-02	1.64E+02	6.24E+02	1.34E+03	3.28E+03
4.43E+00		4.15E-03	6.81E+01	2.59E+02	6.95E+02	5.26E+03
4.43E+00						9.61E-01
1.33E+01		4.18E+03	2.02E+01	7.69E+01	1.13E+03	8.35E+04
	1.51E+02	5.17E-02	5.74E+01	2.19E+02	1.11E+03	
1.33E+00	3.65E+00	1.44E-02	1.12E+02	4.26E+02	1.18E+03	2.65E+03
1.33E+00	3.65E+00					2.88E-01
7.98E+02		6.78E+07	1.03E+00	3.94E+00	2.89E+02	6.27E+10
4.99E-02		5.65E+04	3.14E+00	1.20E+01	2.07E+04	4.47E+03
2.00E+00						4.33E-01
3.99E-03		3.18E+02	1.30E+02	4.96E+02	1.10E+02	4.88E+00
3.99E+01						8.65E+00
2.00E+01		5.01E+03	1.52E+02	5.79E+02	2.71E+06	6.28E+07
2.00E+01		5.32E+02	8.05E+01	3.07E+02	7.78E+02	3.93E+04
3.99E+01		4.60E+02	9.32E+01	3.55E+02	8.56E+02	8.17E+04
2.00E+00		6.55E+09	4.65E-03	1.77E-02	1.09E+01	1.52E+10
6.65E+00		9.76E+04	1.12E+01	4.25E+01	1.60E+02	7.54E+05
6.65E+00						1.44E+00
6.65E+00						1.44E+00
6.65E+00						1.44E+00
1.33E+02		7.95E+04	1.70E+00	6.50E+00	3.50E+02	1.23E+07
3.99E-01	4.18E-01	1.60E-01	1.80E+01	6.85E+01	8.90E+02	4.52E+02
9.98E-01		1.63E+04	1.32E+00	5.03E+00	1.08E+02	1.90E+04
6.65E-01		1.70E+05	4.47E+00	1.70E+01	1.38E+02	1.31E+05
7.98E+01		2.18E+04	1.45E+00	5.52E+00	4.95E+02	2.06E+06
3.07E+03		6.11E+06	2.06E+00	7.85E+00	4.11E+02	2.18E+10
4.99E+01		7.90E+02	7.58E-01	2.89E+00	1.40E+02	5.40E+04
2.00E+02		2.66E+00	2.11E+00	8.05E+00	4.11E+02	9.82E+04
6.65E+00	8.89E+00	5.71E+00	1.67E+00	6.37E+00	4.09E+02	3.26E+03
3.99E+01		2.84E+00	5.71E+00	2.18E+01	4.25E+02	2.11E+04
		2.78E+09	1.15E-01	4.40E-01	3.31E+01	
1.33E-01		4.17E-02	2.96E-02	1.13E-01	2.78E-02	6.15E-02
2.00E-01		4.61E+03	1.20E+02	4.56E+02	1.02E+03	1.44E+03
		4.69E-01	2.66E-01	1.02E+00	2.50E-01	
2.00E+00		2.61E-01	1.18E-01	4.51E-01	1.11E-01	2.61E+00
		1.04E+01	1.63E+01	6.20E+01	1.53E+01	
2.00E+00	1.24E+01	2.61E+00	1.48E+00	5.64E+00	1.39E+00	2.62E+01
	2.07E+00				0.00E+00	
7.98E+00		6.08E+03	2.78E+00	1.06E+01	2.49E+01	5.66E+04
6.65E-01	2.76E-01	5.33E-03	2.16E+02	8.22E+02	2.35E+03	2.61E+03
2.00E+00						4.33E-01
4.99E-01	2.55E+00	8.62E-02	2.35E+02	8.97E+02	1.90E+03	1.76E+03
7.98E-01		5.10E+01	7.78E+01	2.97E+02	7.65E+02	1.10E+03
7.98E+00		8.48E+01	8.67E+01	3.31E+02	8.17E+02	1.22E+04
7.98E+00		2.61E+00	1.78E+00	6.77E+00	1.67E+00	1.20E+02
2.00E+00		4.71E+00	1.29E+01	4.91E+01	2.29E+02	6.84E+02
2.00E+00		6.26E-01	1.78E-01	6.77E-01	2.22E-01	4.37E+00
	3.11E+00	4.66E+01	9.77E+01	3.72E+02	8.84E+01	

	5.49E+03			**4.51E+03**	**5.49E+03**	
7.58E+00	1.37E+02			**3.74E-03**	**1.25E+02**	
3.16E+00	1.10E+03			**7.16E+02**	**8.34E+02**	
6.32E-01	5.49E+03			**3.58E+03**	**4.17E+03**	
1.26E-01	2.74E+04			**5.45E-01**	**2.08E+04**	
	2.47E+04	1.41E+04		**2.46E+01**	**8.98E+03**	
	8.23E+03	5.04E+04		**1.33E+01**	**7.08E+03**	
	2.74E+04	6.06E+03		**2.09E+01**	**4.96E+03**	
	8.23E+03	1.01E+02		**3.23E+00**	**9.98E+01**	
	2.47E+03			**2.08E+00**	**2.47E+03**	
	2.47E+03			**2.03E+03**	**2.47E+03**	
	8.23E+02			**1.31E-01**	**8.23E+02**	
		7.25E+01		**7.25E+01**	**7.25E+01**	
	8.23E+03	3.00E+03		**4.12E+00**	**2.20E+03**	
	8.23E+03	3.00E+03		**2.08E+03**	**2.20E+03**	
2.53E+02	1.37E+01			**1.75E-07**	**1.04E+01**	
1.58E-02	2.20E+05			**2.45E+00**	**1.67E+05**	
	5.49E+03			**4.51E+03**	**5.49E+03**	
1.26E-03	2.74E+06			**2.24E+03**	**2.08E+06**	
	2.74E+02			**2.26E+02**	**2.74E+02**	
	5.49E+02			**1.74E-04**	**5.49E+02**	
	5.49E+02			**2.79E-01**	**5.49E+02**	
	2.74E+02			**1.34E-01**	**2.74E+02**	
6.32E-01	5.49E+03			**7.23E-07**	**4.17E+03**	
2.11E+00	1.65E+03			**1.45E-02**	**1.25E+03**	
2.11E+00	1.65E+03			**1.07E+03**	**1.25E+03**	
2.11E+00	1.65E+03			**1.07E+03**	**1.25E+03**	
2.11E+00	1.65E+03			**1.07E+03**	**1.25E+03**	
4.21E+01	8.23E+01			**8.89E-04**	**6.25E+01**	
	2.74E+04	2.62E+04		**2.42E+01**	**1.34E+04**	
4.11E-01	1.10E+04			**5.78E-01**	**7.78E+03**	
2.74E-01	1.65E+04			**8.35E-02**	**1.17E+04**	
2.53E+01	1.37E+02			**5.31E-03**	**1.04E+02**	
9.72E+02	3.57E+00			**5.03E-07**	**2.71E+00**	
1.58E+01	2.20E+02			**2.03E-01**	**1.67E+02**	
6.32E+01	5.49E+01			**1.11E-01**	**4.17E+01**	
2.11E+00	1.65E+03	1.23E+03		**3.34E+00**	**6.20E+02**	
1.26E+01	2.74E+02			**5.18E-01**	**2.08E+02**	
	8.23E+04			**5.63E+04**	**8.23E+04**	
6.32E-02	5.49E+04			**7.62E+00**	**4.17E+04**	
	5.49E+03			**2.38E+03**	**5.49E+03**	
	5.49E+03	8.80E+02		**2.70E+02**	**7.58E+02**	
		5.29E+03		**5.29E+03**	**5.29E+03**	
	1.37E+03			**1.93E-01**	**1.37E+03**	
	1.65E+04	3.97E+04		**4.19E+00**	**1.16E+04**	
	5.49E+03			**4.51E+03**	**5.49E+03**	
	2.20E+04	4.29E+03		**6.22E+00**	**3.59E+03**	
2.53E-01	1.37E+04			**9.93E+00**	**1.04E+04**	
2.53E+00	1.37E+03			**8.96E-01**	**1.04E+03**	
	1.37E+03			**8.53E+01**	**1.37E+03**	
6.32E-01	5.49E+03			**1.60E+01**	**4.17E+03**	
	5.49E+03			**1.72E+03**	**5.49E+03**	
		3.52E+03		**3.52E+03**	**3.52E+03**	

9.58E-03				3.86E+05	3.32E-01	1.26E+00
1.36E-02				2.17E+04	2.77E-01	1.06E+00
1.36E-02		6.04E-05		3.16E+04	3.55E-01	1.35E+00
2.91E-01		5.51E-04		4.88E+08	1.88E-01	7.17E-01
3.35E-03						
				4.34E+04	2.14E+00	8.17E+00
				1.29E+00	1.17E+01	4.46E+01
9.58E-04				8.97E-01	1.22E+01	4.66E+01
1.80E-02				1.80E+05	9.83E+00	3.74E+01
				8.22E-03	1.05E+02	4.02E+02
3.63E-03		1.38E-02		1.65E-02	1.64E+02	6.24E+02
2.39E-02		8.39E-02		4.15E-03	6.81E+01	2.59E+02
				4.18E+03	2.02E+01	7.69E+01
2.71E-03				5.17E-02	5.74E+01	2.19E+02
3.99E-03		2.71E-03		1.44E-02	1.12E+02	4.26E+02
3.99E-03		2.71E-03				
6.38E-01		2.85E-03		6.78E+07	1.03E+00	3.94E+00
				5.65E+04	3.14E+00	1.20E+01
				3.18E+02	1.30E+02	4.96E+02
				5.01E+03	1.52E+02	5.79E+02
2.71E-02				5.32E+02	8.05E+01	3.07E+02
2.71E-02				4.60E+02	9.32E+01	3.55E+02
		2.49E-06		6.55E+09	4.65E-03	1.77E-02
				9.76E+04	1.12E+01	4.25E+01
				7.95E+04	1.70E+00	6.50E+00
				1.60E-01	1.80E+01	6.85E+01
				1.63E+04	1.32E+00	5.03E+00
				1.70E+05	4.47E+00	1.70E+01
1.80E-01		8.00E-04		2.18E+04	1.45E+00	5.52E+00
3.63E-01		1.62E-03		6.11E+06	2.06E+00	7.85E+00
6.38E-02		2.85E-04		7.90E+02	7.58E-01	2.89E+00
3.11E-03		1.37E-05		2.66E+00	2.11E+00	8.05E+00
				5.71E+00	1.67E+00	6.37E+00
5.59E-04		2.49E-06		2.84E+00	5.71E+00	2.18E+01
2.91E-02		5.51E-05		2.78E+09	1.15E-01	4.40E-01
				4.17E-02	2.96E-02	1.13E-01
3.79E-05				4.61E+03	1.20E+02	4.56E+02
				4.69E-01	2.66E-01	1.02E+00
				2.61E-01	1.18E-01	4.51E-01
				1.04E+01	1.63E+01	6.20E+01
				2.61E+00	1.48E+00	5.64E+00
				6.08E+03	2.78E+00	1.06E+01
2.99E-04		3.89E-04		5.33E-03	2.16E+02	8.22E+02
				8.62E-02	2.35E+02	8.97E+02
				5.10E+01	7.78E+01	2.97E+02
				8.48E+01	8.67E+01	3.31E+02
				2.61E+00	1.78E+00	6.77E+00
				4.71E+00	1.29E+01	4.91E+01
				6.26E-01	1.78E-01	6.77E-01
				4.66E+01	9.77E+01	3.72E+02

7.28E+02	4.29E+03		9.10E-04		2.67E+00	
4.92E+02	3.49E+02		1.29E-03		1.88E+00	
4.50E+01	4.98E+02		1.29E-03		1.88E+00	
3.98E-03	1.65E+08		1.20E-01		8.77E-02	
	7.27E-04		1.06E-03		7.62E+00	
1.79E+01						
8.06E+02						
4.73E+02	5.91E-01				2.67E+01	
4.39E+02	3.77E+03		5.69E-03		1.42E+00	
6.23E+02						
1.34E+03	8.95E+00				7.04E+00	
6.95E+02	2.84E+01				1.07E+00	
1.13E+03						
1.11E+03	4.38E+00				9.42E+00	
1.18E+03	7.96E+00				6.40E+00	
	8.65E-04				6.40E+00	
2.89E+02	5.02E+07		2.02E-01		4.00E-02	
2.07E+04						
1.10E+02						
2.71E+06						
7.78E+02	5.34E+01				9.42E-01	
8.56E+02	5.55E+01				9.42E-01	
1.09E+01						
1.60E+02						
3.50E+02						
8.90E+02						
1.08E+02						
1.38E+02						
4.95E+02	4.64E+03		5.69E-02		1.42E-01	
4.11E+02	2.57E+06		1.15E-01		7.04E-02	
1.40E+02	6.91E+01		2.02E-02		4.00E-01	
4.11E+02	1.53E+00		9.86E-04		8.21E+00	
4.09E+02						
4.25E+02	2.95E-01		1.77E-04		4.57E+01	
3.31E+01	9.41E+07		1.20E-02		8.77E-01	
2.78E-02						
1.02E+03	2.73E-01		1.20E-05		6.74E+02	
2.50E-01						
1.11E-01						
1.53E+01						
1.39E+00						
0.00E+00						
2.49E+01						
2.35E+03	1.18E+00				8.54E+01	
1.90E+03						
7.65E+02						
8.17E+02						
1.67E+00						
2.29E+02						
2.22E-01						
8.84E+01						

							3.34E-01
		2.81E+01		**5.95E-06**	**2.44E+00**		
		1.98E+01		**7.32E-05**	**1.72E+00**		
4.23E+02		1.98E+01		**5.13E-05**	**1.71E+00**		1.34E+01
4.63E+01		2.13E-01		**1.55E-10**	**6.21E-02**		
							1.67E+00
		2.41E+01		**4.97E+00**	**5.79E+00**		3.34E-01
							6.68E-02
							7.42E-02
				4.31E-02	**2.67E+01**		2.23E-01
		4.49E+00		**6.78E-06**	**1.08E+00**		
							6.68E-02
1.85E+00				**2.85E-03**	**1.47E+00**		2.23E-01
3.04E-01				**8.97E-04**	**2.37E-01**		7.42E-01
							7.42E-01
							2.23E+00
				5.83E-03	**9.42E+00**		
9.42E+00				**3.21E-03**	**3.81E+00**		2.23E-01
9.42E+00				**3.38E+00**	**3.81E+00**		2.23E-01
8.98E+00		1.26E-01		**5.09E-10**	**3.03E-02**		1.34E+02
							8.35E-03
							3.34E-01
							6.68E-04
							6.68E+00
							3.34E+00
				4.78E-04	**9.42E-01**		3.34E+00
				4.60E-04	**9.42E-01**		6.68E+00
1.03E+04				**1.03E+04**	**1.03E+04**		3.34E-01
							1.11E+00
							1.11E+00
							1.11E+00
							1.11E+00
							2.23E+01
							6.68E-02
							1.67E-01
							1.11E-01
3.19E+01		4.49E-01		**5.50E-06**	**1.08E-01**		1.34E+01
1.58E+01		2.22E-01		**9.93E-09**	**5.33E-02**		5.14E+02
8.98E+01		1.26E+00		**3.70E-04**	**3.03E-01**		8.35E+00
1.87E+03		2.59E+01		**1.66E-02**	**6.21E+00**		3.34E+01
							1.11E+00
1.03E+04		1.44E+02		**8.63E-02**	**3.46E+01**		6.68E+00
4.63E+02		2.13E+00		**2.72E-10**	**6.21E-01**		
							2.23E-02
		2.13E+03		**9.36E-02**	**5.12E+02**		3.34E-02
							3.34E-01
							3.34E-01
							1.34E+00
6.57E+01				**2.17E-02**	**3.71E+01**		1.11E-01
							3.34E-01
							8.35E-02
							1.34E-01
							1.34E+00
							1.34E+00
							3.34E-01
							3.34E-01

		2.04E+04			**2.04E+04**			
							1.60E-03	
							2.27E-03	
	1.55E+00	5.11E+02		4.41E+03	**4.58E+02**		2.27E-03	
							4.88E-02	
	6.45E-01	4.09E+03		1.06E+04	**2.95E+03**			
	1.29E-01	2.04E+04		5.29E+04	**1.47E+04**		5.61E-04	
	2.58E-02	1.02E+05		2.65E+05	**7.37E+04**			
1.73E-01		9.20E+04	3.95E+04		**2.76E+04**			
4.83E-02		3.07E+04	1.41E+05		**2.52E+04**		1.60E-04	
							3.01E-03	
4.02E-01		1.02E+05	1.70E+04		**1.46E+04**			
2.41E+01		3.07E+04	2.83E+02		**2.81E+02**		6.08E-04	
		9.20E+03			**9.20E+03**		4.01E-03	
		9.20E+03			**9.20E+03**			
		3.07E+03			**3.07E+03**			
3.36E+01			2.03E+02		**2.03E+02**		4.54E-04	
8.13E-01		3.07E+04	8.40E+03		**6.59E+03**		6.68E-04	
8.13E-01		3.07E+04	8.40E+03		**6.59E+03**		6.68E-04	
	5.16E+01	5.11E+01		1.32E+02	**3.69E+01**		1.07E-01	
	3.22E-03	8.18E+05		2.12E+06	**5.90E+05**			
		2.04E+04			**2.04E+04**			
	2.58E-04	1.02E+07		2.65E+07	**7.37E+06**			
		1.02E+03			**1.02E+03**			
		2.04E+03			**2.04E+03**			
		2.04E+03			**2.04E+03**		4.54E-03	
		1.02E+03			**1.02E+03**		4.54E-03	
	1.29E-01	2.04E+04		5.29E+04	**1.47E+04**			
	4.30E-01	6.13E+03		1.59E+04	**4.42E+03**			
	4.30E-01	6.13E+03		1.59E+04	**4.42E+03**			
	4.30E-01	6.13E+03		1.59E+04	**4.42E+03**			
	4.30E-01	6.13E+03		1.59E+04	**4.42E+03**			
	8.60E+00	3.07E+02		7.94E+02	**2.21E+02**			
9.30E-02		1.02E+05	7.34E+04		**4.27E+04**			
	8.38E-02	4.09E+04		8.14E+04	**2.72E+04**			
	5.59E-02	6.13E+04		1.22E+05	**4.08E+04**			
	5.16E+00	5.11E+02		1.32E+03	**3.69E+02**		3.01E-02	
	1.98E+02	1.33E+01		3.44E+01	**9.59E+00**		6.08E-02	
	3.22E+00	8.18E+02		2.12E+03	**5.90E+02**		1.07E-02	
	1.29E+01	2.04E+02		5.29E+02	**1.47E+02**		5.21E-04	
1.98E+00	4.30E-01	6.13E+03	3.45E+03	1.59E+04	**1.94E+03**			
	2.58E+00	1.02E+03		2.65E+03	**7.37E+02**		9.35E-05	
							4.88E-03	
		3.07E+05			**3.07E+05**			
	1.29E-02	2.04E+05		5.29E+05	**1.47E+05**		6.34E-06	
		2.04E+04			**2.04E+04**			
2.77E+00		2.04E+04	2.47E+03		**2.20E+03**			
4.60E-01			1.48E+04		**1.48E+04**			
		5.11E+03			**5.11E+03**			
6.14E-02		6.13E+04	1.11E+05		**3.95E+04**		5.01E-05	
		2.04E+04			**2.04E+04**			
5.67E-01		8.18E+04	1.20E+04		**1.05E+04**			
	5.16E-02	5.11E+04		1.32E+05	**3.69E+04**			
	5.16E-01	5.11E+03		1.32E+04	**3.69E+03**			
		5.11E+03			**5.11E+03**			
	1.29E-01	2.04E+04		5.29E+04	**1.47E+04**			
		2.04E+04			**2.04E+04**			
6.93E-01			9.85E+03		**9.85E+03**			

			1.86E-04		1.59E+01		
			2.63E-04		1.13E+01		
	1.34E-05		2.63E-04		1.13E+01		1.90E+03
	1.23E-04		2.45E-02		5.24E-01		2.08E+02
			2.17E-04		4.55E+01		
					1.59E+02		
			1.16E-03		8.50E+00		
	3.07E-03				4.20E+01		8.32E+00
	1.87E-02				6.38E+00		1.37E+00
					5.63E+01		
	6.04E-04				3.83E+01		4.23E+01
	6.04E-04				3.83E+01		4.23E+01
	6.33E-04		4.13E-02		2.39E-01		4.04E+01
					5.63E+00		
					5.63E+00		
	5.54E-07						4.61E+04
	1.78E-04		1.16E-02		8.50E-01		1.44E+02
	3.60E-04		2.35E-02		4.20E-01		7.10E+01
	6.33E-05		4.13E-03		2.39E+00		4.04E+02
	3.05E-06		2.01E-04		4.90E+01		8.39E+03
	5.54E-07		3.61E-05		2.73E+02		4.61E+04
	1.23E-05		2.45E-03		5.24E+00		2.08E+03
			2.45E-06		4.03E+03		
	8.65E-05				5.10E+02		2.95E+02

						2.23E-01		
	1.38E+02		**1.43E+01**					
	9.71E+01		**1.01E+01**					
	9.71E+01		**1.00E+01**			8.93E+00		3.54E-01
	1.04E+00		**3.48E-01**					
						1.12E+00		1.47E-01
	1.18E+02		**3.29E+01**			2.23E-01		2.95E-02
						4.46E-02		5.89E-03
						4.96E-02	9.19E-02	
			1.59E+02			1.49E-01	2.57E-02	
	2.20E+01		**6.13E+00**					
						4.46E-02	2.14E-01	
			6.95E+00			1.49E-01	1.28E+01	
			1.13E+00			4.96E-01		
						4.96E-01		
						1.49E+00		
			5.63E+01				1.79E+01	
			2.01E+01			1.49E-01	4.33E-01	
			2.01E+01			1.49E-01	4.33E-01	
	6.19E-01		**1.72E-01**			8.93E+01		1.18E+01
						5.58E-03		7.37E-04
						2.23E-01		
						4.46E-04		5.89E-05
						4.46E+00		
						2.23E+00		
			5.63E+00			2.23E+00		
			5.63E+00			4.46E+00		
			4.61E+04			2.23E-01		2.95E-02
						7.44E-01		9.82E-02
						7.44E-01		9.82E-02
						7.44E-01		9.82E-02
						7.44E-01		9.82E-02
						1.49E+01		1.96E+00
						4.46E-02	4.95E-02	
						1.12E-01		1.92E-02
						7.44E-02		1.28E-02
	2.20E+00		**6.11E-01**			8.93E+00		1.18E+00
	1.09E+00		**3.02E-01**			3.43E+02		4.53E+01
	6.19E+00		**1.72E+00**			5.58E+00		7.37E-01
	1.27E+02		**3.52E+01**			2.23E+01		2.95E+00
						7.44E-01	1.05E+00	9.82E-02
	7.08E+02		**1.96E+02**			4.46E+00		5.89E-01
	1.04E+01		**3.48E+00**					
						1.49E-02		
	1.04E+04		**2.91E+03**			2.23E-02		2.95E-03
						2.23E-01		
						2.23E-01	1.47E+00	
							2.45E-01	
						8.93E-01		
			1.87E+02			7.44E-02	3.27E-02	
						2.23E-01		
						5.58E-02	3.02E-01	
						8.93E-02		1.18E-02
						8.93E-01		1.18E-01
						8.93E-01		
						2.23E-01		2.95E-02
						2.23E-01		
							3.69E-01	

4.09E+04			**4.09E+04**					
					1.07E-03			
					1.52E-03			
1.02E+03		2.58E+04	**9.83E+02**		1.52E-03			7.15E-06
					3.26E-02			6.53E-05
8.18E+03		6.19E+04	**7.22E+03**					
4.09E+04		3.10E+05	**3.61E+04**		3.75E-04			
2.04E+05		1.55E+06	**1.81E+05**					
1.84E+05	9.93E+04		**6.45E+04**					
6.13E+04	3.55E+05		**5.23E+04**		1.07E-04			
					2.01E-03			
2.04E+05	4.26E+04		**3.53E+04**					
6.13E+04	7.11E+02		**7.03E+02**		4.06E-04			1.63E-03
1.84E+04			**1.84E+04**		2.68E-03			9.94E-03
1.84E+04			**1.84E+04**					
6.13E+03			**6.13E+03**					
	5.10E+02		**5.10E+02**		3.04E-04			
6.13E+04	2.11E+04		**1.57E+04**		4.46E-04			3.21E-04
6.13E+04	2.11E+04		**1.57E+04**		4.46E-04			3.21E-04
1.02E+02		7.74E+02	**9.03E+01**		7.14E-02			3.37E-04
1.64E+06		1.24E+07	**1.44E+06**					
4.09E+04			**4.09E+04**					
2.04E+07		1.55E+08	**1.81E+07**					
2.04E+03			**2.04E+03**					
4.09E+03			**4.09E+03**					
4.09E+03			**4.09E+03**		3.04E-03			
2.04E+03			**2.04E+03**		3.04E-03			
4.09E+04		3.10E+05	**3.61E+04**					2.95E-07
1.23E+04		9.29E+04	**1.08E+04**					
1.23E+04		9.29E+04	**1.08E+04**					
1.23E+04		9.29E+04	**1.08E+04**					
1.23E+04		9.29E+04	**1.08E+04**					
6.13E+02		4.65E+03	**5.42E+02**					
2.04E+05	1.84E+05		**9.69E+04**					
8.18E+04		4.76E+05	**6.98E+04**					
1.23E+05		7.15E+05	**1.05E+05**					
1.02E+03		7.74E+03	**9.03E+02**		2.01E-02			9.48E-05
2.66E+01		2.01E+02	**2.35E+01**		4.06E-02			1.92E-04
1.64E+03		1.24E+04	**1.44E+03**		7.14E-03			3.37E-05
4.09E+02		3.10E+03	**3.61E+02**		3.48E-04			1.62E-06
1.23E+04	8.67E+03	9.29E+04	**4.82E+03**					
2.04E+03		1.55E+04	**1.81E+03**		6.25E-05			2.95E-07
					3.26E-03			6.53E-06
6.13E+05			**6.13E+05**					
4.09E+05		3.10E+06	**3.61E+05**		4.24E-06			
4.09E+04			**4.09E+04**					
4.09E+04	6.19E+03		**5.38E+03**					
	3.73E+04		**3.73E+04**					
1.02E+04			**1.02E+04**					
1.23E+05	2.79E+05		**8.52E+04**		3.35E-05			4.61E-05
4.09E+04			**4.09E+04**					
1.64E+05	3.02E+04		**2.55E+04**					
1.02E+05		7.74E+05	**9.03E+04**					
1.02E+04		7.74E+04	**9.03E+03**					
1.02E+04			**1.02E+04**					
4.09E+04		3.10E+05	**3.61E+04**					
4.09E+04			**4.09E+04**					
	2.47E+04		**2.47E+04**					

	4.24E-05		2.38E+01				6.02E+02
	6.01E-05		1.68E+01				4.25E+02
	6.01E-05		1.68E+01		3.57E+03		4.25E+02
	5.59E-03		7.84E-01		3.91E+02		4.57E+00
	4.95E-05		6.81E+01				5.16E+02
			2.38E+02				
	2.65E-04		1.27E+01				9.64E+01
			6.29E+01		1.56E+01		
			9.54E+00		2.57E+00		
			8.42E+01				
			5.72E+01		7.95E+01		
			5.72E+01		7.95E+01		
	9.43E-03		3.58E-01		7.58E+01		2.71E+00
			8.42E+00				
			8.42E+00				
					8.67E+04		
	2.65E-03		1.27E+00		2.70E+02		9.64E+00
	5.36E-03		6.29E-01		1.33E+02		4.76E+00
	9.43E-04		3.58E+00		7.58E+02		2.71E+01
	4.60E-05		7.34E+01		1.58E+04		5.56E+02
	8.25E-06		4.09E+02		8.67E+04		3.10E+03
	5.59E-04		7.84E+00		3.91E+03		4.57E+01
	5.60E-07		6.02E+03				4.56E+04
			7.63E+02		5.55E+02		

					2.85E-01			3.84E+04
	2.29E+01							
	1.62E+01							
	1.61E+01				1.14E+01		2.17E+00	9.61E+02
	6.68E-01							
					1.43E+00		9.03E-01	7.68E+03
	6.02E+01				2.85E-01		1.81E-01	3.84E+04
					5.70E-02		3.61E-02	1.92E+05
					6.33E-02	1.07E-01		1.73E+05
	2.38E+02				1.90E-01	2.99E-02		5.76E+04
	1.12E+01							
					5.70E-02	2.49E-01		1.92E+05
	1.25E+01				1.90E-01	1.49E+01		5.76E+04
	2.03E+00				6.33E-01			1.73E+04
					6.33E-01			1.73E+04
					1.90E+00			5.76E+03
	8.42E+01					2.08E+01		
	3.33E+01				1.90E-01	5.03E-01		5.76E+04
	3.33E+01				1.90E-01	5.03E-01		5.76E+04
	3.15E-01				1.14E+02		7.22E+01	9.61E+01
					7.13E-03		4.51E-03	1.54E+06
					2.85E-01			3.84E+04
					5.70E-04		3.61E-04	1.92E+07
					5.70E+00			1.92E+03
					2.85E+00			3.84E+03
	8.42E+00				2.85E+00			3.84E+03
	8.42E+00				5.70E+00			1.92E+03
	8.67E+04				2.85E-01		1.81E-01	3.84E+04
					9.50E-01		6.02E-01	1.15E+04
					9.50E-01		6.02E-01	1.15E+04
					9.50E-01		6.02E-01	1.15E+04
					9.50E-01		6.02E-01	1.15E+04
					1.90E+01		1.20E+01	5.76E+02
					5.70E-02	5.76E-02		1.92E+05
					1.43E-01		1.17E-01	7.68E+04
					9.50E-02		7.82E-02	1.15E+05
	1.12E+00				1.14E+01		7.22E+00	9.61E+02
	5.53E-01				4.38E+02		2.78E+02	2.50E+01
	3.15E+00				7.13E+00		4.51E+00	1.54E+03
	6.46E+01				2.85E+01		1.81E+01	3.84E+02
					9.50E-01	1.23E+00	6.02E-01	1.15E+04
	3.60E+02				5.70E+00		3.61E+00	1.92E+03
	6.68E+00							
					1.90E-02			5.76E+05
	5.32E+03				2.85E-02		1.81E-02	3.84E+05
					2.85E-01			3.84E+04
					2.85E-01	1.72E+00		3.84E+04
						2.85E-01		
					1.14E+00			9.61E+03
	3.21E+02				9.50E-02	3.80E-02		1.15E+05
					2.85E-01			3.84E+04
					7.13E-02	3.51E-01		1.54E+05
					1.14E-01		7.22E-02	9.61E+04
					1.14E+00		7.22E-01	9.61E+03
					1.14E+00			9.61E+03
					2.85E-01		1.81E-01	3.84E+04
					2.85E-01			3.84E+04
						4.29E-01		

		3.84E+04					
				1.37E-03			
				1.94E-03			
	5.06E+03	**8.07E+02**		1.94E-03		8.32E-06	
				4.16E-02		7.60E-05	
	1.21E+04	**4.70E+03**					
	6.07E+04	**2.35E+04**		4.79E-04			
	3.03E+05	**1.18E+05**					
1.02E+05		**6.43E+04**					
3.66E+05		**4.98E+04**		1.37E-04			
				2.57E-03			
4.40E+04		**3.58E+04**					
7.34E+02		**7.24E+02**		5.19E-04		1.90E-03	
		1.73E+04		3.42E-03		1.16E-02	
		1.73E+04					
		5.76E+03					
5.26E+02		**5.26E+02**		3.88E-04			
2.18E+04		**1.58E+04**		5.70E-04		3.74E-04	
2.18E+04		**1.58E+04**		5.70E-04		3.74E-04	
	1.52E+02	**5.88E+01**		9.12E-02		3.92E-04	
	2.43E+06	**9.41E+05**					
		3.84E+04					
	3.03E+07	**1.18E+07**					
		1.92E+03					
		3.84E+03					
		3.84E+03		3.88E-03			
		1.92E+03		3.88E-03			
	6.07E+04	**2.35E+04**				3.43E-07	
	1.82E+04	**7.06E+03**					
	1.82E+04	**7.06E+03**					
	1.82E+04	**7.06E+03**					
	1.82E+04	**7.06E+03**					
	9.10E+02	**3.53E+02**					
1.90E+05		**9.55E+04**					
	9.33E+04	**4.21E+04**					
	1.40E+05	**6.32E+04**					
	1.52E+03	**5.88E+02**		2.57E-02		1.10E-04	
	3.94E+01	**1.53E+01**		5.19E-02		2.23E-04	
	2.43E+03	**9.41E+02**		9.12E-03		3.92E-05	
	6.07E+02	**2.35E+02**		4.45E-04		1.89E-06	
8.94E+03	1.82E+04	**3.94E+03**					
	3.03E+03	**1.18E+03**		7.98E-05		3.43E-07	
				4.16E-03		7.60E-06	
		5.76E+05					
	6.07E+05	**2.35E+05**		5.42E-06			
		3.84E+04					
6.38E+03		**5.47E+03**					
3.84E+04		**3.84E+04**					
		9.61E+03					
2.88E+05		**8.23E+04**		4.28E-05		5.36E-05	
		3.84E+04					
3.12E+04		**2.59E+04**					
	1.52E+05	**5.88E+04**					
	1.52E+04	**5.88E+03**					
		9.61E+03					
	6.07E+04	**2.35E+04**					
		3.84E+04					
2.55E+04		**2.55E+04**					

2.60E-04		1.87E+01		9.83E+01	**1.57E+01**
3.68E-04		1.32E+01		6.94E+01	**1.11E+01**
3.68E-04		1.32E+01	3.07E+03	6.94E+01	**1.10E+01**
3.43E-02		6.14E-01	3.36E+02	7.46E-01	**3.36E-01**
3.03E-04		5.34E+01		8.43E+01	**3.27E+01**
		1.87E+02			**1.87E+02**
1.62E-03		9.96E+00		1.57E+01	**6.10E+00**
		4.93E+01	1.34E+01		**1.06E+01**
		7.47E+00	2.21E+00		**1.71E+00**
		6.59E+01			**6.59E+01**
		4.48E+01	6.83E+01		**2.71E+01**
		4.48E+01	6.83E+01		**2.71E+01**
5.78E-02		2.80E-01	6.52E+01	4.42E-01	**1.71E-01**
		6.59E+00			**6.59E+00**
		6.59E+00			**6.59E+00**
			7.45E+04		**7.45E+04**
1.62E-02		9.96E-01	2.32E+02	1.57E+00	**6.08E-01**
3.29E-02		4.93E-01	1.15E+02	7.78E-01	**3.01E-01**
5.78E-03		2.80E+00	6.52E+02	4.42E+00	**1.71E+00**
2.82E-04		5.75E+01	1.35E+04	9.07E+01	**3.51E+01**
5.05E-05		3.20E+02	7.45E+04	5.06E+02	**1.96E+02**
3.43E-03		6.14E+00	3.36E+03	7.46E+00	**3.36E+00**
3.43E-06		4.72E+03		7.45E+03	**2.89E+03**
		5.98E+02	4.77E+02		**2.65E+02**

Nitrobenzene	(V)	98-95-3	1.83E-02		**1.83E-02**	
4-Nitrophenol	(V)	100-02-7	2.92E-01		**2.92E-01**	
n-Nitrosodiphenylamine	(V)	86-30-6		1.74E-02	**1.74E-02**	
n-Nitrosodipropylamine		621-64-7		1.22E-05	**1.22E-05**	
Pentachlorophenol		87-86-5	1.10E+00	7.10E-04	**7.10E-04**	
Phenol		108-95-2	2.19E+01		**2.19E+01**	
Pyrene		129-00-0	1.10E+00		**1.10E+00**	
Selenium		7782-49-2	1.83E-01		**1.83E-01**	
Silver		7440-22-4	1.83E-01		**1.83E-01**	
Strontium		7440-24-6	2.19E+01		**2.19E+01**	
Stryene	(V)	100-42-5	7.30E+00		**7.30E+00**	
1,1,2,2-Tetrachloroethane	(V)	79-34-5	2.19E+00	4.26E-04	**4.26E-04**	
Tetrachloroethene	(V)	127-18-4	3.65E-01	1.64E-03	**1.64E-03**	
Tin		7440-31-5	2.19E+01		**2.19E+01**	
Toluene	(V)	108-88-3	7.30E+00		**7.30E+00**	
Toxaphene		8001-35-2		7.74E-05	**7.74E-05**	
1,2,4-Trichlorobenzene	(V)	120-82-1	3.65E-01		**3.65E-01**	
1,1,1-Trichloroethane	(V)	71-55-6	1.02E+01		**1.02E+01**	
1,1,2-Trichloroethane	(V)	79-00-5	1.46E-01	1.49E-03	**1.49E-03**	
Trichloroethene	(V)	79-01-6	1.10E-02	2.13E-04	**2.13E-04**	
2,4,5-Trichlorophenol		95-95-4	3.65E+00		**3.65E+00**	
2,4,6-Trichlorophenol		88-06-2		7.74E-03	**7.74E-03**	
Vanadium		7440-62-2	2.56E-01		**2.56E-01**	
Vinyl acetate		108-05-4	3.65E+01		**3.65E+01**	
Vinyl chloride	(V)	75-01-4	1.10E-01	6.08E-05	**6.08E-05**	
Xylene (total)	(V)	1330-20-7	7.30E+01		**7.30E+01**	
Zinc		7440-66-6	1.10E+01		**1.10E+01**	
Nitrate		14797-55-8	5.84E+01		**5.84E+01**	
Nitrite		14797-65-0	3.65E+00		**3.65E+00**	
Ammonium (as Ammonia)		7664-41-7				
Fluoride (as fluorine)		7782-41-4	2.19E+00		**2.19E+00**	
				(pCi/L)	**(pCi/L)**	
Am-241		14596-10-2		4.58E-01	**4.58E-01**	
Pu-239		15117-48-3		3.53E-01	**3.53E-01**	
Pu-240		14119-33-6		3.53E-01	**3.53E-01**	
U-233		13968-55-3	1.10E-01	6.63E-01	**1.10E-01**	
U-234		13966-29-5	1.10E-01	6.74E-01	**1.10E-01**	
U-235		15117-96-1	1.10E-01	6.84E-01	**1.10E-01**	
U-235+D		15117-96-1(+D)	1.10E-01	6.63E-01	**1.10E-01**	
U-238		7440-61-1	1.10E-01	7.44E-01	**1.10E-01**	
U-238+D		7440-61-1(+D)	1.10E-01	5.47E-01	**1.10E-01**	

7.98E+01	3.87E+01	2.53E+00	1.00E+02	3.81E+02	2.86E+02	7.13E+04
4.99E+00		8.62E+03	9.03E+01	3.44E+02	8.37E+01	5.28E+04
		9.92E+02	2.04E+01	7.77E+01	4.75E+02	
		3.17E+02	1.83E+02	6.96E+02	1.47E+03	
1.33E+00		1.06E+04	1.33E+00	5.05E+00	1.05E+04	3.26E+04
6.65E-02		3.67E+01	1.60E+02	6.11E+02	1.20E+03	1.55E+02
1.33E+00		1.08E+07	1.47E+00	5.62E+00	6.78E+01	1.67E+07
7.98E+00		6.26E-02	2.96E-02	1.13E-01	6.12E-01	9.29E+00
7.98E+00		4.17E+00	2.96E+00	1.13E+01	2.78E+00	1.98E+02
6.65E-02		2.61E+01	7.40E+00	2.82E+01	6.95E+00	5.31E+00
2.00E-01	1.69E-01	2.31E-01	2.32E+01	8.85E+01	1.47E+02	5.99E+01
6.65E-01		1.51E-01	3.46E+01	1.32E+02	5.39E+02	5.45E+02
3.99E+00		1.73E-02	3.88E+01	1.48E+02	2.89E-02	8.64E+02
6.65E-02		3.13E-01	1.78E-01	6.77E-01	1.67E-01	1.17E-01
2.00E-01	1.41E+00	6.60E-02	3.29E+01	1.25E+02	6.48E+02	1.86E+02
3.99E+00	5.47E-01	3.94E+00	5.68E+00	2.17E+01	4.70E+02	2.32E+03
1.43E-01	1.04E+00	1.19E-02	4.56E+01	1.74E+02	4.81E-01	3.63E+01
9.98E+00		9.94E-02	7.04E+01	2.68E+02	5.89E+02	1.07E+04
1.33E+02		1.73E-02	3.88E+01	1.48E+02	2.89E-02	2.88E+04
3.99E-01		1.37E+03	6.63E+00	2.53E+01	5.62E+02	9.07E+02
		1.28E+03	8.20E+00	3.12E+01	2.14E+03	
5.70E+00		5.74E-02	8.88E-02	3.38E-01	8.34E-02	4.99E+00
3.99E-02	3.11E-03	5.89E-03	4.53E+02	1.73E+03	3.98E+03	2.85E+02
1.33E+01	2.42E+01	3.08E-05	2.49E+02	9.50E+02	2.03E+03	4.97E+04
2.00E-02		1.62E+00	1.62E+01	6.17E+01	1.05E+03	2.62E+01
1.33E-01		1.56E+01	0.00E+00	0.00E+00	1.22E+00	2.63E+00
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2.49E-02						5.41E-03
3.99E-01						8.65E-02
		0.00E+00	0.00E+00	0.00E+00	0.00E+00	
	6.22E-03					
6.65E-01						1.44E-01
		5.42E-01	1.33E-01	5.08E-01	1.25E-01	
		2.45E-04	7.40E-03	2.82E-02	6.95E-03	
		2.45E-04	7.40E-03	2.82E-02	6.95E-03	
1.33E+01		5.34E-01	1.52E+00	5.78E+00	1.42E+00	1.46E+02
1.33E+01		5.34E-01	1.52E+00	5.78E+00	1.42E+00	1.46E+02
1.33E+01		5.34E-01	1.52E+00	5.78E+00	1.42E+00	1.46E+02
1.33E+01		5.34E-01	1.52E+00	5.78E+00	1.42E+00	1.46E+02
1.33E+01		5.34E-01	1.52E+00	5.78E+00	1.42E+00	1.46E+02
1.33E+01		5.34E-01	1.52E+00	5.78E+00	1.42E+00	1.46E+02

	1.37E+02	2.83E+02		**1.53E-01**	**9.24E+01**	
	2.20E+03			**2.07E-01**	**2.20E+03**	
1.05E+00	8.23E+03			**3.36E-01**	**4.60E+03**	
	1.65E+05			**7.06E+01**	**1.65E+05**	
4.21E-01	8.23E+03			**6.55E-04**	**6.25E+03**	
	1.37E+03			**6.34E+02**	**1.37E+03**	
	1.37E+03			**5.32E+01**	**1.37E+03**	
	1.65E+05			**2.04E+03**	**1.65E+05**	
	5.49E+04	6.49E+04		**1.82E+02**	**2.97E+04**	
	1.65E+04			**2.01E+01**	**1.65E+04**	
	2.74E+03			**1.26E+01**	**2.74E+03**	
	1.65E+05			**5.96E+04**	**1.65E+05**	
	5.49E+04	7.76E+03		**5.82E+01**	**6.80E+03**	
	2.74E+03	2.00E+04		**4.71E+00**	**2.41E+03**	
	7.68E+04	1.05E+04		**2.92E+02**	**9.26E+03**	
	1.10E+03			**1.02E+00**	**1.10E+03**	
	8.23E+01			**3.78E-01**	**8.23E+01**	
	2.74E+04			**1.21E+01**	**2.74E+04**	
	1.92E+03			**1.02E+03**	**1.92E+03**	
	2.74E+05	3.52E+06		**3.85E+01**	**2.55E+05**	
	8.23E+02	4.53E+02		**2.20E-01**	**2.92E+02**	
	5.49E+05			**4.18E+02**	**5.49E+05**	
	8.23E+04			**3.96E+03**	**8.23E+04**	
	4.39E+05			**3.61E+05**	**4.39E+05**	
	2.74E+04			**2.26E+04**	**2.74E+04**	
		1.76E+06		**1.76E+06**	**1.76E+06**	
	1.65E+04			**1.35E+04**	**1.65E+04**	
	8.23E+02			**6.90E+01**		
	8.23E+02			**6.90E+01**		
	8.23E+02			**6.90E+01**		
	8.23E+02			**6.90E+01**		
	8.23E+02			**6.90E+01**		
	8.23E+02			**6.90E+01**		

				2.53E+00	1.00E+02	3.81E+02
				8.62E+03	9.03E+01	3.44E+02
1.96E-04				9.92E+02	2.04E+01	7.77E+01
2.79E-01				3.17E+02	1.83E+02	6.96E+02
4.79E-03				1.06E+04	1.33E+00	5.05E+00
				3.67E+01	1.60E+02	6.11E+02
				1.08E+07	1.47E+00	5.62E+00
				6.26E-02	2.96E-02	1.13E-01
				4.17E+00	2.96E+00	1.13E+01
				2.61E+01	7.40E+00	2.82E+01
				2.31E-01	2.32E+01	8.85E+01
7.98E-03		9.28E-03		1.51E-01	3.46E+01	1.32E+02
2.07E-03		5.22E-04		1.73E-02	3.88E+01	1.48E+02
				3.13E-01	1.78E-01	6.77E-01
				6.60E-02	3.29E+01	1.25E+02
4.39E-02		1.96E-04				
				3.94E+00	5.68E+00	2.17E+01
				1.19E-02	4.56E+01	1.74E+02
2.27E-03		5.38E-03		9.94E-02	7.04E+01	2.68E+02
1.60E-02		1.19E-03		1.73E-02	3.88E+01	1.48E+02
				1.37E+03	6.63E+00	2.53E+01
4.39E-04		1.78E-06		1.28E+03	8.20E+00	3.12E+01
				5.74E-02	8.88E-02	3.38E-01
				5.89E-03	4.53E+02	1.73E+03
5.59E-02		2.13E-02		3.08E-05	2.49E+02	9.50E+02
				1.62E+00	1.62E+01	6.17E+01
				1.56E+01	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00
	#REF!					
	2.73E-07		2.61E-07	5.42E-01	1.33E-01	5.08E-01
	3.49E-07		3.09E-07	2.45E-04	7.40E-03	2.82E-02
	3.49E-07		3.09E-07	2.45E-04	7.40E-03	2.82E-02
	2.02E-07		1.08E-07	5.34E-01	1.52E+00	5.78E+00
	1.99E-07		1.06E-07	5.34E-01	1.52E+00	5.78E+00
	1.98E-07		9.37E-08	5.34E-01	1.52E+00	5.78E+00
	2.05E-07		9.37E-08	5.34E-01	1.52E+00	5.78E+00
	1.80E-07		8.65E-08	5.34E-01	1.52E+00	5.78E+00
	2.65E-07		8.67E-08	5.34E-01	1.52E+00	5.78E+00

2.86E+02						
8.37E+01						
4.75E+02	3.55E-01				1.31E+02	
1.47E+03	8.64E+02				9.15E-02	
1.05E+04	1.17E+02		3.79E-03		5.34E+00	
1.20E+03						
6.78E+01						
6.12E-01						
2.78E+00						
6.95E+00						
1.47E+02						
5.39E+02	6.54E+00				3.20E+00	
2.89E-02	4.49E-01				1.23E+01	
1.67E-01						
6.48E+02						
	9.52E-03		1.39E-02		5.82E-01	
4.70E+02						
4.81E-01						
5.89E+02	2.45E+00				1.12E+01	
2.89E-02	3.46E+00				1.60E+00	
5.62E+02						
2.14E+03	1.76E+00				5.82E+01	
8.34E-02						
3.98E+03						
2.03E+03	2.09E+02				4.57E-01	
1.05E+03						
1.22E+00						
0.00E+00						
0.00E+00						
1.25E-01		5.47E-07		3.50E-07		3.66E+00
6.95E-03		1.09E-07		2.54E-09		2.87E+00
6.95E-03		1.09E-07		8.86E-10		2.87E+00
1.42E+00		2.50E-06		1.25E-08		4.96E+00
1.42E+00		2.46E-06		3.20E-09		5.02E+00
1.42E+00		2.43E-06		6.57E-06		5.06E+00
1.42E+00		2.51E-06		6.89E-06		4.87E+00
1.42E+00		2.23E-06		6.33E-10		5.55E+00
1.42E+00		3.12E-06		1.45E-06		3.78E+00

							1.34E+01
							8.35E-01
				7.19E-02	**1.31E+02**		
				2.96E-05	**9.15E-02**		
		6.74E+00		**2.18E-04**	**2.98E+00**		2.23E-01
							1.11E-02
							2.23E-01
							1.34E+00
							1.34E+00
							1.11E-02
							3.34E-02
2.75E+00				**3.90E-03**	**1.48E+00**		1.11E-01
4.89E+01				**5.65E-02**	**9.84E+00**		6.68E-01
							1.11E-02
							3.34E-02
1.31E+02		1.84E+00		**3.79E-01**	**4.41E-01**		
							6.68E-01
							2.39E-02
4.75E+00				**1.04E-02**	**3.34E+00**		1.67E+00
2.15E+01				**7.36E-03**	**1.49E+00**		2.23E+01
							6.68E-02
1.44E+04				**1.45E-02**	**5.80E+01**		
							9.54E-01
							6.68E-03
1.20E+00				**1.22E-04**	**3.31E-01**		2.23E+00
							3.34E-03
							2.23E-02
							4.17E-03
							6.68E-02
							1.11E-01
				(pCi/g)			
	3.84E+00		2.86E+00	**6.99E-01**			
	3.24E+00		3.94E+02	**1.30E+00**			
	3.24E+00		1.13E+03	**1.30E+00**			
	9.29E+00		8.03E+01	**3.55E-01**			2.23E+00
	9.46E+00		3.13E+02	**3.61E-01**			2.23E+00
	1.07E+01		1.52E-01	**1.08E-01**			2.23E+00
	1.07E+01		1.45E-01	**1.03E-01**			2.23E+00
	1.16E+01		1.58E+03	**4.00E-01**			2.23E+00
	1.15E+01		6.91E-01	**2.03E-01**			2.23E+00

8.61E+00		5.11E+02	7.92E+02		**3.11E+02**			
		8.18E+03			**8.18E+03**			
							3.27E-05	
							4.68E-02	
	2.15E-01	3.07E+04		3.18E+04	**1.56E+04**		8.01E-04	
		6.13E+05			**6.13E+05**			
	8.60E-02	3.07E+04		7.94E+04	**2.21E+04**			
		5.11E+03			**5.11E+03**			
		5.11E+03			**5.11E+03**			
		6.13E+05			**6.13E+05**			
3.75E-02		2.04E+05	1.82E+05		**9.62E+04**			
		6.13E+04			**6.13E+04**		1.34E-03	
		1.02E+04			**1.02E+04**		3.47E-04	
		6.13E+05			**6.13E+05**			
3.14E-01		2.04E+05	2.17E+04		**1.97E+04**			
							7.35E-03	
1.22E-01		1.02E+04	5.61E+04		**8.64E+03**			
2.31E-01		2.86E+05	2.95E+04		**2.68E+04**			
		4.09E+03			**4.09E+03**		3.81E-04	
		3.07E+02			**3.07E+02**		2.67E-03	
		1.02E+05			**1.02E+05**			
							7.35E-05	
		7.15E+03			**7.15E+03**			
6.92E-04		1.02E+06	9.86E+06		**9.26E+05**			
5.37E+00		3.07E+03	1.27E+03		**8.98E+02**		9.35E-03	
		2.04E+06			**2.04E+06**			
		3.07E+05			**3.07E+05**			
		1.64E+06			**1.64E+06**			
		1.02E+05			**1.02E+05**			
1.38E-03			4.94E+06		**4.94E+06**			
		6.13E+04			**6.13E+04**			#REF!
								1.01E-07
								1.29E-07
								1.29E-07
		3.07E+03			**3.07E+03**			7.48E-08
		3.07E+03			**3.07E+03**			7.39E-08
		3.07E+03			**3.07E+03**			7.34E-08
		3.07E+03			**3.07E+03**			7.62E-08
		3.07E+03			**3.07E+03**			6.69E-08
		3.07E+03			**3.07E+03**			9.82E-08

					7.81E+02		
					5.47E-01		
			7.74E-04		3.19E+01		
	2.06E-03				1.91E+01		1.24E+01
	1.16E-04				7.36E+01		2.20E+02
	4.35E-05		2.84E-03		3.48E+00		5.87E+02
	1.20E-03				6.71E+01		2.14E+01
	2.64E-04				9.56E+00		9.66E+01
	3.96E-07				3.48E+02		6.46E+04
	4.73E-03				2.73E+00		5.40E+00
4.25E-08		7.78E-08		2.23E-07		2.35E+01	
5.66E-08		9.22E-08		1.61E-09		1.77E+01	
5.66E-08		9.22E-08		5.63E-10		1.77E+01	
		3.21E-08		7.92E-09		1.34E+01	
2.39E-08		3.16E-08		2.03E-09		4.19E+01	
2.30E-08		2.80E-08		4.18E-06		4.35E+01	
2.27E-08		2.80E-08		4.38E-06		4.41E+01	
2.18E-08		2.58E-08		4.03E-10		4.59E+01	
2.18E-08		2.59E-08		9.20E-07		4.59E+01	

						8.93E+00	4.59E+00	
						5.58E-01		
			7.81E+02					
			5.47E-01					
	3.30E+01		**1.62E+01**			1.49E-01		4.91E-02
						7.44E-03		
						1.49E-01		1.96E-02
						8.93E-01		
						8.93E-01		
						7.44E-03		
						2.23E-02	2.00E-02	
			7.52E+00			7.44E-02		
			5.51E+01			4.46E-01		
						7.44E-03		
						2.23E-02	1.67E-01	
	9.01E+00		**2.50E+00**					
						4.46E-01	6.48E-02	
						1.59E-02	1.23E-01	
			1.62E+01			1.12E+00		
			8.70E+00			1.49E+01		
						4.46E-02		
			3.46E+02					
						6.38E-01		
						4.46E-03	3.69E-04	
			1.81E+00			1.49E+00	2.86E+00	
						2.23E-03		
						1.49E-02		
						2.79E-03		
						4.46E-02		
							7.36E-04	
						7.44E-02		
				(pCi/g)				
1.29E+01		4.49E+00		**2.91E+00**				
1.08E+01		6.20E+02		**6.65E+00**				
1.08E+01		1.78E+03		**6.70E+00**				
3.11E+01		1.26E+02		**8.71E+00**		1.49E+00		
3.17E+01		4.92E+02		**1.74E+01**		1.49E+00		
3.58E+01		2.39E-01		**2.36E-01**		1.49E+00		
3.58E+01		2.28E-01		**2.26E-01**		1.49E+00		
3.88E+01		2.48E+03		**2.08E+01**		1.49E+00		
3.86E+01		1.09E+00		**1.03E+00**		1.49E+00		

1.02E+03	1.99E+03		**6.75E+02**					
1.64E+04			**1.64E+04**					
					2.19E-05			
					3.13E-02			
6.13E+04		1.86E+05	**4.61E+04**		5.36E-04			
1.23E+06			**1.23E+06**					
6.13E+04		4.65E+05	**5.42E+04**					
1.02E+04			**1.02E+04**					
1.02E+04			**1.02E+04**					
1.23E+06			**1.23E+06**					
4.09E+05	4.57E+05		**2.16E+05**					
1.23E+05			**1.23E+05**		8.93E-04			1.10E-03
2.04E+04			**2.04E+04**		2.32E-04			6.19E-05
1.23E+06			**1.23E+06**					
4.09E+05	5.46E+04		**4.82E+04**					
					4.91E-03			2.32E-05
2.04E+04	1.41E+05		**1.78E+04**					
5.72E+05	7.41E+04		**6.56E+04**					
8.18E+03			**8.18E+03**		2.54E-04			6.37E-04
6.13E+02			**6.13E+02**		1.79E-03			1.41E-04
2.04E+05			**2.04E+05**					
					4.91E-05			2.11E-07
1.43E+04			**1.43E+04**					
2.04E+06	2.48E+07		**1.89E+06**					
6.13E+03	3.19E+03		**2.10E+03**		6.25E-03			2.52E-03
4.09E+06			**4.09E+06**					
6.13E+05			**6.13E+05**					
3.27E+06			**3.27E+06**					
2.04E+05			**2.04E+05**					
	1.24E+07		**1.24E+07**					
1.23E+05			**1.23E+05**					
						6.78E-08	2.84E-08	
						8.66E-08	3.78E-08	
						8.66E-08	3.78E-08	
6.13E+03			**6.13E+03**			5.00E-08		
6.13E+03			**6.13E+03**			4.94E-08	1.60E-08	
6.13E+03			**6.13E+03**			4.91E-08	1.54E-08	
6.13E+03			**6.13E+03**			5.09E-08	1.52E-08	
6.13E+03			**6.13E+03**			4.47E-08	1.46E-08	
6.13E+03			**6.13E+03**			6.56E-08	1.46E-08	

			1.17E+03				
			8.18E-01				
	1.77E-04		4.77E+01				1.45E+02
			2.86E+01		2.33E+01		
			1.10E+02		4.13E+02		
	6.48E-04		5.20E+00		1.10E+03		3.94E+01
			1.00E+02		4.01E+01		
			1.43E+01		1.82E+02		
			5.20E+02		1.21E+05		
			4.09E+00		1.01E+01		
4.14E-08		1.70E-07		3.52E+01		2.41E+01	
4.91E-08		1.23E-09		2.64E+01		2.04E+01	
4.91E-08		4.30E-10		2.64E+01		2.04E+01	
1.71E-08		6.05E-09		2.00E+01		5.85E+01	
1.68E-08		1.55E-09		6.26E+01		5.95E+01	
1.49E-08		3.19E-06		6.50E+01		6.72E+01	
1.49E-08		3.35E-06		6.60E+01		6.72E+01	
1.37E-08		3.08E-10		6.87E+01		7.28E+01	
1.38E-08		7.03E-07		6.87E+01		7.26E+01	

					1.14E+01	5.34E+00		9.61E+02
					7.13E-01			1.54E+04
	1.17E+03							
	8.18E-01							
	3.59E+01				1.90E-01		3.01E-01	5.76E+04
					9.50E-03			1.15E+06
					1.90E-01		1.20E-01	5.76E+04
					1.14E+00			9.61E+03
					1.14E+00			9.61E+03
					9.50E-03			1.15E+06
					2.85E-02	2.32E-02		3.84E+05
	1.28E+01				9.50E-02			1.15E+05
	8.69E+01				5.70E-01			1.92E+04
					9.50E-03			1.15E+06
					2.85E-02	1.94E-01		3.84E+05
	4.58E+00							
					5.70E-01	7.54E-02		1.92E+04
					2.04E-02	1.43E-01		5.38E+05
	2.87E+01				1.43E+00			7.68E+03
	1.33E+01				1.90E+01			5.76E+02
					5.70E-02			1.92E+05
	5.18E+02							
					8.14E-01			1.34E+04
					5.70E-03	4.29E-04		1.92E+06
	2.91E+00				1.90E+00	3.33E+00		5.76E+03
					2.85E-03			3.84E+06
					1.90E-02			5.76E+05
					3.56E-03			3.07E+06
					5.70E-02			1.92E+05
						8.57E-04		
					9.50E-02			1.15E+05
		(pCi/g)						
5.88E+00		**4.17E+00**						
8.11E+02		**1.13E+01**						
2.32E+03		**1.15E+01**						
1.65E+02		**1.37E+01**			1.90E+00			5.76E+03
6.44E+02		**2.91E+01**			1.90E+00			5.76E+03
3.13E-01		**3.10E-01**			1.90E+00			5.76E+03
2.99E-01		**2.96E-01**			1.90E+00			5.76E+03
3.25E+03		**3.50E+01**			1.90E+00			5.76E+03
1.42E+00		**1.37E+00**			1.90E+00			5.76E+03

2.05E+03		**6.54E+02**					
		1.54E+04					
				2.79E-05			
				3.99E-02			
	3.64E+04	**2.23E+04**		6.84E-04			
		1.15E+06					
	9.10E+04	**3.53E+04**					
		9.61E+03					
		9.61E+03					
		1.15E+06					
4.71E+05		**2.12E+05**					
		1.15E+05		1.14E-03		1.28E-03	
		1.92E+04		2.96E-04		7.20E-05	
		1.15E+06					
5.63E+04		**4.91E+04**					
				6.27E-03		2.70E-05	
1.45E+05		**1.70E+04**					
7.65E+04		**6.69E+04**					
		7.68E+03		3.25E-04		7.41E-04	
		5.76E+02		2.28E-03		1.64E-04	
		1.92E+05					
				6.27E-05		2.45E-07	
		1.34E+04					
2.55E+07		**1.79E+06**					
3.29E+03		**2.09E+03**		7.98E-03		2.93E-03	
		3.84E+06					
		5.76E+05					
		3.07E+06					
		1.92E+05					
1.28E+07		**1.28E+07**					
		1.15E+05					
					3.91E-08		3.16E-08
					4.99E-08		3.75E-08
					4.99E-08		3.75E-08
		5.76E+03			2.88E-08		1.31E-08
		5.76E+03			2.84E-08		1.28E-08
		5.76E+03			2.83E-08		1.14E-08
		5.76E+03			2.93E-08		1.14E-08
		5.76E+03			2.57E-08		1.05E-08
		5.76E+03			3.78E-08		1.05E-08

		9.15E+02			**9.15E+02**
		6.40E-01			**6.40E-01**
1.08E-03		3.74E+01		2.36E+01	**1.45E+01**
		2.24E+01	2.00E+01		**1.06E+01**
		8.62E+01	3.55E+02		**6.94E+01**
3.97E-03		4.07E+00	9.48E+02	6.43E+00	**2.49E+00**
		7.86E+01	3.45E+01		**2.40E+01**
		1.12E+01	1.56E+02		**1.05E+01**
		4.07E+02	1.04E+05		**4.06E+02**
		3.20E+00	8.72E+00		**2.34E+00**
					(pCi/g)
	2.04E-07	2.56E+01	3.16E+01	4.90E+00	**3.64E+00**
	1.48E-09	2.01E+01	2.67E+01	6.76E+02	**1.13E+01**
	5.16E-10	2.01E+01	2.67E+01	1.94E+03	**1.14E+01**
	7.26E-09	3.47E+01	7.66E+01	1.38E+02	**2.04E+01**
	1.86E-09	3.52E+01	7.79E+01	5.36E+02	**2.32E+01**
	3.83E-06	3.54E+01	8.80E+01	2.61E-01	**2.58E-01**
	4.02E-06	3.41E+01	8.80E+01	2.49E-01	**2.46E-01**
	3.69E-10	3.89E+01	9.53E+01	2.71E+03	**2.73E+01**
	8.43E-07	2.65E+01	9.50E+01	1.19E+00	**1.12E+00**

Target Analyte List Chemical	VOC
Acenaphthene	#
Acetone	#
Aldrin	
Aluminum	
Anthracene	#
Antimony	
Aroclor 1016	
Aroclor 1221	
Aroclor 1232	
Aroclor 1242	
Aroclor 1248	
Aroclor 1254	
Aroclor 1260	
Arsenic	
Barium	
Benzene	#
alpha-BHC	
beta-BHC	
delta-BHC	
gamma-BHC (Lindane)	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Benzoic Acid (at pH 7)	
Benzyl Alcohol	
Beryllium	
bis(2-chloroethyl)ether	#
bis(2-chloroisopropyl)ether	#
bis(2-ethylhexyl)phthalate	
Bromodichloromethane	#
Bromoform	#
Bromomethane (methyl bromide)	#
2-Butanone (methyl ethyl ketone)	#
Butylbenzylphthalate	
Cadmium (water)	
Cadmium (food)	
Carbon disulfide	#
Carbon tetrachloride	#
alpha-Chlordane	
beta-Chlordane	
gamma-Chlordane	
4-Chloroaniline	
Chlorobenzene	#
Chloroethane (ethyl chloride)	#
Chloroform	#
Chloromethane (methyl chloride)	#
2-Chloronaphthalene	#
2-Chlorophenol	#
Chromium III	
Chromium VI	
Chrysene	
Cobalt	
Copper	
Cyanide	
4,4-DDD	
4,4-DDE	
4,4-DDT	
Dibenz(a,h)anthracene	

CAS Number	Molecular Weight
83-32-9	1.54E+02
67-64-1	5.81E+01
309-00-2	3.65E+02
7429-90-5	
120-12-7	1.78E+02
7440-36-0	
12674-11-2	2.58E+02
11104-28-2	
11141-16-5	
53469-21-9	
12672-29-6	
11097-69-1	3.27E+02
11096-82-5	3.70E+02
7440-38-2	7.50E+01
7440-39-3	1.37E+02
71-43-2	7.80E+01
319-84-6	2.91E+02
319-85-7	2.91E+02
319-86-8	
58-89-9	2.91E+02
56-55-3	2.28E+02
50-32-8	2.52E+02
205-99-2	2.52E+02
207-08-9	2.52E+02
65-85-0	1.22E+02
100-51-6	
7440-41-7	6.54E+01
111-44-4	
39638-32-9	
117-81-7	391
75-27-4	1.63E+02
75-25-2	2.53E+02
74-83-9	9.49E+01
78-93-3	7.21E+01
85-68-7	3.12E+02
7440-43-9	1.12E+02
7440-43-9	1.12E+02
75-15-0	7.60E+01
56-23-5	1.54E+02
5103-71-9	4.10E+02
5103-74-2	4.10E+02
12789-03-6	4.10E+02
106-47-8	
108-90-7	1.13E+02
75-00-3	6.45E+01
67-66-3	1.19E+02
74-87-3	5.05E+01
91-58-7	
95-57-8	1.29E+02
16065-83-1	5.20E+01
18540-29-9	5.20E+01
218-01-9	2.28E+02
7440-48-4	6.54E+01
7440-50-8	6.35E+01
57-12-5	
72-54-8	3.20E+02
72-55-9	3.18E+02
50-29-3	3.55E+02
53-70-3	2.78E+02

Source	DOE's Henry's Law Constant (atm-m³/mol)		Updated Henry's Law Constant (atm-m³/mol)	Source	Updated Henry's Law Constant (unitless)	Source	DOE's Koc (ml/g)		Updated Koc (ml/g)	Source	DOE's Water Solubility (mg/L)		Updated Water Solubility (mg/L)	Source	DOE's Diffusivity	
SPHEM	9.20E-05	m	1.55E-04	(a)	6.36E-03	(a)	#######	m	7.08E+03	(a)	3.42E+00	m	#######	(a)		
MERCK	2.06E-05	m	3.88E-05	(a)	1.59E-03	calc.	#######	m	#######	(a)	1.00E+06	m	#######	(a)	1.09E-01	n
MERCK	1.60E-05	m	1.70E-04	(a)	6.97E-03	calc.	#######	m	#######	(b)			1.80E-01	(a)		
	-				0.00E+00								NA			
SFPHEM	1.02E-03	m	6.50E-05	(a)	2.67E-03	calc.	#######	m	#######	(a)	4.50E-02	m	4.34E-02	(a)		
	-		-		-								NA			
Combustor	1.07E-03	m	4.23E-04	(b)	1.73E-02	calc.	#######	m	#######	(b)			5.71E-01	(b)	5.57E-02	
	1.07E-03	m			0.00E+00		#######	m							5.57E-02	
	1.07E-03	m			0.00E+00		#######	m							5.57E-02	
	1.07E-03	m			0.00E+00		#######	m							5.57E-02	
	1.07E-03	m			0.00E+00		#######	m							5.57E-02	
Combustor	1.07E-03	m	3.79E-03	(b)	1.55E-01	calc.	#######	m	#######	(b)			1.00E-02	(b)	5.57E-02	
(d)	1.07E-03	m	3.36E-04	(d)	1.38E-02	calc.	#######	m	#######	(d)			8.00E-02	(d)	5.57E-02	
MERCK	-		-		-				NA				NA			
Combustor	-		-		-				NA				NA			
MERCK	5.59E-03	m	5.55E-03	(a)	2.28E-01	calc.	#######	m	#######	(a)	1.75E+03	m	#######	(a)	9.23E-02	n
SFPHEM	5.87E-06	m	6.78E-06	(b)	2.78E-04	calc.	#######	m	#######	(a)			#######	(a)		
SFPHEM	4.47E-07	m	7.43E-07	(a)	3.05E-05	calc.	#######	m	#######	(a)			2.40E-01	(a)		
	2.07E-07	m			0.00E+00		#######	m	#######	(c)			#######	(c)		
MERCK	7.85E-06	m	7.85E-06	(c)	3.22E-04	calc.	#######	m	#######	(a)			#######	(a)		
SFPHEM	1.16E-06	m	3.35E-06	(a)	1.37E-04	calc.	#######	m	#######	(a)			9.40E-03	(a)		
SFPHEM	1.55E-06	m	1.13E-06	(a)	4.63E-05	calc.	#######	m	#######	(a)			1.62E-03	(a)		
SFPHEM	1.19E-05	m	1.11E-04	(a)	4.55E-03	calc.	#######	m	#######	(a)			1.50E-03	(a)		
SFPHEM	3.94E-05	m	8.29E-07	(a)	3.40E-05	calc.	#######	m	#######	(a)			8.00E-04	(a)		
Combustor			1.54E-06	(a)	6.31E-05	calc.			#######	(b)			#######	(a)		
					0.00E+00											
Combustor	-		-		-				NA				NA			
	1.31E-05	m			0.00E+00		#######	m			1.02E+04	m				
	1.13E-04	m			0.00E+00		#######	m			1.70E+03	m				
SFPHEM	1.00E-04		1.02E-07	(a)	4.18E-06	calc.	#######		#######	(c)			3.40E-01	(a)		
calc.	1.60E-03		1.60E-03	(a)	6.56E-02	calc.	#######		#######	(a)			#######	(a)		
Combustor	6.60E-04		5.35E-04	(a)	2.19E-02	calc.	#######		#######	(a)			#######	(a)	1.09E-01	n
MERCK	6.24E-03		6.24E-03	(a)	2.56E-01	calc.	#######		#######	(a)			#######	(a)		
MERCK			3.61E-05	(b)	1.48E-03	calc.			#######	(b)			#######	(b)	9.49E-02	n
Combustor			1.26E-06	(a)	5.17E-05	calc.			#######	(a)						
MERCK	-		-		-				NA				NA			
MERCK	-		-		-				NA				NA			
MERCK	1.23E-02	m	3.03E-02	(a)	1.24E+00	calc.	#######	m	#######	(a)	2.94E+03	m	#######	(a)		
MERCK	2.41E-02	m	3.04E-02	(a)	1.25E+00	calc.	#######	m	#######	(a)	7.57E+02	m	7.93 E+2	(a)	8.45E-02	n
SFPHEM	9.63E-06	m	4.86E-05	(a)	1.99E-03	calc.	#######	m	#######	(a)			5.60E-02	(a)		
SFPHEM	9.63E-06	m	4.86E-05	(a)	1.99E-03	calc.	#######	m	#######	(a)			5.60E-02	(a)		
SFPHEM	9.63E-06	m	4.86E-05	(a)	1.99E-03	calc.	#######	m	#######	(a)			5.60E-02	(a)		
					0.00E+00											
MERCK	3.72E-03	m	3.70E-03	(a)	1.52E-01	calc.	#######	m	#######	(a)	4.66E+02	m	#######	(a)	7.63E-02	n
MERCK	8.48E-03		1.80E+00	(b)	7.38E+01	calc.	#######		#######	(b)			#######	(b)	1.10E-01	n
MERCK	2.87E-03	m	3.67E-03	(a)	1.50E-01	calc.	#######	m	#######	(a)	8.20E+03	m	#######	(a)	9.40E-02	n
MERCK	8.82E-02		4.52E-02	(b)	1.85E+00	calc.			#######	(b)			6.34 E+3	(b)	1.18E-01	n
			1.43E-04	(b)	5.86E-03	calc.			#######	(b)			#######	(b)		
MERCK	1.30E-05		3.91E-04	(a)	1.60E-02	calc.	#######		#######	(a) at pH6.8			#######	(a)		
MERCK	-		-		-				NA				NA			
MERCK	-		-		-				NA				NA			
SFPHEM	1.05E-06	m	9.46E-05	(a)	3.88E-03	calc.	#######	m	#######	(a)			1.60E-03	(a)		
Combustor	-		-		-				NA				NA			
MERCK	-		-		-				NA				NA			
	-				0.00E+00								NA			
SFPHEM	7.96E-06	m	4.00E-06	(a)	1.64E-04	calc.	#######	m	#######	(a)			9.00E-02	(a)		
SFPHEM	6.80E-05	m	2.10E-05	(a)	8.61E-04	calc.	#######	m	#######	(a)			1.20E-01	(a)		
SFPHEM	5.13E-04	m	8.10E-06	(a)	3.32E-04	calc.	#######	m	#######	(a)			2.50E-02	(a)		
SFPHEM	7.33E-08	m	1.47E-08	(a)	6.03E-07	calc.	#######	m	#######	(a)			2.49E-03	(a)		

Diffusivity in air (cm2/sec)	Source	Diffusivity in water (cm2/sec)	Source	Dei	Pa	Kas	Alpha	Da	VF (m3/kg)	Site-specific Da	Site-specific VF (m3/kg)	DOE's Soil-to-Air Volatilization Factor (VF)	DOE's Csat (mg/kg)
4.21E-02	(a)	7.69E-06	(a)	0.00E+00	2.84E-01	4.10E-05	########	3.37E-07	#######	2.87E-08	7.66E+05	#DIV/0!	3.15E+01
1.24E-01	(a)	1.14E-05	(a)	8.77E-03	2.84E-01	1.92E-02	2.51E-05	1.02E-04	#######	7.48E-06	4.75E+04	2.61E+04	1.44E+04
1.32E-02	(a)	4.86E-06	(a)	0.00E+00	2.84E-01	3.42E-07	########	1.69E-08	#######	1.77E-09	3.08E+06	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
3.24E-02	(a)	7.74E-06	(a)	0.00E+00	2.84E-01	1.49E-04	########	2.64E-08	#######	3.54E-09	2.18E+06	#DIV/0!	1.26E+00
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
4.69E-02	(b)	5.43E-06	(b)	4.47E-03	2.84E-01	4.14E-06	2.77E-09	3.13E-07	#######	2.10E-08	8.96E+05	2.49E+06	0.00E+00
				4.47E-03	2.84E-01	4.14E-06	2.77E-09					2.49E+06	0.00E+00
				4.47E-03	2.84E-01	4.14E-06	2.77E-09					2.49E+06	0.00E+00
				4.47E-03	2.84E-01	4.14E-06	2.77E-09					2.49E+06	0.00E+00
				4.47E-03	2.84E-01	4.14E-06	2.77E-09					2.49E+06	0.00E+00
4.00E-02	(b)	4.64E-06	(b)	4.47E-03	2.84E-01	4.14E-06	2.77E-09	5.55E-08	#######	3.46E-09	2.21E+06	2.49E+06	0.00E+00
		5.30E-05	(d)	4.47E-03	2.84E-01	4.14E-06	2.77E-09					2.49E+06	0.00E+00
1.07E-01	(b)	1.24E-05	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
7.14E-02	(b)	8.26E-06	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
8.80E-02	(a)	9.80E-06	(a)	7.41E-03	2.84E-01	1.38E-01	1.50E-04	2.16E-03	#######	1.28E-04	1.15E+04	1.05E+04	3.16E+02
1.42E-02	(a)	7.34E-06	(a)	0.00E+00	2.84E-01	3.17E-06	########	3.45E-08	#######	4.49E-08	6.13E+05	#DIV/0!	0.00E+00
1.42E-02	(a)	7.34E-06	(a)	0.00E+00	2.84E-01	2.41E-07	########	9.14E-09	#######	4.24E-08	6.31E+05	#DIV/0!	0.00E+00
5.58E-02	(s)			0.00E+00	2.84E-01	6.43E-08	########					#DIV/0!	0.00E+00
1.42E-02	(a)	7.34E-06	(a)	0.00E+00	2.84E-01	1.49E-05	########	4.47E-08	#######	5.18E-08	5.70E+05	#DIV/0!	0.00E+00
5.10E-02	(a)	9.00E-06	(a)	0.00E+00	2.84E-01	1.72E-09	########	1.81E-10	#######	1.77E-10	9.77E+06	#DIV/0!	0.00E+00
4.30E-02	(a)	9.00E-06	(a)	0.00E+00	2.84E-01	5.78E-10	########	2.68E-11	#######	6.62E-11	1.60E+07	#DIV/0!	0.00E+00
2.26E-02	(a)	5.56E-06	(a)	0.00E+00	2.84E-01	4.44E-08	########	7.50E-10	#######	7.94E-11	1.46E+07	#DIV/0!	0.00E+00
2.26E-02	(a)	5.56E-06	(a)	0.00E+00	2.84E-01	1.47E-07	########	1.04E-11	#######	3.37E-11	2.24E+07	#DIV/0!	0.00E+00
5.36E-02	(a)	7.97E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	2.25E-06	#######	2.36E-06	8.45E+04	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
1.17E-01	(b)	1.36E-05	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
				0.00E+00	2.84E-01	1.93E-03	########					#DIV/0!	3.86E+02
				0.00E+00	2.84E-01	3.80E-03	########					#DIV/0!	2.25E+02
3.51E-02	(a)	3.66E-06	(a)	0.00E+00	2.84E-01	2.05E-05	########	3.45E-13	#######	1.80E-12	9.69E+07	#DIV/0!	0.00E+00
2.98E-02	(a)	1.06E-05	(a)	0.00E+00	2.84E-01	6.19E-02	########	2.37E-04	#######	1.42E-05	3.44E+04	#DIV/0!	0.00E+00
1.49E-02	(a)	1.03E-05	(a)	8.73E-03	2.84E-01	1.38E-02	1.80E-05	2.80E-05	#######	2.27E-06	8.61E+04	3.09E+04	0.00E+00
7.28E-02	(a)	1.21E-05	(a)	0.00E+00	2.84E-01	1.02E-01	########	4.71E-03	#######	2.68E-04	7.94E+03	#DIV/0!	0.00E+00
1.35E-01	(b)	1.03E-05	(b)	7.61E-03	2.84E-01	#DIV/0!	#DIV/0!	9.41E-05	#######	6.76E-06	4.99E+04	#DIV/0!	0.00E+00
1.74E-02	(a)	4.83E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	2.29E-10	#######	6.29E-10	5.18E+06	#DIV/0!	0.00E+00
8.16E-02	(b)	9.45E-06	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
8.16E-02	(b)	9.45E-06	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
1.04E-01	(a)	1.00E-05	(a)	0.00E+00	2.84E-01	4.67E-01	########	1.13E-02	#######	8.35E-04	4.49E+03	#DIV/0!	3.75E+02
7.80E-02	(a)	8.80E-06	(a)	6.78E-03	2.84E-01	4.49E-01	4.27E-04	3.77E-03	#######	2.51E-04	8.20E+03	5.95E+03	1.88E+02
1.18E-02	(a)	4.37E-06	(a)	0.00E+00	2.84E-01	1.41E-07	########	1.79E-09	#######	3.77E-10	6.69E+06	#DIV/0!	0.00E+00
1.18E-02	(a)	4.37E-06	(a)	0.00E+00	2.84E-01	1.41E-07	########	1.79E-09	#######	3.77E-10	6.69E+06	#DIV/0!	0.00E+00
1.18E-02	(a)	4.37E-06	(a)	0.00E+00	2.84E-01	1.41E-07	########	1.79E-09	#######	3.77E-10	6.69E+06	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
7.30E-02	(a)	8.70E-06	(a)	6.12E-03	2.84E-01	2.31E-02	2.11E-05	4.11E-04	#######	2.50E-05	2.60E+04	2.85E+04	3.14E+02
1.27E-01	(b)	1.07E-05		8.85E-03	2.84E-01	5.27E-01	6.47E-04	3.08E-02	#######	4.13E-03	2.02E+03	4.78E+03	0.00E+00
1.04E-01	(a)	1.00E-05	(a)	7.55E-03	2.84E-01	1.90E-01	2.08E-04	2.28E-03	#######	1.30E-04	1.14E+04	8.84E+03	6.09E+02
2.13E-01	(b)	1.39E-05	(b)	9.49E-03	2.84E-01	#DIV/0!	#DIV/0!	4.34E-02	#######	4.13E-03	2.02E+03	#DIV/0!	0.00E+00
3.64E-02	(b)	8.24E-06	(b)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	2.67E-07	#######	2.49E-08	8.23E+05	#DIV/0!	0.00E+00
5.01E-02	(a)	9.46E-06	(a)	0.00E+00	2.84E-01	1.78E-03	########	1.76E-05	#######	1.23E-06	1.17E+05	#DIV/0!	0.00E+00
1.36E-01	(b)	1.58E-05	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
1.36E-01	(b)	1.58E-05	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
2.48E-02	(a)	6.21E-06	(a)	0.00E+00	2.84E-01	1.08E-08	########	2.17E-09	#######	2.48E-10	8.24E+06	#DIV/0!	0.00E+00
1.17E-01	(b)	1.36E-05	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
NA		NA		0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
1.69E-02	(a)	4.76E-06	(a)	0.00E+00	2.84E-01	2.12E-08	########	2.98E-11	#######	3.67E-11	2.14E+07	#DIV/0!	0.00E+00
1.44E-02	(a)	5.87E-06	(a)	0.00E+00	2.84E-01	3.17E-08	########	2.61E-11	#######	1.12E-11	3.88E+07	#DIV/0!	0.00E+00
1.37E-02	(a)	4.95E-06	(a)	0.00E+00	2.84E-01	4.33E-06	########	1.74E-11	#######	1.49E-11	3.37E+07	#DIV/0!	0.00E+00
2.02E-02		5.18E-06	(a)	0.00E+00	2.84E-01	4.55E-11	########	1.48E-12	#######	1.01E-11	4.09E+07	#DIV/0!	0.00E+00

DOE's Indoor Water Use Volatilization Factor (K) (mg/m³ air per mg/L water)	DOE's PEF (m³/kg)	Construction Transport Factor TF=1/VF + 1/PEF (kg/m³)	Chemical-specific $Br_{root\ veg}$ (ug/g DW plant ug/gsoil)	Source	Chemical-specific $Br_{above\ ground\ veg}$ (ug/g DW plant ug/gsoil)	Source	Chemical-specific Br_{grain} (ug/g DW plant ug/g soil)	
0.5	-	-	5.48E+00	(b)	1.98E-01	(b)	1.98E-01	
0.5	-	3.83E-05	6.80E+02	(b)	5.20E+01	(b)	5.20E+01	
-	#REF!	#REF!	2.73E+01	(b)	1.04E-02	(b)	1.04E-02	
-	#REF!	#REF!	6.50E-04	Baes, 1984	6.50E-04	Baes, 1984	6.50E-04	Baes, 1984
0.5	-	-	2.76E+00	(b)	1.01E-01	(b)	1.01E-01	
-	#REF!	#REF!	3.00E-02	(b),Baes,1984	3.00E-02	(b),Baes,1984	3.00E-02	Baes, 1984
-	#REF!	#REF!	1.45E+01	(b)	2.91E-02	(b)	2.91E-02	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	
-	#REF!	#REF!	NA	(b)	NA		NA	
-	#REF!	#REF!	8.00E-03	(b)	3.60E-02	(b)	4.00E-03	(b)
-	#REF!	#REF!	1.50E-02	(b)	1.50E-02	Baes, 1984	1.50E-02	Baes, 1984
0.5	-	9.53E-05	2.67E+01	(b)	2.25E+00	(b)	2.25E+00	
-	#REF!	#REF!	1.15E+01	(b)	2.47E-01	(b)	2.47E-01	
-	#REF!	#REF!	1.00E+01	(b)	2.36E-01	(b)	2.36E-01	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	2.11E+00	(b)	2.02E-02	(b)	2.02E-02	
-	#REF!	#REF!	1.26E+00	(b)	1.11E-02	(b)	1.11E-02	
-	#REF!	#REF!	1.66E+00	(b)	1.01E-02	(b)	1.01E-02	
-	#REF!	#REF!	1.66E+00	(b)	1.01E-02	(b)	1.01E-02	
-	#REF!	#REF!	2.33E+03	(b)	3.17E+00	(b)	1.69E+01	
-	#REF!	#REF!	7.77E+01	(b)	8.95E+00	(b)	8.95E+00	
-	#REF!	#REF!			1.50E-03	(b),Baes,1984	1.50E-03	(b),Baes, 1984
0.5	-	-	1.14E+01	(b)	6.85E+00	(b)	6.85E+00	
0.5	-	-	1.98E+01	(b)	1.25E+00	(b)	1.25E+00	
-	#REF!	#REF!	2.13E+00	(b)	3.80E-02	(b)	3.80E-02	
0.5	-	-	2.74E+01	(b)	2.61E+00	(b)	2.61E+00	
0.5	-	3.24E-05	1.69E+01	(b)	1.70E+00	(b)	1.70E+00	
0.5	-	-	8.87E+01	(b)	8.79E+00	(b)	8.79E+00	(b)
0.5	-	-	2.86E+02	(b)	2.67E+01	(b)	2.67E+01	(b)
-	#REF!	#REF!	4.27E+00	(b)	1.09E-01	(b)	1.09E-01	
-	#REF!	#REF!	6.40E-02	(b)	3.64E-01	(b)	6.20E-02	(b)
-	#REF!	#REF!	6.40E-02	(b)	3.64E-01	(b)	6.20E-02	(b)
0.5	-	-	2.79E+01	(b)	2.70E+00	(b)	2.70E+00	
0.5	-	1.68E-04	2.30E+01	(b)	1.04E+00	(b)	1.04E+00	
-	#REF!	#REF!	1.69E+01	(b)	1.43E-02	(b)	1.43E-02	
-	#REF!	#REF!	1.69E+01	(b)	1.43E-02	(b)	1.43E-02	
-	#REF!	#REF!	1.69E+01	(b)	1.43E-02	(b)	1.43E-02	
-	#REF!	#REF!	3.12E+01	(b)	3.22E+00	(b)	3.22E+00	
0.5	-	3.51E-05	1.74E+01	(b)	9.45E-01	(b)	9.45E-01	
0.5	-	2.09E-04	1.70E+01	(b)	6.25E-01	(b)	6.25E-01	
0.5	-	1.13E-04	2.58E+01	(b)	2.89E+00	(b)	2.89E+00	
0.5	-	-	1.24E+02	(b)	1.16E+01	(b)	1.16E+01	(b)
0.5	-	-	4.50E+00	(b)	1.72E-01	(b)	1.72E-01	
0.5	-	-	4.40E+00	(b)	2.18E+00	(b)	2.18E+00	
-	#REF!	#REF!	4.50E-03	(b)	7.50E-03	(b)	4.50E-03	(b)
-	#REF!	#REF!	4.50E-03	(b)	7.50E-03	(b)	4.50E-03	(b)
-	#REF!	#REF!	2.05E+00	(b)	1.87E-02	(b)	1.87E-02	
-	#REF!	#REF!	7.00E-03	Baes, 1984	7.00E-03	Baes, 1984	7.00E-03	Baes, 1984
-	#REF!	#REF!	2.51E-01	Baes, 1984	2.50E-01	Baes, 1984	2.50E-01	Baes, 1984
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	2.62E+01	(b)	1.12E-02	(b)	1.12E-02	
-	#REF!	#REF!	1.77E+01	(b)	9.37E-03	(b)	9.37E-03	
-	#REF!	#REF!	1.62E+00	(b)	1.20E-02	(b)	1.20E-02	
-	#REF!	#REF!	1.43E-04	(b)	6.36E-03	(b)	6.36E-03	

Chemical-specific $Bv_{above\ ground\ veg}$ (ug/g DW plant ug/gsoil)	Source	chem-spec dist'n for Bv (ug/g DW plant ug/g soil)	Source
4.66E+00	(b)		
1.13E-03	(b)		
1.58E+06	(b)		
4.00E-03	Baes, 1984		
2.90E+01	(b)		
2.00E-01	Baes,1984		
7.52E+01	(b)		
NA			
NA			
NA			
NA			
6.01E+01	(b)		
NA			
4.00E-02	Baes, 1984		
1.50E-01	Baes, 1984		
1.92E-03	(b)		
9.17E+01	(b)		
1.95E+03	(b)		
NA			
NA			
1.72E+04	(b)		
2.25E+05	(b)		
3.65E-04	(b)		
5.40E+05	(b)		
NA			
2.19E+00	(b)		
1.00E-02	Baes, 1984		
6.37E-02	(b)		
4.44E-02	(b)		
1.77E+06	(b)		
2.53E-03	(b)		
2.89E-02	(b)		
6.07E-05	(b)		
3.08E-03	(b)		
1.46E+03	(b)		
5.50E-01	Baes, 1984		
5.50E-01	Baes, 1984		
5.92E-04	(b)		
1.52E-03	(b)		
4.46E+03	(b)		
4.46E+03	(b)		
4.46E+03	(b)		
4.66E+00	(b)		
1.19E-02	(b)		
6.05E-01	(b)		
1.65E-03	(b)		
1.13E-05	(b)		
8.46E+00	(b)		
6.76E-01	(b)		
7.50E-03	Baes, 1984		
7.50E-03	Baes, 1984		
5.97E+04	(b)		
2.00E-02	Baes, 1984		
4.00E-01	Baes, 1984		
NA			
3.70E+04	(b)		
2.08E+03	(b)		
3.03E+03	(b)		
4.68E+07	(b)		

Variable	Transport Factor
VF	Soil-to-air volatilization factor (m3/kg)
K	Indoor water use volatilization factor (mg/m3 air per mg/L water)

Default Value
chemical specific - see column N
5.00E-01

Dibenzofuran	
Dibromochloromethane	
Di-n-butylphthalate	
1,2-Dichlorobenzene (o-)	#
1,4-Dichlorobenzene (p-)	#
3,3-Dichlorobenzidine	
1,1-Dichloroethane	#
1,2-Dichloroethane	#
1,1-Dichloroethene	#
1,2-Dichloroethene (total)	#
2,4-Dichlorophenol (at pH 6.8)	
1,2-Dichloropropane	#
cis-1,3-Dichloropropene	#
trans-1,3-Dichloropropene	#
Dieldrin	#
Diethylphthalate	
2,4-Dimethylphenol	
Dimethylphthalate	#
4,6-Dinitro-2-methylphenol (4,6-dinitro-o-cresol)	
2,4-Dinitrophenol	#
2,4-Dinitrotoluene	
2,6-Dinitrotoluene	
Di-n-octylphthalate	
Endosulfan I	
Endosulfan II	
Endosulfan sulfate	
Endosulfan (technical)	
Endrin (technical)	
Ethylbenzene	
Fluoranthene	#
Fluorene	
Heptachlor	#
Heptachlor epoxide	
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachlorocyclopentadiene	
Hexachloroethane	
Indeno(1,2,3-cd)pyrene	#
Iron	
Isophorone	
Lead	
Lithium	
Magnesium	
Manganese	
Mercury (elemental)	
Methoxychlor	
Methylene chloride (dichloromethane)	
2-Methylnaphthalene	#
4-Methyl-2-pentanone (methyl isobutyl ketone)	#
2-Methylphenol (o-cresol)	#
4-Methylphenol (p-cresol)	
Molybdenum	
Naphthalene	
Nickel (soluble)	#
2-Nitroaniline	
Nitrobenzene	
4-Nitrophenol	
n-Nitrosodiphenylamine	#
n-Nitrosodipropylamine	#
Pentachlorophenol	
Phenol	#
Pyrene	
Selenium	
Silver	
Strontium	

132-64-9	1.68E+02
124-48-1	2.08E+02
84-74-2	2.78E+02
95-50-1	1.47E+02
106-46-7	1.47E+02
91-94-1	
75-34-3	9.90E+01
107-06-2	9.90E+01
75-35-4	9.69E+01
540-59-0	9.69E+01
120-83-2	1.63E+02
78-87-5	1.13E+02
10061-01-5	1.11E+02
10061-02-6	1.11E+02
60-57-1	3.81E+02
84-66-2	2.22E+02
105-67-9	1.22E+02
131-11-3	1.94E+02
534-52-1	
51-28-5	1.84E+02
121-14-2	1.82E+02
606-20-2	1.82E+02
117-84-0	3.91E+02
959-98-8	4.07E+02
33213-65-9	4.07E+02
1031-07-8	4.23E+02
115-29-7	
72-20-8	3.81E+02
100-41-4	1.10E+02
206-44-0	2.02E+02
86-73-7	1.16E+02
76-44-8	3.74E+02
1024-57-3	3.89E+02
118-74-1	2.85E+02
87-68-3	2.61E+02
77-47-4	2.73E+02
67-72-1	2.37E+02
193-39-5	2.76E+02
7439-89-6	
78-59-1	1.38E+02
7439-92-1	2.07E+02
7439-93-2	
7439-95-4	
7439-96-5	
7439-97-6	2.01E+02
72-43-5	3.46E+02
75-09-2	8.49E+01
91-57-6	1.42E+02
108-10-1	1.00E+02
95-48-7	1.08E+02
106-44-5	1.08E+02
7439-98-7	
91-20-3	1.28E+02
7440-02-0	5.87E+01
88-74-4	
98-95-3	1.23E+02
100-02-7	1.39E+02
86-30-6	
621-64-7	1.30E+02
87-86-5	2.66E+02
108-95-2	9.41E+01
129-00-0	2.02E+02
7782-49-2	7.90E+01
7440-22-4	1.08E+02
7440-24-6	

(d)			5.82E-05	(d)	2.39E-03	calc.		#######	(d)		#######	(d)	
(b)			1.21E-03	(b)	4.96E-02	calc.		#######	(b)		#######	(b)	
Combustor	2.82E-07	m	9.38E-10	(a)	3.85E-08	calc.	####### m	#######	(a)		#######	(a)	
MERCK	1.93E-03	m	1.90E-03	(a)	7.79E-02	calc.	####### m	#######	(a)	1.00E+02 m	#######	(a)	
MERCK	2.89E-03	m	2.43E-03	(a)	9.96E-02	calc.	####### m	#######	(a)	7.90E+01 m	#######	(a)	
	8.33E-07	m			0.00E+00		####### m	#######	(a)		#######	(a)	
MERCK	4.31E-03	m	5.62E-03	(a)	2.30E-01	calc.	####### m	#######	(a)	5.50E+03 m	#######	(a)	9.64E-02 n
MERCK	9.78E-04	m	9.79E-04	(a)	4.01E-02	calc.	####### m	#######	(a)	8.52E+03 m	#######	(a)	9.64E-02 n
MERCK	3.40E-02	m	2.61E-02	(a)	1.07E+00	calc.	####### m	#######	(a)	2.25E+03 m	#######	(a)	8.39E-02 n
MERCK					0.00E+00		#######						8.39E-02 n
SFPHEM	2.75E-06	m	3.16E-06	(a)	1.30E-04	calc.	####### m	#######	(a) at pH6.8		#######	(a)	
MERCK	2.31E-03	m	2.80E-03	(a)	1.15E-01	calc.	####### m	#######	(a)	2.70E+03 m	#######	(a)	
MERCK	2.40E-03				0.00E+00		#######	#######	(a)		#######	(a)	
MERCK	1.80E-03				0.00E+00		#######	#######	(a)		#######	(a)	
SFPHEM	1.77E-03	aa	1.51E-05	(a)	6.19E-04	calc.	####### aa	#######	(a)	2.80E+03 aa	1.95E-01	(a)	
SFPHEM	4.58E-07	m	4.50E-07	(a)	1.85E-05	calc.	####### m	#######	(a)		#######	(a)	
Combustor	1.14E-06	m	2.00E-06	(a)	8.20E-05	calc.	####### m	#######	(a)		#######	(a)	
(d)	6.00E-07		2.60E-07	(d)	1.07E-05	calc.	#######	#######	(d)		#######	(d)	
					0.00E+00								
MERCK	4.80E-11		4.43E-07	(a)	1.82E-05	calc.	#######	#######	(a) at pH6.8		#######	(a)	
Combustor	6.45E-10	m	9.26E-08	(a)	3.80E-06	calc.	####### m	#######	(a)		#######	(a)	
SFPHEM	5.09E-06	m	7.47E-07	(a)	3.06E-05	calc.	####### m	#######	(a)		#######	(a)	
Combustor	3.27E-06	m	6.68E-05	(a)	2.74E-03	calc.	####### m	#######	(a)		2.00E-02	(a)	
SFPHEM			1.12E-05	(a)	4.59E-04	calc.		#######	(a)		5.10E-01	(a)	
(d)			8.70E-06	(d)	3.57E-04	calc.		#######	(d)		2.80E-01	(d)	
(d)			4.64E-05	(d)	1.90E-03	calc.		#######	(d)		1.17E-01	(d)	
					0.00E+00								
MERCK			7.52E-06	(a)	3.08E-04	calc.		#######	(a)		2.50E-01	(a)	
MERCK			7.88E-03	(a)	3.23E-01	calc.		#######	(a)		#######	(a)	
SFPHEM	6.43E-03	m	1.61E-05	(a)	6.60E-04	calc.	####### m	#######	(a)	1.52E+02 m	2.06E-01	(a)	7.07E-02 n
SFPHEM	6.46E-06	m	6.36E-05	(a)	2.61E-03	calc.	####### m	#######	(a)		#######	(a)	
Combustor	6.42E-05	m	5.87E-06	(b)	2.41E-04	calc.	####### m	#######	(a)	1.69E+00 m	1.80E-01	(a)	
SFPHEM	8.19E-04	m	9.50E-06	(a)	3.90E-04	calc.	####### m	#######	(a)		2.00E-01	(a)	
MERCK	4.39E-04	m	1.32E-03	(a)	5.41E-02	calc.	####### m	#######	(a)		#######	(a)	
SFPHEM	6.81E-04	m	8.15E-03	(a)	3.34E-01	calc.	####### m	#######	(a)		#######	(a)	
SFPHEM	4.57E+00	m	2.70E-02	(a)	1.11E+00	calc.	####### m	#######	(a)		#######	(a)	
SFPHEM	1.37E-02	m	3.89E-03	(a)	1.59E-01	calc.	####### m	#######	(a)		#######	(a)	
Combustor	3.39E-05		1.60E-06	(a)	6.56E-05	calc.	#######	#######	(a)		2.20E-05	(a)	
	6.86E-08	m	-		-		####### m	NA			NA		
SFPHEM	-		6.64E-06	(a)	2.72E-04	calc.		#######	(a)		#######	(a)	
Combustor			-		-			NA			NA		
	-		-		-			NA			NA		
			-		-			NA			NA		
	-		-		-			NA			NA		
Combustor	-		1.14E-02	SSG	-			NA			NA		
MERCK	-		1.58E-05	(a)	6.48E-04	calc.		#######	(a)		4.50E-02	(a)	
MERCK			2.19E-03	(a)	8.98E-02	calc.		#######	(a)		#######	(a)	
MERCK	2.00E-03		3.32E-04	(a)	1.36E-02	calc.	#######	#######	(a)	2.00E+04	#######	(a)	1.08E-01
MERCK	5.18E-04		1.25E-04	(b)	5.13E-03	calc.	#######	#######	(b)		#######	(b)	
MERCK	9.40E-05		1.20E-06	(a)	4.92E-05	calc.	#######	#######	(a)		#######	(a)	
MERCK			7.99E-07	(b)	3.28E-05	calc.		#######	(b)		#######	(b)	
			-		-			NA			NA		
MERCK	-		4.83E-04	(a)	1.98E-02	calc.		#######	(a)		#######	(a)	
MERCK			-		-		#######	NA			NA		
	-				0.00E+00								
MERCK			2.40E-05	(a)	9.84E-04	calc.		#######	(a)		#######	(a)	
Combustor			7.32E-09	(b)	3.00E-07	calc.		#######	(b)		#######	(b)	
					0.00E+00		#######						
Combustor	6.40E-04		2.25E-06	(a)	9.23E-05	calc.	#######	#######	(a)		#######	(a)	
SFPHEM	6.92E-06	m	2.44E-08	(a)	1.00E-06	calc.	####### m	#######	(a) at pH6.8	9.90E+03 m	#######	(a)	
MERCK	1.59E-04	m	3.97E-07	(a)	1.63E-05	calc.	####### m	#######	(a)	1.00E+00 m	#######	(a)	
MERCK	-		1.10E-05	(a)	4.51E-04	calc.		#######	(a)		1.35E-01	(a)	
Combustor	5.04E-06	m	-		-		####### m	NA			NA		
Combustor	-		-		-			NA			NA		
	-		-		-			NA			NA		

		6.30E-06	(d)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
1.96E-02	(b)	1.05E-05	(b)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	9.78E-05	#######	6.36E-06	5.15E+04	#DIV/0!	0.00E+00
4.38E-02	(a)	7.86E-06	(a)	0.00E+00	2.84E-01	3.40E-09	########	2.47E-10	#######	1.71E-09	3.14E+06	#DIV/0!	0.00E+00
6.90E-02	(a)	7.90E-06	(a)	0.00E+00	2.84E-01	2.33E-03	########	7.54E-05	#######	4.69E-06	6.00E+04	#DIV/0!	3.41E+02
6.90E-02	(a)	7.90E-06	(a)	0.00E+00	2.84E-01	3.49E-03	########	9.63E-05	#######	5.97E-06	5.32E+04	#DIV/0!	2.70E+02
1.94E-02	(a)	6.74E-06	(a)	0.00E+00	2.84E-01	1.10E-06	########	9.69E-09	#######	6.65E-08	5.04E+05	#DIV/0!	0.00E+00
7.42E-02	(a)	1.05E-05	(a)	7.74E-03	2.84E-01	2.95E-01	3.27E-04	2.75E-03	#######	1.59E-04	1.03E+04	6.95E+03	4.03E+02
1.04E-01	(a)	9.90E-06	(a)	7.74E-03	2.84E-01	1.43E-01	1.62E-04	1.05E-03	#######	5.50E-05	1.75E+04	1.01E+04	3.30E+02
9.00E-02	(a)	1.04E-05	(a)	6.73E-03	2.84E-01	1.07E+00	9.31E-04	7.85E-03	#######	5.50E-04	5.54E+03	3.71E+03	3.74E+02
				6.73E-03	2.84E-01	0.00E+00	#DIV/0!					#DIV/0!	0.00E+00
3.46E-02	(a)	8.77E-06	(a)	0.00E+00	2.84E-01	1.48E-05	########	3.01E-07	#######	3.91E-07	2.08E+05	#DIV/0!	0.00E+00
7.82E-02	(a)	8.73E-06	(a)	0.00E+00	2.84E-01	9.29E-02	########	1.25E-03	#######	7.12E-05	1.54E+04	#DIV/0!	3.07E+02
6.26E-02	(a)	1.00E-05	(a)	0.00E+00	2.84E-01	2.14E-01	########	1.71E-07	#######	1.04E-06	1.27E+05	#DIV/0!	0.00E+00
6.26E-02	(a)	1.00E-05	(a)	0.00E+00	2.84E-01	1.42E-01	########	1.71E-07	#######	1.04E-06	1.27E+05	#DIV/0!	0.00E+00
1.25E-02	(a)	4.74E-06	(a)	0.00E+00	2.84E-01	1.34E-01	########	3.46E-09	#######	1.83E-09	3.03E+06	#DIV/0!	1.84E+02
2.56E-02	(a)	6.35E-06	(a)	0.00E+00	2.84E-01	5.52E-07	########	3.60E-08	#######	1.51E-07	3.35E+05	#DIV/0!	0.00E+00
5.84E-02	(a)	8.69E-06	(a)	0.00E+00	2.84E-01	1.65E-05	########	2.30E-07	#######	2.85E-07	2.43E+05	#DIV/0!	0.00E+00
2.96E-02		6.60E-06	(d)	0.00E+00	2.84E-01	2.89E-06	########	1.24E-07	#######	5.55E-07	1.74E+05	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
2.73E-02	(a)	9.06E-06	(a)	0.00E+00	2.84E-01	4.37E-10	########	8.44E-07	#######	2.67E-06	7.95E+04	#DIV/0!	0.00E+00
2.03E-01	(a)	7.06E-06	(a)	0.00E+00	2.84E-01	7.97E-08	########	1.28E-07	#######	4.36E-07	1.97E+05	#DIV/0!	0.00E+00
3.27E-02	(a)	7.26E-06	(a)	0.00E+00	2.84E-01	2.32E-04	########	1.94E-07	#######	5.74E-07	1.71E+05	#DIV/0!	0.00E+00
4.38E-02	(a)	7.86E-06	(a)	0.00E+00	2.84E-01	7.29E-05	########	1.30E-11	#######	1.49E-12	1.06E+08	#DIV/0!	0.00E+00
1.15E-02	(a)	4.55E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	2.41E-08	#######	1.69E-08	1.00E+06	#DIV/0!	0.00E+00
		4.50E-06	(d)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
		4.40E-06	(d)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
1.25E-02	(a)	4.74E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	3.20E-09	#######	3.01E-09	2.37E+06	#DIV/0!	0.00E+00
7.50E-02	(a)	7.80E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	5.54E-04	#######	3.41E-05	2.22E+04	#DIV/0!	0.00E+00
3.02E-02	(a)	6.35E-06	(a)	5.67E-03	2.84E-01	1.20E-02	1.02E-05	1.72E-09	#######	5.41E-10	5.58E+06	4.11E+04	3.37E+02
3.63E-02	(a)	7.88E-06	(a)	0.00E+00	2.84E-01	3.49E-07	########	6.17E-08	#######	7.97E-09	1.45E+06	#DIV/0!	0.00E+00
1.12E-02	(a)	5.69E-06	(a)	0.00E+00	2.84E-01	1.80E-05	########	2.13E-11	#######	3.09E-11	2.34E+07	#DIV/0!	2.47E+01
1.32E-02	(a)	4.23E-06	(a)	0.00E+00	2.84E-01	1.40E-04	########	6.05E-10	#######	4.09E-10	6.42E+06	#DIV/0!	0.00E+00
5.42E-02	(a)	5.91E-06	(a)	0.00E+00	2.84E-01	4.09E-03	########	4.76E-07	#######	3.01E-08	7.48E+05	#DIV/0!	0.00E+00
5.61E-02	(a)	6.16E-06	(a)	0.00E+00	2.84E-01	3.58E-04	########	3.11E-06	#######	1.93E-07	2.96E+05	#DIV/0!	0.00E+00
1.61E-02	(a)	7.21E-06	(a)	0.00E+00	2.84E-01	3.23E-01	########	7.94E-07	#######	4.92E-08	5.85E+05	#DIV/0!	0.00E+00
2.50E-03	(a)	6.80E-06	(a)	0.00E+00	2.84E-01	5.85E-03	########	1.98E-06	#######	1.49E-07	3.36E+05	#DIV/0!	0.00E+00
1.90E-02	(a)	5.66E-06	(a)	0.00E+00	2.84E-01	5.19E-04	########	4.94E-12	#######	1.22E-11	3.71E+07	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	8.79E-11	########					#DIV/0!	0.00E+00
6.23E-02	(a)	6.76E-06	(a)	0.00E+00	2.84E-01	#VALUE!	#VALUE!	2.50E-06	#######	8.23E-07	1.43E+05	#VALUE!	#VALUE!
5.43E-02	(b)	6.28E-06	(b)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
				0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
1.09E-02	(b)	3.01E-05	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
1.56E-02	(a)	4.46E-06	(a)	0.00E+00	2.84E-01	#VALUE!	#VALUE!	9.71E-10	#######	3.94E-10	6.54E+06	#VALUE!	#VALUE!
1.01E-01	(a)	1.17E-05	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	2.59E-03	#######	1.34E-04	1.12E+04	#DIV/0!	0.00E+00
6.20E-02	(a)	7.50E-06		8.69E-03	2.84E-01	8.54E-02	1.10E-04	9.47E-07	#######	6.52E-08	5.08E+05	1.24E+04	2.15E+03
8.59E-02	(b)	8.36E-06	(b)	0.00E+00	2.84E-01	1.25E-04	########	1.36E-04	#######	8.16E-06	4.54E+04	#DIV/0!	0.00E+00
7.40E-02	(a)	8.30E-06	(a)	0.00E+00	2.84E-01	1.01E-02	########	3.83E-07	#######	5.44E-07	1.76E+05	#DIV/0!	0.00E+00
6.93E-02	(b)	9.30E-06	(b)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	4.80E-07	#######	9.81E-07	1.31E+05	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
5.90E-02	(a)	7.50E-06	(a)	0.00E+00	2.84E-01	#VALUE!	#VALUE!	5.17E-06	#######	3.44E-07	2.21E+05	#VALUE!	#VALUE!
NA		NA		0.00E+00	2.84E-01	0.00E+00	#DIV/0!					#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
7.60E-02	(a)	8.60E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	8.31E-06	#######	1.17E-06	1.20E+05	#DIV/0!	0.00E+00
4.30E-02	(b)	9.61E-06	(b)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	2.28E-08	#######	1.54E-07	3.31E+05	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	0.00E+00	#DIV/0!					#DIV/0!	0.00E+00
5.45E-02	(a)	8.17E-06	(a)	0.00E+00	2.84E-01	1.09E-03	########	1.32E-06	#######	1.28E-06	1.15E+05	#DIV/0!	0.00E+00
5.60E-02	(a)	6.10E-06	(a)	0.00E+00	2.84E-01	9.46E-04	########	1.15E-08	#######	7.31E-08	4.80E+05	#DIV/0!	3.96E+02
8.20E-02	(a)	9.10E-06	(a)	0.00E+00	2.84E-01	2.33E-05	########	4.75E-07	#######	1.26E-06	1.16E+05	#DIV/0!	2.80E+01
2.72E-02	(a)	7.24E-06	(a)	0.00E+00	2.84E-01	#VALUE!	#VALUE!	1.11E-09	#######	5.73E-10	5.42E+06	#VALUE!	#VALUE!
1.03E-01	(b)	1.20E-05	(b)	0.00E+00	2.84E-01	2.72E-07	########					#DIV/0!	0.00E+00
8.38E-02	(b)	9.71E-06	(b)	0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!

-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	6.43E-01	(b)	7.24E-02	(b)	7.24E-02	
0.5	-	-	2.90E+01	(b)	3.95E-01	(b)	3.95E-01	
0.5	-	-	1.70E+01	(b)	4.13E-01	(b)	4.13E-01	
-	#REF!	#REF!	1.58E+01	(b)	3.32E-01	(b)	3.32E-01	
0.5	-	1.44E-04	2.24E+01	(b)	3.56E+00	(b)	3.56 E+0	
0.5	-	9.92E-05	4.81E+01	(b)	5.53E+00	(b)	5.53E+00	
0.5	-	2.70E-04	2.50E+01	(b)	2.30E+00	(b)	2.30E+00	
0.5	-	-	NA		NA		NA	
-	#REF!	#REF!	4.07E+01	(b)	6.82E-01	(b)	6.82E-01	
0.5	-	-	4.01E+01	(b)	1.94E+00	(b)	1.94E+00	
0.5	-	-	4.25E+01	(b)	3.78E+00	(b)	3.78E+00	
0.5	-	-	NA		NA		NA	
0.5	-	-	1.04E+01	(b)	3.49E-02	(b)	3.49E-02	
-	#REF!	#REF!	7.46E+02	(b)	1.06E-01	(b)	1.06E-01	
-	#REF!	#REF!	NA		NA		NA	
0.5	-	-	3.95E+00	(b)	4.40E+00	(b)	4.40E+00	
-	#REF!	#REF!	NA		NA		NA	
0.5	-	-	9.74E+04	(b)	5.13E+00	(b)	5.13E+00	
-	#REF!	#REF!	2.80E+01	(b)	2.72E+00	(b)	2.72E+00	
-	#REF!	#REF!	3.08E+01	(b)	3.15E+00	(b)	3.15E+00	
-	#REF!	#REF!	3.93E-01	(b)	1.57E-04	(b)	1.57E-04	
-	#REF!	#REF!	5.75E+00	(b)	3.77E-01	(b)	3.77E-01	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!	1.26E+01	(b)	5.76E-02	(b)	5.76E-02	
-	#REF!	#REF!	3.20E+01	(b)	6.07E-01	(b)	6.01E-01	
0.5	-	2.43E-05	3.90E+00	(b)	4.46E-02	(b)	4.46E-02	
-	#REF!	#REF!	4.96E+00	(b)	1.51E-01	(b)	1.51E-01	
0.5	-	-	1.78E+01	(b)	4.89E-02	(b)	4.89E-02	
-	#REF!	#REF!	1.48E+01	(b)	6.96E-02	(b)	6.96E-02	
-	#REF!	#REF!	5.02E+00	(b)	2.56E-02	(b)	2.56E-02	
-	#REF!	#REF!	1.48E+01	(b)	7.14E-02	(b)	7.14E-02	
-	#REF!	#REF!	1.47E+01	(b)	5.65E-02	(b)	5.65E-02	
-	#REF!	#REF!	1.53E+01	(b)	1.93E-01	(b)	1.93E-01	
0.5	-	-	1.19E+00	(b)	3.90E-03	(b)	3.90E-03	
-	#REF!	#REF!	1.00E-03	Baes, 1984	1.00E-03	Baes, 1984	1.00E-03	Baes, 1984
-	#REF!	#REF!	3.68E+01	(b)	4.04E+00	(b)	4.04E+00	
-	#REF!	#REF!	9.00E-03	(b)	9.00E-03	Baes,1984	9.00E-03	(b),Baes, 1984
-	#REF!	#REF!	4.00E-03	Baes, 1984	4.00E-03	Baes, 1984	4.00E-03	Baes, 1984
-	#REF!	#REF!	5.50E-01	Baes, 1984	5.50E-01	Baes, 1984	5.50E-01	Baes, 1984
-	#REF!	#REF!	5.00E-02	Baes, 1984	5.00E-02	Baes, 1984	5.00E-02	Baes, 1984
-	#REF!	#REF!			NA	(b)	NA	
-	#REF!	#REF!	8.95E-01	(b)	9.38E-02	(b)	9.38E-02	
-	#REF!	#REF!	8.46E+01	(b)	7.29E+00	(b)	7.29E+00	
0.5	-	8.08E-05	NA		NA		NA	
0.5	-	-	6.85E+01	(b)	7.95E+00	(b)	7.95E+00	
0.5	-	-	2.75E+01	(b)	2.63E+00	(b)	2.63E+00	
-	#REF!	#REF!	2.94E+01	(b)	2.93E+00	(b)	2.93E+00	
-	#REF!	#REF!	6.00E-02	Baes, 1984	6.00E-02	Baes, 1984	6.00E-02	Baes, 1984
-	#REF!	#REF!	8.23E+00	(b)	4.35E-01	(b)	4.35E-01	
0.5	-	-	8.00E-03	(b)	6.00E-03	(b)	6.00E-03	(b)
-	#REF!	#REF!	3.18E+00	(b)	3.30E+00	(b)	3.30E+00	
-	#REF!	#REF!	1.03E+01	(b)	3.38E+00	(b)	3.38E+00	
-	#REF!	#REF!	3.01E+00	(b)	3.05E+00	(b)	3.05E+00	
0.5	-	-	1.71E+01	(b)	6.89E-01	(b)	6.89E-01	
0.5	-	-	5.29E+01	(b)	6.17E+00	(b)	6.17E+00	
-	#REF!	#REF!	3.77E+02	(b)	4.48E-02	(b)	4.48E-02	
0.5	-	-	4.32E+01	(b)	5.42E+00	(b)	5.42E+00	
-	#REF!	#REF!	2.44E+00	(b)	4.98E-02	(b)	4.98E-02	
-	#REF!	#REF!	2.20E-02	(b)	1.00E-03	Baes, 1984	2.00E-03	(b)
-	#REF!	#REF!	1.00E-01	(b)	1.00E-01	Baes, 1984	1.00E-01	Baes, 1984
-	#REF!	#REF!	2.50E-01	Baes, 1984	2.50E-01	Baes, 1984	2.50E-01	Baes, 1984

NA		
NA		
4.16E+03	(b)	
1.24E-01	(b)	
8.60E-02	(b)	
1.73E+04	(b)	
7.88E-04	(b)	
1.58E-03	(b)	
3.98E-04	(b)	
NA		
4.01E+02	(b)	
4.96E-03	(b)	
1.38E-03	(b)	
NA		
6.50E+06	(b)	
5.42E+03	(b)	
NA		
3.05E+01	(b)	
NA		
4.80E+02	(b)	
5.10E+01	(b)	
4.41E+01	(b)	
6.28E+08	(b)	
9.36E+03	(b)	
NA		
NA		
NA		
7.62E+03	(b)	
1.53E-02	(b)	
1.56E+03	(b)	
1.63E+04	(b)	
2.09E+03	(b)	
5.86E+05	(b)	
7.57E+01	(b)	
2.55E-01	(b)	
5.47E-01	(b)	
2.72E-01	(b)	
2.67E+08	(b)	
4.00E-03	Baes, 1984	
4.42E+02	(b)	
4.50E-02	Baes, 1984	ok
2.50E-02	Baes, 1984	
1.00E+00	Baes, 1984	
2.50E-01	Baes, 1984	
NA	(b)	
5.83E+02	(b)	
5.11E-04	(b)	
NA		
8.26E-03	(b)	
4.89E+00	(b)	
8.13E+00	(b)	
2.50E-01	Baes, 1984	
4.52E-01	(b)	
6.00E-02	Baes, 1984	
4.47E+00	(b)	
2.43E-01	(b)	
8.26E+02	(b)	
9.51E+01	(b)	
3.04E+01	(b)	
1.02E+03	(b)	
3.52E+00	(b)	
1.04E+06	(b)	
6.00E-03	Baes, 1984	
4.00E-01	Baes, 1984	
2.50E+00	Baes, 1984	

Styrene	
1,1,2,2-Tetrachloroethane	#
Tetrachloroethene	#
Tin	
Toluene	
Toxaphene	#
1,2,4-Trichlorobenzene	
1,1,1-Trichloroethane	#
1,1,2-Trichloroethane	
Trichloroethene	#
2,4,5-Trichlorophenol	#
2,4,6-Trichlorophenol	
Vanadium	
Vinyl acetate	
Vinyl chloride	
Xylene (total)	#
Zinc	#
Nitrate	
Nitrite	
Ammonium (as Ammonia)	
Fluoride (as fluorine)	
Am-241	
Pu-239	
Pu-240	
U-233	
U-234	
U-235	
U-235+D	
U-238	
U-238+D	

Notes:
Chemicals listed are volatile.

(a) = EPA, 1996 SSG
(b) = EPA, 1999 Interim Combustor Guidance
(c) = EPA, 1986 SPHEM
(d) = GW Chemicals Desk Reference (3rd ed)

definitions
Da = apparent diffusivity

(b)*

100-42-5	1.04E+02
79-34-5	1.68E+02
127-18-4	1.66E+02
7440-31-5	
108-88-3	9.21E+01
8001-35-2	4.14E+02
120-82-1	1.81E+02
71-55-6	1.33E+02
79-00-5	1.33E+02
79-01-6	1.31E+02
95-95-4	1.97E+02
88-06-2	1.97E+02
7440-62-2	
108-05-4	8.61E+01
75-01-4	6.25E+01
1330-20-7	1.06E+02
7440-66-6	6.54E+01
14797-55-8	
14797-65-0	
7664-41-7	
7782-41-4	
14596-10-2	
15117-48-3	
14119-33-6	
13968-55-3	
13966-29-5	
15117-96-1	
15117-96-1(+D)	
7440-61-1	
7440-61-1(+D)	

The plant uptake values for m-xylene were used as a surrogate for total xylene since the m-isomer is the dominant isomer in the typical mixture (www.chemfinder.com

MERCK			2.75E-03	(a)	1.13E-01	calc.		#######	(a)		#######	(a)		
(b)	5.20E-03		3.45E-04	(a)	1.41E-02	calc.	#######	#######	(a)		#######	(a)	7.46E-02	n
MERCK	3.81E-04	m	1.84E-02	(a)	7.54E-01	calc.	#######	m	#######	(a)	2.90E+03	m	#######	(a)	7.73E-02	
	-		-		-				NA				NA			
MERCK			6.64E-03	(a)	2.72E-01	calc.			#######	(a)			#######	(a)		
MERCK	6.37E-03	m	4.36E-01	(c)	1.79E+01	calc.	#######	m	#######	(c)	5.35E+02	m	7.40E-01	(a)	8.30E-02	n
MERCK	4.36E-01	m	6.16E-03	(bb)	2.53E-01	calc.	#######	m	#######	(a)			#######	(a)		
MERCK	2.31E-03	m	1.72E-02	(a)	7.05E-01	calc.	#######	m	#######	(a)	3.00E+01	m	#######	(a)		
MERCK	1.44E-02	m	9.13E-04	(a)	3.74E-02	calc.	#######	m	#######	(a)	4.50E-03		#######	(a)	8.45E-02	
MERCK	1.17E-03	m	1.03E-02	(a)	4.22E-01	calc.	#######	m	#######	(a)	4.50E+03	m	#######	(a)	8.45E-02	
MERCK	9.10E-03	m	4.33E-06	(a)	1.78E-04	calc.	#######	m	#######	(a) at pH6.8	1.10E+03	m	#######	(a)	8.61E-02	n
MERCK	2.18E-04	m	7.79E-06	(a)	3.19E-04	calc.	#######	m	#######	(a) at pH6.8			#######	(a)		
	3.90E-06	m	-		-		#######	m	NA				NA			
MERCK	-		5.11E-04	(a)	2.10E-02	calc.			#######	(a)			#######	(a)		
MERCK			2.70E-02	(a)	1.11E+00	calc.			#######	(a)			#######	(a)		
(c)	8.19E-02	m	7.04E-03	(c)	2.89E-01	calc.	#######	m			2.67E+03	m	#######	(c)	1.14E-01	n
Combustor	7.04E-03	m	-		-		#######	m	NA		1.98E+02	m	NA		7.60E-02	n
	-															
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			
			-		-				NA				NA			

7.10E-02	(a)	8.00E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	8.97E-05	#######	5.56E-06	5.51E+04	#DIV/0!	0.00E+00
7.10E-02	(a)	7.90E-06	(a)	5.99E-03	2.84E-01	3.95E-02	3.52E-05	8.12E-05	#######	5.15E-06	5.72E+04	2.20E+04	0.00E+00
7.20E-02	(a)	8.20E-06	(a)	6.20E-03	2.84E-01	6.62E-03	6.14E-06	2.48E-03	#######	1.58E-04	1.03E+04	5.29E+04	7.14E+02
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
8.70E-02	(a)	8.60E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	1.02E-03	#######	6.22E-05	1.65E+04	#DIV/0!	0.00E+00
1.16E-02	(a)	4.34E-06	(a)	6.66E-03	2.84E-01	4.35E-02	4.31E-05	1.20E-03	#######	9.54E-05	1.33E+04	1.99E+04	3.29E+02
3.00E-02	(a)	8.23E-06	(a)	0.00E+00	2.84E-01	9.27E-01	########	3.74E-05	#######	2.34E-06	8.49E+04	#DIV/0!	0.00E+00
7.80E-02	(a)	8.80E-06	(a)	0.00E+00	2.84E-01	5.15E-04	########	3.29E-03	#######	2.11E-04	8.93E+03	#DIV/0!	5.52E+02
7.80E-02	(a)	8.80E-06	(a)	6.78E-03	2.84E-01	1.94E-01	1.91E-04	3.83E-04	#######	2.21E-05	2.76E+04	9.22E+03	1.46E-03
7.90E-02	(a)	9.10E-06	(a)	6.78E-03	2.84E-01	4.28E-02	4.32E-05	1.52E-03	#######	9.39E-05	1.34E+04	1.98E+04	5.53E+02
2.91E-02	(a)	7.03E-06	(a)	6.91E-03	2.84E-01	1.48E-01	1.50E-04	3.32E-08	#######	3.38E-08	7.07E+05	1.05E+04	2.96E+02
3.18E-02	(a)	6.25E-06	(a)	0.00E+00	2.84E-01	5.02E-03	########	2.44E-07	#######	1.27E-07	3.64E+05	#DIV/0!	0.00E+00
				0.00E+00	2.84E-01	4.00E-06	########					#DIV/0!	0.00E+00
8.50E-02	(a)	9.20E-06	(a)	0.00E+00	2.84E-01	#VALUE!	#VALUE!	7.04E-04	#######	3.42E-05	2.22E+04	#VALUE!	#VALUE!
1.06E-01	(a)	1.23E-06	(a)	0.00E+00	2.84E-01	#DIV/0!	#DIV/0!	1.49E-02	#######	1.14E-03	3.84E+03	#DIV/0!	0.00E+00
				9.13E-03	2.84E-01	2.95E+00	2.79E-03					1.72E+03	5.01E+02
1.17E-01	(b)	1.36E-05	(b)	6.10E-03	2.84E-01	6.01E-02	5.44E-05					1.76E+04	9.81E+01
				0.00E+00	2.84E-01	#VALUE!	#VALUE!					#VALUE!	#VALUE!
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00
						#DIV/0!	#DIV/0!					#DIV/0!	0.00E+00

-	#REF!	#REF!	5.28E+00	(b)	7.85E-01	(b)	7.85E-01	
0.5	-	4.55E-05	1.94E+01	(b)	1.17E+00	(b)	1.17E+00	
0.5	-	1.89E-05	1.04E-03	(b)	1.31E+00	(b)	1.31E+00	
-	#REF!	#REF!	6.00E-03	Baes, 1984	6.00E-03	Baes, 1984	6.00E-03	Baes, 1984
-	#REF!	#REF!	2.33E+01	(b)	1.11E+00	(b)	1.11E+00	
0.5	-	5.04E-05	NA		NA		NA	
-	#REF!	#REF!	1.69E+01	(b)	1.92E-01	(b)	1.92E-01	
0.5	-	-	1.73E-02	(b)	1.54E+00	(b)	1.54E+00	
0.5	-	1.08E-04	2.12E+01	(b)	2.38E+00	(b)	2.38E+00	
0.5	-	5.04E-05	1.04E-03	(b)	1.31E+00	(b)	1.31E+00	
0.5	-	9.53E-05	2.02E+01	(b)	2.24E-01	(b)	2.24E-01	
-	#REF!	#REF!	7.69E+01	(b)	2.77E-01	(b)	2.77E-01	
-	#REF!	#REF!	3.00E-03	Baes, 1984	3.00E-03	Baes, 1984	3.00E-03	Baes, 1984
-	#REF!	#REF!	1.43E+02	(b)	1.53E+01	(b)	1.53E+01	
-	#REF!	#REF!	7.29E+01	(b)	8.42E+00	(b)	8.42E+00	
0.5	-	5.80E-04	3.78E+01	(b)	5.47E-01	(b)*	5.47E-01	(b)*
0.5	-	5.67E-05	4.40E-02	(b)				
-	#REF!	#REF!						
			NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!						
			NA		NA		NA	
-	#REF!	#REF!	NA		NA		NA	
-	#REF!	#REF!						
-	#REF!	#REF!	4.50E-03	Whicker, 1999	4.50E-03	Whicker, 1999	4.50E-03	Whicker, 1999
-	#REF!	#REF!	2.50E-04	Whicker, 1999	2.50E-04	Whicker, 1999	2.50E-04	Whicker, 1999
-	#REF!	#REF!	2.50E-04	Whicker, 1999	2.50E-04	Whicker, 1999	2.50E-04	Whicker, 1999
-	#REF!	#REF!	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002
-	#REF!	#REF!	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002
-	#REF!	#REF!	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002
-	#REF!	#REF!	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002
-	#REF!	#REF!	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002
-	#REF!	#REF!	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002	5.12E-02	Goodrum, 2002

2.21E-02	(b)					
1.45E-02	(b)					
1.66E-03	(b)					
3.00E-02	Baes, 1984					
6.33E-03	(b)					
NA						
3.78E-01	(b)					
1.14E-03	(b)					
9.53E-03	(b)					
1.66E-03	(b)					
1.31E+02	(b)					
1.23E+02	(b)					
5.50E-03	Baes, 1984					
5.65E-04	(b)					
2.95E-06	(b)					
1.55E-01	(b)*					
1.50E+00	Baes, 1984					
NA						
NA						
NA						
NA						
5.20E-02	Whicker, 1999					
2.35E-05	Whicker, 1999					
2.35E-05	Whicker, 1999					
5.12E-02	Goodrum, 2002	lognormal	0.016	0.023	Goodrum, 2002	0.051
5.12E-02	Goodrum, 2002	lognormal	0.016	0.023	Goodrum, 2002	0.051
5.12E-02	Goodrum, 2002	lognormal	0.016	0.023	Goodrum, 2002	0.051
5.12E-02	Goodrum, 2002	lognormal	0.016	0.023	Goodrum, 2002	0.051
5.12E-02	Goodrum, 2002	lognormal	0.016	0.023	Goodrum, 2002	0.051
5.12E-02	Goodrum, 2002	lognormal	0.016	0.023	Goodrum, 2002	0.051

Target Analyte List
Chemical

Carbon tetrachloride#
Chloroform#
Tetrachloroethene#
Trichloroethene#
Americium-241
Plutonium-239
Plutonium-240

Henry's Law Constant (atm-mšu3›/mol)		Koc (ml/g)		Water Solubility (mg/L)		Diffusivity	
2.41E-02	m	110	m	7.57E+02	m	0.08451	n
2.87E-03	m	31	m	8.20E+03	m	0.09404	n
2.59E-02	m	364	m	1.50E+02	m	0.07852	n
9.10E-03	m	126	m	1.10E+03	m	0.08606	n
-		-		-		-	
-		-		-		-	
-		-		-		-	

Dei	Pa	Kas	Alpha	Volatilization Factor	Csat
0.00678207	0.28396226	4.49E-01	4.27E-04	6.01E+00	1.88E+02
0.00754687	0.28396226	1.90E-01	2.08E-04	8.93E+00	6.09E+02
0.00630136	0.28396226	1.46E-01	1.35E-04	1.12E+01	1.14E+02
0.00690646	0.28396226	1.48E-01	1.50E-04	1.06E+01	2.96E+02
-	-	#VALUE!	#VALUE!	#VALUE!	
-	-	#VALUE!	#VALUE!	#VALUE!	
-	-	#VALUE!	#VALUE!	#VALUE!	

Toxicity and Chemical Notes
RFETS PPRGs

= Chemicals listed are volatile.

* = Values given are in units of risk/pCi or risk/yr per pCi/g.

** = Values given are in units of pCi/L.

*** = Values given are in units of pCi/g.

a = All toxicity values and notes are from IRIS, April 1998 unless otherwise noted. Several inhalation slope factors have been derived by multiplying the inhalation unit risk from IRIS by a conversion factor of 3500
[SFi = (Inh Unit Risk x 70kg x 1,000 ug/mg) / 20 m^3/d];
several inhalation reference doses have been derived by multiplying the inhalation reference concentration by a conversion factor of 0.2857
[RfDi = (RfCi x 20 m^3/d) / 70 kg];
and several oral slope factors have been derived by multiplying the drinking water unit risk by a conversion factor of 35,000
[SFo = (DW Unit Risk x 70 kg x 1,000 ug/mg) / 2 L/day].

b = Value from HEAST (1997).

c = Values given are for PCBs.

d = Values given are for chlordane (CAS no. 12789-03-6).

e = Values given are for 1,3-dichloropropene.

f = Values given are for endosulfan.

g = Oral slope factor is based on a 2,4-DNT/2,6-DNT mixture.

h = Value given is for nickel refinery dust.

i = Value given for arsenic is calculated from an oral unit risk of 5E-5 (L/µg).

j = Values given for chemicals were calculated from HEAST (1997).

k = Values given for PAHs were found in the EPA guidance document "Research and Development-Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons."

l = Values given for tetrachloroethene are from a U.S. EPA memo from the Office of Research and Development, Environmental Criteria and Assessment Office.

m = Values given are found in the Superfund Public Health Evaluation Manual, 1986.

n = Values given are found in the Superfund Exposure Assessment Manual, 1988.

o = Value based on the copper drinking water standard of 1.3 mg/L.

q = The upper-bound slope factor for high risk and persistence is recommended by EPA for the oral slope factor of PCB environmental mixtures.

r = Dual oral RfDs available for cadmium. The first value (5E-04) is representative of pathways involving water and the second value (1E-03) is representative of pathways involving food (soil).

s = According to IRIS (1998), the oral RfD of 0.14 represents total oral intake of manganese. It is recommended that a modifying factor of three be applied (resulting oral RfD = 0.047) if oral RfD is used for assessments involving nondietary exposures (ingesting soil or drinking water).

t = occupational exposure only

u = Values given for 70 percent bis(2-chloro-1-methyl ethyl) ether and 30 percent bis(2-chloroisopropyl) ether.

w = Value given has been withdrawn by EPA; greater uncertainty is associated with this toxicity value than values listed in IRIS and HEAST.

x = Ammonia oral RfD specifically related to organoleptic threshold.

y = ECAO (as referenced in Region III (10/97) update).

z = Values given for Endosulfan (technical).

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

Equations used for the DRAFT 2002 PPRG spreadsheets:

Residential Groundwater Exposure Scenario

Noncarcinogenic PPRG = ((THI x AT_NC(y) x 365(d/y))/(IRw(L/d) x EF_RR(d/y) x ED_A(y) x 1/RfD_o(mg/kgd) x 1/BW_A(kg)))

Carcinogenic PPRG = ((TR x AT_C(y) x 365(d/y))/(IRw(L/d) x EF_RR(d/y) x ED_A(y) x CSF_o(risk/mg/kgd) x (1/BW_A(kg)))

Radionuclide carcinogenic PPRG = (TR/(IRw(L/d) x EF_RR(d/y) x ED_A(y) x $CSF_{w\ FRG13}$(risk/pCi))

Rural Residential Surface Soil Exposure Scenario

Noncarcinogenic PPRG = ((THI x AT_NC(y) x 365(d/y)) / ((SIF_ageav_RR(mgy/kgd) x EF_RR(d/y) x 10-6 (kg/mg) x 1/RfD_o(mg/kgd)) +

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF
** Note: the plant ingestion pathway for the non-radionuclides has not yet been inserted into this cumulative PPRG equation.

Carcinogenic PPRG = ((TR x AT_C(y) x 365(d/y)) / (SIF_ageav_RR(mgy/kgd) x EF_RR(d/y) x 10-6(kg/mg) x CSF_o(risk/mg/kgd))

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF
** Note: the plant ingestion pathway for the non-radionuclides has not yet been inserted into this cumulative PPRG equation.

Radionuclide Carcinogenic PPRG = ((TR / (SIR_ageavRAD_RR(mg/d) x $CSF_{soil\ FRG13}$(risk/pCi) x 10-3 (g/mg) x EF_RR(d/y) x ED_A(y)) +

Wildlife Refuge Worker Surface Soil Exposure Scenario

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

(IF_ageav_RR(m^3y/kgd) x EF_RR(d/y) x 1/PEF*(m^3/kg) x1/RfD_i(mg/kgd) x (ETo_RR +(ETi_RR x DFi))) +
(SFSageav_RR(mgy/kg event) x EF_RR(d/y) x ABS x EV(events/d) x 1/RfD_o(mg/kgd) x 10-6(kg/mg)))
**

(IF_ageav_RR(m^3y/kgd) x EF_RR(d/y) x 1/PEF*(m^3/kg) x CSF_i(risk/mg/kgd) x (ETo_RR + (ETi_RR x DFi))) +
(SFSageav_RR(mgy/kg event) x EF_RR(d/y) x ABS x EV(events/d) x CSF_o(risk/mg/kgd) x 10-6(kg/mg)))
**

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

(IR_ageav_RR(m^3/d) x 1/PEF(m^3/kg) x $CSF_{i\ FRG13}$(risk/pCi) x 1000(g/kg) x EF_RR(d/y) x ED_A(y) x (ETo_RR + (ETi_RR x DFi))) +
($CSF_{e\ FRG13}$(risk/y/pCi/g) x EF_RR(d/y)/365(d/y) x ED_A(y) x ACF x (ETo_RR + (ETi_RR x GSF))) +
((1000(g/kg) x Bv x DWCv x Fv_lfy) + (1000(g/kg) x Br x DWCr x Fr_non-lfy) + (MLp(g/m^3) x LT(m^3/kg)))
(CRfood_ageav(kg/y) x $CSF_{food\ FRG13}$(risk/pCi) x ED_A(y)))

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

Noncarcinogenic PPRG = ((THI x AT_NC(y) x 365(d/y)) / ((SIR_A_WRW(mg/d) x EF_WRW(d/y) x ED_WRW(y) x 10^{-6}(kg/mg) x 1/RfD_o(mg/kgd) x 1/BW_A(kg)) +

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF

Carcinogenic PPRG = ((TR x AT_C(y) x 365(d/y)) / (SIR_A_WRW(mg/d) x EF_WRW(d/y) x ED_WRW(y) x 10^{-6}(kg/mg) x CSF_o(risk/mg/kgd) x 1/BW_A(kg))

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF

Radionuclide Carcinogenic PPRG = (TR / ((SIR_A_WRW(mg/d) x $CSF_{soil\ FRG13}$(risk/pCi) x 10^{-3}(g/mg) x EF_WRW(d/y) x ED_WRW(y)) +

Open Space Surface Water Exposure Scenario

Noncarcinogenic PPRG = Exposure Factor x Oral RfD
Carcinogenic PPRG = Exposure Factor / Oral SF

Office Worker Surface Soil Exposure Scenario

Noncarcinogenic PPRG = ((THI x AT_NC(y) x 365(d/y)) / ((SIR_A_OW(mg/d) x EF_OW(d/y) x ED_OW(y) x 10^{-6}(kg/mg) x 1/RfD_o(mg/kgd) x 1/BW_A(kg)) +

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF

Carcinogenic PPRG = ((TR x AT_C(y) x 365(d/y)) / (SIR_A_OW(mg/d) x EF_OW(d/y) x ED_OW(y) x 10^{-6}(kg/mg) x CSF_o(risk/mg/kgd) x 1/BW_A(kg))

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

(HIR_A_WRW(m^3/d) x EF_WRW(d/y) x ED_WRW(y) x ET_SS_WRW(h/d) x 1/PEF*(m^3/kg) x 1/RfD_i(mg/kgd) x 1/BW_A(kg) x (ETo_WRW +(ETi_WRW x DFi))) +
(SA_A_WRW(cm^2) x AF_A_WRW(mg/cm^2event) x EF_WRW(d/y) x ED_WRW(y) x ABS x EV(events/d) x 1/RfD_o(mg/kgd) x 10^{-6}(kg/mg) x 1/BW_A(kg))

(HIR_A_WRW(m^3/h) x EF_WRW(d/y) x ED_WRW(y) x ET_SS_WRW(h/d) x 1/PEF*(m^3/kg) x CSF_i(risk/mg/kgd) x 1/BW_A(kg) x (ETo_WRW + (ETi_WRW x DFi))) +
(AF_A_WRW(mg/cm^2 event) x SA_A_WRW(cm^2) x EF_WRW(d/y) x ED_WRW(y) x ABS x EV(events/d) x CSF_o(risk/mg/kgd) x 10^{-6}(kg/mg) x 1/BW_A(kg)))

(HIR_A_OW(m^3/h) x EF_OW(d/y) x ED_OW(y) x ET_SS_OW(h/d) x 1/BW_A(kg) x 1/PEF*(m^3/kg) x1/RfD_i(mg/kgd) x (ETo_OW +(ETi_OW x DFi))) +
(SA_A_OW(cm^2) x AF_A_OW(mg/cm^2event) x EF_OW(d/y) x ED_OW(y) x ABS x EV(events/d) x 1/RfD_o(mg/kgd) x 10^{-6}(kg/mg) x 1/BW_A(kg))

(HIR_A_OW(m^3/d) x EF_OW(d/y) x ED_OW(y) x ET_SS_OW(h/d) x 1/PEF*(m^3/kg) x CSF_i(risk/mg/kgd) x 1/BW_A(kg) x (ETo_OW + (ETi_OW x DFi))) +
(AF_A_OW(mg/cm^2 event) x SA_A_OW(cm^2) x EF_OW(d/y) x ED_OW(y) x ABS x EV(events/d) x CSF_o(risk/mg/kgd) x 10^{-6}(kg/mg) x 1/BW_A(kg)))

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

(HIR_A_WRW(m^3/h) x 1/PEF(m^3/kg) x $CSF_{i\ FRG13}$(risk/pCi) x 1000(g/kg) x EF_WRW(d/y) x ED_WRW(y) x ET_SS_WRW(h/d) x (ETo_WRW + (ETi_WRW x DFi))) +
($CSF_{e\ FRG13}$(risk/y/pCi/g) x EF_WRW(d/y)/365(d/y) x ED_WRW(y) x ACF x (ETo_WRW + (ETi_WRW x GSF)))))

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

Radionuclide Carcinogenic PPRG = (TR / ((SIR_A_OW(mg/d) x $CSF_{soil\ FRG13}$(risk/pCi) x 10^{-3}(g/mg) x EF_OW(d/y) x ED_OW(y)) +

Open Space Surface Soil Exposure Scenario

Noncarcinogenic PPRG = ((THI x AT_NC_A(y) x 365(d/y)) / ((SIF_ageav_OS(mgy/kgd) x EF_OS(d/y) x 10^{-6}(kg/mg) x 1/RfD_o(mg/kgd)) +

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF

Carcinogenic PPRG = ((TR x AT_C(y) x 365(d/y)) / (SIF_ageav_OS(mgy/kgd) x EF_OS(d/y) x 10^{-6}(kg/mg) x CSF_o(risk/mg/kgd))

* for volatile compounds, substitute the chemical-specific volatilization factor, VF found on the newChem&trans sheet for PEF

Radionuclide Carcinogenic PPRG = ((TR / (SIR_ageav_OS(mg/d) x $CSF_{soil\ FRG13}$(risk/pCi) x 10^{-3}(g/mg) x EF_OS(d/y) x ED_OS(y)) +

Table Xx
Summary of Equations Used to Calculate PPRGS
RFETS PPRGs

(HIF_ageav_OS(m^3y/kgd) x EF_OS(d/y) x 1/PEF*(m^3/kg) x1/RfD_i(mg/kgd) x (ETo_OS +(ETi_OS x DFi))) +
(SFSageav_OS(mgy/kg event) x EF_OS(d/y) x ABS x EV(events/d) x 1/RfD_o(mg/kgd) x 10^{-6}(kg/mg)))

(HIF_ageav_OS(m^3y/kgd) x EF_OS(d/y) x 1/PEF*(m^3/kg) x CSF_i(risk/mg/kgd) x (ETo_OS + (ETi_OS x DFi))) +
(SFSageav_OS(mgy/kg event) x EF_OS(d/y) x ABS x EV(events/d) x CSF_o(risk/mg/kgd) x 10^{-6}(kg/mg)))

(HIR_A_OW(m^3/d) x 1/PEF(m^3/kg) x $CSF_{i\ FRG13}$(risk/pCi) x 1000(g/kg) x EF_OW(d/y) x ED_OW(y) x ET_SS_OW(h/d) x (ETo_OW + (ETi_OW x DFi))) +
($CSF_{e\ FRG13}$(risk/y/pCi/g) x EF_OW(d/y)/365(d/y) x ED_OW(y) x ACF x (ETo_OW + (ETi_OW x GSF)))))

(IR_ageav_OS(m^3/d) x 1/PEF(m^3/kg) x $CSF_{i\ FRG13}$(risk/pCi) x 10^{-3}(kg/mg) x EF_OS(d/y) x ED_OS(y) x (ETo_OS + (ETi_OS x DFi))) +
($CSF_{e\ FRG13}$(risk/y/pCi/g) x EF_OS(d/y)/365(d/y) x ED_OS(y) x ACF x (ETo_OS + (ETi_OS x GSF)))))