EPA Region 5 Records Ctr.
347254

Reference 2

United States Environmental Protection Agency. *Superfund Chemical Data Matrix*. January 28, 2004. http://www.epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Acenaphthene	000083-32-9	10	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	0.4000	0.4000	500.0	500.0	500.0	500.0	10000	1000*	11	0.2000	Yes	Yes
Acenaphthylene	000208-96-8	0	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	0.4000	1.0000	500.0	500.0	500.0	500.0	0	0	11	0.0200	Yes	Yes
Acetone	000067-64-1	1*	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0700*	0.0700	0.5	0.5	0.5	0.5	100	1	17	1.0000	Yes	No
Acrolein	000107-02-8	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0700	0.0700	500.0	500.0	500.0	500.0	10000	1000	17	1.0000	Yes	No
Acrylamide	000079-06-1	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	1.0000	5.0	5.0	5.0	5.0	10	10	5	0.2000	Yes	Yes
Alachlor**	015972-60-8	100	1.00E+00	1.00E-02	1.00E+00	1.00E-02	0.4000	0.0700	500.0	500.0	50.0	50.0	1000	1000	6	0.0200	Yes	Yes
Aldrin	000309-00-2	10000	1.00E+00	1.00E-04	2.00E-03	2.00E-07	1.0000	1.0000	5000.0*	50000.0	50000.0	50000.0	10000	10000	6	0.0020	Yes	Yes
Aluminum	007429-90-5	0	1.00E+00	1.00E+00*	1.00E+00*	1.00E+00*	1.0000	1.0000	50.0	50.0	5000.0*	5000.0*	100	100		.	No	Yes
Americium**	007440-35-9	0	1.00E+00	1.00E+00	..	.	1.0000	1.0000	5000.0	5000.0	5000.0	5000.0	0	0		.	No	Yes
Aniline	000062-53-3	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	0.4000	50.0*	50.0*	500.0	500.0	10000	10	11	1.0000	Yes	No
Anthracene	000120-12-7	10	1.00E+00	1.00E-04*	2.00E-03	2.00E-07*	0.4000*	0.4000*	50000.0*	50000.0*	50000.0*	50000.0*	10000	10000*	6	0.0020	Yes	Yes
Antimony	007440-36-0	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0*	5.0*	5.0	50.0*	100	100	.		No	Yes
Arsenic	007440-38-2	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0	500.0	5000.0*	500.0	10	100		..	No	Yes
Asbestos	001332-21-4	10000	1.00E-00	1.00E-04		..	1.0000	1.0000	0.5	0.5	0.5	0.5	0	0		.	No	Yes
Barium	007440-39-3	10000	1.00E-00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	1	1			No	Yes

* Indicates difference between previous version of chemical data (JUN 96) and current version of chemical data (JAN04)
** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Benz(a)anthracene	000056-55-3	1000	1 00E+00	1 00E-04*	2 00E-05	2.00E-09*	1.0000	1.0000	50000.0	50000.0	50000.0	50000 0	10000	10000	6	0 0020	Yes	Yes
Benzene	000071-43-2	1000*	1.00E+00	1 00E+00	1.00E+00	1.00E+00	0.4000	0 4000	5000.0	5000 0	5000 0*	50000 0	1000*	1000	17	1 0000	Yes	No
Benzidine	000092-87-5	10000	1 00E+00	1.00E+00	1 00E+00	1.00E+00	1.0000	0.4000	50.0	50 0	5000.0*	5000 0*	100*	100*	0	0 0002	Yes	Yes
Benzo(a)pyrene	000050-32-8	10000	1 00E+00	1 00E-04	2.00E-05	2.00E-09	1 0000	1.0000	50000.0	50000.0*	50000.0	50000 0*	10000	1000	6	0 0002	Yes	Yes
Benzo(g,h,i)perylene	000191-24-2	0	1.00E+00	1 00E-04	2.00E-05	2 00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000 0	0	0	..	.	No	Yes
Benzo(j,k)fluorene (Fluoranthene)	000206-44-0	100	1 00E+00	1.00E-04*	2 00E-03	2.00E-07*	1.0000	1.0000	500 0*	5000.0	5000 0*	5000 0	10000	10000*	6	0 0020	Yes	Yes
Benzo(k)fluoranthene	000207-08-9	100	1 00E+00	1 00E-04	2 00E-05	2 00E-09	1 0000	1 0000	50000.0	50000 0	50000 0	50000.0	0	0	6	0 0002	Yes	Yes
Beryllium	007440-41-7	10000	1 00E+00	1 00E-02	1.00E+00	1.00E-02	1 0000	1 0000	50.0	50 0	50 0	50 0	0	0	...		No	Yes
Bis (2-ethylhexyl) phthalate	000117-81-7	100	1 00E+00	1 00E-04	2 00E-03	2.00E-07	1.0000	1.0000	50000.0	500 0*	50000 0	5000.0*	1000	1000*	6	0 0002*	Yes	Yes
Boron	007440-42-8	100	1 00E+00	1 00E+00	1.00E+00	1 00E+00	1 0000	1 0000	0.5	0 5	0 5	0 5	0	0	..	.	No	Yes
Bromodichloromethane	000075-27-4	100	1 00E+00	1 00E+00	1 00E+00	1.00E+00	0 4000	1.0000	50 0	50.0	50.0	50 0	0	0	17	1 0000	Yes	No
Butylbenzyl phthalate	000085-68-7	10	1 00E+00	1 00E-04*	2 00E-01	2 00E-05*	1 0000	1.0000	500 0	500.0	500 0	500.0	1000*	1000*	6	0.0020	Yes	Yes
Cadmium	007440-43-9	10000	1 00E+00	1 00E-02	1 00E+00*	1.00E-02*	1 0000	1 0000	5000 0	50000.0*	50000.0*	50000 0*	10000*	1000	.		No	Yes
Carbazole	000086-74-8	10	1 00E+00	1 00E-02*	2 00E-01	2.00E-03*	0 4000	0 0700	500 0	500 0	500 0	500.0	1000*	1000*	6*	0 0200*	Yes	Yes

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Carbon disulfide	000075-15-0	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.4000	500.0	500.0	500.0	500.0	100	10*	17	1.0000	Yes	No
Carbon tetrachloride	000056-23-5	1000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	500.0*	500.0*	100	10*	17	1.0000	Yes	No
Cesium	007440-46-2	0	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0*	50.0*	5.0*	50.0*	0	0	..	.	No	Yes
Chlordane	000057-74-9	10000	1.00E+00	1.00E-02	2.00E-03	2.00E-05	1.0000	1.0000	5000.0*	5000.0*	50000.0	5000.0*	10000	10000	6	0.0020	Yes	Yes
Chlordane, alpha-	005103-71-9	10000*	1.00E+00	1.00E-02	2.00E-03	2.00E-05	1.0000	1.0000	50000.0*	50000.0*	50000.0*	50000.0*	10000	10000	11*	0.0200*	Yes*	Yes
Chlordane, gama-	005566-34-7	10000*	1.00E+00	1.00E-02	2.00E-03	2.00E-05	1.0000	1.0000	50000.0	50000.0	50000.0*	50000.0*	0*	0*	6*	0.0020*	Yes*	Yes
Chlorobenzene	000108-90-7	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007	0.0700	50.0	50.0	5000.0*	5000.0*	10000*	100	17	1.0000	Yes	No
Chloroform	000067-66-3	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	500.0*	500.0*	100*	10	17	1.0000	Yes	No
Chromium	007440-47-3	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	500.0*	500.0	500.0*	500.0	10000*	100	.	...	No	Yes
Chromium(III)	016065-83-1	1	1.00E+00	1.00E-04	1.00E+00	1.00E-04	1.0000	1.0000	500.0	500.0	500.0	500.0	100*	100*	.	.	No	Yes
Chromium(VI)	018540-29-9	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0	500.0	5.0	500.0	100	100		..	No	Yes
Chrysene	000218-01-9	10	1.00E+00	1.00E-04*	2.00E-05	2.00E-09*	1.0000	1.0000	5.0*	5.0*	5000.0	500.0	1000	1000	6	0.0002	Yes	Yes
Cobalt	007440-48-4	10*	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5000.0*	5000.0*	5000.0	5000.0	0	0		..	No	Yes
Copper	007440-50-8	0	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	500.0*	50000.0	5000.0*	50000.0	1000*	1000*		..	No	Yes
Cumene	000098-82-8	10*	1.00E+00	1.00E-02*	2.00E-01	2.00E-03*	0.4000	0.4000	500.0	500.0	500.0	500.0	100	1	17	1.0000	Yes	No

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** Indicates new hazardous substance in current version of chemical data (JAN04).

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Cyanamide**	000420-04-2	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	1.0000	0.5	0.5	0.5	0.5	10	100	6	0.2000	Yes	Yes
Cyanide	000057-12-5	100	1.00E+00	1.00E+00	1.00E+00*	1.00E+00*	1.0000*	1.0000*	0.5	0.5	0.5	0.5	1000	1000	17*	1.0000*	Yes*	No*
DDD	000072-54-8	100	1.00E+00	1.00E-04	2.00E-03	2.00E-07	1.0000	1.0000	50000.0	50000.0	50000.0	50.0*	10000	10000	6	0.0020	Yes	Yes
DDE	000072-55-9	100	1.00E+00	1.00E-04	2.00E-03	2.00E-07	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	10000	10000	6	0.0020	Yes	Yes
DDT	000050-29-3	1000	1.00E+00	1.00E-04	2.00E-03	2.00E-07	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	10000	10000	6	0.0020	Yes	Yes
Di-n-butyl phthalate	000084-74-2	10	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	1.0000	1.0000	5000.0	5000.0	5000.0	5000.0	1000	10000	6	0.0200	Yes	Yes
Di-n-octyl phthalate	000117-84-0	100	1.00E+00	1.00E-04	2.00E-03	2.00E-07	1.0000	1.0000	500.0	500.0	50000.0*	50000.0*	0	0	6	0.0020	Yes	Yes
Dibenz(a,h)anthracene	000053-70-3	10000	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0		.	No	Yes
Dibenzofuran	000132-64-9	1000*	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	1.0000	1.0000	500.0	500.0	500.0	500.0	1000*	1000*	11	0.0200	Yes	Yes
Dibromo-3-chloropropane, 1,2-	000096-12-8	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	1.0000	50.0	50.0	50.0	50.0	10*	10*	11	1.0000	Yes	No
Dibromoethane, 1,2-	000106-93-4	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	10*	100*	17	1.0000	Yes	No
Dichlorobenzene, 1,4-	000106-46-7	10	1.00E+00	1.00E+00	2.00E-01	2.00E-01	0.4000	1.0000	5000.0*	5000.0*	5000.0*	5000.0*	1000*	100	17	1.0000	Yes	No
Dichloroethane, 1,1-	000075-34-3	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	0	0	17	1.0000	Yes	No
Dichloroethane, 1,2-	000107-06-2	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	10*	1	17	1.0000	Yes	No

* Indicates difference between previous version of chemical data (JUN 96) and current version of chemical data (JAN04)
** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Dichloroethylene, 1,1-	000075-35-4	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	100*	1	17	1.0000	Yes	No
Dichloroethylene, 1,2-**	000540-59-0	100	1.00E+00	1.00E-02	1.00E+00	1.00E-02	0.4000	1.0000	50.0	50.0	50.0	50.0	1	1	17	1.0000	Yes	No
Dichloroethylene, cis-1,2-	000156-59-2	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	0	0	17	1.0000	Yes	No
Dichloroethylene, trans-1,2-	000156-60-5	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	1	1	17	1.0000	Yes	No
Dichlorophenol, 2,4-	000120-83-2	1000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007	0.0700	50.0	50.0	500.0	500.0	10000*	100	11	0.2000	Yes	Yes
Dichloropropane, 1,2-	000078-87-5	1000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0*	50.0*	50.0*	50.0*	10	10*	17	1.0000	Yes	No
Dichloropropene, 1,3-	000542-75-6	100*	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.4000	5.0*	5.0*	5.0*	5.0*	1000	1000*	17	1.0000	Yes	No
Dieldrin	000060-57-1	10000	1.00E+00	1.00E-02	2.00E-03	2.00E-05	1.0000	1.0000	50000.0	5000.0	50000.0	50000.0*	10000	10000	6	0.0020	Yes	Yes
Diethyl phthalate	000084-66-2	1	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	500.0	500.0	500.0	500.0	10	100*	11	0.2000	Yes	Yes
Dimethyl phenol, 2,4-	000105-67-9	100	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	0.4000	500.0	500.0	500.0	500.0	100	1000*	11	0.2000	Yes	Yes
Dinitrobenzene, 1,3-	000099-65-0	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	0.4000*	5.0	5.0	5.0	5.0	100	100	6	0.0200	Yes	Yes
Dioxin, 1,4-**	000290-67-5	10	1.00E+00			..	0.4000	0.0700	0.5	0.5	0.5	0.5	0	0		..	No	Yes
Diphenylhydrazine, 1,2-	000122-66-7	1000	1.00E+00	1.00E-02*	2.00E-01	2.00E-03*	1.0000	1.0000	50.0	50.0	50.0	50.0	1000	1000	6	0.0200	Yes	Yes
Disulfoton	000298-04-4	10000	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	1.0000	0.4000	500.0	500.0	5000.0*	5000.0*	10000	10000*	6	0.0200	Yes	Yes

* Indicates difference between previous version of chemical data (JUN 96) and current version of chemical data (JAN04)
** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

Substance Name	CAS Number	Toxicity	Ground Water Mobility: Liquid: Karst	Ground Water Mobility: Liquid: Non-Karst	Ground Water Mobility: Non-Liquid: Karst	Ground Water Mobility: Non-Liquid: Non-Karst	Persistence: River	Persistence: Lake	Bioaccumulation: Food Chain: Fresh	Bioaccumulation: Food Chain: Salt	Bioaccumulation: Environment: Fresh	Bioaccumulation: Environment: Salt	Ecotoxicity: Fresh	Ecotoxicity: Salt	Air Gas Migration	Air Gas Mobility	Air Gas: Gas	Air Gas: Part
Endosulfan (I or II)	000115-29-7	100	1.00E+00	1.00E+00	2.00E-03	2.00E-03	1.0000	0.4000	5.0*	5000.0	50000.0	5000.0	10000	10000	11	0.0020	Yes	Yes
Endosulfan I**	000959-98-8	100	1.00E+00	1.00E+00	2.00E-03	2.00E-03	1.0000	1.0000	500.0	500.0	50000.0	50000.0	10000	10000	11	0.0020	Yes	Yes
Endosulfan II**	033213-65-9	100	1.00E+00	1.00E+00	...	..	1.0000	1.0000	500.0	500.0	5000.0	5000.0	10000	10000	11	0.0020	Yes	Yes
Endrin	000072-20-8	10000	1.00E+00	1.00E-02	2.00E-03	2.00E-05	1.0000	1.0000	5000.0	5000.0	50000.0	5000.0	10000	10000	6	0.0020	Yes	Yes
Endrin aldehyde	007421-93-4	0	1.00E+00	1.00E-04*	2.00E-03*	2.00E-07*	1.0000*	1.0000*	5000.0*	5000.0*	5000.0*	5000.0*	0	0	6*	0.0020*	Yes*	Yes
Ethyl benzene	000100-41-4	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007*	0.0700*	50.0	50.0	50.0	50.0	100	1000*	17	1.0000	Yes	No
Ethyl chloride	000075-00-3	1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007	0.0700	5.0	5.0	5.0	5.0	0	0	17	1.0000	Yes	No
Ethylene glycol monobutyl ether (EBGE)**	000111-76-2	10	1.00E+00	1.00E+00		.	1.0000	1.0000	5.0	5.0	5.0	5.0	1	1	.	.	No	Yes
Fluorene	000086-73-7	100	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	1.0000	1.0000	500.0*	500.0*	5000.0	5000.0	1000	1000	11	0.0200	Yes	Yes
Fluorine	007782-41-4	10	1.00E+00	1.00E-02	2.00E-01*	2.00E-03*	0.4000	0.0700	50000.0*	50000.0*	50000.0*	50000.0*	0	0	17	1.0000	Yes	No
Heptachlor	000076-44-8	1000	1.00E+00	1.00E-04	2.00E-03	2.00E-07	0.4000*	0.4000*	50000.0*	50000.0*	50000.0	50000.0	10000	10000	11	0.0200	Yes	Yes
Heptachlor epoxide, alpha, beta, gamma	001024-57-3	10000	1.00E+00	1.00E-04*	2.00E-03	2.00E-07*	1.0000	1.0000	5000.0*	5000.0*	50000.0	5000.0*	10000	10000	6	0.0200	Yes	Yes
Heptachlorodibenzo-p-dioxin**	037871-00-4	0	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0		..	No	Yes
Heptachlorodibenzo-p-dioxin 1,2,3,4,6,7,8-	035822-46-9	10000	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0		.	No	Yes

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** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Heptachlorodibenzofuran 1,2,3,4,6,7,8-	067562-39-4	10000	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0	6*	0.0002*	Yes*	Yes
Heptachlorodibenzofuran 1,2,3,4,7,8,9-	055673-89-7	10000*	1.00E+00	.	.	.	0.4000	0.0700	0.5	0.5	0.5	0.5	0	0	.	.	No	Yes
Hexabromobiphenyl (PBB)**	036355-01-8	1	1.00E-00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0	6	0.0002	Yes	Yes
Hexachlorobenzene	000118-74-1	1000	1.00E-00	1.00E-02	2.00E-05	2.00E-07	1.0000	1.0000	50000.0*	50000.0	50000.0	50000.0	10000*	10000	1	0.0200	Yes	Yes
Hexachlorobutadiene	000087-68-3	10000	1.00E+00	1.00E-04*	2.00E-01	2.00E-05*	1.0000	1.0000	50.0	50000.0*	5000.0	50000.0*	10000	1000*	17	1.0000	Yes	No
Hexachlorocyclohexane alpha-	000319-84-6	10000	1.00E-00	1.00E+00	2.00E-01	2.00E-01	1.0000	1.0000	5000.0*	50000.0*	5000.0*	50000.0*	1000*	1000	1	0.0200	Yes	Yes
Hexachlorocyclohexane, beta-	000319-85-7	100	1.00E-00	1.00E+00	2.00E-03	2.00E-03	1.0000	1.0000	500.0	500.0	5000.0*	5000.0	1000*	1000*	6	0.0020	Yes	Yes
Hexachlorodibenzo-p-dioxin 1,2,3,4,7,8-	039227-28-6	10000	1.00E-00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0	.	.	No	Yes
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8-	057653-85-7	10000	1.00E+00	1.00E-04*			1.0000*	1.0000*	5000.0	5000.0	5000.0	5000.0	0*	0*	. .	. .	No	Yes
Hexachlorodibenzo-p-dioxin 1,2,3,7,8,9-	019408-74-3	10000	1.00E+00	1.00E-04*	2.00E-05*	2.00E-09*	1.0000*	1.0000*	50000.0*	50000.0*	50000.0*	50000.0*	0	0		. .	No	Yes
Hexachlorodibenzofuran 1,2,3,4,7,8-	070648-26-9	10000	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0	.	. .	No	Yes
Hexachlorodibenzofuran 1,2,3,6,7,8-	057117-44-9	10000	1.00E+00		. .	.	0.4000	0.0700	0.5	0.5	0.5	0.5	0	0	. .	.	No	Yes
Hexachlorodibenzofuran 1,2,3,7,8,9-	072918-21-9	10000	1.00E+00	.			0.4000	0.0700	0.5	0.5	0.5	0.5	0	0	.	. .	No	Yes

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Hexachlorodibenzofuran 2,3,4,6,7,8-	060851-34-5	10000	1.00E+00	.	.	..	0.4000	0.0700	0.5	0.5	0.5	0.5	0	0	.	.	No	Yes
Hydrazine	000302-01-2	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000*	0.0700*	0.5	0.5	0.5	0.5	10000	100	11*	1.0000	Yes	No
Hydrogen sulfide	007783-06-4	1000*	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007*	0.0700	0.5	0.5	0.5	0.5	1000	1000	1*	1.0000	Yes	No
Indeno(1,2,3-cd)pyrene	000193-39-5	1000	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0	.	..	No	Yes
Iron	007439-89-6	1	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5000.0*	5000.0*	5000.0*	5000.0*	10	10	.		No	Yes
Lead	007439-92-1	10000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	5.0*	5000.0	50000.0*	5000.0	1000	1000	.	.	No	Yes
Lead chromate**	007758-97-6	10000	1.00E+00	.	2.00E-03	..	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0			No	Yes
Lindane	000058-89-9	10000	1.00E+00	1.00E+00	2.00E-01	2.00E-01	1.0000	1.0000	50000.0*	5000.0*	50000.0*	5000.0*	10000	10000	11	0.0200	Yes	Yes
Manganese	007439-96-5	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	50000.0*	50000.0*	50000.0	50000.0	0	0	.	.	No	Yes
Mercury	007439-97-6	10000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000*	1.0000	50000.0	50000.0	50000.0	50000.0	10000	10000	1*	0.2000	Yes	Yes
Methoxychlor	000072-43-5	100	1.00E+00	1.00E-04*	2.00E-03	2.00E-07*	1.0000	1.0000	5.0*	50000.0*	5000.0*	50000.0*	10000	10000	6	0.0020	Yes	Yes
Methyl Parathion	000298-00-0	10000	1.00E+00	1.00E-02*	2.00E-01	2.00E-03*	1.0000	0.4000	50.0	50.0	50.0	50.0	10000	10000	6	0.0200	Yes	Yes
Methyl ethyl ketone	000078-93-3	1*	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.4000	0.5	0.5	0.5	0.5	1	1	1*	1.0000	Yes	No
Methyl isobutyl ketone	000108-10-1	10*	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.4000	5.0	5.0	5.0	5.0	1	1	1*	1.0000	Yes	No

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Methyl phenol, 4-	000106-44-5	100	1.00E-00	1.00E-02*	1.00E+00	1.00E-02*	0.0007*	0.0007*	5.0	5.0	5.0	5.0	100*	100*	1	1.0000	Yes	No
Methyl tert-butyl ether (MTBE)**	001634-04-4	1	1.00E-00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	1	1	17	1.0000	Yes	No
Methylene chloride (dichloromethane)	000075-09-2	10	1.00E-00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	500.0*	500.0*	1	10	17	1.0000	Yes	No
Methylnaphthalene, 2-	000091-57-6	0	1.00E-00	1.00E-02	2.00E-01	2.00E-03	0.4000	0.4000	50000.0*	50000.0*	50000.0*	50000.0*	100*	1000	11	0.2000	Yes	Yes
Naphthalene	000091-20-3	1000*	1.00E-00	1.00E-02*	2.00E-01	2.00E-03*	0.4000	0.4000	50000.0*	5000.0*	50000.0*	5000.0	1000	1000	11	0.2000	Yes	Yes
Nickel	007440-02-0	10000	1.00E-00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	0.5	500.0	500.0	500.0	100*	1000	..	...	No	Yes
Nitrosodiphenylamine, N-	000086-30-6	10	1.00E-00	1.00E-02*	2.00E-01	2.00E-03*	1.0000	1.0000	500.0	500.0	500.0	500.0	100	100	6	0.0200	Yes	Yes
Pentachlorodibenzo-p-dioxin 1,2,3,7,8-	040321-76-4	10000	1.00E-00	1.00E-04	2.00E-05*	2.00E-09*	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0*	0*		.	No	Yes
Pentachlorodibenzofuran 2,3,7,8-	057117-41-6	0*	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0		.	No	Yes
Pentachlorodibenzofuran 1,2,3,4,7,8-**	057117-31-4	10000	1.00E-00	1.00E-04	..		1.0000	1.0000	0.5	0.5	0.5	0.5	0	0	6	0.0020	Yes	Yes
Pentachlorophenol (PCP)	000087-86-5	100	1.00E-00	1.00E+00	1.00E+00	1.00E+00	1.0000	1.0000	50000.0*	5000.0*	50000.0*	5000.0*	100	1000	6	0.0200	Yes	Yes
Perchlorate**	014797-73-0	10000	1.00E-00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.0700	0.5	0.5	0.5	0.5	0	0	.		No	Yes
Phenanthrene	000085-01-8	0	1.00E-00	1.00E-04*	2.00E-01	2.00E-05*	0.4000*	0.4000*	5000.0*	5000.0*	50000.0*	5000.0*	10000*	10000*	1	0.0200	Yes	Yes
Phenol	000108-95-2	10*	1.00E-00	1.00E+00	1.00E+00	1.00E+00	0.0007*	0.0700*	50.0*	5.0	50000.0*	5.0	10000	1000*	1	1.0000	Yes	No
Plutonium	007440-07-5	0	1.00E+00	1.00E-04	.		1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	0	0			No	Yes

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

Substance Name	CAS Number	Toxicity	Ground Water Mobility: Liquid: Karst	Ground Water Mobility: Liquid: Non-Karst	Ground Water Mobility: Non-Liquid: Karst	Ground Water Mobility: Non-Liquid: Non-Karst	Persistence: River	Persistence: Lake	Bioaccumulation: Food Chain: Fresh	Bioaccumulation: Food Chain: Salt	Bioaccumulation: Environment: Fresh	Bioaccumulation: Environment: Salt	Ecotoxicity: Fresh	Ecotoxicity: Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Polychlorinated biphenyls (PCBs)	001336-36-3	10000	1.00E+00	1.00E-04	2.00E-03	2.00E-07	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	10000	10000	11	0.0200	Yes	Yes
Pyrene	000129-00-0	100	1.00E+00	1.00E-04*	2.00E-01*	2.00E-05	1.0000	1.0000	50000.0*	5000.0	50000.0*	5000.0	10000	10000	6	0.0020	Yes	Yes
Radium	007440-14-4	0	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	0	0	. .	.	No	Yes
Radon	010043-92-2	0	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.0700	0.5	0.5	0.5	0.5	0	0	17	1.0000	Yes	No
Selenium	007782-49-2	100	1.00E+00	1.00E+00*	1.00E+00	1.00E+00*	1.0000	1.0000	50.0*	500.0*	500.0*	500.0*	1000	100	. .	.	No	Yes
Silver	007440-22-4	10	1.00E+00	1.00E+00	1.00E+00*	1.00E+00*	1.0000	1.0000	50.0	50000.0*	50.0	50000.0*	10000	10000	.	.	No	Yes
Strontium	007440-24-6	1	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0*	5.0*	5.0*	5.0*	0	0		.	No	Yes
Styrene	000100-42-5	10	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	0.4000	1.0000	50.0	50.0	50.0	50.0	100	100	17	1.0000	Yes	No
Tetrachlorobenzene, 1,2,4,5-	000095-94-3	10000	1.00E+00	1.00E-02	2.00E-03	2.00E-05	1.0000	1.0000	5000.0	5000.0	5000.0	5000.0	10000*	1000	17	0.2000	Yes	Yes
Tetrachlorodibenzo-p-dioxin**	041903-57-5	0	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0			No	Yes
Tetrachlorodibenzo-p-dioxin 2,3,7,8- (TCDD)	001746-01-6	10000	1.00E+00	1.00E-04	2.00E-05	2.00E-09	1.0000	1.0000	5000.0	5000.0	5000.0	5000.0	0*	0*	6	0.0002	Yes	Yes
Tetrachlorodibenzofuran 2,3,7,8-	051207-31-9	10000	1.00E+00	1.00E-04	2.00E-05*	2.00E-09*	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	0	0	6*	0.0020*	Yes*	Yes
Tetrachloroethane, 1,1,2,2-	000079-34-5	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	0*	0*	11	1.0000	Yes	No
Tetrachloroethylene	000127-18-4	100	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	0*	0*	17	1.0000	Yes	No

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Thallium	007440-28-0	100	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	500.0	50.0	500.0	50.0	0*	0*	..		No	Yes
Toluene	000108-88-3	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0700*	0.0700*	50.0	50.0	5000.0*	50.0	100	100	17	1.0000	Yes	No
Toxaphene	008001-35-2	1000	1.00E+00	1.00E-04*	2.00E-03	2.00E-07*	1.0000	1.0000	50000.0	50000.0	50000.0	50000.0	10000	10000	6	0.0020	Yes	Yes
Trichlorobenzene, 1,2,4-	000120-82-1	100	1.00E+00	1.00E+00	2.00E-01	2.00E-01	0.4000	1.0000	5000.0*	500.0	5000.0*	500.0	1000	10000*	17	1.0000	Yes	No
Trichloroethane, 1,1,1-	000071-55-6	1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0	5.0	5.0	5.0	10	10	17	1.0000	Yes	No
Trichloroethane, 1,1,2-	000079-00-5	1000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	100*	10	17	1.0000	Yes	No
Trichloroethylene (TCE)	000079-01-6	0	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	100	10	17	1.0000	Yes	No
Trichlorofluoromethane	000075-69-4	0	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	0	0	17	1.0000	Yes	No
Trichlorophenol, 2,4,6-	000088-06-2	0	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	0.4000	5000.0*	5000.0*	50000.0	50000.0	1000	100	11	0.2000	Yes	Yes
Trichloropropane, 1,2,3-	000096-18-4	10000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	5.0*	5.0*	5.0*	5.0*	10	10	11	1.0000	Yes	No
Trifluralin (Treflan)	001582-09-8	100	1.00E+00	1.00E-02	2.00E-01	2.00E-03	1.0000	1.0000	5000.0	5000.0	50000.0	50000.0	10000	10000*	11	0.0200	Yes	Yes
Trinitrobenzene, 1,3,5-	000099-35-4	100*	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	0.0700	5.0	5.0	5.0	5.0	1000	1000	0*	0.0020*	Yes	Yes
Vanadium	007440-62-2	100	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	0	0			No	Yes
Vinyl acetate	000108-05-4	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0700*	0.0700*	0.5	0.5	0.5	0.5	10	100*	17	1.0000	Yes	No

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Vinyl chloride	000075-01-4	10000	1.00E-00	1.00E+00	1.00E+00	1.00E+00	0.0007	0.0700	5.0	5.0	5.0	5.0	0	0	17	1.0000	Yes	No
Xylene**	001330-20-7	100	1.00E-00	1.00E-02	1.00E+00	1.00E-02	0.4000	1.0000	50.0	50.0	50.0	50.0	100	100	17	1.0000	Yes	No
Xylene, m-	000108-38-3	1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007*	0.0700*	500.0	500.0	500.0	500.0	100	100*	17	1.0000	Yes	No
Xylene, o-	000095-47-6	1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.4000	1.0000	50.0	50.0	50.0	50.0	100	100	17	1.0000	Yes	No
Xylene, p-	000106-42-3	10	1.00E+00	1.00E+00	1.00E+00	1.00E+00	0.0007*	0.0700*	50.0	50.0	50.0	50.0	100	100*	17	1.0000	Yes	No
Zinc	007440-66-6	10	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	5.0*	50000.0	50000.0*	50000.0	10	100			No	Yes

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** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM

Hazardous Substance Factor Values

Substance Name	CAS Number	Toxicity	Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity		Air Gas Migration	Air Gas Mobility	Gas	Part
			Liquid		Non-Liquid				Food Chain		Environment							
			Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt				
Americium 241	014596-10-2	10000	1.00E+00	1.00E-02	.		1.0000	1.0000	0.5	0.5	0.5	0.5	10000	10000	.	...	No	Yes
Antimony 125(+D) (radionuclide)	014234-35-6	1000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0*	5.0*	5.0	50.0*	1000	1000		.	No	Yes
Cadmium 109 (radionuclide)	014109-32-1	1000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	5000.0	50000.0*	50000.0*	50000.0*	1000	1000	..	.	No	Yes
Cesium 137(+D) (radionuclide)	010045-97-3	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5.0*	50.0*	5.0*	50.0*	10000	10000			No	Yes
Cobalt 57 (radionuclide)	011981-50-5	100	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5000.0*	5000.0*	5000.0	5000.0	100	100		..	No	Yes
Cobalt 60 (radionuclide)	010198-40-0	10000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5000.0*	5000.0*	5000.0	5000.0	10000	10000	.		No	Yes
Iron 55 (radionuclide)	014681-59-5	100	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	5000.0*	5000.0*	5000.0*	5000.0*	100	100		..	No	Yes
Lead 210(+D) (radionuclide)	014255-04-0	10000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	5.0*	5000.0	50000.0*	5000.0	10000	10000		.	No	Yes
Manganese 54 (radionuclide)	013966-31-9	1000	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.0000	1.0000	50000.0*	50000.0*	50000.0	50000.0	1000	1000		.	No	Yes
Nickel 59 (radionuclide)	014336-70-0	100	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	0.5	500.0	500.0	500.0	100	100			No	Yes
Nickel 63 (radionuclide)	013981-37-8	100	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	0.5	500.0	500.0	500.0	100	100	.	..	No	Yes
Plutonium 236 (radionuclide)	015411-92-4	10000	1.00E+00	1.00E-04		...	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000	.	.	No	Yes
Plutonium 238 (radionuclide)	013981-16-3	10000	1.00E+00	1.00E-04			1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000	.	.	No	Yes
Plutonium 239 (radionuclide)	015117-48-3	10000	1.00E+00	1.00E-04	..	..	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000	.		No	Yes
Plutonium 240 (radionuclide)	014119-33-6	10000	1.00E+00	1.00E-04	.	.	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000		.	No	Yes

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** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

			Ground Water Mobility				Persistence		Bioaccumulation				Ecotoxicity					
			Liquid		Non-Liquid				Food Chain		Environment							
Substance Name	CAS Number	Toxicity	Karst	Non-Karst	Karst	Non-Karst	River	Lake	Fresh	Salt	Fresh	Salt	Fresh	Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Plutonium 241(+D) (radionuclide)	014119-32-5	10000	1.00E+00	1.00E-04	..	..	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000	..	...	No	Yes
Plutonium 242 (radionuclide)	013982-10-0	10000	1.00E+00	1.00E-04	.	...	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000	.	.	No	Yes
Plutonium 243 (radionuclide)	015706-37-3	100	1.00E+00	1.00E-04	.	.	0.0700	0.0700	500.0*	500.0*	500.0*	500.0*	100	100		.	No	Yes
Plutonium 244(+D) (radionuclide)	014119-34-7	10000	1.00E+00	1.00E-04		.	1.0000	1.0000	500.0*	500.0*	500.0*	500.0*	10000	10000	.	.	No	Yes
Radium 226(+D) (radionuclide)	013982-63-3	10000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000			No	Yes
Radium 228(+D) (radionuclide)	013262-20-1	10000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000	.		No	Yes
Radon 222 (+D)(radionuclide)	014859-67-7	1000	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.0000	0.4000	0.5	0.5	0.5	0.5	1000	1000	17	1.0000	Yes	No
Silver 108m(+D) (radionuclide)	014391-65-2	1000*	1.00E+00	1.00E+00	1.00E+00*	1.00E+00*	1.0000	1.0000	50.0	50000.0*	50.0	50000.0*	1000*	1000*	.	.	No	Yes
Silver 110m (radionuclide)	014391-76-5	1000*	1.00E+00	1.00E+00	1.00E+00*	1.00E+00*	1.0000	1.0000	50.0	50000.0*	50.0	50000.0*	1000*	1000*		.	No	Yes
Strontium 90(+D) (radionuclide)	010098-97-2	10000	1.00E+00	1.00E-02	1.00E-00	1.00E-02	1.0000	1.0000	5.0*	5.0*	5.0*	5.0*	10000	10000			No	Yes
Technetium 99 (radionuclide)**	014133-76-7	1000	1.00E+00	1.00E+00	.	..	1.0000	1.0000	0.5	0.5	0.5	0.5	1000	1000	.		No	Yes
Thallium 204 (radionuclide)	014968-51-9	1000*	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	500.0	50.0	500.0	50.0	1000*	1000*		..	No	Yes
Thorium 227 (radionuclide)	014623-47-9	10000	1.00E+00	1.00E-02*	1.00E-00	1.00E-02*	1.0000	0.4000	0.5*	0.5*	0.5*	0.5*	10000	10000	.	.	No	Yes
Thorium 228(+D) (radionuclide)	014274-82-9	10000	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000		.	No	Yes

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HAZARD RANKING SYSTEM
Hazardous Substance Factor Values

Substance Name	CAS Number	Toxicity	Ground Water Mobility: Liquid: Karst	Ground Water Mobility: Liquid: Non-Karst	Ground Water Mobility: Non-Liquid: Karst	Ground Water Mobility: Non-Liquid: Non-Karst	Persistence: River	Persistence: Lake	Bioaccumulation: Food Chain: Fresh	Bioaccumulation: Food Chain: Salt	Bioaccumulation: Environment: Fresh	Bioaccumulation: Environment: Salt	Ecotoxicity: Fresh	Ecotoxicity: Salt	Air Gas Migration	Air Gas Mobility	Gas	Part
Thorium 229(+D) (radionuclide)	015594-54-4	10000	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000		.	No	Yes
Thorium 230 (radionuclide)	014269-63-7	10000	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000		..	No	Yes
Thorium 231 (radionuclide)	014932-40-2	1000*	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	0.4000	0.0700	0.5*	0.5*	0.5*	0.5*	1000*	1000*			No	Yes
Thorium 232 (radionuclide)	007440-29-1	10000	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000	.	.	No	Yes
Thorium 234 (radionuclide)	015065-10-8	10000*	1.00E+00	1.00E-02*	1.00E+00	1.00E-02*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000*	10000*		.	No	Yes
Tritium	010028-17-8	100	1.00E+00	1.00E+00			1.0000	1.0000	0.5	0.5	0.5	0.5	100	100	17 .	1.0000	Yes	No
Uranium 232 (radionuclide)	014158-29-3	10000	1.00E+00	1.00E+00*	2.00E-01*	2.00E-01*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000		..	No	Yes
Uranium 233 (radionuclide)	013968-55-3	10000	1.00E+00	1.00E+00*	2.00E-01*	2.00E-01*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000		..	No	Yes
Uranium 234 (radionuclide)	013966-29-5	10000	1.00E+00	1.00E+00*	2.00E-01*	2.00E-01*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000			No	Yes
Uranium 235(+D) (radionuclide)	015117-96-1	10000	1.00E+00	1.00E+00*	2.00E-01*	2.00E-01*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000	.	..	No	Yes
Uranium 236(+D) (radionuclide)	013982-70-2	10000	1.00E+00	1.00E+00*	2.00E-01*	2.00E-01*	1.0000	1.0000	0.5*	0.5*	0.5*	0.5*	10000	10000		.	No	Yes
Uranium 238(+D) (radionuclide)	007440-61-1	10000	1.00E+00	1.00E+00*	2.00E-01*	2.00E-01*	1.0000	1.0000	5000.0*	5000.0*	5000.0*	5000.0*	10000	10000		.	No	Yes
Zinc 65 (radionuclide)	013982-39-3	1000	1.00E+00	1.00E-02	1.00E+00*	1.00E-02*	1.0000	1.0000	5.0*	50000.0	50000.0*	50000.0	1000	1000			No	Yes

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Acenaphthene	000083-32-9	.	2.2E+0	.	.	8.1E+1	.	.	.	..	...
Acenaphthylene	000208-96-8		..	...	...	..	...	...	..		...
Acetone	000067-64-1		3.3E+1*	..	..	1.2E+3*	..	...	.	..	.
Acrolein	000107-02-8	.	1.8E-2*	.	...	6.8E-1*	.	..	..	...	.
Acrylamide	000079-06-1	..	7.3E-3	1.9E-5	.	2.7E-1	7.0E-4	.	..	..	..
Alachlor**	015972-60-8	2.0E-3	3.6E-1	1.1E-3	...	1.4E+1	3.9E-2	..	.	.	..
Aldrin	000309-00-2		1.1E-3	5.0E-6	3.0E-1	4.1E-2	1.9E-4	3.0E+0[G]	1.3E+0[G]		
Aluminum	007429-90-5	..	...	..	...	.	.	7.5E+2[G2, I2]	..	8.7E+1[G2, I2, L2]	..
Americium**	007440-35-9		..	..	...	...		...	..	..	..
Aniline	000062-53-3		...	1.5E-2	...	.	5.5E-1	..	...	..	..
Anthracene	000120-12-7		1.1E+1	.	..	4.1E+2	..	...	..	...	..
Antimony	007440-36-0	6.0E-3	1.5E-2	..	...	5.4E-1	.	...	...	...	..
Arsenic	007440-38-2	1.0E-2*	1.1E-2	5.7E-5	...	4.1E-1	2.1E-3	3.4E-2[A, D, K]	6.9E+1[A, D, bb]	1.5E+2[A, D, K]	3.6E+1[A, D, bb]
Asbestos	001332-21-4	7.0E+0 million fibers/L	...	.	...	.	..	.	...	...	..

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** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	*Reference Dose* Screen Conc (mg/L)	*Cancer Risk* Screen Conc (mg/L)	FDAAL (ppm)	*Ref. Dose* Screen Conc (mg/kg)	*Cancer Risk* Screen Conc (mg/kg)	*Acute* CMC (µg/L) *		*Chronic* CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Barium	007440-39-3	2.0E+0	2.6E+0	...	.	9.5E+1	...	..	..	..	...
Benz(a)anthracene	000056-55-3	.	..	1.2E-4	...	..	4.3E-3	..	..	..	
Benzene	000071-43-2	5.0E-3	1.5E-1*	1.5E-3		5.4E+0*	5.7E-2*	...	...	...	
Benzidine	000092-87-5	.	1.1E-1	3.7E-7	..	4.1E+0	1.4E-5	..	...		.
Benzo(a)pyrene	000050-32-8	2.0E-4	..	1.2E-5		.	4.3E-4	...	...	..	
Benzo(g,h,i)perylene	000191-24-2	.	..		..	..	.	.		.	
Benzo(j,k)fluorene (Fluoranthene)	000206-44-0	..	1.5E+0	..	..	5.4E+1	..	...		..	.
Benzo(k)fluoranthene	000207-08-9	.	..	1.2E-3	...	..	4.3E-2	...	.	.	.
Beryllium	007440-41-7	4.0E-3	7.3E-2*	.. *	.	2.7E+0*	*	...	.		..
Bis (2-ethylhexyl) phthalate	000117-81-7	6.0E-3	7.3E-1	6.1E-3	.	2.7E+1	2.3E-1	..	.	..	.
Boron	007440-42-8	...	3.3E+0	...		1.2E+2	..	...	..	..	.
Bromodichloromethane	000075-27-4	..*	7.3E-1	1.4E-3	.	2.7E+1	5.1E-2	...		..	.
Butylbenzyl phthalate	000085-68-7	..	7.3E+0	..	.	2.7E+2	..	...	.	..	.
Cadmium	007440-43-9	5.0E-3	1.8E-2	.	..	6.8E-1		2.0E+0[D, E, K, bb]	4.0E+1[D, bb]	2.5E-1[D, E, K, bb]	8.8E+0[D, bb]

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** Indicates new hazardous substance in current version of chemical data (JAN04).

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Carbazole	000086-74-8		..	4.3E-3	..	...	1.6E-1	..	..	...	...
Carbon disulfide	000075-15-0		3.7E+0	...	...	1.4E+2	..	...		.	..
Carbon tetrachloride	000056-23-5	5.0E-3	2.6E-2	6.6E-4	.	9.5E-1	2.4E-2	..	.		..
Cesium	007440-46-2		..	..	.	...	..	..	.	.	.
Chlordane	000057-74-9	2.0E-3	1.8E-2	2.4E-4	3.0E-1	6.8E-1*	9.0E-3	2.4E+0[G]	9.0E-2[G]	4.3E-3[G, aa]	4.0E-3[G, aa]
Chlordane, alpha-	005103-71-9	.	1.8E-2*	2.4E-4*	..	6.8E-1*	9.0E-3*		.	..	.
Chlordane, gama-	005566-34-7	.	1.8E-2*	2.4E-4*	..	6.8E-1*	9.0E-3*	..	.	..	..
Chlorobenzene	000108-90-7	1.0E-1	7.3E-1	.	..	2.7E+1		..	..	...	.
Chloroform	000067-66-3	.. *	3.6E-1	. *	...	1.4E+1	*	..	...	...	
Chromium	007440-47-3	1.0E-1	1.1E-1*	.	..	4.1E+0*		...		...	.
Chromium(III)	016065-83-1	.	5.5E+1*	..	..	2.0E+3*	..	5.7E+2[D, E, K]	..	7.4E-1[D, E, K]	..
Chromium(VI)	018540-29-9		1.1E-1*	.	...	4.1E+0*	..	1.6E+1[D, K]	1.1E+3[D, bb]	1.1E-1[D, K]	5.0E+1[D, bb]
Chrysene	000218-01-9	.	.	1.2E-2	...	..	4.3E-1			..	.

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Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Cobalt	007440-48-4	...	.	..	...	...	...	. .	...	.	.
Copper	007440-50-8	1 3E+0		.	...	...	..	1 3E+1[D, E K, cc]	4.8E+0[D, cc, ff]	9.0E+0[D, E, K, cc]	3.1E+0[D, cc, ff]
Cumene	000098-82-8		3.7E+0*	..	...	1.4E+2*	.	.	...	. .	..
Cyanamide**	000420-04-2			.	.	..	..	.	.	. .	
Cyanide	000057-12-5	2 0E-1	7 3E-1	..	.	2.7E+1	.	2 2E+1[K, Q]	1 0E+0[Q, bb]	5 2E+0[K, Q]	1.0E+0[Q, bb]
DDD	000072-54-8	..		3.5E-4	. .*	. .	1.3E-2			. .	..
DDE	000072-55-9		. .	2.5E-4	5.0E+0	..	9.3E-3	.	..	.	..
DDT	000050-29-3	..	1 8E-2	2.5E-4	5.0E+0	6.8E-1	9.3E-3	1 1E+0[G, ii]	1.3E-1[G, ii]	1 0E-3[G, aa, ii]	1 0E-3[G, aa, ii]
Di-n-butyl phthalate	000084-74-2		3.7E+0	.	..	1.4E+2		.	..	.	..
Di-n-octyl phthalate	000117-84-0		7 3E-1	..	...	2.7E+1	...	.	...	.	...
Dibenz(a,h)anthracene	000053-70-3	.		1.2E-5	...	.	4 3E-4	.	...	.	.
Dibenzofuran	000132-64-9		1.5E-1*	..	..	5 4E+0*	. .	.	.	.	
Dibromo-3-chloropropane, 1,2-	000096-12-8	2 0E-4	..	6.1E-5	. .	. .	2 3E-3	.	...	.	
Dibromoethane, 1,2-	000106-93-4	...*	. .	1.0E-6	...	...	3 7E-5		.		.

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Dichlorobenzene, 1,4-	000106-46-7	7.5E-2	...	3.5E-3	..	...	1.3E-1	...	..		..
Dichloroethane, 1,1-	000075-34-3	...	3.7E+0		..	1.4E+2	.	..	..		.
Dichloroethane, 1,2-	000107-06-2	5.0E-3	.	9.4E-4	..	.	3.5E-2	..	...		.
Dichloroethylene, 1,1-	000075-35-4	7.0E-3	1.8E+0*	*	.	6.8E+1*	..*	..	..		
Dichloroethylene, 1,2-**	000540-59-0	.	3.3E-1		.	1.2E+1	...	...	.		
Dichloroethylene, cis-1,2-	000156-59-2	7.0E-2	3.6E-1	.	.	1.4E+1	...	...	...		.
Dichloroethylene, trans-1,2-	000156-60-5	1.0E-1	7.3E-1			2.7E+1	.	..			
Dichlorophenol, 2,4-	000120-83-2	..	1.1E-1	.		4.1E+0	..	...	.	.	
Dichloropropane, 1,2-	000078-87-5	5.0E-3	...	1.3E-3		..	4.6E-2	...	..		..
Dichloropropene, 1,3-	000542-75-6	...	1.1E+0*	8.5E-4	.	4.1E+1*	3.2E-2	..	..		.
Dieldrin	000060-57-1	.	1.8E-3	5.3E-6	3.0E-1	6.8E-2	2.0E-4	2.4E-1[K]	7.1E-1[G]	5.6E-2[K, O]	1.9E-3[G aa]
Diethyl phthalate	000084-66-2	..	2.9E+1	..	..	1.1E+3	...	...		..	..
Dimethyl phenol, 2,4-	000105-67-9	...	7.3E-1	..	..	2.7E+1	.	...			..

* Indicates difference between previous version of chemical data (JUN 96) and current version of chemical data (JAN04).
** Indicates new hazardous substance in current version of chemical data (JAN04).

HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Dinitrobenzene, 1,3-	000099-65-0	..	3.7E-3	...	...	1.4E-1	...	...	.	.	...
Dioxin 1,4-**	000290-67-5	..	..	.	...	..	..	..	..		..
Diphenylhydrazine, 1,2-	000122-66-7	..	.	1.1E-4	...	...	3.9E-3	...			.
Disulfoton	000298-04-4	..	1.5E-3	.	..	5.4E-2	...	..			...
Endosulfan (I or II)	000115-29-7	..	2.2E-1		..	8.1E+0	..	.	.		..
Endosulfan I**	000959-98-8	.	2.2E-1		.	8.1E+0	...	2.2E-1[G, Y]	3.4E-2[G, Y]	5.6E-2[G, Y]	8.7E-3[G, Y]
Endosulfan II**	033213-65-9		2.2E-1		..	8.1E+0	..	2.2E-1[G, Y]	3.4E-2[G, Y]	5.6E-2[G, Y]	8.7E-3[G, Y]
Endrin	000072-20-8	2.0E-3	1.1E-2		..	4.1E-1	..	8.6E-2[K]	3.7E-2[G]	3.6E-2[K, O]	2.3E-3[G, aa]
Endrin aldehyde	007421-93-4	..	...		...	.	...	.	..		
Ethyl benzene	000100-41-4	7.0E-1	3.7E+0		..	1.4E+2	..	..	..	.	..
Ethyl chloride	000075-00-3	.		..		..	...	..	...		.
Ethylene glycol monobutyl ether (EBGE)**	000111-76-2	...	1.8E+1		...	6.8E+2	.	...			.
Fluorene	000086-73-7		1.5E+0		.	5.4E+1	.	..	..	.	.
Fluorine	007782-41-4	..	2.2E+0	.	..	8.1E+1		...	.		..

* Indicates difference between previous version of chemical data (JUN 96) and current version of chemical data (JAN04)
** Indicates new hazardous substance in current version of chemical data (JAN04).

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Heptachlor	000076-44-8	4.0E-4	1 8E-2	1.9E-5	3.0E-1	6.8E-1	7.0E-4	5.2E-1[G]	5.3E-2[G]	3.8E-3[G, aa]	3.6E-3[G, aa]
Heptachlor epoxide, alpha, beta, gamma	001024-57-3	2.0E-4	4.7E-4	9.4E-6	3.0E-1	1.8E-2	3.5E-4	5 2E-1[G, V]	5.3E-2[G, V]	3.8E-3[G, V, aa]	3 6E-3[G, V, aa]
Heptachlorodibenzo-p-dioxin**	037871-00-4	.	.		..		...	...	..	.	...
Heptachlorodibenzo-p-dioxin 1,2,3,4,6,7,8-	035822-46-9	. .	..	5.7E-7	..	.	2 1E-5	.	.	...	.
Heptachlorodibenzofuran 1,2,3 4,6,7,8-	067562-39-4	..	.	5.7E-7	.	...	2 1E-5	...	...	..	.
Heptachlorodibenzofuran 1,2,3 4,7,8,9-	055673-89-7	..	.	5.7E-7*	.	...	2.1E-5*	..	.	..	
Hexabromobiphenyl (PBB)**	036355-01-8	. .	...	..	.	...	.	...	.		.
Hexachlorobenzene	000118-74-1	1 0E-3	2.9E-2	5 3E-5	...	1.1E+0	2 0E-3	.	.	.	
Hexachlorobutadiene	000087-68-3		7.3E-3	1 1E-3	.	2.7E-1	4 0E-2	...	...	.	.
Hexachlorocyclohexane, alpha-	000319-84-6		...	1.4E-5	..	...	5 0E-4	.	.	. .	
Hexachlorocyclohexane, beta-	000319-85-7		...	4 7E-5	...		1 8E-3	.	.	. .	
Hexachlorodibenzo-p-dioxin 1,2,3,4,7,8-	039227-28-6		.	1.4E-8	.	...	5.3E-7	. .	..	.	..
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8-	057653-85-7	.	.	1.4E-8	..		5 3E-7	..	.	.	.
Hexachlorodibenzo-p-dioxin 1,2,3,7,8,9-	019408-74-3	.	..	1 4E-8	...		5 1E-7	.		.	...

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** Indicates new hazardous substance in current version of chemical data (JAN04)

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Hexachlorodibenzofuran 1,2,3,4,7,8-	070648-26-9	...	.	5.7E-8	..	..	2.1E-6		.	. .	
Hexachlorodibenzofuran 1,2,3,6,7,8-	057117-44-9	..	...	5.7E-8	. .	. .	2.1E-6	...	...	.	.
Hexachlorodibenzofuran 1,2,3,7,8,9-	072918-21-9		...	5.7E-8	. .		2.1E-6	. .	. .	.	.
Hexachlorodibenzofuran 2,3,4,6,7,8-	060851-34-5	. .		5.7E-8	.	.	2.1E-6	..	.		
Hydrazine	000302-01-2	.	...	2.8E-5	.	.	1.1E-3	...	.	.	.
Hydrogen sulfide	007783-06-4		1.1E+0*	..	..	4.1E+1*	..	...	..	2.0E+0[F2]	2.0E+0[F2]
Indeno(1,2,3-cd)pyrene	000193-39-5	.	..	1.2E-4	...	..	4.3E-3	..	..		..
Iron	007439-89-6	.	..	..	...	.	..	..	..	1.0E+3[F2]	
Lead	007439-92-1	1.5E-2	.	..	...		..	6.5E+1[D, E, bb, gg]	2.1E+2[D, bb]	2.5E+0[D, E, bb, gg]	8.1E+0[D, bb]
Lead chromate**	007758-97-6	.	..	..	. .	..	.	...	..		
Lindane	000058-89-9	2.0E-4	1.1E-2	6.6E-5	...	4.1E-1	2.4E-3	9.5E-1[K]	1.6E-1[J]	.	
Manganese	007439-96-5		5.1E+0	.		1.9E+2	.	. .	..	.	
Mercury	007439-97-6	2.0E-3	1.1E-2	...	1.0E+0	4.1E-1	.	1.4E+0[D, K, hh]	1.8E+0[D, ee, hh]	7.7E-1[D, K, hh]	9.4E-1[D, ee, hh]

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** Indicates new hazardous substance in current version of chemical data (JAN04)

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
								Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Fresh	Salt	Fresh	Salt
Methoxychlor	000072-43-5	4.0E-2	1.8E-1	..	..	6.8E+0	...	..		3.0E-2[F2]	3.0E-2[F2]
Methyl Parathion	000298-00-0	...	9.1E-3		..	3.4E-1	..	...	.	.	...
Methyl ethyl ketone	000078-93-3	...	2.2E+1	.	..	8.1E+2	.	..	...	.	...
Methyl isobutyl ketone	000108-10-1		2.9E+0	.	...	1.1E+2	...	...	.	.	
Methyl phenol, 4-	000106-44-5	...	1.8E-1		..	6.8E+0	...	...			...
Methyl tert-butyl ether (MTBE)**	001634-04-4	.		..	..	...	...	..	.		...
Methylene chloride (dichloromethane)	000075-09-2	5.0E-3	2.2E+0	1.1E-2	..	8.1E+1	4.2E-1	..	.		.
Methylnaphthalene, 2-	000091-57-6	..	..	.	...	..	..	...		..	..
Naphthalene	000091-20-3	...	1.5E+0			5.4E+1	...	...			...
Nickel	007440-02-0	...	7.3E-1		..	2.7E+1	...	4.7E+2[D, E, K]	7.4E+1[D, bb]	5.2E+[illegible][D, E, K]	8.2E+0[D, bb]
Nitrosodiphenylamine, N-	000086-30-6	...	.	1.7E-2	.	...	6.4E-1	..	..		...
Pentachlorodibenzo-p-dioxin 1,2,3,7,8-	040321-76-4	..		1.1E-9	..	...	4.2E-8	...		.	..
Pentachlorodibenzofuran 1,2,3,7,8-	057117-41-6	..		*		...	...*	.	.		...
Pentachlorodibenzofuran 2,3,4,7,8-**	057117-31-4	.		5.7E-9	.	...	2.1E-7	...	.	.	

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** Indicates new hazardous substance in current version of chemical data (JAN04)

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
								Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Fresh	Salt	Fresh	Salt
Pentachlorophenol (PCP)	000087-86-5	1.0E-3	1.1E+0	7.1E-4	..	4.1E+1	2.6E-2	1.9E+1[F, K]	1.3E+1[bb]	1.5E-1[F, K]	7.9E+0[bb]
Perchlorate**	014797-73-0	..	3.7E-3	...	..	1.4E-1	..	..		..	...
Phenanthrene	000085-01-8	..			.	..	..	..		..	.
Phenol	000108-95-2		1.1E+1*		..	4.1E+2*	...	.			...
Plutonium	007440-07-5		.		...	...	..	...		..	..
Polychlorinated biphenyls (PCBs)	001336-36-3	5.0E-4	7.3E-4	4.3E-5	...	2.7E-2	1.6E-3	..		1.4E-2[N, aa]	3.0E-2[N, aa]
Pyrene	000129-00-0	..	1.1E+0	..	.	4.1E+1	.	..		.	...
Radium	007440-14-4	.	.	.	..	...	...	...	.	..	...
Radon	010043-92-2	..		..	...	...	...	...		.	...
Selenium	007782-49-2	5.0E-2	1.8E-1	.	..	6.8E+0	...	.[L, R, T]	2.9E+2[D, bb, dd]	5.0E-0[T]	7.1E+1[D, bb, dd]
Silver	007440-22-4	.	1.8E-1	..		6.8E+0	...	3.2E+0[D, E, G]	1.9E-0[D, G]	.	...
Strontium	007440-24-6	...			..	...	..	...			...
Styrene	000100-42-5	1.0E-1	7.3E+0	..	...	2.7E+2	..	..		.	.

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
								Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Fresh	Salt	Fresh	Salt
Tetrachlorobenzene, 1,2,4,5-	000095-94-3	.	1.1E-2	.	...	4.1E-1	..	...	...	..	.
Tetrachlorodibenzo-p-dioxin**	041903-57-5	...	...	...	..	..	...	...	..	...	..
Tetrachlorodibenzo-p-dioxin 2,3,7,8- (TCDD)	001746-01-6	3.0E-8	..	5.7E-10	...	.	2.1E-8	...	..	..	
Tetrachlorodibenzofuran 2,3,7,8-	051207-31-9	...	.	5.7E-9	...		2.1E-7	...	.	..	..
Tetrachloroethane, 1,1,2,2-	000079-34-5	..	..	4.3E-4		..	1.6E-2	...	...	...	
Tetrachloroethylene	000127-18-4	5.0E-3	3.6E-1	1.6E-3	..	1.4E+1	6.1E-2	...	..	.	..
Thallium	007440-28-0	5.0E-4	..	..	..	.	..	...	...	..	.
Toluene	000108-88-3	1.0E-0	7.3E+0	.	...	2.7E+2		.		..	.
Toxaphene	008001-35-2	3.0E-3	...	7.7E-5	.	..	2.9E-3	7.3E-1	2.1E-1	2.0E-4[aa]	2.0E-4[aa]
Trichlorobenzene, 1,2,4-	000120-82-1	7.0E-2	3.6E-1		..	1.4E+1	...	...	..	.	
Trichloroethane, 1,1,1-	000071-55-6	2.0E-1	...		..		...	.		.	..
Trichloroethane, 1,1,2-	000079-00-5	3.0E-3	1.5E-1	1.5E-3	...	5.4E+0	5.5E-2	...	.		
Trichloroethylene (TCE)	000079-01-6	5.0E-3	.	7.7E-3	.		2.9E-1	...	.	..	
Trichlorofluoromethane	000075-69-4		1.1E+1	..	.	4.1E+2			.		

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** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	Ground Water/Surface Water Pathway Drinking Water			Surface Water Pathway Food Chain			Surface Water Pathway Environmental			
		MCL/MCLG (mg/L)	Reference Dose Screen Conc (mg/L)	Cancer Risk Screen Conc (mg/L)	FDAAL (ppm)	Ref. Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)	Acute CMC (µg/L) *		Chronic CCC (µg/L) *	
								Fresh	Salt	Fresh	Salt
Trichlorophenol, 2,4,6-	000088-06-2	...	...	7.7E-3	.	.	2.9E-1	...		.	
Trichloropropane, 1,2,3-	000096-18-4	..	2.2E-1	1.2E-5	..	8.1E+0	4.5E-4	...	..	.	
Trifluralin (Treflan)	001582-09-8	.	2.7E-1	1.1E-2	..	1.0E+1	4.1E-1	...	..		.
Trinitrobenzene, 1,3,5-	000099-35-4	.	1.1E+0*	..		4.1E+1*	.	..	..	.	
Vanadium	007440-62-2	.	2.6E-1	..	.	9.5E+0	..	..		.	.
Vinyl acetate	000108-05-4	...	3.7E+1	.	.	1.4E+3		.	..	.	..
Vinyl chloride	000075-01-4	2.0E-3	1.1E-1*	5.7E-5		4.1E+0*	2.1E-3	...	.	.	
Xylene**	001330-20-7	..	7.3E+0	..		2.7E+2		..	..	..	..
Xylene, m-	000108-38-3	1.0E+1	7.3E+1	.	.	2.7E+3	...	...	..		
Xylene, o-	000095-47-6	1.0E+1	7.3E+1	..	..	2.7E+3	...	...	...	.	.
Xylene, p-	000106-42-3	1.0E+1	...	..	.	...	..	...	...	..	
Zinc	007440-66-6	.	1.1E+1	..		4.1E+2	...	1.2E+2[D, E, K]	9.0E+1[D, bb]	1.2E+2[D, E, K]	8.1E+1[D, bb]

* Indicates difference between previous version of chemical data (JUN 96) and current version of chemical data (JAN04)
** Indicates new hazardous substance in current version of chemical data (JAN04).

HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

		AIR PATHWAY			SOIL PATHWAY	
Substance Name	CAS Number	NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Acenaphthene	000083-32-9	...	..	..	4.7E+3	. .
Acenaphthylene	000208-96-8	..	.	.	...	.
Acetone	000067-64-1	...	...	..	7.0E+4*	..
Acrolein	000107-02-8	..	2.1E-5	.	3.9E+1*	.
Acrylamide	000079-06-1		...	1.9E-6	1.6E+1	1.4E-1
Alachlor**	015972-60-8	. .	...		7.8E+2	8.0E+0
Aldrin	000309-00-2	..	...	5.0E-7	2.3E+0	3.8E-2
Aluminum	007429-90-5	.		.	..	.
Americium**	007440-35-9	..	..	...	. .	. .
Aniline	000062-53-3	.	1.0E-3	...	.	1.1E+2*
Anthracene	000120-12-7	...	...	.	2.3E+4*	..
Antimony	007440-36-0	. .	4.2E-4*	.	3.1E+1	..
Arsenic	007440-38-2	.		5.7E-7	2.3E+1	4.3E-1
Asbestos	001332-21-4	.		Inhal Unit Risk 2.3E-1 fibers/mL*		...

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

		AIR PATHWAY			SOIL PATHWAY	
Substance Name	CAS Number	NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Barium	007440-39-3	..	5.2E-4	..	5.5E+3	..
Benz(a)anthracene	000056-55-3	..	..	.	.	8 8E-1
Benzene	000071-43-2	..	3 1E-2*	3 1E-4	3.1E+2*	1 2E+1*
Benzidine	000092-87-5	.	.	3.6E-8	2 3E+2	2 8E-3
Benzo(a)pyrene	000050-32-8		..	.		8.8E-2
Benzo(g,h,i)perylene	000191-24-2	..	...			..
Benzo(j,k)fluorene (Fluoranthene)	000206-44-0	.	..	.	3 1E+3	...
Benzo(k)fluoranthene	000207-08-9	.	.	..		8.8E+0
Beryllium	007440-41-7	1 0E-2	2.1E+1*	1 0E-6	1 6E+2*	...*
Bis (2-ethylhexyl) phthalate	000117-81-7	...	...	.	1 6E+3	4 6E+1*
Boron	007440-42-8	...	2 1E-2		7 0E+3	..
Bromodichloromethane	000075-27-4	...	...	.	1 6E+3	1.0E+1
Butylbenzyl phthalate	000085-68-7	...	..		1.6E+4*	...
Cadmium	007440-43-9	..	9.4E-4*	1 4E-6	3 9E+1	..

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** Indicates new hazardous substance in current version of chemical data (JAN04)

HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Carbazole	000086-74-8	..	...	..	...	3.2E+1*
Carbon disulfide	000075-15-0	..	7.3E-1	..	7.8E+3	
Carbon tetrachloride	000056-23-5		2.1E-2*	1.6E-4	5.5E+1	4.9E+0
Cesium	007440-46-2	.	..	.	...	.
Chlordane	000057-74-9		7.3E-4*	2.4E-5	3.9E+1*	1.8E+0*
Chlordane, alpha-	005103-71-9	..	7.3E-4*	2.4E-5*	3.9E+1*	1.8E+0*
Chlordane, gama-	005566-34-7		7.3E-4*	2.4E-5*	3.9E+1*	1.8E+0*
Chlorobenzene	000108-90-7	.	2.1E-2	...	1.6E+3	
Chloroform	000067-66-3	.	.	1.1E-4	7.8E+2	.*
Chromium	007440-47-3	..	8.3E-6*	.. *	2.3E+2*	.
Chromium(III)	016065-83-1		..	...	1.2E+5*	
Chromium(VI)	018540-29-9	.	8.3E-6*	2.0E-7	2.3E+2*	
Chrysene	000218-01-9	.	..	.		8.8E+1*
Cobalt	007440-48-4	.			.	
Copper	007440-50-8	.	.	..		.

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Cumene	000098-82-8	.	4.2E-1*	...	7.8E+3*	
Cyanamide**	000420-04-2	...	..	..	.	.
Cyanide	000057-12-5	..	...	..	1.6E+3	..
DDD	000072-54-8	.	...	..	..	2.7E+0
DDE	000072-55-9	.	...	...	.	1.9E+0
DDT	000050-29-3	.		2.5E-5	3.9E+1	1.9E+0
Di-n-butyl phthalate	000084-74-2	..	..		7.8E+3	.
Di-n-octyl phthalate	000117-84-0		..	...	1.6E+3	.
Dibenz(a,h)anthracene	000053-70-3	..	.	.	.	8.8E-2
Dibenzofuran	000132-64-9	.	...		3.1E+2*	
Dibromo-3-chloropropane, 1,2-	000096-12-8	...	2.1E-4	3.5E-3	.	4.6E-1
Dibromoethane, 1,2-	000106-93-4	..	2.1E-4	1.1E-5	..	7.5E-3
Dichlorobenzene, 1,4-	000106-46-7		8.3E-1	...		2.7E+1*
Dichloroethane, 1,1-	000075-34-3	.	5.2E-1*	..	7.8E+3	..

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Dichloroethane, 1,2-	000107-06-2	...	..	9.4E-5	.	7 0E+0
Dichloroethylene, 1,1-	000075-35-4	..	2.1E-1*	7.1E-6	3.9E+3*	. *
Dichloroethylene, 1,2-**	000540-59-0	..	..	...	7.0E+2	
Dichloroethylene, cis-1,2-	000156-59-2	.	..	..	7.8E+2	..
Dichloroethylene, trans-1,2-	000156-60-5	...	...		1.6E+3	.
Dichlorophenol, 2,4-	000120-83-2	...	..	.	2.3E+2	...
Dichloropropane, 1,2-	000078-87-5	...	4.2E-3	.	.	9.4E+0
Dichloropropene, 1,3-	000542-75-6	..	2 1E-2	6 1E-4	2 3E+3*	6 4E+0*
Dieldrin	000060-57-1	...	.	5 3E-7	3.9E+0	4.0E-2
Diethyl phthalate	000084-66-2	.		..	6 3E+4*	..
Dimethyl phenol, 2,4-	000105-67-9	.		..	1 6E+3	..
Dinitrobenzene, 1,3-	000099-65-0	...	.	.	7.8E+0	.
Dioxin 1,4-**	000290-67-5	. .	..	.		..
Diphenylhydrazine, 1,2-	000122-66-7	...	..	1 1E-5	.	8.0E-1
Disulfoton	000298-04-4	..	...	..	3.1E+0	..

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Endosulfan (I or II)	000115-29-7	..	.	..	4.7E+2	..
Endosulfan I**	000959-98-8	..	...		4.7E+2	..
Endosulfan II**	033213-65-9	..	.		4.7E+2	...
Endrin	000072-20-8			..	2.3E+1	
Endrin aldehyde	007421-93-4	.	.	.	..	...
Ethyl benzene	000100-41-4	.	1.0E+0		7.8E+3	.
Ethyl chloride	000075-00-3	..	1.0E+1	..	.	
Ethylene glycol monobutyl ether (EBGE)**	000111-76-2	..	2.1E-1	.	3.9E+4	..
Fluorene	000086-73-7	..	..	..	3.1E+3	
Fluorine	007782-41-4	..	...	.	4.7E+3	.
Heptachlor	000076-44-8	...	...	1.9E-6	3.9E+1	1.4E-1
Heptachlor epoxide, alpha beta, gamma	001024-57-3	.	.	9.4E-7	1.0E+0	7.0E-2
Heptachlorodibenzo-p-dioxin**	037871-00-4	.	..	..	..	.
Heptachlorodibenzo-p-dioxin, 1,2,3,4,6,7,8-	035822-46-9	...	.	5.7E-8	...	4.3E-3

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Heptachlorodibenzofuran 1,2,3,4,6,7,8-	067562-39-4	.	..	5.7E-8		4.3E-3
Heptachlorodibenzofuran 1,2,3,4,7,8,9-	055673-89-7	..	..	5.7E-8*	.	4.3E-3*
Hexabromobiphenyl (PBB)**	036355-01-8		..	.		..
Hexachlorobenzene	000118-74-1		.	5.3E-6	6.3E+1	4.0E-1
Hexachlorobutadiene	000087-68-3	.	...	1.1E-4	1.6E+1	8.2E+0
Hexachlorocyclohexane alpha-	000319-84-6		...	1.4E-6		1.0E-1
Hexachlorocyclohexane beta-	000319-85-7	.	..	4.6E-6	.	3.5E-1
Hexachlorodibenzo-p-dioxin 1,2,3,4,7,8-	039227-28-6	...	..	1.4E-9		1.1E-4
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8-	057653-85-7	...	.	1.4E-9		1.1E-4
Hexachlorodibenzo-p-dioxin 1,2,3,7,8,9-	019408-74-3	..	...	1.9E-9		1.0E-4
Hexachlorodibenzofuran 1,2,3,4,7,8-	070648-26-9		.	5.7E-9		4.3E-4
Hexachlorodibenzofuran 1,2,3,6,7,8-	057117-44-9	.	..	5.7E-9		4.3E-4
Hexachlorodibenzofuran 1,2,3,7,8,9-	072918-21-9	.	...	5.7E-9		4.3E-4
Hexachlorodibenzofuran 2,3,4,6,7,8-	060851-34-5	.	...	5.7E-9		4.3E-4

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Hydrazine	000302-01-2	..	...	5.0E-7	..	2.1E-1
Hydrogen sulfide	007783-06-4	..	2.1E-3	...	2.3E+3*	..
Indeno(1,2,3-cd)pyrene	000193-39-5	...	..	..	.	8.8E-1
Iron	007439-89-6	...	...	...	.	..
Lead	007439-92-1	1.5E+0	...	..		...
Lead chromate**	007758-97-6	...	...	.		..
Lindane	000058-89-9	.	...	..	2.3E+1	4.9E-1
Manganese	007439-96-5	..	5.2E-5	.	1.1E+4	.
Mercury	007439-97-6	..	3.1E-4	..	2.3E+1	...
Methoxychlor	000072-43-5	.	..	..	3.9E+2	.
Methyl Parathion	000298-00-0	..	..	..	2.0E+1	.
Methyl ethyl ketone	000078-93-3	..	5.2E+0*	...	4.7E+4*	...
Methyl isobutyl ketone	000108-10-1	..	3.1E+0*	...	6.3E+3	.
Methyl phenol, 4-	000106-44-5	..	..	.	3.9E+2	.
Methyl tert-butyl ether (MTBE)**	001634-04-4	..	3.1E+0	..	..	.

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Methylene chloride (dichloromethane)	000075-09-2	...	3.1E+0	5.2E-3	4.7E+3	8.5E+1*
Methylnaphthalene, 2-	000091-57-6	..		.	..	.
Naphthalene	000091-20-3	.	3.1E-3*	..	3.1E+3	..
Nickel	007440-02-0	.	..	..	1.6E+3	
Nitrosodiphenylamine, N-	000086-30-6	.	..		..	1.3E+2*
Pentachlorodibenzo-p-dioxin 1,2,3,7,8-	040321-76-4	.	..	1.1E-10		8.5E-6
Pentachlorodibenzofuran 1,2,3,7,8-	057117-41-6	.		...*	..	...*
Pentachlorodibenzofuran 2,3,4,7,8-**	057117-31-4	.	.	5.7E-10	..	4.3E-5
Pentachlorophenol (PCP)	000087-86-5	.	...	.	2.3E+3	5.3E+0
Perchlorate**	014797-73-0	..	.	..	7.8E+0	..
Phenanthrene	000085-01-8	.		..	.	
Phenol	000108-95-2	..	.	.	2.3E+4*	
Plutonium	007440-07-5	...		..	...	..
Polychlorinated biphenyls (PCBs)	001336-36-3	..	.	2.4E-5*	1.6E+0	3.2E-1*

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Pyrene	000129-00-0	...	..	.	2.3E+3	..
Radium	007440-14-4	...	.	.	..	.
Radon	010043-92-2		..		...	.
Selenium	007782-49-2		.	.	3.9E+2	
Silver	007440-22-4		...		3.9E+2	
Strontium	007440-24-6	.		.	4.7E+4*	
Styrene	000100-42-5	.	1.0E+0	.	1.6E+4*	.
Tetrachlorobenzene, 1,2,4,5-	000095-94-3	.	..	..	2.3E+1	
Tetrachlorodibenzo-p-dioxin**	041903-57-5	..	.		..	..
Tetrachlorodibenzo-p-dioxin 2,3,7,8- (TCDD)	001746-01-6	..	..	5.7E-11	..	4.3E-6
Tetrachlorodibenzofuran 2,3,7,8-	051207-31-9	.	.	5.7E-10	...	4.3E-5
Tetrachloroethane, 1,1,2,2-	000079-34-5	...	.	4.2E-5	...	3.2E+0
Tetrachloroethylene	000127-18-4	...	..	..	7.8E+2	1.2E+1
Thallium	007440-28-0	..	..	.	..	
Toluene	000108-88-3	...	4.2E-1	.	1.6E+4*	

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Toxaphene	008001-35-2	..	...	7.6E-6	...	5.8E-1
Trichlorobenzene, 1,2,4-	000120-82-1	...	2.1E-1	.	7.8E+2	...
Trichloroethane, 1,1,1-	000071-55-6	...	2.3E+0*	..	..	.
Trichloroethane, 1,1,2-	000079-00-5	...	...	1.5E-4	3.1E+2	1.1E+1
Trichloroethylene (TCE)	000079-01-6	.	..		.	5.8E+1*
Trichlorofluoromethane	000075-69-4	..	7.3E-1	.	2.3E+4*	...
Trichlorophenol, 2,4,6-	000088-06-2	...	...	7.8E-4	.	5.8E+1*
Trichloropropane, 1,2,3-	000096-18-4	.	..	..	4.7E+2	9.1E-2
Trifluralin (Treflan)	001582-09-8	..	...	..	5.9E+2	8.3E+1*
Trinitrobenzene, 1,3,5-	000099-35-4	...			2.3E+3*	..
Vanadium	007440-62-2		...		5.5E+2	
Vinyl acetate	000108-05-4	..	2.1E-1	..	7.3E+4*	...
Vinyl chloride	000075-01-4	.	1.0E-1*	2.8E-4	2.3E+2*	4.3E-1*
Xylene**	001330-20-7	.	1.0E-1	..	1.6E+4	..

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	AIR PATHWAY			SOIL PATHWAY	
		NAAQS NESHAPS (ug/m^3)	Reference Dose Screen Conc (mg/m^3)	Cancer Risk Screen Conc (mg/m^3)	Reference Dose Screen Conc (mg/kg)	Cancer Risk Screen Conc (mg/kg)
Xylene, m-	000108-38-3	..	...	.	1.6E+5*	..
Xylene, o-	000095-47-6	..	...	..	1.6E+5*	...
Xylene, p-	000106-42-3	...	..	..	.	
Zinc	007440-66-6	.	...		2.3E+4*	...

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	DRINKING WATER		FOOD CHAIN	AIR	SOIL		
		MCL (pCi/L)	Cancer Risk Screen Conc (pCi/L)	Cancer Risk Screen Conc (pCi/kg)	Cancer Risk Screen Conc (pCi/m3)	UMTRCA (pCi/kg)	Cancer Risk Soil Ing (pCi/kg)	Cancer Risk Soil Gam (pCi/kg)
Americium 241	014596-10-2	1.5E+1*	4.6E-1*	1.3E+1*	1.7E-4*	..	3.7E+3*	..
Antimony 125(+D) (radionuclide)	014234-35-6	3.0E+2*	9.3E+0*	2.4E+2*	2.5E-1*	...	6.0E+4*	..
Cadmium 109 (radionuclide)	014109-32-1	6.0E+2*	9.5E+0*	2.6E+2*	2.2E-1*	...	7.0E+4*	.
Cesium 137(+D) (radionuclide)	010045-97-3	2.0E+2*	1.6E+0*	4.7E+1*	4.0E-1*	...	1.8E+4*	
Cobalt 57 (radionuclide)	013981-50-5	1.0E+3*	4.6E+1*	1.2E+3*	2.3E+0*	...	2.9E+5*	
Cobalt 60 (radionuclide)	010198-40-0	1.0E+2*	3.0E+0*	7.9E+1*	1.3E-1*	...	2.0E+4*	..
Iron 55 (radionuclide)	014681-59-5	2.0E+3*	5.5E+1*	1.5E+3*	6.0E+0*	.	3.8E+5*	
Lead 210(+D) (radionuclide)	014255-04-0	...	3.7E-2	5.1E-1*	3.4E-4	...	3.0E+2*	
Manganese 54 (radionuclide)	013966-31-9	3.0E+2*	2.1E+1*	5.7E+2*	8.1E-1*	.	1.5E+5*	
Nickel 59 (radionuclide)	014336-70-0	3.0E+2*	1.8E+2*	4.5E+3*	1.0E+1*	..	2.1E+6*	
Nickel 63 (radionuclide)	013981-37-8	5.0E+1*	7.1E+1*	1.9E+3*	2.9E+0*	..	4.4E+5*	
Plutonium 236 (radionuclide)	015411-92-4	..	6.4E-1	1.8E+1*	2.1E-4*	...	4.6E+3*	...
Plutonium 238 (radionuclide)	013981-16-3	1.5E+1*	3.6E-1*	1.0E+1*	1.4E-4*	...	2.9E+3*	..
Plutonium 239 (radionuclide)	015117-48-3	1.5E+1*	3.5E-1*	1.0E+1*	1.4E-4*	..	2.9E+3*	...
Plutonium 240 (radionuclide)	014119-33-6	1.5E+1*	3.5E-1*	1.0E+1*	1.4E-4*	...	2.9E+3*	

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Substance Name	CAS Number	DRINKING WATER		FOOD CHAIN	AIR	SOIL		
		MCL (pCi/L)	Cancer Risk Screen Conc (pCi/L)	Cancer Risk Screen Conc (pCi/kg)	Cancer Risk Screen Conc (pCi/m3)	UMTRCA (pCi/kg)	Cancer Risk Soil Ing (pCi/kg)	Cancer Risk Soil Gam (pCi/kg)
Plutonium 241(+D) (radionuclide)	014119-32-5	.	2.7E+1*	7.7E+2*	1.4E-2*	...	2.4E+5*	
Plutonium 242 (radionuclide)	013982-10-0	1.5E+1*	3.7E-1*	1.1E+1*	1.5E-4*	..	3.0E+3*	
Plutonium 243 (radionuclide)	015706-37-3		1.0E+2*	2.5E+3*	1.6E+1*	...	5.9E+5*	.
Plutonium 244(+D) (radionuclide)	014119-34-7	1.5E+1*	3.5E-1*	9.8E+0*	1.6E-4*	..	2.7E+3*	
Radium 226(+D) (radionuclide)	013982-63-3	5.0E+0*	1.2E-1	3.4E+0*	4.1E-4	..	1.1E+3*	..
Radium 228(+D) (radionuclide)	015262-20-1	5.0E+0*	4.6E-2*	1.2E+0*	9.1E-4*	.	3.5E+2*	
Radon 222 (+D)(radionuclide)	014859-67-7	..	..	..	6.3E-1	...	..	
Silver 108m(+D) (radionuclide)	014391-65-2	...	5.8E+0*	1.6E+2*	1.8E-1*	...	4.1E+4*	
Silver 110m (radionuclide)	014391-76-5	9.0E+1*	4.8E+0*	1.3E+2*	1.7E-1*	...	3.4E+4*	.
Strontium 90(+D) (radionuclide)	010098-97-2	8.0E+0*	6.4E-1*	1.8E+1*	4.2E-2*	...	5.5E+3*	.
Technetium 99 (radionuclide)**	014133-76-7	9.0E+2	1.7E+1	4.4E+2	3.4E-1*		1.0E+5	...
Thallium 204 (radionuclide)	013968-51-9	3.0E+2*	8.1E+0*	2.1E+2*	1.9E+0*	...	5.2E+4*	
Thorium 227 (radionuclide)	015623-47-9	..	1.0E+0*	2.5E+1*	1.4E-4*	...	5.8E+3*	.
Thorium 228(+D) (radionuclide)	014274-82-9	1.5E+1*	1.6E-1	4.2E+0*	3.3E-5*	...	9.8E+2*	...

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HAZARD RANKING SYSTEM
Hazardous Substance Benchmarks

Substance Name	CAS Number	DRINKING WATER		FOOD CHAIN	AIR	SOIL		
		MCL (pCi/L)	Cancer Risk Screen Conc (pCi/L)	Cancer Risk Screen Conc (pCi/kg)	Cancer Risk Screen Conc (pCi/m3)	UMTRCA (pCi/kg)	Cancer Risk Soil Ing (pCi/kg)	Cancer Risk Soil Gam (pCi/kg)
Thorium 229(+D) (radionuclide)	015594-54-4	1.5E+1*	9.0E-2	2.5E+0*	2.1E-5*	..	6.2E+2*	
Thorium 230 (radionuclide)	014269-63-7	1.5E+1*	5.2E-1*	1.5E+1*	1.7E-4*	...	3.9E+3*	..
Thorium 231 (radionuclide)	014932-40-2	...	2.2E+1*	5.4E+2*	3.1E+0*	...	1.2E+5*	.
Thorium 232 (radionuclide)	007440-29-1	1.5E+1*	4.7E-1*	1.3E+1*	1.1E-4*	.	3.4E+3*	...
Thorium 234 (radionuclide)	015065-10-8		2.1E+0*	5.8E+1*	1.6E-1*		1.2E+4*	
Tritium	010028-17-8	...	4.3E+2*	1.2E+4*	2.4E+1*	..	3.6E+6*	..
Uranium 232 (radionuclide)	014158-29-3	2.0E+1*	1.6E-1*	4.6E+0*	2.4E-4*	.	1.4E+3*	...
Uranium 233 (radionuclide)	013968-55-3	2.0E+1*	6.6E-1*	1.8E+1*	4.1E-4*	.	5.0E+3*	..
Uranium 234 (radionuclide)	013966-29-5	2.0E+1*	6.7E-1*	1.8E+1*	4.2E-4*		5.0E+3*	...
Uranium 235(+D) (radionuclide)	015117-96-1	2.0E+1*	6.6E-1*	1.8E+1*	4.7E-4*		4.9E+3*	.
Uranium 236(+D) (radionuclide)	013982-70-2	2.0E+1*	7.1E-1*	1.9E+1*	4.5E-4*	..	5.3E+3*	..
Uranium 238(+D) (radionuclide)	007440-61-1	2.0E+1*	5.5E-1*	1.5E+1*	5.1E-4*	.	3.8E+3*	...
Zinc 65 (radionuclide)	013982-39-3	3.0E+2*	4.1E+0*	1.1E+2*	8.2E-1*	.	3.2E+4*	

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Footnote Code	Footnote Description
A	This recommended water quality criterion was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. In the arsenic criteria document (EPA 440/5-84-033, January 1985), Species Mean Acute Values are given for both arsenic (III) and arsenic (V) for five species and the ratios of the SMAVs for each species range from 0.6 to 1.7. Chronic values are available for both arsenic (III) and arsenic (V) for one species, for the fathead minnow, the chronic value for arsenic (V) is 0.29 times the chronic value for arsenic (III). No data are known to be available concerning whether the toxicities of the forms of arsenic to aquatic organisms are additive.
B	This criterion has been revised to reflect The Environmental Protection Agency's q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case.
C	This criterion is based on carcinogenicity of 10^{-6} risk. Alternate risk levels may be obtained by moving the decimal point (e.g., for a risk level of 10^{-5}, move the decimal point in the recommended criterion one place to the right)
D	Freshwater and saltwater criteria for metals are expressed in terms of the dissolved metal in the water column. The recommended water quality criteria value was calculated by using the previous 304(a) aquatic life criteria expressed in terms of total recoverable metal, and multiplying it by a conversion factor (CF). The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. (Conversion Factors for saltwater CCCs are not currently available. Conversion factors derived for saltwater CMCs have been used for both saltwater CMCs and CCCs) See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria," October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water, available from the Water Resource center, USEPA, 401 M St., SW, mail code RC4100, Washington, DC 20460, and 40CFR§131.36(b)(1). Conversion Factors applied in the table can be found in Appendix A to the Preamble- Conversion Factors for Dissolved Metals (which is attached below)
E	The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L. Criteria values for other hardness may be calculated from the following: CMC (dissolved) = $\exp\{m_A [\ln(\text{hardness})] + b_A\}$ (CF), or CCC (dissolved) = $\exp\{m_C [\ln(\text{hardness})] + b_C\}$ (CF) and the parameters specified in Appendix B- Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent (which is attached below)
F	Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: CMC = exp(1.005(pH)-4.869), CCC = exp(1.005(pH)-5.134). Values displayed in table correspond to a pH of 7.8.
G	This Criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (EPA 440/5- 80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.
H	No criterion for protection of human health from consumption of aquatic organisms excluding water was presented in the 1980 criteria document or in the *1986 Quality Criteria for Water*. Nevertheless, sufficient information was presented in the 1980 document to allow the calculation of a criterion, even though the results of such a calculation were not shown in the document
I	This criterion for asbestos is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act (SDWA)
J	This fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.

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Footnote Code	Footnote Description
K	This recommended criterion is based on a 304(a) aquatic life criterion that was issued in the *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*, (EPA-820-B-96-001, September 1996). This value was derived using the GLI Guidelines (60FR15393-15399, March 23, 1995; 40CFR132 Appendix A); the difference between the 1985 Guidelines and the GLI Guidelines are explained on page iv of the 1995 Updates. None of the decisions concerning the derivation of this criterion were affected by any considerations that are specific to the Great Lakes.
L	The CMC = 1/[(f1/CMC1) + (f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 µg/l and 12.82 µg/l, respectively
M	EPA is currently reassessing the criteria for arsenic
N	This criterion applies to total pcbs, (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses.)
O	The derivation of the CCC for this pollutant (Endrin) did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.
P	Although a new RfD is available in IRIS, the surface water criteria will not be revised until the National Primary Drinking Water Regulations: Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) is completed, since public comment on the relative source contribution (RSC) for chloroform is anticipated.
Q	This recommended water quality criterion is expressed as µg free cyanide (as CN)/L
R	This value for selenium was announced (61FR58444-58449, November 14, 1996) as a proposed GLI 303(c) aquatic life criterion. EPA is currently working on this criterion and so this value might change substantially in the near future.
S	This recommended water quality criterion for arsenic refers to the inorganic form only
T	This recommended water quality criterion for selenium is expressed in terms of total recoverable metal in the water column. It is scientifically acceptable to use the conversion factor (0.996- CMC or 0.922- CCC) that was used in the GLI to convert this to a value that is expressed in terms of dissolved metal.
U	The organoleptic effect criterion is more stringent than the value for priority toxic pollutants.
V	This value was derived from data for heptachlor and the criteria document provides insufficient data to estimate the relative toxicities of heptachlor and heptachlor epoxide.
W	Although EPA has not published a completed criteria document for butylbenzyl phthalate it is EPA's understanding that sufficient data exist to allow calculation of aquatic criteria. It is anticipated that industry intends to publish in the peer reviewed literature draft aquatic life criteria generated in accordance with EPA Guidelines. EPA will review such criteria for possible issuance as national WQC.
X	There is a full set of aquatic life toxicity data that show that DEHP is not toxic to aquatic organisms at or below its solubility limit.
Y	This value was derived from data for endosulfan and is most appropriately applied to the sum of alpha-endosulfan and beta-endosulfan.
Z	A more stringent MCL has been issued by EPA. Refer to drinking water regulations (40 CFR 141) or Safe Drinking Water Hotline (1-800-426-4791) for values.
aa	This criterion is based on a 304(a) aquatic life criterion issued in 1980 or 1986, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80- 038), Endrin (EPA 440/5-80-047), Heptachlor (EPA 440/5-80-052), Polychlorinated biphenyls (EPA 440/5-80-068), Toxaphene (EPA 440/5-86-006). This CCC is currently based on the Final Residue Value (FRV) procedure. Since the publication of the Great Lakes Aquatic Life Criteria Guidelines in 1995 (60FR15393-15399, March 23, 1995), the Agency no longer uses the Final Residue Value procedure for deriving CCCs for new or revised 304(a) aquatic life criteria. Therefore, the Agency anticipates that future revisions of this CCC will not be based on the FRV procedure

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Footnote Code	Footnote Description
bb	This water quality criterion is based on a 304(a) aquatic life criterion that was derived using the 1985 Guidelines (*Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*, PB85-227049, January 1985) and was issued in one of the following criteria documents. Arsenic (EPA 440/5-84-033), Cadmium (EPA 882-R-01-001), Chromium (EPA 440/5-84-029), Copper (EPA 440/5-84-031), Cyanide (EPA 440/5- 84-028), Lead (EPA 440/5-84-027), Nickel (EPA 440/5-86-004), Pentachlorophenol (EPA 440/5-86-009), Toxaphene, (EPA 440/5-86-006), Zinc (EPA 440/5-87- 003)
cc	When the concentration of dissolved organic carbon is elevated, copper is substantially less toxic and use of Water-Effect Ratios might be appropriate.
dd	The selenium criteria document (EPA 440/5-87-006, September 1987) provides that if selenium is as toxic to saltwater fishes in the field as it is to freshwater fishes in the field, the status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 µg/L in salt water because the saltwater CCC does not take into account uptake via the food chain.
ee	This recommended water quality criterion was derived on page 43 of the mercury criteria document (EPA 440/5- 84-026, January 1985). The saltwater CCC of 0.025 ug/L given on page 23 of the criteria document is based on the Final Residue Value procedure in the 1985 Guidelines. Since the publication of the Great Lakes Aquatic Life Criteria Guidelines in 1995 (60FR15393-15399, March 23, 1995), the Agency no longer uses the Final Residue Value procedure for deriving CCCs for new or revised 304(a) aquatic life criteria
ff	This recommended water quality criterion was derived in *Ambient Water Quality Criteria Saltwater Copper Addendum* (Draft, April 14, 1995) and was promulgated in the Interim final National Toxics Rule (60FR22228- 222237, May 4, 1995)
gg	EPA is actively working on this criterion and so this recommended water quality criterion may change substantially in the near future.
hh	This recommended water quality criterion was derived from data for inorganic mercury (II), but is applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, this criterion will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a great extent, this criterion does not account for uptake via the food chain because sufficient data were not available when the criterion was derived.
ii	This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).
F2	The derivation of this value is presented in the Red Book (EPA 440/9-76-023, July, 1976)
G2	This value is based on a 304(a) aquatic life criterion that was derived using the 1985 Guidelines (*Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*, PB85-227049, January 1985) and was issued in one of the following criteria documents: Aluminum (EPA 440/5-86-008), Chloride (EPA 440/5-88-001), Chloropyrifos (EPA 440/5-86-005).
I2	This value for aluminum is expressed in terms of total recoverable metal in the water column
L2	There are three major reasons why the use of Water-Effect Ratios might be appropriate. (1) The value of 87 µg/l is based on a toxicity test with the striped bass in water with pH= 6.5-6.6 and hardness <10 mg/L. Data in "Aluminum Water-Effect Ratio for the 3M Plant Effluent Discharge, Middleway, West Virginia" (May 1994) indicate that aluminum is substantially less toxic at higher pH and hardness, but the effects of pH and hardness are not well quantified at this time. (2) In tests with the brook trout at low pH and hardness, effects increased with increasing concentrations of total aluminum even though the concentration of dissolved aluminum was constant, indicating that total recoverable is a more appropriate measurement than dissolved, at least when particulate aluminum is primarily aluminum hydroxide particles. In surface waters, however, the total recoverable procedure might measure aluminum associated with clay particles, which might be less toxic than aluminum associated with aluminum hydroxide. (3) EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 µg aluminum/L, when either total recoverable or dissolved is measured.

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Conversion Factors for Dissolved Metals				
Metal	**Conversion Factor Freshwater CMC**	**Conversion Factor Freshwater CCC**	**Conversion Factor Saltwater CMC**	**Conversion Factor Saltwater CMC**
Arsenic	1.000	1.000	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]	0.994	0.994
ChromiumIII	0.316	0.860	--	--
Chromium VI	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[ln hardness)(0.145712)]	0.951	0.951
Mercury	0.85	0.85	0.85	0.85
Nickel	0.998	0.997	0.990	0.990
Selenium	--	--	0.998	0.998
Silver	0.85	--	0.85	--
Zinc	0.978	0.986	0.946	0.946

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Parameters for Calculating Freshwater Dissolved Metals That are Hardness Dependent						
					Conversion Factors (CF)	
Chemical	m_A	b_A	m_C	b_C	**CMC**	**CCC**
Cadmium	1.0166	-3.924	0.7409	-4.719	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Copper	0.9422	-1.700	0.8545	-1.702	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59	--	--	0.85	--
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Hardness-dependent metals' criteria may be calculated from the following.

$$CMC\ (dissolved) = \exp\{m_A\ [\ln(hardness)] + b_A\}\ (CF)$$

$$CCC\ (dissolved) = \exp\{m_C\ [\ln(hardness)] + b_C\}\ (CF)$$

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