

US EPA ARCHIVE DOCUMENT

Table CO7. Chemical-specific Risks and Hazards by Cohorts for Surface Impoundments (unitless)
Human Receptors - 2000 meters; Ecological Receptors - 2000 meters

Chemical Name	CASRN	Scenario 1						Scenario 2					
		Infants		1-12 yrs old		13 yrs old & older		Infants		1-12 yrs old		13 yrs old & older	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Acetonitrile	75-05-8	NA	NA	note 2	= 9E-02,(inh)	note 2	< 1E-01,(inh)	NA	NA	note 2	= 9E-01,(inh)	note 2	< 1E+00,(inh)
Acrylonitrile	107-13-1	NA	NA	= 4E-06,(ing)	= 5E-02,(ing)	= 1E-06,(ing)	< 1E-01,(inh)	NA	NA	= 1E-06,(ing)	< 1E-01,(inh)	= 1E-06,(ing)	< 1E-01,(inh)
Aniline	62-53-3	NA	NA	= 6E-07,(ing)	= 8E-02,(inh)	= 6E-07,(ing)	< 1E-01,(inh)	NA	NA	= 3E-06,(ing)	= 8E-01,(inh)	< 1E-06,(ing)	= 9E-01,(inh)
Arsenic	7440-38-2	NA	NA	= 8E-07,(ing)	< 1E-01,(inh)	= 9E-07,(ing)	< 1E-01,(inh)	NA	NA	= 1E-06,(ing)	< 1E-01,(inh)	= 1E-06,(ing)	< 1E-01,(inh)
Barium	7440-39-3	NA	NA	note 2	= 2E-01,(ing)	note 2	= 6E-02,(ing)	NA	NA	note 2	= 4E+00,(ing)	note 2	= 9E-01,(ing)
Benzene	71-43-2	NA	NA	= 1E-06,(cmb)	note 3	< 1E-06,(cmb)	note 3	NA	NA	= 7E-07,(cmb)	note 3	< 1E-06,(cmb)	note 3
Benzo(a)pyrene	50-32-8	NA	NA	< 1E-08,(ing)	note 3	< 1E-08,(ing)	note 3	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3
Beryllium	7440-41-7	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)
Bis-(2-ethylhexyl) phthalate	117-81-7	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)
Cadmium	7440-43-9	NA	NA	< 1E-08,(inh)	= 1E-01,(ing)	< 1E-08,(inh)	= 9E-02,(ing)	NA	NA	< 1E-08,(inh)	= 4E+00,(ing)	< 1E-08,(inh)	= 7E-01,(ing)
Carbon disulfide	75-15-0	NA	NA	note 2	= 2E-01,(ing)	note 2	= 6E-02,(ing)	NA	NA	note 2	= 2E-02,(ing)	note 2	= 6E-02,(ing)
Chlorobenzene	108-90-7	NA	NA	note 2	= 9E-02,(cmb)	note 2	< 1E-01,(cmb)	NA	NA	note 2	= 9E-01,(cmb)	note 2	< 1E+00,(cmb)
Chloroform	67-66-3	NA	NA	= 1E-06,(cmb)	< 1E-01,(inh)	< 1E-06,(cmb)	= 2E-03,(ing)	NA	NA	= 9E-07,(cmb)	< 1E-01,(inh)	< 1E-06,(cmb)	< 1E-01,(inh)
Dibenz[a,h]anthracene	53-70-3	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3
Dichlorophenoxyacetic acid, 2,4-	94-75-7	NA	NA	note 2	= 2E-01,(ing)	note 2	= 7E-02,(ing)	NA	NA	note 2	= 5E+00,(ing)	note 2	= 9E-01,(ing)
Divalent Mercury	7439-97-6	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Ethylene dibromide	106-93-4	NA	NA	= 4E-06,(ing)	< 1E-01,(inh)	= 1E-06,(ing)	< 1E-01,(inh)	NA	NA	= 1E-06,(ing)	< 1E-01,(inh)	= 9E-07,(ing)	< 1E-01,(inh)
Lead	7439-92-1	NA	NA	note 1	note 1	note 1	note 1	NA	NA	note 1	note 1	note 1	note 1
Methyl ethyl ketone	78-93-3	NA	NA	note 2	= 7E-01,(cmb)	note 2	< 1E-01,(cmb)	NA	NA	note 2	= 7E-01,(cmb)	note 2	= 7E-01,(cmb)
Methyl methacrylate	80-62-6	NA	NA	note 2	= 2E-01,(ing)	note 2	< 1E-01,(inh)	NA	NA	note 2	< 1E+00,(inh)	note 2	< 1E+00,(inh)
Methylene chloride	75-09-2	NA	NA	= 4E-06,(cmb)	= 6E-02,(cmb)	< 1E-06,(cmb)	= 1E-02,(cmb)	NA	NA	= 1E-06,(cmb)	= 1E-02,(cmb)	< 1E-06,(cmb)	= 9E-04,(cmb)
Nickel [+2]	7440-02-0	NA	NA	< 1E-08,(inh)	= 1E-01,(ing)	< 1E-08,(inh)	= 9E-02,(ing)	NA	NA	< 1E-08,(inh)	= 3E+00,(ing)	< 1E-08,(inh)	= 9E-01,(ing)
Nitrobenzene	98-95-3	NA	NA	note 2	= 1E-01,(cmb)	note 2	< 1E-01,(cmb)	NA	NA	note 2	< 1E+00,(cmb)	note 2	= 1E+00,(cmb)
Pentachlorophenol	87-86-5	NA	NA	= 3E-06,(ing)	< 1E-01,(inh)	= 9E-07,(ing)	< 1E-01,(inh)	NA	NA	< 1E-06,(ing)	< 1E-01,(inh)	< 1E-06,(ing)	< 1E-01,(inh)
Phenol	108-95-2	NA	NA	note 2	= 4E-01,(ing)	note 2	< 1E-01,(ing)	NA	NA	note 2	< 1E+00,(ing)	note 2	< 1E+00,(ing)
Pyridine	110-86-1	NA	NA	note 2	= 5E-01,(ing)	note 2	< 1E-01,(ing)	NA	NA	note 2	= 4E+00,(ing)	note 2	< 1E+00,(ing)
Silver	7440-22-4	NA	NA	Invalid curve	Invalid curve	Invalid curve	Invalid curve	NA	NA	note 2	= 1E+00,(ing)	note 2	= 9E-01,(ing)
Tetrachlorodibenzo-p-dioxin, 2,3,7	1746-01-6	NA	NA	= 2E-06,(cmb)	< 1E-01,(inh)	< 1E-06,(cmb)	< 1E-01,(inh)	NA	NA	= 2E-06,(cmb)	< 1E-01,(inh)	< 1E-06,(cmb)	< 1E-01,(inh)

Table CO7. Chemical-specific Risks and Hazards by Cohorts for Surface Impoundments (unitless)
 Human Receptors - 2000 meters; Ecological Receptors - 2000 meters

Chemical Name	CASRN	Scenario 1						Scenario 2					
		Infants		1-12 yrs old		13 yrs old & older		Infants		1-12 yrs old		13 yrs old & older	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Tetrachloroethylene	127-18-4	NA	NA	= 5E-06,(cmb)	= 6E-02,(ing)	< 1E-06,(cmb)	< 1E-01,(inh)	NA	NA	= 9E-07,(cmb)	< 1E-01,(inh)	< 1E-06,(cmb)	< 1E-01,(inh)
Thallium [+1]	7446-18-6	NA	NA	note 2	= 2E-01,(ing)	note 2	= 9E-02,(ing)	NA	NA	note 2	= 2E+00,(ing)	note 2	= 6E-01,(ing)
Thiram	137-26-8	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Toluene	108-88-3	NA	NA	note 2	< 1E-01,(inh)	note 2	= 4E-03,(ing)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Trichloroethane, 1,1,1-	71-55-6	NA	NA	note 2	= 2E-01,(ing)	note 2	= 1E-01,(ing)	NA	NA	note 2	= 2E-01,(ing)	note 2	= 5E-01,(ing)
Trichloroethylene	79-01-6	NA	NA	= 7E-08,(ing)	note 3	= 9E-09,(ing)	note 3	NA	NA	= 9E-09,(ing)	note 3	= 9E-09,(ing)	note 3
Vinyl chloride	75-01-4	NA	NA	= 2E-06,(cmb)	note 3	= 9E-07,(cmb)	note 3	NA	NA	= 1E-06,(cmb)	note 3	= 9E-07,(cmb)	note 3
Zinc	7440-66-6	NA	NA	note 2	< 1E-01,(ing)	note 2	= 9E-02,(ing)	NA	NA	note 2	= 8E-01,(ing)	note 2	= 9E-01,(ing)

note 1: Human impacts were not evaluated due to the lack of human health toxicity values.

note 2: The risk was not calculated for this chemical because the chemical did not have a cancer slope factor.

note 3: The hazard was not calculated for this chemical because it did not have a noncancer reference dose or reference concentration.

NA: Not Applicable.

Invalid Curve: For this chemical and cohort, the curve could not be used to interpolate a result.

Table CO7. Chemical-specific Risks and Hazards by Cohorts for Surface Impoundments (unitless)
Human Receptors - 2000 meters; Ecological Receptors - 2000 meters

Chemical Name	CASRN	Scenario 3						Scenario 4					
		Infants		1-12 yrs old		13 yrs old & older		Infants		1-12 yrs old		13 yrs old & older	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Acetonitrile	75-05-8	NA	NA	note 2	= 9E-01,(inh)	note 2	< 1E+00,(inh)	NA	NA	note 2	= 6E+00,(inh)	note 2	= 9E-01,(inh)
Acrylonitrile	107-13-1	NA	NA	= 7E-06,(ing)	< 1E-01,(ing)	= 7E-06,(ing)	= 2E-01,(ing)	NA	NA	= 1E-05,(ing)	= 2E-01,(ing)	= 1E-05,(ing)	= 2E-01,(ing)
Aniline	62-53-3	NA	NA	= 5E-06,(ing)	= 1E+00,(inh)	= 5E-06,(ing)	< 1E+00,(inh)	NA	NA	= 7E-06,(ing)	= 4E+00,(inh)	= 6E-06,(ing)	< 1E+00,(inh)
Arsenic	7440-38-2	NA	NA	= 1E-05,(ing)	= 4E-01,(ing)	= 1E-05,(ing)	= 1E-01,(ing)	NA	NA	= 6E-06,(ing)	= 3E-02,(ing)	= 8E-07,(ing)	< 1E-01,(inh)
Barium	7440-39-3	NA	NA	note 2	= 4E+00,(ing)	note 2	= 9E-01,(ing)	NA	NA	note 2	< 1E-01,(ing)	note 2	< 1E-01,(ing)
Benzene	71-43-2	NA	NA	= 9E-06,(cmb)	note 3	= 8E-06,(cmb)	note 3	NA	NA	< 1E-05,(cmb)	note 3	< 1E-05,(cmb)	note 3
Benzo(a)pyrene	50-32-8	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3
Beryllium	7440-41-7	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)
Bis-(2-ethylhexyl) phthalate	117-81-7	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)	NA	NA	< 1E-08,(inh)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)
Cadmium	7440-43-9	NA	NA	< 1E-08,(inh)	= 4E+00,(ing)	< 1E-08,(inh)	= 7E-01,(ing)	NA	NA	< 1E-08,(inh)	< 1E-01,(ing)	< 1E-08,(inh)	< 1E-01,(ing)
Carbon disulfide	75-15-0	NA	NA	note 2	= 2E-02,(ing)	note 2	= 6E-02,(ing)	NA	NA	note 2	< 0E+00,(inh)	note 2	< 1E-01,(inh)
Chlorobenzene	108-90-7	NA	NA	note 2	= 9E-01,(cmb)	note 2	< 1E+00,(cmb)	NA	NA	note 2	< 1E+00,(cmb)	note 2	< 1E-01,(cmb)
Chloroform	67-66-3	NA	NA	= 7E-06,(cmb)	= 3E-02,(ing)	= 6E-06,(cmb)	= 1E-01,(ing)	NA	NA	= 9E-06,(cmb)	= 9E-02,(ing)	= 7E-06,(cmb)	= 9E-02,(ing)
Dibenz[a,h]anthracene	53-70-3	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3	NA	NA	< 1E-08,(inh)	note 3	< 1E-08,(inh)	note 3
Dichlorophenoxyacetic acid, 2,4-	94-75-7	NA	NA	note 2	= 5E+00,(ing)	note 2	= 9E-01,(ing)	NA	NA	note 2	< 1E+00,(ing)	note 2	< 1E-01,(ing)
Divalent Mercury	7439-97-6	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Ethylene dibromide	106-93-4	NA	NA	< 1E-05,(ing)	< 1E-01,(inh)	= 1E-05,(ing)	< 1E-01,(inh)	NA	NA	= 9E-06,(ing)	< 1E-01,(inh)	= 9E-06,(ing)	< 1E-01,(inh)
Lead	7439-92-1	NA	NA	note 1	note 1	note 1	note 1	NA	NA	note 1	note 1	note 1	note 1
Methyl ethyl ketone	78-93-3	NA	NA	note 2	= 7E-01,(cmb)	note 2	= 7E-01,(cmb)	NA	NA	note 2	< 1E-01,(cmb)	note 2	< 1E-01,(cmb)
Methyl methacrylate	80-62-6	NA	NA	note 2	< 1E+00,(inh)	note 2	< 1E+00,(inh)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Methylene chloride	75-09-2	NA	NA	= 9E-06,(cmb)	= 4E-01,(cmb)	= 1E-05,(cmb)	= 3E-01,(cmb)	NA	NA	< 1E-05,(cmb)	< 1E+00,(cmb)	< 1E-05,(cmb)	< 1E-01,(cmb)
Nickel [+2]	7440-02-0	NA	NA	< 1E-08,(inh)	= 3E+00,(ing)	< 1E-08,(inh)	= 9E-01,(ing)	NA	NA	< 1E-08,(inh)	< 1E+00,(ing)	< 1E-08,(inh)	< 1E+00,(ing)
Nitrobenzene	98-95-3	NA	NA	note 2	< 1E+00,(cmb)	note 2	= 1E+00,(cmb)	NA	NA	note 2	= 3E+00,(cmb)	note 2	= 9E-01,(cmb)
Pentachlorophenol	87-86-5	NA	NA	< 1E-06,(ing)	< 1E-01,(inh)	< 1E-06,(ing)	< 1E-01,(inh)	NA	NA	< 1E-08,(ing)	< 1E-01,(inh)	< 1E-08,(inh)	< 1E-01,(inh)
Phenol	108-95-2	NA	NA	note 2	< 1E+00,(ing)	note 2	< 1E+00,(ing)	NA	NA	note 2	< 1E-01,(ing)	note 2	< 1E-01,(inh)
Pyridine	110-86-1	NA	NA	note 2	= 4E+00,(ing)	note 2	< 1E+00,(ing)	NA	NA	note 2	< 1E-01,(ing)	note 2	< 1E-01,(ing)
Silver	7440-22-4	NA	NA	note 2	= 1E+00,(ing)	note 2	= 9E-01,(ing)	NA	NA	note 2	= 4E+00,(ing)	note 2	= 9E-01,(ing)
Tetrachlorodibenzo-p-dioxin, 2,3,7	1746-01-6	NA	NA	< 5E-06,(cmb)	< 1E-01,(inh)	< 5E-06,(cmb)	< 1E-01,(inh)	NA	NA	< 1E-08,(cmb)	< 1E-01,(inh)	< 1E-08,(cmb)	< 1E-01,(inh)

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 Human Receptors - 2000 meters; Ecological Receptors - 2000 meters

Chemical Name	CASRN	Scenario 3						Scenario 4					
		Infants		1-12 yrs old		13 yrs old & older		Infants		1-12 yrs old		13 yrs old & older	
		Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ	Risk	HQ
Tetrachloroethylene	127-18-4	NA	NA	< 1E-05,(cmb)	= 9E-02,(ing)	< 1E-05,(cmb)	= 4E-01,(ing)	NA	NA	< 1E-05,(cmb)	< 1E-01,(ing)	< 1E-05,(cmb)	< 1E-01,(ing)
Thallium [+1]	7446-18-6	NA	NA	note 2	= 2E+00,(ing)	note 2	= 6E-01,(ing)	NA	NA	note 2	< 1E+00,(ing)	note 2	< 1E-01,(ing)
Thiram	137-26-8	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Toluene	108-88-3	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)	NA	NA	note 2	< 1E-01,(inh)	note 2	< 1E-01,(inh)
Trichloroethane, 1,1,1-	71-55-6	NA	NA	note 2	= 2E-01,(ing)	note 2	= 5E-01,(ing)	NA	NA	note 2	= 9E-01,(ing)	note 2	= 8E-01,(ing)
Trichloroethylene	79-01-6	NA	NA	= 9E-09,(ing)	note 3	= 9E-09,(ing)	note 3	NA	NA	= 9E-09,(ing)	note 3	= 9E-09,(ing)	note 3
Vinyl chloride	75-01-4	NA	NA	= 8E-06,(cmb)	note 3	= 7E-06,(cmb)	note 3	NA	NA	= 9E-06,(cmb)	note 3	= 8E-06,(cmb)	note 3
Zinc	7440-66-6	NA	NA	note 2	= 8E-01,(ing)	note 2	= 9E-01,(ing)	NA	NA	note 2	< 1E+00,(ing)	note 2	< 1E-01,(ing)

- note 1: Human impacts were not evaluated due to the lack of human health toxicity values.
- note 2: The risk was not calculated for this chemical because the chemical did not have a cancer slope factor.
- note 3: The hazard was not calculated for this chemical because it did not have a noncancer reference dose or reference concentration.
- NA: Not Applicable.