

TABLE 1
NJDEP MASTER TABLE
VAPOR INTRUSION SCREENING LEVELS AND
INDOOR AIR REMEDIATION STANDARDS

Chemical	CAS No.	Ground Water	Soil Gas Screening Levels		Indoor Air Remediation Standards	
		Screening Levels	Residential	Nonresidential	Residential	Nonresidential
		$\mu\text{g/L}$	$\mu\text{g/m}^3$	$\mu\text{g/m}^3$	$\mu\text{g/m}^3$	$\mu\text{g/m}^3$
Acetone (2-propanone)	67-64-1	-	-	-	-	-
Benzene	71-43-2	23 ^a	18	79	0.64 ^b	1.6
Bromodichloromethane	75-27-4	-	-	-	-	-
Bromoform	75-25-2	-	-	-	-	-
Bromomethane (methyl bromide)	74-83-9	20	260	1,100	5.2	22
2-Butanone (methyl ethyl ketone)	78-93-3	2,500,000	260,000	1,100,000	5,200	22,000
Carbon disulfide	75-15-0	1,500	36,000	150,000	730	3,100
Carbon tetrachloride	56-23-5	1.0 ^e	23	100	1.3 ^b	2.0
Chlorobenzene	108-90-7	770	2,600	11,000	52	220
Chloroethane (ethyl chloride)	75-00-3	26,000	520,000	2,200,000	10,000	44,000
Chloroform	67-66-3	1,000	5,100	21,000	100	430
Chloromethane (methyl chloride)	74-87-3	240	4,700	20,000	94	390
Cyclohexane	110-82-7	16,000 ^a	310,000	1,300,000	6,300	26,000
Dibromochloromethane	124-48-1	-	-	-	-	-
1,2-Dibromoethane (ethylene dibromide)	106-93-4	0.45	15 ^b	15 ^b	1.5 ^b	1.5 ^b
1,2-Dichlorobenzene (o)	95-50-1	6,800	10,000	44,000	210	880
1,4-Dichlorobenzene (p)	106-46-7	21,000	42,000	180,000	830	3,500
Dichlorodifluoromethane (Freon 12)	75-71-8	-	-	-	-	-
1,1-Dichloroethane	75-34-3	-	-	-	-	-
1,2-Dichloroethane	107-06-2	230	360	1500	7.3	31
1,1-Dichloroethene	75-35-4	26	1,000	4,400	21	88
1,2-Dichloroethene (cis)	156-59-2	-	-	-	-	-
1,2-Dichloroethene (trans)	156-60-5	-	-	-	-	-
1,2-Dichloropropane	78-87-5	11	38	170	0.92 ^b	3.3
1,3-Dichloropropene (total) ^d	542-75-6	8.4	35	150	0.91 ^b	3.1
1,4-Dioxane	123-91-1	2,500	28	120	0.72 ^b	2.5
Ethylbenzene	100-41-4	700 ^{a,c}	56	250	1.1	4.9
Hexachlorobutadiene	87-68-3	-	-	-	-	-
n-Hexane	110-54-3	160 ^a	36,000	150,000	730	3,100
Mercury, elemental	7439-97-6	- ^e	- ^e	- ^e	1 ^b	1.3
Methylene chloride (dichloromethane)	75-09-2	2,600	14,000	61,000	280	1,200

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		Screening Levels	Residential	Nonresidential	Residential	Nonresidential
		$\mu\text{g/L}$	$\mu\text{g/m}^3$	$\mu\text{g/m}^3$	$\mu\text{g/m}^3$	$\mu\text{g/m}^3$
4-Methyl-2-pentanone (MIBK)	108-10-1	900,000	160,000	660,000	3,100	13,000
Methyl tert-butyl ether (MTBE)	1634-04-4	690	540	2,400	11	47
Naphthalene	91-20-3	300 ^{a,c}	26 ^b	26 ^b	2.6 ^b	2.6 ^b
Styrene	100-42-5	180,000 ^a	52,000	220,000	1,000	4,400
1,1,2,2-Tetrachloroethane	79-34-5	-	-	-	-	-
Tetrachloroethene (PCE)	127-18-4	36	540	2,400	11	47
Toluene	108-88-3	330,000 ^a	260,000	1,100,000	5,200	22,000
1,2,4-Trichlorobenzene	120-82-1	130	100	440	3.7 ^b	8.8
1,1,1-Trichloroethane	71-55-6	13,000	260,000	1,100,000	5,200	22,000
1,1,2-Trichloroethane	79-00-5	-	-	-	-	-
Trichloroethene (TCE)	79-01-6	3.0	34	150	1.1 ^b	3.0
Trichlorofluoromethane (Freon 11)	75-69-4	-	-	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	20,000 ^c	260,000	1,100,000	5,200	22,000
1,2,4-Trimethylbenzene	95-63-6	6,000 ^a	3,100	13,000	63	260
Vinyl chloride	75-01-4	1.0 ^c	32	140	0.64	2.8
Xylenes (total) ^d	1330-20-7	7,800 ^a	5,200	22,000	100	440

NOTES

^a Screening level incorporates a factor of ten to reflect degradation of chemical in the unsaturated soil zone.

^b Value is based on the higher analytical reporting limit.

^c Value is based on the higher Ground Water Remediation Standard.

^d The concentrations of each isomer are added if multiple isomers are present and the results compared to the total screening level/Indoor Air Remediation Standard.

^e Screening level not available because the sample collection and analytical methods used can be an issue when evaluating the levels of elemental mercury present in soil gas and/or groundwater.

Contact the Department if VI is determined to be an issue for elemental mercury at a site.

"-" = Not applicable because appropriate toxicological information is not available to derive an Indoor Air Remediation Standard, Soil Gas Screening Level, or Ground Water Screening Level.

The user should refer to the NJDEP VI website at <http://www.nj.gov/dep/srp/guidance/vaporintrusion/> for the latest information on the tables.

TABLE 2
NJDEP RAPID ACTION LEVELS FOR INDOOR AIR

Chemical	CAS No.	Cancer/ Noncancer ^a	Rapid Action Levels ^b	
			<i>Residential</i>	<i>Nonresidential</i>
			<i>ug/m³</i>	<i>ug/m³</i>
Acetone (2-propanone)	67-64-1		-	-
Benzene	71-43-2	C	36	160
Bromodichloromethane	75-27-4		-	-
Bromoform	75-25-2		-	-
Bromomethane (methyl bromide)	74-83-9	N	10	44
2-Butanone (methyl ethyl ketone)	78-93-3	N	10,000	44,000
Carbon disulfide	75-15-0	N	1,500	6,200
Carbon tetrachloride	56-23-5	C	47	200
Chlorobenzene	108-90-7	N	100	440
Chloroethane (ethyl chloride)	75-00-3	N	20,000	88,000
Chloroform	67-66-3	N	200	860
Chloromethane (methyl chloride)	74-87-3	N	190	780
Cyclohexane	110-82-7	N	13,000	52,000
Dibromochloromethane	124-48-1		-	-
1,2-Dibromoethane (ethylene dibromide)	106-93-4	C	1.5 ^d	2.0
1,2-Dichlorobenzene (o)	95-50-1	N	420	1,800
1,4-Dichlorobenzene (p)	106-46-7	N	1,700	7,000
Dichlorodifluoromethane (Freon 12)	75-71-8		-	-
1,1-Dichloroethane	75-34-3		-	-
1,2-Dichloroethane	107-06-2	N	15	62
1,1-Dichloroethene	75-35-4	N	42	180
1,2-Dichloroethene (cis)	156-59-2		-	-
1,2-Dichloroethene (trans)	156-60-5		-	-
1,2-Dichloropropane	78-87-5	N	8.4	36

TABLE 2
NJDEP RAPID ACTION LEVELS FOR INDOOR AIR

Chemical	CAS No.	Cancer/ Noncancer ^a	Rapid Action Levels ^b	
			Residential	Nonresidential
			ug/m ³	ug/m ³
1,3-Dichloropropene (total) ^c	542-75-6	N	42	180
1,4-Dioxane	123-91-1	C	56	250
Ethylbenzene	100-41-4	C	110	490
Hexachlorobutadiene	87-68-3		-	-
n-Hexane	110-54-3	N	1,500	6,200
Mercury, elemental	7439-97-6	N	1.0 ^d	2.6
Methylene chloride (dichloromethane)	75-09-2	N	1,300	5,200
4-Methyl-2-pentanone (MIBK)	108-10-1	N	6,200	26,000
Methyl tert-butyl ether (MTBE)	1634-04-4	C	1,100	4,700
Naphthalene	91-20-3	N	6.2	26
Styrene	100-42-5	N	2,000	8,800
1,1,2,2-Tetrachloroethane	79-34-5		-	-
Tetrachloroethene (PCE)	127-18-4	N	84	360
Toluene	108-88-3	N	10,000	44,000
1,2,4-Trichlorobenzene	120-82-1	N	4.2	18
1,1,1-Trichloroethane	71-55-6	N	10,000	44,000
1,1,2-Trichloroethane	79-00-5		-	-
Trichloroethene (TCE)	79-01-6	N	4.2	18
Trichlorofluoromethane (Freon 11)	75-69-4		-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	N	10,000	44,000
1,2,4-Trimethylbenzene	95-63-6	N	130	520
Vinyl chloride	75-01-4	C	64	280
Xylenes (total) ^c	1330-20-7	N	200	880

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NJDEP RAPID ACTION LEVELS FOR INDOOR AIR

Chemical	CAS No.	Cancer/ Noncancer ^a	Rapid Action Levels ^b	
			Residential	Nonresidential
			ug/m ³	ug/m ³
<p>NOTES</p> <p>^a Values based on cancer (C) or noncancer (N) effects.</p> <p>^b Levels are the lower value generated using a factor of 100x for carcinogens and a factor of 2x for noncarcinogens using the Table A-5 health-based values.</p> <p>^c The concentrations of each isomer are added if multiple isomers are present and the results compared to the total screening level.</p> <p>^d Value is based on the higher analytical reporting limit.</p> <p>"-" = Not applicable because appropriate toxicological information is not available to derive a screening level.</p>				

TABLE 3**NJDEP GROUND WATER SCREENING LEVELS FOR ALTERNATE SOIL TEXTURES**

Chemical	CAS No.	LOAMY SAND: Ground Water Screening Levels (µg/L)	SANDY LOAM: Ground Water Screening Levels (µg/L)	LOAM: Ground Water Screening Levels (µg/L)
Acetone (2-Propanone)	67-64-1	-	-	-
Benzene	71-43-2	51 ^a	120 ^a	190 ^a
Bromodichloromethane (Dichlorobromomethane)	75-27-4	-	-	-
Bromoform	75-25-2	-	-	-
Bromomethane (Methyl bromide)	74-83-9	43	110	160
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	2,700,000	3,100,000	3,900,000
Carbon disulfide	75-15-0	3,200	8,100	12,000
Carbon tetrachloride	56-23-5	2.0	5.3	8.3
Chlorobenzene	108-90-7	1,700	3,800	5,800
Chloroethane (Ethyl chloride)	75-00-3	57,000	140,000	220,000
Chloroform	67-66-3	2,300	5,400	8,100
Chloromethane (Methyl chloride)	74-87-3	510	1,300	1,900
Cyclohexane	110-82-7	37,000 ^a	_{a,b}	_{a,b}
Dibromochloromethane (Chlorodibromomethane)	124-48-1	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.73	1.1	1.5
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	14,000	28,000	41,000
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	47,000	_b	_b
Dichlorodifluoromethane (Freon 12)	75-71-8	-	-	-
1,1-Dichloroethane	75-34-3	-	-	-
1,2-Dichloroethane	107-06-2	440	850	1,200
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	59	160	240
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	-	-	-
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	-	-	-
1,2-Dichloropropane	78-87-5	25	55	83

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Chemical	CAS No.	LOAMY SAND: Ground Water Screening Levels (µg/L)	SANDY LOAM: Ground Water Screening Levels (µg/L)	LOAM: Ground Water Screening Levels (µg/L)
1,3-Dichloropropene (total) ^d	542-75-6	18	43	64
1,4-Dioxane	123-91-1	2,500	2,800	3,100
Ethylbenzene	100-41-4	700 ^{a,c}	700 ^{a,c}	700 ^{a,c}
Hexachloro-1,3-butadiene	87-68-3	-	-	-
n-Hexane	110-54-3	380 ^a	1,000 ^a	1,600 ^a
Mercury (elemental)	7439-97-6	- ^e	- ^e	- ^e
Methylene chloride (Dichloromethane)	75-09-2	5,600	13,000	19,000
4-Methyl-2-pentanone (MIBK)	108-10-1	1,100,000	1,400,000	1,800,000
Methyl tert-butyl ether (MTBE)	1634-04-4	1,300	2,100	3,000
Naphthalene	91-20-3	300 ^{a,c}	300 ^{a,c}	340 ^a
Styrene	100-42-5	- _{a,b}	- _{a,b}	- _{a,b}
1,1,2,2-Tetrachloroethane	79-34-5	-	-	-
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	89	240	360
Toluene	108-88-3	- _{a,b}	- _{a,b}	- _{a,b}
1,2,4-Trichlorobenzene	120-82-1	250	430	620
1,1,1-Trichloroethane	71-55-6	31,000	82,000	130,000
1,1,2-Trichloroethane	79-00-5	-	-	-
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	7.1	18	28
Trichlorofluoromethane (Freon 11)	75-69-4	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	20,000 ^c	20,000 ^c	20,000 ^c
1,2,4-Trimethylbenzene	95-63-6	14,000 ^a	35,000 ^a	53,000 ^a
Vinyl chloride	75-01-4	1.3	3.3	5.1

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Chemical	CAS No.	LOAMY SAND: Ground Water Screening Levels (µg/L)	SANDY LOAM: Ground Water Screening Levels (µg/L)	LOAM: Ground Water Screening Levels (µg/L)
Xylenes (total) ^d	1330-20-7	18,000 ^a	45,000 ^a	68,000 ^a

NOTES

^a Screening level incorporates a factor of ten to reflect degradation of chemical in the unsaturated soil zone.

^b Calculated GWSL is above the water solubility limit, indicating that the indoor air screening level cannot be exceeded at any concentration.

^c Value is based on the higher GWRS.

^d The concentrations of each isomer are added if multiple isomers are present and the result compared to the total screening level.

^e Screening level not determined because no appropriate ground water method is available.

"-" = Not available because appropriate toxicological information is not available, or because GWSL is above the water solubility limit (footnote "b").