

TABLE 1
NJDEP MASTER TABLE
GENERIC VAPOR INTRUSION SCREENING LEVELS

Chemical	Ground Water Screening Levels	Soil Gas Screening Levels				Indoor Air Screening Levels			
		Residential		Nonresidential		Residential		Nonresidential	
	$\mu\text{g/L}$	$\mu\text{g/m}^3$	ppbv	$\mu\text{g/m}^3$	ppbv	$\mu\text{g/m}^3$	ppbv	$\mu\text{g/m}^3$	ppbv
METHOD TO-15 PARAMETERS									
Acetone (2-propanone)	1,900,000	160,000	69,000	230,000	97,000	3,300	1,400	4,600	1,900
Benzene	15	16	5	26	8	2	0.5	2	0.5
Bromodichloromethane	5	34	5	34	5	3	0.5	3	0.5
Bromoethene (vinyl bromide)	0.1	22	5	22	5	2	0.5	2	0.5
Bromoform	370	80	8	180	18	5	0.5	5	0.5
Bromomethane (methyl bromide)	29	260	66	360	92	5	1	7	2
1,3-Butadiene (vinyl ethylene)	0.01	11	5	11	5	1	0.5	1	0.5
2-Butanone (methyl ethyl ketone)	2,700,000	260,000	87,000	360,000	120,000	5,100	1,700	7,200	2,400
Carbon disulfide	710	36,000	12,000	51,000	16,000	730	230	1,000	330
Carbon tetrachloride	1	31	5	31	5	3	0.5	3	0.5
Chlorobenzene	640	2,600	550	3,600	780	51	11	72	16
Chloroethane (ethyl chloride)	4	110	41	250	93	2	0.8	5	2
Chloroform	70	24	5	24	5	2	0.5	2	0.5
Chloromethane (methyl chloride)	240	4,700	2,300	6,600	3,200	95	46	130	64
3-Chloropropene (allyl chloride)	0.8	16	5	34	11	2	0.5	2	0.5
2-Chlorotoluene (o-chlorotoluene)	1,200	3,600	700	5,100	990	73	14	100	20
Cyclohexane	1,200	310,000	90,000	430,000	130,000	6,200	1,800	8,700	2,500
Dibromochloromethane	9	43	5	43	5	4	0.5	4	0.5
1,2-Dibromoethane (ethylene dibromide)	0.4	38	5	38	5	4	0.5	4	0.5
1,2-Dichlorobenzene (o)	5,900	7,300	1,200	10,000	1,700	150	24	200	34
1,3-Dichlorobenzene (m)	600	550	91	770	130	11	2	15	3
1,4-Dichlorobenzene (p)	75	30	5	32	5	3	0.5	3	0.5
Dichlorodifluoromethane (Freon 12)	1,000	9,100	1,800	13,000	2,600	180	37	260	52
1,1-Dichloroethane	3,600	26,000	6,300	36,000	8,800	510	130	720	180
1,2-Dichloroethane	2	20	5	20	5	2	0.5	2	0.5
1,1-Dichloroethene	250	11,000	2,800	15,000	3,900	220	55	310	77
** 1,2-Dichloroethene (cis)	350	1,800	460	2,600	640	36	9	51	13
1,2-Dichloroethene (trans)	300	3,600	920	5,100	1,300	73	18	100	26
1,2-Dichloroethene (total) ^d	190	1,600	410	2,300	580	33	8	46	12
1,2-Dichloropropane	1	23	5	23	5	2	0.5	2	0.5
1,3-Dichloropropene (total) ^d	1	31	7	72	16	2	0.5	2	0.5
Ethylbenzene	61,000	53,000	12,000	74,000	17,000	1,100	240	1,500	340
Hexachlorobutadiene	1	53	5	53	5	5	0.5	5	0.5

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		Residential		Nonresidential		Residential		Nonresidential	
	$\mu\text{g/L}$	$\mu\text{g/m}^3$	ppbv	$\mu\text{g/m}^3$	ppbv	$\mu\text{g/m}^3$	ppbv	$\mu\text{g/m}^3$	ppbv
n-Hexane	30	36,000	10,000	51,000	14,000	730	210	1,000	290
Methylene chloride (dichloromethane)	53	190	55	430	120	4	1	9	2
4-Methyl-2-pentanone (MIBK)	880,000	160,000	38,000	220,000	54,000	3,100	770	4,400	1,100
MTBE (methyl tert butyl ether)	78	78	22	180	50	2	0.5	4	1
Styrene	18,000	52,000	12,000	73,000	17,000	1,000	250	1,500	340
Tertiary butyl alcohol (TBA)	170,000	3,300	1,100	4,600	1,500	66	22	92	30
1,1,2,2-Tetrachloroethane	4	34	5	34	5	3	0.5	3	0.5
Tetrachloroethene (PCE)	1	34	5	36	5	3	0.5	3	0.5
Toluene	310,000	260,000	68,000	360,000	95,000	5,100	1,400	7,200	1,900
1,2,4-Trichlorobenzene	2,800	1,800	250	2,600	340	36	5	51	7
1,1,1-Trichloroethane	2,300	51,000	9,400	72,000	13,000	1,000	190	1,400	260
1,1,2-Trichloroethane	5	27	5	27	5	3	0.5	3	0.5
Trichloroethene (TCE)	1	27	5	27	5	3	0.5	3	0.5
Trichlorofluoromethane (Freon 11)	2,000	36,000	6,500	51,000	9,100	730	130	1,000	180
1,1,2-Trichloro-1,2,2-trifluoroethane	2,400	1,600,000	200,000	2,200,000	290,000	31,000	4,100	44,000	5,700
Vinyl chloride	1	13	5	48	19	1	0.5	1	0.5
Xylenes (total) ^a	7,000	5,500	1,300	7,700	1,800	110	25	150	35
ADDITIONAL PARAMETERS									
** Mercury (elemental) ^b	NA	NA	NA	NA	NA	0.3	NA	0.4	NA
NOTES									
** Values updated from previous Table 1(dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors or latest NJDEP GWQS.									
^a The concentrations of each isomer are added if multiple isomers are present and the results compared to the total screening level.									
^b Indoor Air Screening Level is health-based and does not consider the analytical reporting limit due to varying collection-specific factors. The analytical method and collection procedures used should attempt to attain a reporting limit as close as possible to the health-based criteria. The laboratory, in consultation with the environmental consultant, must submit their reporting limit prior to sampling.									
NA = Not available									
Screening levels are unavailable for six NJDEP state contract Method TO-15 chemicals (1,2-dichlorotetrafluoroethane, 4-ethyl toluene, n-heptane, 2,2,4-trimethylpentane, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene) due to the absence of toxicity information.									
See Appendix G of the NJDEP Vapor Intrusion Guidance for details on the development of the screening levels.									
When comparing site data with the screening levels, the data and the screening levels must be in the same units (i.e., ppbv or $\mu\text{g/m}^3$).									
Due to routine updates to the table, the user should refer to the NJDEP website for the latest information.									

TABLE 2
NJDEP ACTION LEVELS FOR INDOOR AIR

March 2007

Chemical	Cancer/ Noncancer ^a	Residential Screening Levels ^b		Rapid Action Levels ^c (RAL)		Health Department Notification Levels ^d (HDNL)	
		$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	ppbv
Acetone (2-propanone)	N	3,300	1,400	6,600	2,800	31,000 ^e	13,000 ^e
** Benzene	C	2*	0.5*	14 ^j	4 ^j	14 ^e	4 ^e
Carbon tetrachloride	C	3*	0.5*	10	2	100	20
Chloroform	C	2*	0.5*	8	2	80	20
1,2-Dichloroethene (total) ⁱ	N	33	8	66	16	400 ^e	100 ^e
Ethylbenzene	N	1,100	240	2,200	480	4,300 ^f	1,000 ^f
Methylene chloride (dichloromethane)	C	4	1	400	100	1,000 ^e	300 ^e
MTBE (methyl tert-butyl ether)	C	2*	0.5*	200	40	2,000	400
Tetrachloroethene (PCE)	C	3*	0.5*	30	5	300	50
Toluene	N	5,100	1,400	10,000	2,800	> 5,100 ^h	> 1,400 ^h
Trichloroethene (TCE)	C	3*	0.5*	20 ^g	3 ^g	20	3
Vinyl chloride	C	1*	0.5*	7	3	70	30
** Xylenes (total) ⁱ	N	110	25	220	50	4,300 ^e	1,000 ^e

NOTES

* Screening level is based on the higher analytical reporting limit.

** Values updated from previous Table 2 (dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors.

^a Values based on cancer (C) or noncancer (N) effects.

^b Levels represent the higher of the health-based value or the Method TO-15 analytical reporting limit.

^c Levels are based on a factor of 100x for carcinogens and a factor of 2x for noncarcinogens, using the Table G-4 residential health-based values.

^d Levels are based on one-half the Agency for Toxic Substances Disease Registry (ATSDR) acute Minimum Risk Level (MRL) or 1,000x the the cancer health-based residential value in Table G-4, whichever is lower. The intermediate MRL is used in the absence of an acute MRL.

^e HDNL is based on one-half the ATSDR acute MRL.

^f HDNL is based on the ATSDR intermediate MRL.

^g The RAL for TCE is set at the HDNL due to the current controversy over the appropriate toxicity factor for the chemical.

^h The HDNL for toluene is set at exceedence of the residential screening level to reflect recent updates in the reference concentration (RfC) toxicity factor not yet incorporated in the ATSDR acute MRL value.

ⁱ The concentrations of each isomer are added if multiple isomers are present and the results compared to the total screening level.

^j The benzene RAL has been set at the lower HDNL.

Values are based on residential exposure. Due to routine updates, the user should refer to the NJDEP website for the latest information.

TABLE 3
NJDEP

GROUND WATER SCREENING LEVELS FOR ALTERNATE SOIL TEXTURES

Chemical	NJDEP Ground Water Quality Standards (µg/L)	LOAMY SAND: Ground Water Screening Level (µg/L)	SANDY LOAM: Ground Water Screening Level (µg/L)	LOAM: Ground Water Screening Level (µg/L)
Acetone (2-propanone)	6,000	2,000,000	2,200,000	2,700,000
Benzene	1	33 ^b	81 ^b	120 ^b
Bromodichloromethane	1	10	17	24
Bromoethene (vinyl bromide)	NA	0.3	0.7	1
Bromoform	4	440	550	770
Bromomethane (methyl bromide)	10	66	160	250
1,3-Butadiene (vinyl ethylene)	NA	0.02	0.06	0.09
2-Butanone (methyl ethyle ketone)	300	2,900,000	3,300,000	4,100,000
Carbon disulfide	700	1,600	4,000	6,200
Carbon tetrachloride	1	1 ^a	1 ^a	1 ^a
Chlorobenzene	50	1,400	3,400	5,100
Chloroethane (ethyl chloride)	NA	7	17	25
Chloroform	70	70 ^a	70 ^a	70 ^a
Chloromethane (methyl chloride)	NA	510	1,300	2,000
3-Chloropropene (allyl chloride)	NA	2	4	6
2-Chlorotoluene (o)	NA	2,800	6,400	9,600
Cyclohexane	NA	2,700	7,100	11,000
Dibromochloromethane	1	13	18	26
1,2-Dibromoethane (ethylene dibromide)	0.03	0.6	0.7	1
1,2-Dichlorobenzene (o)	600	12,000	26,000	39,000
1,3 Dichlorobenzene (m)	600	600 ^a	980	1,500
1,4-Dichlorobenzene (p)	75	75 ^a	75 ^a	75 ^a
Dichlorodifluoromethane (Freon 12)	1,000	1,000 ^a	1,000 ^a	1,000 ^a

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Chemical	NJDEP Ground Water Quality Standards (µg/L)	LOAMY SAND: Ground Water Screening Level (µg/L)	SANDY LOAM: Ground Water Screening Level (µg/L)	LOAM: Ground Water Screening Level (µg/L)
1,1-Dichloroethane	50	8,100	20,000	30,000
1,2-Dichloroethane	2	4	9	12
1,1-Dichloroethene	1	570	1,500	2,300
** 1,2-Dichloroethene (cis)	70	780	1,800	2,800
1,2-Dichloroethene (trans)	100	700	1,800	2,700
1,2_Dichloroethene (total) ^d	NA	440	1,100	1,600
1,2-Dichloropropane	1	3	7	10
1,3-Dichloropropene (total) ^d	1	3	8	12
Ethylbenzene	700	140,000 ^b	— ^c	— ^c
Hexachlorobutadiene	1	2	4	6
n-Hexane	30	30 ^a	45	67
Methylene chloride (dichloromethane)	3	110	240	360
4-Methyl-2-pentanone (MIBK)	NA	1,100,000	1,400,000	1,900,000
MTBE (methyl tert butyl ether)	70	140	250	350
Styrene	100	41,000	92,000	140,000
Tertiary butyl alcohol (TBA)	100	180,000	190,000	220,000
1,1,2,2-Tetrachloroethane	1	6	9	13
Tetrachloroethene (PCE)	1	2	5	7
Toluene	1,000	— ^c	— ^c	— ^c
1,2,4-Trichlorobenzene	9	5,200	8,400	12,000
1,1,1-Trichloroethane	30	5,300	14,000	22,000
1,1,2-Trichloroethane	3	10	18	26
Trichloroethene (TCE)	1	1 ^a	1 ^a	1 ^a

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Trichlorofluoromethane (Freon 11)	2,000	2,000 ^a	2,000 ^a	2,300
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	NA	5,500	15,000	23,000
Vinyl chloride	1	1 ^a	1 ^a	1 ^a
Xylenes (total) ^d	1,000	16,000 ^b	40,000 ^b	61,000 ^b
NOTES				
** Values updated from previous Table 3 (dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors or latest NJDEP GWQS.				
^a Value is based on the higher GWQS/PQLs.				
^b Screening level multiplied by a factor of ten to reflect degradation of chemical in the unsaturated soil zone.				
^c Calculated GWSL is above the water solubility limit, indicating that the indoor air screening level cannot be exceeded at any concentration.				
^d The concentrations of each isomer are added if multiple isomers are present and the result compared to the total screening level.				
Screening levels are unavailable for six NJDEP state contract Method TO-15 chemicals (1,2-dichlorotetrafluoroethane, 4-ethyl toluene, n-heptane, 2,2,4-trimethylpentane, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene) due to the absence of toxicity information.				
NA = Not available.				