TABLE 1
NJDEP MASTER TABLE
GENERIC VAPOR INTRUSION SCREENING LEVELS

March 2007

Chemical	Ground Water Screening Levels	Soil Gas Screening Levels				Indoor Air Screening Levels			
		Residential		Nonresidential		Residential		Nonresidential	
	µg/L	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	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)[a]	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)[a]	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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Chemical	Ground Water Screening Levels	Soil Gas Screening Levels				Indoor Air Screening Levels			
		Residential		Nonresidential		Residential		Nonresidential	
	µg/L	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	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 $\mu g/m^3$).

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)	
		$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	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]

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)
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]

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)
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.

TABLE G-1
DERIVATION OF THE NJDEP VAPOR INTRUSION GROUND WATER (GW) SCREENING LEVELS

Chemical	Cancer/ Noncancer[a]	Health-Based GW to Indoor Air Values (µg/L)	NJDEP Ground Water Quality Standards (µg/L)	NJDEP Ground Water Screening Levels (ug/L)[b]
Acetone (2-propanone)	N	1,900,000	6,000	**1,900,000**
Benzene	C	15[c]	1	**15[c]**
Bromodichloromethane	C	5	1	**5**
Bromoethene (vinyl bromide)	C	0.1	NA	**0.1**
Bromoform	C	370	4	**370**
Bromomethane (methyl bromide)	N	29	10	**29**
1,3-Butadiene (vinyl ethylene)	C	0.01	NA	**0.01**
2-Butanone (methyl ethyl ketone)	N	2,700,000	300	**2,700,000**
Carbon disulfide	N	710	700	**710**
Carbon tetrachloride	C	0.2	1	**1**
Chlorobenzene	N	640	50	**640**
Chloroethane (ethyl chloride)	C	4	NA	**4**
Chloroform	C	0.7	70	**70**
Chloromethane (methyl chloride)	N	240	NA	**240**
3-Chloropropene (allyl chloride)	C	0.8	NA	**0.8**
2-Chlorotoluene (o-chlorotoluene)	N	1,200	NA	**1,200**
Cyclohexane	N	1,200	NA	**1,200**
Dibromochloromethane	C	9	1	**9**
1,2-Dibromoethane (ethylene dibromide)	C	0.4	0.03	**0.4**
1,2-Dichlorobenzene (o)	N	5,900	600	**5,900**
1,3-Dichlorobenzene (m)	N	190	600	**600**
1,4-Dichlorobenzene (p)	C	6	75	**75**
Dichlorodifluoromethane (Freon 12)	N	27	1,000	**1,000**

TABLE G-1
DERIVATION OF THE NJDEP VAPOR INTRUSION GROUND WATER (GW) SCREENING LEVELS

Chemical	Cancer/ Noncancer[a]	Health-Based GW to Indoor Air Values (µg/L)	NJDEP Ground Water Quality Standards (µg/L)	NJDEP Ground Water Screening Levels (ug/L)[b]
1,1-Dichloroethane	N	3,600	50	**3,600**
1,2-Dichloroethane	C	2	2	**2**
1,1-Dichloroethene	N	250	1	**250**
** 1,2-Dichloroethene (cis)	N	350	70	**350**
1,2-Dichloroethene (trans)	N	300	100	**300**
1,2-Dichloroethene (total)[d]	N	190	NA	**190**
1,2-Dichloropropane	C	1	1	**1**
1,3-Dichloropropene (total)[d]	C	1	1	**1**
Ethylbenzene	N	61,000[c]	700	**61,000[c]**
Hexachlorobutadiene	C	0.7	1	**1**
n-Hexane	N	10	30	**30**
Methylene chloride (dichloromethane)	C	53	3	**53**
4-Methyl-2-pentanone (MIBK)	N	880,000	NA	**880,000**
MTBE (methyl tert-butyl ether)	C	78	70	**78**
Styrene	N	18,000	100	**18,000**
Tertiary butyl alcohol (TBA)	N	170,000	100	**170,000**
1,1,2,2-Tetrachloroethane	C	4	1	**4**
Tetrachloroethene (PCE)	C	0.8	1	**1**
Toluene	N	310,000[c]	1,000	**310,000[c]**
1,2,4-Trichlorobenzene	N	2,800	9	**2,800**
1,1,1-Trichloroethane	N	2,300	30	**2,300**
1,1,2-Trichloroethane	C	5	3	**5**

TABLE G-1

DERIVATION OF THE NJDEP VAPOR INTRUSION GROUND WATER (GW) SCREENING LEVELS

Chemical	Cancer/ Noncancer[a]	Health-Based GW to Indoor Air Values (µg/L)	NJDEP Ground Water Quality Standards (µg/L)	NJDEP Ground Water Screening Levels (ug/L)[b]
Trichloroethene (TCE)	C	0.06	1	**1**
Trichlorofluoromethane (Freon 11)	N	240	2,000	**2,000**
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	N	2,400	NA	**2,400**
Vinyl chloride	C	0.07	1	**1**
Xylenes (total)[d]	N	7,000[c]	1,000	**7,000[c]**

NOTES

** Values updated from previous Table G-1 (dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors or latest NJDEP GWQS.

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

[b] Levels are the higher of the health-based values and the GWQS/PQL.

[c] Screening level multiplied by a factor of ten to reflect degradation of chemical in the unsaturated soil zone.

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

NA = Not available.

TABLE G-2
CHEMICAL PROPERTIES [a, b]

CAS No.	Chemical	Org. Car. partition coefficient K_{oc} (cm^3/g)	Diffusivity in air D_a (cm^2/s)	Diffusivity in water D_w (cm^2/s)	Pure component water sol S (mg/L)	Henry's law constant H' (unitless)	Normal boiling point (bp) T_B (^oK)	Critical Temp T_C (^oK)	Enthalpy of vaporization at normal bp $DH_{v,b}$ (cal/mol)
67641	Acetone (2-propanone)	5.75E-01	1.24E-01	1.14E-05	1.00E+06	1.59E-03	329.20	508.10	6,955
71432	Benzene	5.89E+01	8.80E-02	9.80E-06	1.79E+03	2.27E-01	353.24	562.16	7,342
75274	Bromodichloromethane	5.50E+01	2.98E-02	1.06E-05	6.74E+03	6.54E-02	363.15	585.85	7,800
593602	Bromoethene (vinyl bromide)	2.10E+01[c]	8.69E-02[d]	1.17E-05[d]	5.68E+03[e]	5.74E-01[e]	288.8[e]	463.51[e]	5401[e]
75252	Bromoform	8.71E+01	1.49E-02	1.03E-05	3.10E+03	2.41E-02	422.35	696.00	9,479
74839	Bromomethane (methyl bromide)	1.05E+01	7.28E-02	1.21E-05	1.52E+04	2.55E-01	276.71	467.00	5,714
106990	1,3-Butadiene (vinyl ethylene)	1.91E+01	2.49E-01	1.08E-05	7.35E+02	3.01E+00	268.60	425.00	5,370
78933	2-Butanone(methyl ethyl ketone)	2.30E+00	8.08E-02	9.80E-06	2.23E+05	2.29E-03	352.50	536.78	7,481
75150	Carbon disulfide	4.57E+01	1.04E-01	1.00E-05	1.19E+03	1.24E+00	319.00	552.00	6,391
56235	Carbon tetrachloride	1.74E+02	7.80E-02	8.80E-06	7.93E+02	1.24E+00	349.90	556.60	7,127
108907	Chlorobenzene	2.19E+02	7.30E-02	8.70E-06	4.72E+02	1.51E-01	404.87	632.40	8,410
75003	Chloroethane (ethyl chloride)	4.40E+00	2.71E-01	1.15E-05	5.68E+03	3.61E-01	285.30	460.40	5,879
67663	Chloroform	3.98E+01	1.04E-01	1.00E-05	7.92E+03	1.50E-01	334.32	536.40	6,988
74873	Chloromethane (methyl chloride)	2.12E+00	1.26E-01	6.50E-06	5.33E+03	3.61E-01	249.00	416.25	5,115
107051	3-Chloropropene (allyl chloride)	1.50E+01[f]	1.17E-01[g]	1.08E-05[g]	3.40E+03[h]	4.51E-01[h]	318.1[h]	514[e]	6940[e]
95498	2-Chlorotoluene (o-chlorotoluene)	6.12E+02[c]	6.07E-02[d]	8.31E-06[d]	3.73E+02[e]	1.46E-01[e]	431.97[e]	654[e]	9958[e]
110827	Cyclohexane	5.90E+02[f]	8.39E-02[g]	9.10E-06[g]	5.50E+01[h]	8.2E+00h	353.7[h]	553[e]	7155[e]
124481	Dibromochloromethane	6.31E+01	1.96E-02	1.05E-05	2.60E+03	3.20E-02	416.14	678.20	5,900
106934	1,2-Dibromoethane	2.50E+01	2.17E-02	1.19E-05	4.18E+03	3.04E-02	404.60	583.00	8,310
95501	1,2-Dichlorobenzene (o)	6.17E+02	6.90E-02	7.90E-06	1.56E+02	7.77E-02	453.57	705.00	9,700
541731	1,3-Dichlorobenzene (m)	1.98E+03	6.92E-02	7.86E-06	1.34E+02	1.27E-01	446	684	9230.18
106467	1,4-Dichlorobenzene (p)	6.17E+02	6.90E-02	7.90E-06	7.90E+01	9.82E-02	447.21	684.75	9,271
75718	Dichlorodifluoromethane (Freon 12)	4.57E+02	6.65E-02	9.92E-06	2.80E+02	1.40E+01	243.20	384.95	9,421

TABLE G-2
CHEMICAL PROPERTIES [a, b]

CAS No.	Chemical	Org. Car. partition coefficient K_{oc} (cm^3/g)	Diffusivity in air D_a (cm^2/s)	Diffusivity in water D_w (cm^2/s)	Pure component water sol S (mg/L)	Henry's law constant H' (unitless)	Normal boiling point (bp) T_B (^oK)	Critical Temp T_C (^oK)	Enthalpy of vaporization at normal bp $DH_{v,b}$ (cal/mol)
75343	1,1-Dichloroethane	3.16E+01	7.42E-02	1.05E-05	5.06E+03	2.30E-01	330.55	523.00	6,895
107062	1,2-Dichloroethane	1.74E+01	1.04E-01	9.90E-06	8.52E+03	4.00E-02	356.65	561.00	7,643
75354	1,1-Dichloroethene	5.89E+01	9.00E-02	1.04E-05	2.25E+03	1.07E+00	304.75	576.05	6,247
156592	** 1,2-Dichloroethene (cis)	3.55E+01	7.36E-02	1.13E-05	3.50E+03	1.67E-01	333.65	544.00	7,192
156605	1,2-Dichloroethene (trans)	5.25E+01	7.07E-02	1.19E-05	6.30E+03	3.84E-01	320.85	516.5	6,717
540590	1,2-Dichloroethene (total)[j]	4.4 E +01	7.22E-02	1.16E-05	4.90E+03	2.76E-01	327.25	530.25	6,954
78875	1,2-Dichloropropane	4.37E+01	7.82E-02	8.73E-06	2.80E+03	1.15E-01	369.52	572.00	7,590
542756	1,3-Dichloropropene (total)	4.57E+01	6.26E-02	1.00E-05	2.80E+03	7.24E-01	381.15	587.38	7900
100414	Ethylbenzene	3.63E+02	7.50E-02	7.80E-06	1.69E+02	3.22E-01	409.34	617.20	8,501
87683	Hexachloro-1,3-butadiene	5.37E+04	5.61E-02	6.16E-06	3.20E+00	3.33E-01	486.15	738.00	10,206
110543	n-Hexane	4.34E+01	2.00E-01	7.77E-06	1.24E+01	6.82E+01	341.70	508.00	6,895
75092	Methylene chloride	1.17E+01	1.01E-01	1.17E-05	1.30E+04	8.96E-02	313.00	510.00	6,706
108101	4-Methyl-2-pentanone (MIBK)	9.06E+00	7.50E-02	7.80E-06	1.90E+04	5.64E-03	389.50	571.00	8,243
1634044	MTBE (methyl tert-butyl ether)	7.26E+00	1.02E-01	1.05E-05	5.10E+04	2.56E-02	328.3	497.1	6677.66
100425	Styrene	7.76E+02	7.10E-02	8.00E-06	3.10E+02	1.12E-01	418.31	636.00	8,737
75650	Tertiary butyl alcohol (TBA)	2.2E+00[c]	9.85E-02[d]	1.14E-05[d]	1.00E+06[e]	3.71E-04[e]	355.41[e]	508[i]	9338[e]
79345	1,1,2,2-Tetrachloroethane	9.33E+01	7.10E-02	7.90E-06	2.96E+03	1.41E-02	419.60	661.15	8,996
127184	Tetrachloroethene (PCE)	1.55E+02	7.20E-02	8.20E-06	2.00E+02	7.53E-01	394.40	620.20	8,288
108883	Toluene	1.82E+02	8.70E-02	8.60E-06	5.26E+02	2.72E-01	383.78	591.79	7,930
120821	1,2,4-Trichlorobenzene	1.78E+03	3.00E-02	8.23E-06	4.88E+01	5.81E-02	486.15	725.00	10,471
71556	1,1,1-Trichloroethane	1.10E+02	7.80E-02	8.80E-06	1.33E+03	7.03E-01	347.24	545.00	7,136
79005	1,1,2-Trichloroethane	5.01E+01	7.80E-02	8.80E-06	4.42E+03	3.73E-02	386.15	602.00	8,322
79016	Trichloroethene (TCE)	1.66E+02	7.90E-02	9.10E-06	1.47E+03	4.21E-01	360.36	544.20	7,505

TABLE G-2
CHEMICAL PROPERTIES [a, b]

CAS No.	Chemical	Org. Car. partition coefficient K_{oc} (cm^3/g)	Diffusivity in air D_a (cm^2/s)	Diffusivity in water D_w (cm^2/s)	Pure component water sol S (mg/L)	Henry's law constant H' (unitless)	Normal boiling point (bp) T_B (^oK)	Critical Temp T_C (^oK)	Enthalpy of vaporization at normal bp $DH_{v,b}$ (cal/mol)
75694	Trichlorofluoromethane (Freon 11)	4.97E+02	8.70E-02	9.70E-06	1.10E+03	3.97E+00	296.70	471.00	5,999
76131	1,1,2-Trichloro-1,2,2-trifluoroethane	1.11E+04	7.80E-02	8.20E-06	1.70E+02	1.97E+01	320.70	487.30	6,463
75014	Vinyl chloride	1.86E+01	1.06E-01	1.23E-05	8.80E+03	1.10E+00	259.25	432.00	5,250
1330207	Xylenes (total)[k]	3.86E+02	7.80E-02	8.75E-06	1.75E+02	2.75E-01	413.8	621.18	8570

NOTES

[a] Chemical properties are from the Johnson and Ettinger spreadsheet unless otherwise noted

[b] See Table G-3 for sources of toxicological parameters

[c] Calculated from K_{ow} using Equation 71 in USEPA (1996a); K_{ow} from Hazardous Substances Databank (2004)

[d] Calculated using USEPA (2001b)

[e] From Hazardous Substances Databank (2004)

[f] Calculated from Kow using Equation 71 in USEPA (1996a); Kow from USEPA (1996b)

[g] From USEPA (2001b)

[h] From USEPA (1996b)

[i] From Chemical Rubber Company (1972)

[j] Average of 2 J&E values

[k] Average of 3 J&E values.

TABLE G-3
CHEMICAL TOXICITY FACTOR LIST
(for Ground Water Screening Levels)

Chemical	Cancer-Based Unit Risk Factor (URF) $(\mu g/m^3)^{-1}$	Ref	Noncancer-Based Reference Concentration (RfC) $(\mu g/m^3)$	Ref
Acetone (2-propanone)	NA		3200	IRIS
Benzene	7.8E-06	IRIS	30	IRIS
Bromodichloromethane	1.8E-05 oral	IRIS	70 oral	IRIS
Bromoethene (vinyl bromide)	3.2E-05	HEAST	3	IRIS
Bromoform	1.1E-06	IRIS	70 oral	IRIS
Bromomethane (methyl bromide)	NA		5	IRIS
1,3-Butadiene (vinyl ethylene)	3.0E-05	IRIS	2	IRIS
2-Butanone (methyl ethyl ketone)	NA		5000	IRIS
Carbon disulfide	NA		700	IRIS
Carbon tetrachloride	1.5E-05	IRIS	188	ATSDR
Chlorobenzene	NA		50	PPRT
Chloroethane (ethyl chloride)	8.3E-07oral	NCEA	10000	IRIS
Chloroform	2.3E-05	IRIS	50	NCEA
Chloromethane (methyl chloride)	NA		90	IRIS
3-Chloropropene (allyl chloride)	6.0E-06	CAL	1	IRIS
2-Chlorotoluene (o-chlorotoluene)	NA		70 oral	IRIS
Cyclohexane	NA		6000	IRIS
Dibromochloromethane	2.4E-05 oral	IRIS	70 oral	IRIS
1,2-Dibromoethane (ethylene dibromide)	6.0E-04	IRIS	9	IRIS
1,2-Dichlorobenzene (o)	NA		200	HEAST
1,3-Dichlorobenzene (m)	NA		11 oral	NCEA
1,4-Dichlorobenzene (p)	6.3E-06	NCEA	800	IRIS
Dichlorodifluoromethane (Freon 12)	NA		200	HEAST

TABLE G-3
CHEMICAL TOXICITY FACTOR LIST
(for Ground Water Screening Levels)

Chemical	Cancer-Based Unit Risk Factor (URF) $(\mu g/m^3)^{-1}$	Ref	Noncancer-Based Reference Concentration (RfC) $(\mu g/m^3)$	Ref
1,1-Dichloroethane	NA		500	HEAST
1,2-Dichloroethane	2.6E-05	IRIS	2430	ATSDR
1,1-Dichloroethene	NA		200	IRIS
** 1,2-Dichloroethene (cis)	NA		35 oral	PPRT
1,2-Dichloroethene (trans)	NA		70 oral	IRIS
1,2-Dichloroethene (total)	NA		31.5 oral	HEAST
1,2-Dichloropropane	1.9E-05	HEAST	4	IRIS
1,3-Dichloropropene (total)	4.0E-06	IRIS	20	IRIS
Ethylbenzene	NA		1000	IRIS
Hexachlorobutadiene	2.2E-05	IRIS	0.7 oral	HEAST
n-Hexane	NA		700	IRIS
Methylene chloride (dichloromethane)	4.7E-07	IRIS	1042	ATSDR
4-Methyl-2-pentanone (MIBK)	NA		3000	IRIS
MTBE (methyl tert-butyl ether)	1.1E-06	EPA	3000	IRIS
Styrene	NA		1000	IRIS
Tertiary butyl alcohol (TBA)	NA		63 oral	DEP
1,1,2,2-Tetrachloroethane	5.8E-05	IRIS	140	ATSDR
Tetrachloroethene (PCE)	5.9E-06	CAL	280	ATSDR
Toluene	NA		5000	IRIS
1,2,4-Trichlorobenzene	NA		35 oral	IRIS
1,1,1-Trichloroethane	NA		980	NCEA
1,1,2-Trichloroethane	1.6E-05	IRIS	14 oral	IRIS
Trichloroethene (TCE)	1.1E-04	NCEA	40	NCEA

TABLE G-3
CHEMICAL TOXICITY FACTOR LIST
(for Ground Water Screening Levels)

Chemical	Cancer-Based Unit Risk Factor (URF) $(\mu g/m^3)^{-1}$	Ref	Noncancer-Based Reference Concentration (RfC) $(\mu g/m^3)$	Ref
Trichlorofluoromethane (Freon 11)	NA		700	HEAST
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	NA		30000	HEAST
Vinyl chloride	8.8E-06	IRIS	100	IRIS
Xylenes (total)	NA		100	IRIS

NOTES

** Values updated from the previous Table G-3 (dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors. All values are based on the latest USEPA Region III RBC table except for the cited TBA and 3-chloropropene values.

IRIS = Integrated Risk Information System.

CAL = CalEPA toxicity value.

HEAST = Health Effects Assessment Summary Tables.

EPA = EPA Drinking Water Advisary for MTBE.

NCEA = National Center for Environmental Assessment.

PPRT = EPA Provisonal Peer Reviewed Toxicity Value (Superfund).

DEP = Value obtained from NJDEP "Addendum to Health-Based Support Document for TBA", 9/12/1997.

ATSDR = Agency for Toxic Substances Disease Registry, Minimum Risk Level (MRL) value (chronic).

oral = Value based on oral toxicity data.

NA = Not available.

TABLE G-4

March 2007

NJDEP HEALTH-BASED INDOOR AIR SCREENING VALUES AND ANALYTICAL REPORTING LIMITS

Chemical	Cancer/ Noncancer[a]	Residential Health-Based Values		Nonresidential Health-Based Values		Method TO-15 Reporting Limits	
		$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv
METHOD TO-15 PARAMETERS							
Acetone (2-propanone)	N	3,300	1,400	4,600	1,900	21	9
Benzene	C	0.2	0.07	0.5	0.2	2	0.5
Bromodichloromethane	C	0.1	0.02	0.2	0.03	3	0.5
Bromoethene (vinyl bromide)	C	0.06	0.01	0.1	0.03	2	0.5
Bromoform	C	2	0.2	4	0.4	5	0.5
Bromomethane (methyl bromide)	N	5	1	7	2	2	0.5
1,3-Butadiene (vinyl ethylene)	C	0.06	0.03	0.1	0.06	1	0.5
2-Butanone (methyl ethyl ketone)	N	5,100	1,700	7,200	2,400	1	0.5
Carbon disulfide	N	730	230	1,000	330	2	0.5
Carbon tetrachloride	C	0.1	0.02	0.3	0.04	3	0.5
Chlorobenzene	N	51	11	72	16	2	0.5
Chloroethane (ethyl chloride)	C	2	0.8	5	2	1	0.5
Chloroform	C	0.08	0.02	0.2	0.04	2	0.5
Chloromethane (methyl chloride)	N	95	46	130	64	1	0.5
3-Chloropropene (allyl chloride)	C	0.3	0.1	0.7	0.2	2	0.5
2-Chlorotolouene (o-chlorotoluene)	N	73	14	100	20	3	0.5
Cyclohexane	N	6,200	1,800	8,700	2,500	2	0.5
Dibromochloromethane	C	0.07	0.009	0.2	0.02	4	0.5
1,2-Dibromoethane (ethylene dibromide)	C	0.003	0.0004	0.007	0.0009	4	0.5
1,2-Dichlorobenzene (o)	N	150	24	200	34	3	0.5
1,3-Dichlorobenzene (m)	N	11	2	15	3	3	0.5
1,4-Dichlorobenzene (p)	C	0.3	0.05	0.6	0.1	3	0.5

TABLE G-4
NJDEP HEALTH-BASED INDOOR AIR SCREENING VALUES AND ANALYTICAL REPORTING LIMITS

Chemical	Cancer/ Noncancer[a]	Residential Health-Based Values		Nonresidential Health-Based Values		Method TO-15 Reporting Limits	
		$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv
Dichlorodifluoromethane (Freon 12)	N	180	37	260	52	2	0.5
1,1-Dichloroethane	N	510	130	720	180	2	0.5
1,2-Dichloroethane	C	0.07	0.02	0.2	0.04	2	0.5
1,1-Dichloroethene	N	220	55	310	77	2	0.5
** 1,2-Dichloroethene (cis)	N	36	9	51	13	2	0.5
1,2-Dichloroethene (trans)	N	73	18	100	26	2	0.5
1,2-Dichloroethene (total)[b]	N	33	8	46	12	2	0.5
1,2-Dichloropropane	C	0.09	0.02	0.2	0.04	2	0.5
1,3-Dichloropropene (total)[b]	C	0.6	0.1	1	0.3	2	0.5
Ethylbenzene	N	1,100	240	1,500	340	2	0.5
Hexachlorobutadiene	C	0.08	0.008	0.2	0.02	5	0.5
n-Hexane	N	730	210	1,000	290	2	0.5
Methylene chloride (dichloromethane)	C	4	1	9	2	2	0.5
4-Methyl-2-pentanone (MIBK)	N	3,100	770	4,400	1,100	2	0.5
MTBE (methyl tert-butyl ether)	C	2	0.4	4	1	2	0.5
Styrene	N	1,000	250	1,500	340	2	0.5
Tertiary butyl alcohol (TBA)	N	66	22	92	30	30	10
1,1,2,2-Tetrachloroethane	C	0.03	0.005	0.07	0.01	3	0.5
Tetrachloroethene (PCE)	C	0.3	0.05	0.7	0.1	3	0.5
Toluene	N	5,100	1,400	7,200	1,900	2	0.5
1,2,4-Trichlorobenzene	N	36	5	51	7	4	0.5
1,1,1-Trichloroethane	N	1,000	190	1,400	260	3	0.5
1,1,2-Trichloroethane	C	0.1	0.02	0.3	0.05	3	0.5

TABLE G-4
NJDEP HEALTH-BASED INDOOR AIR SCREENING VALUES AND ANALYTICAL REPORTING LIMITS

Chemical	Cancer/ Noncancer[a]	Residential Health-Based Values		Nonresidential Health-Based Values		Method TO-15 Reporting Limits	
		$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv
Trichloroethene (TCE)	C	0.02	0.003	0.04	0.007	3	0.5
Trichlorofluoromethane (Freon 11)	N	730	130	1,000	180	3	0.5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	N	31,000	4,100	44,000	5,700	4	0.5
Vinyl chloride	C	0.07	0.03	1	0.4	1	0.5
Xylenes (total)[b]	N	110	25	150	35	2	0.5
ADDITIONAL PARAMETERS							
** Mercury (elemental) [c]	N	0.3	NA	0.4	NA	NA	NA

NOTES

The Indoor Air Screening Level is the higher of the health-based indoor air concentration and the Method TO-15 reporting limit.

** Values updated from previous Table G-4 (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] The concentrations of each isomer are added if multiple isomers are present and the results compared to the total screening level.

[c] 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

Site specific background air concentrations must be considered when interpreting results and, if higher, may supercede the above values.

Values have been rounded to one significant figure when less than 10 and two significant figures when greater than 10.

When comparing site data with screening levels, the concentration and screening levels must be in the same units (i.e. ppbv or ug/m3).

Due to routine updates to the table, the user should refer to the NJDEP website for the latest information.

TABLE G-5
CHEMICAL TOXICITY FACTOR LIST
(for Indoor Air Screening Levels)

Chemical	Cancer Slope Factor (inhalation) 1/mg/kg/d	Ref	Reference Dose (inhalation) mg/kg/d	Ref
METHOD TO-15 PARAMETERS				
Acetone (2-propanone)	NA		9.0E-01 (oral)	IRIS
Benzene	2.7E-02	IRIS	8.6E-03	IRIS
Bromodichloromethane	6.2E-02 (oral)	IRIS	2.0E-02 (oral)	IRIS
Bromoethene (vinyl bromide)	1.1E-01	HEAST	8.6E-04	IRIS
Bromoform	3.9E-03	IRIS	2.0E-02 (oral)	IRIS
Bromomethane (methyl bromide)	NA		1.4E-03	IRIS
1,3-Butadiene (vinyl ethylene)	1.0E-01	IRIS	5.7E-04	IRIS
2-Butanone (methyl ethyl ketone)	NA		1.4E+00	IRIS
Carbon disulfide	NA		2.0E-01	IRIS
Carbon tetrachloride	5.3E-02	IRIS	5.0E-02	ATSDR
Chlorobenzene	NA		1.4E-02	PPRT
Chloroethane (ethyl chloride)	2.9E-03 (oral)	NCEA	2.9E+00	IRIS
Chloroform	8.1E-02	IRIS	1.4E-02	NCEA
Chloromethane (methyl chloride)	NA		2.6E-02	IRIS
3-Chloropropene (allyl chloride)	2.1E-02	CAL	2.86E-04	IRIS
2-Chlorotoluene (o-chlorotoluene)	NA		2.0E-02 (oral)	IRIS
Cyclohexane	NA		1.7E+00	IRIS
Dibromochloromethane	8.4E-02 (oral)	IRIS	2.0E-02 (oral)	IRIS
1,2-Dibromoethane (ethylene dibromide)	2.0E+00	IRIS	2.6E-03	IRIS
1,2-Dichlorobenzene (o)	NA		4.0E-02	HEAST
1,3-Dichlorobenzene (m)	NA		3.0E-03 (oral)	NCEA
1,4-Dichlorobenzene (p)	2.2E-02	NCEA	2.29E-01	IRIS

TABLE G-5
CHEMICAL TOXICITY FACTOR LIST
(for Indoor Air Screening Levels)

Chemical	Cancer Slope Factor (inhalation) 1/mg/kg/d	Ref	Reference Dose (inhalation) mg/kg/d	Ref
Dichlorodifluoromethane (Freon 12)	NA		5.0E-02	HEAST
1,1-Dichloroethane	NA		1.4E-01	HEAST
1,2-Dichloroethane	9.1E-02	IRIS	7.0E-01	ATSDR
1,1-Dichloroethene	NA		6.0E-02	IRIS
** 1,2-Dichloroethene (cis)	NA		1.0E-02 (oral)	PPRT
1,2-Dichloroethene (trans)	NA		2.0E-02 (oral)	IRIS
1,2 Dichloroethene (total)	NA		9.0E-03 (oral)	HEAST
1,2-Dichloropropane	6.8E-02 (oral)	HEAST	1.14E-03	IRIS
1,3-Dichloropropene (total)	1.0E-02	IRIS	5.71E-03	IRIS
Ethylbenzene	NA		2.9E-01	IRIS
Hexachlorobutadiene	7.8E-02	IRIS	2.0E-04 (oral)	HEAST
n-Hexane	NA		2.0E-01	IRIS
Methylene chloride (dichloromethane)	1.65E-03	IRIS	3.0E-01	ATSDR
4-Methyl-2-pentanone (MIBK)	NA		8.6E-01	IRIS
MTBE (methyl tert-butyl ether)	4.0E-03 (oral)	EPA	8.57E-01	IRIS
Styrene	NA		2.86E-01	IRIS
Tertiary butyl alcohol (TBA)	NA		0.018 (oral)	DEP
1,1,2,2-Tetrachloroethane	2.0E-01	IRIS	4.0E-02 (oral)	ATSDR
Tetrachloroethene (PCE)	2.0E-02	CAL	8.0E-02	ATSDR
Toluene	NA		1.4E+00	IRIS
1,2,4-Trichlorobenzene	NA		1.0E-02 (oral)	IRIS
1,1,1-Trichloroethane	NA		2.8E-01 (oral)	NCEA
1,1,2-Trichloroethane	5.6E-02	IRIS	4.0E-03 (oral)	IRIS

TABLE G-5
CHEMICAL TOXICITY FACTOR LIST
(for Indoor Air Screening Levels)

Chemical	Cancer Slope Factor (inhalation) 1/mg/kg/d	Ref	Reference Dose (inhalation) mg/kg/d	Ref
Trichloroethene (TCE)	4.0E-01	NCEA	1.0E-02	NCEA
Trichlorofluoromethane (Freon 11)	NA		2.0E-01	HEAST
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	NA		8.6E+00	HEAST
Vinyl chloride (including early life exposure)	3.0E-02	IRIS	2.8E-02	IRIS
Vinyl chloride (adult exposure)	1.5E-02	IRIS	2.8E-02	IRIS
Xylenes (total)	NA		3.0E-02	IRIS
ADDITIONAL PARAMETERS				
** Mercury (elemental)	NA		8.6E-05	IRIS

NOTES

** Values updated from the previous Table G-3 (dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors. All values based on the latest USEPA Region III RBC table except for the cited TBA and 3-chloropropene values.

IRIS = EPA Integrated Risk Information System.

CAL = CalEPA toxicity value.

HEAST = EPA Health Effects Assessment Summary Tables.

EPA = EPA Drinking Water Advisary for tert methyl butyl ether (MTBE).

NCEA = EPA National Center for Environmental Assessment.

PPRT = EPA Provisional Peer Reviewed Toxicity Value (Superfund).

ATSDR = Agency for Toxic Substances and Disease Registry, Minimum Risk Levels (chronic).

oral = Value based on oral toxicity factor.

DEP = Value obtained from NJDEP "Addendum to Health Based Support Document for TBA", 9/12/1997.

NA = Not available.

TABLE G-6
NJDEP HEALTH-BASED SOIL GAS SCREENING VALUES AND REPORTING LIMITS

Chemical	Residential Health-Based Values		Nonresidential Health-Based Values		Reporting Limits based on Method TO-15	
	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv
Acetone (2-propanone)	160,000	69,000	230,000	97,000	210	90
Benzene	12	4	26	8	16	5
Bromodichloromethane	5	0.8	12	2	34	5
Bromoethene (vinyl bromide)	3	0.7	6	1	22	5
Bromoform	80	8	180	18	52	5
Bromomethane (methyl bromide)	260	66	360	92	19	5
1,3-Butadiene (vinyl ethylene)	3	1	7	3	11	5
2-Butanone (methyl ethyl ketone)	260,000	87,000	360,000	120,000	15	5
Carbon disulfide	36,000	12,000	51,000	16,000	16	5
Carbon tetrachloride	6	0.9	14	2	31	5
Chlorobenzene	2,600	550	3,600	780	23	5
Chloroethane (ethyl chloride)	110	41	250	93	13	5
Chloroform	4	0.8	9	2	24	5
Chloromethane (methyl chloride)	4,700	2,300	6,600	3,200	10	5
3-Chloropropene (allyl chloride)	15	5	34	11	16	5
2-Chlorotolouene (o-chlorotoluene)	3,600	700	5,100	990	26	5
Cyclohexane	310,000	90,000	430,000	130,000	17	5
Dibromochloromethane	4	0.4	8	1	43	5
1,2-Dibromoethane (ethylene dibromide)	0.2	0.02	0.4	0.05	38	5
1,2-Dichlorobenzene (o)	7,300	1,200	10,000	1,700	30	5
1,3-Dichlorobenzene (m)	550	91	770	130	30	5
1,4-Dichlorobenzene (p)	14	2	32	5	30	5
Dichlorodifluoromethane (Freon 12)	9,100	1,800	13,000	2,600	25	5

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NJDEP HEALTH-BASED SOIL GAS SCREENING VALUES AND REPORTING LIMITS

Chemical	Residential Health-Based Values		Nonresidential Health-Based Values		Reporting Limits based on Method TO-15	
	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv
1,1-Dichloroethane	26,000	6,300	36,000	8,800	20	5
1,2-Dichloroethane	3	0.8	8	2	20	5
1,1-Dichloroethene	11,000	2,800	15,000	3,900	20	5
** 1,2 Dichloroethene (cis)	1,800	460	2,600	640	20	5
1,2-Dichloroethene (trans)	3,600	920	5,100	1,300	20	5
1,2-Dichloroethene (total)[a]	1,600	410	2,300	580	20	5
1,2-Dichloropropane	5	1	10	2	23	5
1,3-Dichloropropene (total)[a]	31	7	72	16	23	5
Ethylbenzene	53,000	12,000	74,000	17,000	22	5
Hexachlorobutadiene	4	0.4	9	0.9	53	5
n-Hexane	36,000	10,000	51,000	14,000	18	5
Methylene chloride (dichloromethane)	190	55	430	120	17	5
4-Methyl-2-pentanone (MIBK)	160,000	38,000	220,000	54,000	20	5
MTBE (methyl tert-butyl ether)	78	22	180	50	18	5
Styrene	52,000	12,000	73,000	17,000	21	5
Tertiary butyl alcohol (TBA)	3,300	1,100	4,600	1,500	300	100
1,1,2,2-Tetrachloroethane	2	0.2	4	0.5	34	5
Tetrachloroethene (PCE)	16	2	36	5	34	5
Toluene	260,000	68,000	360,000	95,000	19	5
1,2,4-Trichlorobenzene	1,800	250	2,600	340	37	5
1,1,1-Trichloroethane	51,000	9,400	72,000	13,000	27	5
1,1,2-Trichloroethane	6	1	13	2	27	5
Trichloroethene (TCE)	0.8	0.1	2	0.3	27	5

TABLE G-6
NJDEP HEALTH-BASED SOIL GAS SCREENING VALUES AND REPORTING LIMITS

Chemical	Residential Health-Based Values		Nonresidential Health-Based Values		Reporting Limits based on Method TO-15	
	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv	$\mu g/m^3$	ppbv
Trichlorofluoromethane (Freon 11)	36,000	6,500	51,000	9,100	28	5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	1,600,000	200,000	2,200,000	290,000	38	5
Vinyl chloride	4	1	48	19	13	5
Xylenes (total)[a]	5,500	1,300	7,700	1,800	22	5

NOTES

The Soil Gas Screening Level is the higher of the health-based soil gas concentration and the Method TO-15 reporting limit.

** Values updated from previous Table G-6 (dated May 2006) based on the latest USEPA Region III RBC Table (10/31/2006) toxicity factors.

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

Values have been rounded to one significant figure when less than 10 and two significant figures when greater than 10.

When reviewing site data, the concentration and screening levels must be in the same units (i.e. ppbv or ug/m3).

Due to routine updates to the table, the user should refer to the NJDEP website for the latest information.