

# Texas Natural Resource Conservation Commission

## INTEROFFICE MEMORANDUM

To: Interested Parties Date: September 5, 1997

From: Toxicology & Risk Assessment Section Staff

Subject: 1997 Effects Screening Levels List

Attached is the latest update of the list of Effects Screening Levels (ESLs) currently used by the TNRCC Toxicology & Risk Assessment (TARA) Section Staff. This update replaces the April 15, 1996 list. ESLs are used to evaluate the potential for effects to occur as a result of exposure to concentrations of constituents in air. ESLs are based on data concerning health effects, odor nuisance potential, vegetation effects, or corrosion effects. They are not ambient air standards. If predicted or measured airborne levels of a constituent do not exceed the screening level, we would not expect any adverse health or welfare effects to result. If ambient levels of constituents in air exceed the screening levels, it does not necessarily indicate a problem. It is just a trigger for a more in-depth review.

We would like to call your attention to several notations used on the list. Short- and long-term ESLs are listed. "Short-term" generally indicates a 1-hour averaging period. However, exceptions are noted parenthetically after a constituent name. An **asterisk immediately after the constituent name** signifies the ESL is currently under review, and thus, subject to change. A **double asterisk after the constituent name** indicates the constituent has disaster potential.

Please note that some ESLs have changed or been added since the April 15, 1996 list was published. Most notably, fluorides are no longer regulated by rule, and thus, undergo ESL review. On this year's ESL list, there are two parenthetical notations that may accompany the ESLs of fluoride-containing constituents -- 1) "as HF, 3hr" or 2) "also evaluate as HF." Fluoride-containing constituents with the first notation have a short-term ESL of  $4.9 \mu\text{g}/\text{m}^3$  averaged over three hours and a long-term ESL of  $0.5 \mu\text{g}/\text{m}^3$  for evaluation from the standpoint of effects on vegetation. These constituents are to be evaluated only for their contribution to total hydrogen fluoride. Fluoride-containing constituents with the second notation have individual hourly and long-term ESLs for evaluation from a health perspective, but must also be evaluated for their contribution to total 3-hour HF for evaluation from the standpoint of effects on vegetation. If a fluoride-containing constituent has no notation, it is to be evaluated using only its individual short- and long-term ESLs.

Also, ESLs for constituents with odor-based short-term ESLs are noted parenthetically and all corresponding long-term ESLs are now a factor of ten lower than the short-term ESL. (Previously, long-term ESLs were not available for all constituents with odor-based short-term ESLs.) These are provided in response to questions regarding what values to use when evaluating long-term emissions in various programs.

If you cannot find a listing for a particular constituent, this does not mean a health effects evaluation is not required. To find out if a screening level has been established for a constituent not on the list,

please check with TARA Staff. Before you call us, please be sure to check synonyms and Chemical Abstract Service Registry numbers (CAS No.) to make sure the constituent you are interested in is not listed. Please feel free to call Zarena Post at (512) 239-1332 or Jong-Song Lee at (512) 239-1790 with any questions.

Hard copies of the ESL list are available upon request.

memo97a.esl

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
Abamectin	71751-41-2	0.4	---	0.04	---
Abate, respirable	3383-96-8	50	---	5	---
acenaphthene*	83-32-9	1	---	0.1	---
acetal	105-57-7	4924	1029	492	103
acetaldehyde (odor)	75-07-0	90	50	9	5
acetamide	60-35-5	320	132	32	13
acetic acid	64-19-7	250	100	25	10
acetic anhydride	108-24-7	200	50	20	5
acetoacetoxyethyl methacrylate,2-	21287-97-3	2000	230	200	23
acetone	67-64-1	5900	2500	590	250
acetone cyanohydrin	75-86-5	40	10	4	1
acetonitrile	75-05-8	340	200	34	20
acetophenone	98-86-2	490	100	49	10
acetyl chloride	75-36-5	4	0.8	0.4	0.08
acetylene	74-86-2	26620	25000	2660	2500
acetylene dichloride	540-59-0	7930	2000	793	200
acetylene tetrabromide	79-27-6	140	10	14	1
acetylsalicylic acid	50-78-2	50	7	5	0.7
acridine	260-94-6	0.5	---	0.05	---
acrolein**	107-02-8	2.3	1	0.23	0.1
acrylamide	79-06-1	0.3	0.1	0.03	0.01
acrylic acid	79-10-7	60	20	6	2
acrylic acid, n-butyl ester (odor)	141-32-2	183	35	18.3	3.5
acrylic acid, ethyl ester (odor)	140-88-5	5	1.25	0.5	0.125
acrylic acid, methyl ester (odor)	96-33-3	58	17	5.8	1.7
acrylic polymer	42767-92-0	40	---	4	---
Acryloid	9011-14-7	50	---	5	---
acrylonitrile	107-13-1	43	20	4.3	2
adamantane	281-23-2	100	---	10	---
adipic acid	124-04-9	50	---	5	---
adiponitrile	111-69-3	88	20	8.8	2
Admire	105827-78-9	33	---	3.3	---
Affirm	71751-41-2	0.4	---	0.04	---
aflatoxin	1402-68-2	0.8	---	0.08	---
alcohol ethoxylates	-----	600	---	60	---
Aldrin	309-00-2	2.5	---	0.25	---
aliphatic diisocyanate	68239-06-5	0.25	---	0.025	---
aliphatic esters	-----	500	---	50	---
alkanes (C4-C16), not otherwise specified	-----	3500	---	350	---
alkanes, C17 and higher	-----	100	---	10	---
alkenyl succinic anhydride	67762-77-0	240	---	24	---
alkyd resins	63148-69-6	100	---	10	---
alkyl phenol, C20	-----	1150	75	115	7.5
alkyl phenol ethoxylate	-----	600	---	60	---
alkylates	-----	1750	---	175	---
allyl alcohol	107-18-6	48	20	4.8	2
allylamine	107-11-9	12	5	1.2	0.5

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
allyl chloride**	107-05-1	30	10	3	1
allyl glycidyl ether	106-92-3	225	50	23	5
allyl methacrylate	96-05-9	110	22	11	2.2
allyl propyl disulfide	2179-59-1	120	20	12	2
allyl succinic anhydride	7539-12-0	6	1	0.6	0.1
alpha olefins	-----	100	---	10	---
alumina	1344-28-1	50	---	5	---
aluminum: metal and oxide	7429-90-5	50	---	5	---
aluminum: pyro powders, welding fumes	-----	50	---	5	---
aluminum: alkyls and soluble salts	-----	20	---	2	---
Amdro	67485-29-4	14	---	1.4	---
amino-3-aminomethyl-3,3,5-trimethylcyclohexane	-----	375	50	38	5
aminoethanol	141-43-5	75	30	7.5	3
aminoethoxyethanol	929-06-6	380	---	38	---
aminoethylethanolamine	111-41-1	640	150	64	15
aminoethyl piperazine	140-31-8	10	---	1	---
1-(2-aminoethyl)-2-n-alkyl imidazoline	-----	50	---	5	---
2-amino-2-methyl-1-propanol	124-68-5	400	---	40	---
aminopropyl morpholine, 4-	123-00-2	1650	280	165	28
aminopyridine, 2-	504-29-0	19	5	2	0.5
aminopyridine, 3-	462-08-8	15	3.8	1.5	0.38
aminopyridine, 4-	504-24-5	2.5	0.7	0.25	0.07
Amitraz (Ovasyn)	33089-61-1	35	---	3.5	---
amino-1,2,4-triazole, 3- (Amitrole)	61-82-5	2	---	0.2	---
ammonia**	7664-41-7	170	250	17	25
ammonium acetate	631-63-8	220	---	22	---
ammonium chloride fume	12125-02-9	100	---	10	---
ammonium fluoride (as HF, 3hr)	12125-01-8	4.9	3.5	0.5	0.35
ammonium hydroxide (as ammonium, aqueous)	1336-21-6	170	120	17	12
ammonium nitrate	6484-52-2	10	---	1	---
ammonium nitrite	13446-48-5	50	---	5	---
ammonium perfluorooctanate	3825-26-1	1	---	0.1	---
ammonium sulfamate	7773-06-0	100	---	10	---
ammonium sulfate	7783-20-2	50	---	5	---
amyl acetate, n- (odor)	628-63-7	27	5	2.7	0.5
amyl acetate, sec- (odor)	626-38-0	11	2	1.1	0.2
amyl alcohol, n- (odor)	71-41-0	430	120	43	12
amyl amine, n-	110-58-7	150	---	15	---
amyl bromide	110-53-2	250	40	25	4
amylene, alpha- (odor)	109-67-1	90	30	9	3
amylenes	-----	22950	8000	2295	800
amyl hydroperoxide, t-	3425-61-4	100	24	10	2.4
amyl mercaptan, n- (odor)	110-66-7	0.1	0.02	0.01	0.002
amyl methyl ether, n- (odor)	628-80-8	520	125	52	12.5
amyl methyl ether, t- (TAME) (odor)	994-05-8	520	125	52	12.5
amyl peroxybenzoate, t-	4511-39-1	15	---	1.5	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
amyl phenol, p-tert-, vapor	80-46-6	700	100	70	10
amyl phenol, p-tert-, particulate	80-46-6	35	---	3.5	---
aniline	62-53-3	76	20	8	2
anisdine, o-, p- isomers	29191-52-4	5	1	0.5	0.1
anisole	100-66-3	100	22	10	2.2
anthracene*	20-12-7	0.5	---	0.05	---
antimony (as Sb)	7440-36-0	5	---	0.5	---
antimony trioxide	1309-64-4	5	---	0.5	---
ANTU	86-88-4	3	---	0.3	---
apiole (odor)	523-80-8	57	6	5.7	0.6
Aramite	140-57-8	100	---	10	---
argon	7440-37-1		simple asphyxiant		
Aromatic 100	64742-95-6	1230	250	123	25
Aromatic Solvent 104	64741-68-0	1230	250	123	25
Aromatic 150	-----	2560	455	256	46
Aromatic 200	-----	4200	620	420	62
Aromatic Distillate, Heavy	67891-79-6	2560	455	256	46
Aromatic Naphtha, Heavy	64742-06-9	4200	620	420	62
arsenic & inorganic cpds	7440-38-2	0.1	---	0.01	---
arsenic, organic (as As)	-----	5	---	0.5	---
arsenic pentoxide	1303-28-2	0.1	---	0.01	---
arsine	7784-42-1	1.6	0.5	0.16	0.05
asbestos, all forms	17068-78-9	0.03	---	0.003	---
asphalt, fumes, particulate fraction	8052-42-4	50	---	5	---
asphalt, vapors	8052-42-4	350	135	35	14
Atrazine	1912-24-9	50	---	5	---
auramine	492-80-8	36	---	3.6	---
Azaserine	115-02-6	8.8	---	0.88	---
azine (odor)	110-86-1	69	23	6.9	2.3
Azinphos-methyl	86-50-0	2	---	0.2	---
Banvel (Herbicide)	1918-00-9	100	---	10	---
barite, respirable	7727-43-7	50	---	5	---
barium & compounds (as Ba)	7440-39-3	5	---	0.5	---
barium sulfate, respirable	7727-43-7	50	---	5	---
bauxite	1318-16-7	50	---	5	---
Baygon	114-26-1	5	---	0.5	---
Baytan	55219-65-3	30	---	3	---
Baythroid	68359-37-5	15	---	1.5	---
Beech wood dust	-----	10	---	1	---
Benomyl (Fungicide), respirable	17804-35-2	50	---	5	---
bentonite	1302-78-9	20	---	2	---
benzal chloride	98-87-3	20	3	2	0.3
benzaldehyde (odor)	100-52-7	22	5	2.2	0.5
benzene	71-43-2	75	25	3	1
benzene (24 hour)	71-43-2	12	4	3	1
benzene azimide	95-14-7	100	20	10	2
benzene raffinate	68410-71-9	3500	1000	350	100

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Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
benzenethiol dichloride	-----	20	---	2	---
benzine	8032-32-4	3500	875	350	88
benzocyclobutyl pentanone, 1-	6809-93-4	25	3.3	2.5	0.33
benzo[b]fluoranthene	205-99-2	0.5	---	0.05	---
benzoic acid	65-85-0	50	10	5	1
benzoin isobutyl ether	22499-12-3	100	---	10	---
benzonitrile	100-47-0	505	120	51	12
benzophenone	119-61-9	150	20	15	2
benzo[a]pyrene*	50-32-8	0.03	---	0.003	---
benzotriazole	95-14-7	100	20	10	2
benzotrichloride	98-07-7	8	1	0.8	0.1
benzoyl carbinol	119-53-9	3440	396	344	40
benzoyl chloride	98-88-4	60	10	6	1
benzoyl peroxide	94-36-0	50	---	5	---
benzyl acetate	140-11-4	600	100	60	10
benzyl alcohol	100-51-6	500	100	50	10
benzyl benzoate	120-51-4	590	---	59	---
benzyl carbinol	60-12-8	500	---	50	---
benzyl chloride	100-44-7	50	10	5	1
benzyl dichloride	98-87-3	20	3	2	0.3
benzyl dimethylamine	103-83-3	108	20	11	2
beryllium	7440-41-7		TACB Reg III		
BHT	128-37-0	100	---	10	---
bicycloheptadiene	121-46-0	2000	---	200	---
Bifenthrin	82657-04-3	25	---	2.5	---
biphenyl (odor)	92-52-4	2.3	0.36	0.23	0.036
biphenyl phenyl ether	28984-89-6	100	---	10	---
bis(2-chloroethyl)ether	111-44-4	290	50	29	5
bis(2-chloroethyl)-2-naphthylamine	494-03-1	380	---	38	---
bis(chloromethyl)ether	542-88-1	0.047	0.01	0.0047	0.001
bismuth telluride, particulate, respirable	1304-82-1	50	---	5	---
bismuth telluride, selenium-doped	-----	50	---	5	---
bisphenol A, particulate	80-05-7	40	---	4	---
bisphenol A, vapor	80-05-7	800	80	80	8
black grit	68475-96-0	50	---	5	---
boiler slag	68475-96-0	50	---	5	---
borates, tetrasodium salts: anhydrous	1330-43-4	10	---	1	---
borates, tetrasodium salts: decahydrate	1303-96-4	50	---	5	---
borates, tetrasodium salts: pentahydrate	11130-12-4	10	---	1	---
boric acid*	10043-35-3	10	---	1	---
boron	7440-42-8	100	---	10	---
boron oxide, respirable	1303-86-2	50	---	5	---
boron tribromide	10294-33-4	100	10	10	1
boron trichloride	10294-34-5	5	---	0.5	---
boron trifluoride (as HF, 3hr)	7637-07-2	4.9	3.5	0.5	0.35
Botran 75W	99-30-9	100	---	10	---
Bromacil	314-40-9	100	10	10	1

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Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
brominated hydrocarbons	-----	50	---	5	---
bromine**	7726-95-6	6.6	1	0.66	0.1
bromine pentafluoride (as HF, 3hr)	7789-30-2	4.9	3.5	0.5	0.35
bromobenzene	108-86-1	30	---	3	---
bromo-3-chloropropane, 1-	109-70-6	0.5	0.075	0.05	0.0075
bromochloromethane (odor)	74-97-5	1680	320	168	32
bromoethane	74-96-4	220	50	22	5
bromofluorobenzene	-----	720	72	72	7
bromoform	75-25-2	52	5	5	0.5
brucine	357-57-3	20	---	2	---
butadiene, 1,3- *	106-99-0	110	50	11	5
butane	106-97-8	19000	8000	1900	800
butanethiol (odor)	109-79-5	1.8	0.5	0.18	0.05
butanone (odor)	78-93-3	3900	1320	390	132
butene, 1- (odor)	25167-67-3	160	69	16	6.9
butene, 2- (odor)	-----	1300	600	130	60
butoxyethanol	111-76-2	240	50	24	5
butoxyethyl acetate, 2-	112-07-2	310	50	31	5
butoxytriglycol	143-22-6	1000	120	100	12
butyl acetate, n- (odor)	123-86-4	1850	390	185	39
butyl acetate, sec-	105-46-4	9500	2000	950	200
butyl acetate, tert- (odor)	540-88-5	19	4	1.9	0.4
butylacrylamide, tert-	107-58-4	2.6	---	0.26	---
butyl acrylate, n- (odor)	141-32-2	183	35	18.3	3.5
butyl alcohol, n	71-36-3	760	250	76	25
butyl alcohol, sec	78-92-2	3030	1000	303	100
butyl alcohol, tert-	75-65-0	3030	1000	303	100
butylamine, n-	109-73-9	150	50	15	5
butylamine, sec-	13952-84-6	150	50	15	5
butylamine, tert-	75-64-9	12	4	1.2	0.4
butyl aniline	-----	100	16	10	1.6
butylated hydroxytoluene	128-37-0	100	---	10	---
butyl benzene, all isomers	-----	2740	500	274	50
butyl benzyl phthalate	85-68-7	50	---	5	---
butyl Carbitol	112-34-5	1060	160	106	16
butyl catechol, tert-	-----	350	50	35	5
butyl Cellosolve	111-76-2	240	50	24	5
butyl Cellosolve acetate	112-07-2	310	50	31	5
butyl chloride, n- (odor)	109-69-3	3335	886	333	88.6
butyl chloride, sec-	78-86-4	4400	1170	440	117
butyl chloride, tert-	507-20-0	4400	1170	440	117
butyl chromate, tert- (as CrO <sub>3</sub> )	1189-85-1	0.1	---	0.01	---
butylene glycol, 1,2-	584-03-2	2100	570	210	57
butylene glycol, 1,3-	107-88-0	4400	1195	440	120
butylene glycol, 1,4-	110-63-4	500	136	50	14
butylene glycol, 2,3-	513-85-9	1400	380	140	38

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
butylene oxide (odor)	106-88-7	206	70	20.6	7
butyl ether, all isomers (odor)	142-96-1	370	70	37	7
butyl-6-ethylaniline, 2-sec-	-----	100	---	10	---
butyl formate	592-84-7	21000	5080	2100	508
butyl glycidyl ether	2426-08-6	300	56	30	5.6
butyl glycolate	7397-62-8	270	50	27	5
butyl hydroperoxide, t-	75-91-2	35	10	3.5	1
butyl hydroquinone, t-	1948-33-0	59	---	5.9	---
butyl isocyanate	111-36-4	9	2.2	0.9	0.22
butyl lactate	138-22-7	300	50	30	5
butyl mercaptan, n- (odor)	109-79-5	1.8	0.5	0.18	0.05
butyl methacrylate	97-88-1	6970	1200	697	120
butyl peroxide, tert-	110-05-4	100	18	10	1.8
butyl peroxybenzoate, t-	614-45-9	15	2	1.5	0.2
butyl phenol, o-sec-	89-72-5	310	50	31	5
butyl phenol, o-tert-	-----	20	3.3	2	0.33
butyl phenol, p-sec-	99-71-8	130	21	13	2.1
butyl phenol, p-tert-	98-54-4	5	0.8	0.5	0.08
butyl propionate, n-	590-01-2	230	43	23	4.3
butyl toluene, p-tert-	98-51-1	61	10	6.1	1
butyl toluene diamine, t-	-----	70	10	7	1
butyl-m-xylene, tert-	98-19-1	3300	500	330	50
butynediol, 1,4	110-65-6	200	60	20	6
butyraldehyde (odor)	123-72-8	14	5	1.4	0.5
butyric acid (odor)	107-92-6	18	5	1.8	0.5
butyric anhydride	106-31-0	250	39	25	3.9
butyrolactam, gamma	616-45-5	70	---	7	---
butyrolactone, gamma	96-48-0	2800	800	280	80
butyronitrile	109-74-0	220	80	22	8
cacodylic acid (as As)	75-60-5	5	---	0.5	---
cadmium & compounds (as Cd)	7440-43-9	0.1	---	0.01	---
calcium arsenate (as As)	7778-44-1	0.1	---	0.01	---
calcium bromide	7789-41-5	100	---	10	---
calcium carbonate, respirable	1317-65-3	50	---	5	---
calcium chloride	10043-52-4	70	---	7	---
calcium chromate (as Cr)	13765-19-0	0.1	---	0.01	---
calcium cyanamide	156-62-7	5	---	0.5	---
calcium cyanide	592-01-8	50	---	5	---
calcium hydroxide	1305-62-0	50	---	5	---
calcium lignosulfate	-----	50	---	5	---
calcium oxide	1305-78-8	20	---	2	---
calcium phosphide	1305-99-3	50	---	5	---
calcium silicate, respirable	1344-95-2	50	---	5	---
calcium sulfate, respirable	7778-18-9	50	---	5	---
calcium sulfonate	-----	50	---	5	---
camphene	79-92-5	20	---	2	---
camphor, synthetic	76-22-2	20	3.3	2	0.33



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Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
capric acid (odor)	334-48-5	14	2	1.4	0.2
caproic acid (odor)	142-62-1	29	6	2.9	0.6
caprolactam, dust	105-60-2	10	---	1	---
caprolactam, vapor	105-60-2	230	50	23	5
caprylic acid (odor)	124-07-2	48	8	4.8	0.8
Captafol	2425-06-1	1	---	0.1	---
Captan	133-06-2	50	---	5	---
Carbanil	103-71-9	5	---	0.5	---
Carbaryl	63-25-2	50	---	5	---
Carbitols	-----	diethylene glycol ethers			
Carbofuran	1563-66-2	1	---	0.1	---
carbon black	1333-86-4	35	---	3.5	---
carbon dioxide	124-38-9	90000	50000	9000	5000
carbon disulfide**	75-15-0	30	10	3	1
carbon monoxide	630-08-0	must meet NAAQS			
carbon tetrabromide	558-13-4	14	1	1.4	0.1
carbon tetrachloride	56-23-5	126	20	13	2
carbon tetrafluoride	75-73-0	18000	5000	1800	500
carbonyl chloride**	75-44-5	4	1	0.4	0.1
carbonyl fluoride (as HF, 3hr)	353-50-4	4.9	3.5	0.5	0.35
carbonyl sulfide	463-58-1	8	3	0.8	0.3
catechol	120-80-9	230	50	23	5
cellulose, respirable	9004-34-6	50	---	5	---
cellulose acetate	-----	100	---	10	---
cellulose acetate butyrate	9004-36-8	100	---	10	---
cellulose acetate phthalate	9004-38-0	100	---	10	---
cellulose acetate propionate	-----	100	---	10	---
ceric oxide	-----	100	---	10	---
cesium hydroxide	21351-79-1	20	---	2	---
cetyl mercaptan	2917-26-2	53	5	5	0.5
chlordane	57-74-9	5	---	0.5	---
chlordecone	143-50-0	0.01	---	0.001	---
chlorinated camphene	8001-35-2	5	---	0.5	---
chlorinated diphenyl oxide	31242-93-0	5	---	0.5	---
chlorine**	7782-50-5	15	5	1.5	0.5
chlorine dioxide	10049-04-4	2.8	1	0.3	0.1
chlorine trifluoride (as HF, 3hr)	7790-91-2	1.9	1.4	0.19	0.14
chlorite (chlorine dioxide ion)	14998-27-7	2.8	1	0.3	0.1
chloroacetaldehyde	107-20-0	32	10	3	1
chloroacetic acid	79-11-8	12	---	1.2	---
chloroacetic acid methyl ester	96-34-4	50	10	5	1
chloroacetone	78-95-5	38	10	4	1
chloroacetophenone	532-27-4	3.2	0.5	0.32	0.05
chloroacetylene	593-63-5	3.9	1	0.39	0.1
chloroacetylchloride	79-04-9	2.3	0.5	0.23	0.05
1-(3-chloroallyl)-3,5,7-aza-1-azoniad adamantane chloride	-----	5	0.5	0.5	0.05

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
Chloroambucil	305-03-3	5	---	0.5	---
chloroamphenicol	56-75-7	50	4	5	0.4
chloroaniline, m-	108-42-9	31	6	3.1	0.6
chloroaniline, o-	95-51-2	53	10	5.3	1
chloroaniline, p-	106-47-8	53	10	5.3	1
chlorobenzene	108-90-7	460	100	46	10
Chlorobenzilate	510-15-6	100	---	10	---
chlorobenzyl chloride	104-83-6	26	4	2.6	0.4
chlorobenzylidene malononitrile, o-	2698-41-1	4	0.5	0.4	0.05
chlorobromomethane (odor)	74-97-5	1680	320	168	32
chloro-1,3-butadiene, 2-	1126-99-8	36	10	3.6	1
chlorocresol (odor)	59-50-7	20	3.4	2	0.34
chlorodifluoroethane, 1,1,1-	75-68-3	61700	18750	6170	1875
chlorodifluoromethane	75-45-6	18000	5000	1800	500
chlorodiphenyl, 42% chlorine (PCBs)	53469-21-9	0.1	---	0.01	---
chlorodiphenyl, 54% chlorine (PCBs)	11097-69-1	0.1	---	0.01	---
chloro-2,3-epoxypropane	106-89-8	19	5	1.9	0.5
chloroethane	75-00-3	500	190	50	19
chloroethanol, 2-	107-07-3	33	10	3.3	1
chloroethylene	75-01-4	130	50	13	5
chloroform	67-66-3	98	20	9.8	2
chloroglycerin	-----	50	11	5	1
chloroisopropyl ether, bis-	108-60-1	210	---	21	---
chloromethyl ether, bis-	542-88-1	0.047	0.01	0.0047	0.001
chloromethylmethyl ether	107-30-2	0.5	0.16	0.05	0.016
chloronitrobenzene, p-	100-00-5	6.4	1	0.64	0.1
chloronitropropane	600-25-9	100	20	10	2
chloropentafluoroethane	76-15-3	63200	10000	6320	1000
chlorophenol, m- (odor)	108-43-0	19	3.6	1.9	0.36
chlorophenol, o- (odor)	95-57-8	2	0.36	0.2	0.036
chlorophenol, p-	106-48-9	300	57	30	5.7
chlorophenolthiomethyl-O,O-diethyl	-----	1	---	0.1	---
phosphorodithioate	-----	5	---	0.5	---
chlorophenyl phenyl ethers	-----	10	---	1	---
1,1-bis-(chlorophenyl)-2,2,2-trichloroethanol	115-32-2	10	---	1	---
chloropicrin	76-06-2	6.7	1	0.67	0.1
chloroprene, beta-	126-99-8	36	10	3.6	1
chloropropionic acid, 2-	598-78-7	4.4	1	0.44	0.1
chloropropionitrile, 3-	542-76-7	180	50	18	5
chlorostyrene, o-	2039-87-4	2850	500	285	50
chlorosulfonic acid	7790-94-5	14	2.9	1.4	0.29
chlorotetrafluoroethane	2837-89-0	27900	5000	2790	500
Chloroethanonil	1897-45-6	15	---	1.5	---
chlorotoluene, all isomers (odor)	-----	235	45	23.5	4.5
chlorotrifluoroethylene	79-38-9	97	20	10	2
chlorotrifluoromethane	75-72-9	43300	10000	4330	1000
chlorotrifluoromethylphenoxytoluene	-----	300	---	30	---

**TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]**

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
chloro-6-(trichloromethyl)-pyridine, 2-, respirable	1929-82-4	50	---	5	---
Chlorpyrifos	2921-88-2	2	---	0.2	---
chromium: chromic acid (H <sub>2</sub> CrO <sub>4</sub> ) & chromate	7738-94-5	0.1	---	0.01	---
chromium metal	7440-47-3	1	---	0.1	---
chromium (II) & (III) cpds	-----	1	---	0.1	---
chromium (VI) cpds	-----	0.1	---	0.01	---
chromium trioxide (CrO <sub>3</sub> )	1333-82-0	0.1	---	0.01	---
chromyl chloride	14977-61-8	0.1	---	0.01	---
chrysene*	218-01-9	0.5	---	0.05	---
citric acid	77-92-9	100	---	10	---
Clopidol, respirable	2971-90-6	50	---	5	---
coal dust: respirable, >5% silica	-----	1	---	0.1	---
coal dust: respirable, <5% silica	-----	20	---	2	---
coal tar	8007-45-2	1	---	0.1	---
coal tar distillate	65996-92-1	3500	875	350	88
coal tar naphtha	8030-30-6	3500	875	350	88
coal tar oil	8001-58-9	1	---	0.1	---
coal tar pitch volatiles, PAH < 10% b(a)p	65996-93-2	0.5	---	0.05	---
coating pigments, all non-metallic	-----	40	---	4	---
cobalt & inorganic cpds	7440-48-4	0.2	---	0.02	---
cobalt carbonyl (as Co)	10210-68-1	1	---	0.1	---
cobalt hydrocarbonyl	16842-03-8	1	---	0.1	---
Cobra	77501-63-4	50	---	5	---
coke oven emissions	-----	1.5	---	0.15	---
coke oven emissions: total particulates	-----	5	---	0.5	---
Combat	67485-29-4	14	---	1.4	---
copper: fume	7440-50-8	1	---	0.1	---
copper: dusts & mists	7440-50-8	10	---	1	---
cresols (odor)	1319-77-3	5	1.1	0.5	0.11
creosote	8001-58-9	1	---	0.1	---
creylic acid (odor)	1319-77-3	5	1.1	0.5	0.11
cresyl glycidyl ether	26447-14-3	30	---	3	---
crystalite*	14464-46-1	0.5	---	0.05	---
crotonaldehyde	4170-30-3	60	20	6	2
Cruformate	299-86-5	50	4	5	0.4
cumene (odor)	98-82-8	500	100	50	10
cumene hydroperoxide	80-15-9	25	4.4	2.5	0.44
cumyl phenol, p-	599-64-4	140	---	14	---
cyanamide	420-04-2	20	---	2	---
cyanide compounds (as CN)	-----	50	---	5	---
cyanogen	460-19-5	210	100	21	10
cyanogen bromide	506-68-3	2.5	0.6	0.25	0.06
cyanogen chloride	506-77-4	0.6	0.3	0.06	0.03
Cycasin	14901-08-7	40	---	4	---
cyclododecatriene, 1,5,9-	-----	1320	200	132	20
cyclododecane	294-62-2	5150	750	515	75

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
cyclododecyl alcohol	-----	9800	1300	980	130
cyclododecanone	-----	1600	150	160	15
cycloheptane	291-64-5	3400	850	340	85
cyclohexane (odor)	110-82-7	1435	415	143.5	41.5
cyclohexanediamine	694-83-7	467	100	47	10
cyclohexanone (odor)	108-94-1	481	120	48.1	12
cyclohexene (odor)	110-83-8	604	180	60	18
cyclohexyl alcohol (odor)	108-93-0	613	150	61.3	15
cyclohexylamine	108-91-8	80	20	8	2
cyclohexyl isocyanate	3173-53-3	20	4	2	0.4
cyclohexylmercaptan	1569-69-3	24	5	2.4	0.5
cyclohexyl-2-pyrrolidone	6837-24-7	82	12	8.2	1.2
cyclonite	121-82-4	5	---	0.5	---
cyclooctadiene	29965-97-7	2000	470	200	47
cyclooctane	292-64-8	3500	750	350	75
cyclopentadiene	542-92-7	2030	750	203	75
cyclopentane	287-92-3	3400	1190	340	119
cyclopentyl alcohol	96-41-3	7200	2050	720	205
cyclopentanone	120-92-3	1700	500	170	50
cyclopentene	142-29-0	8150	2930	815	293
cyclotetramethylenetetranitramine	2691-41-0	27	---	2.7	---
Cyfluthrin	68359-37-5	15	---	1.5	---
Cyhexatin	13121-70-5	50	---	5	---
cymene, p-	99-87-6	2745	500	275	50
cypermethrin	66841-24-5	50	---	5	---
Cyromazine	66215-27-8	100	---	10	---
2,4-D	94-75-7	10	---	1	---
DDT	50-29-3	1	---	0.1	---
Dalapon	75-99-0	58	10	5.8	1
Danitol	39515-41-8	50	---	5	---
daunomycin	20830-81-3	1.4	---	0.14	---
deanol (odor)	108-01-0	55	---	5.5	---
decaborane	17702-41-9	2.5	0.5	0.25	0.05
decabromodiphenyl oxide	1163-19-5	50	---	5	---
decalin	91-17-8	3500	---	350	---
decane	124-18-5	10000	1750	1000	---
decanoic acid (odor)	334-48-5	14	2	1.4	0.2
decyl alcohol (odor)	112-30-1	39	---	3.9	---
decylmercaptan	143-10-2	36	5	3.6	0.5
demeton-methyl	8022-00-2	5	---	0.5	---
Demeton	8065-48-3	1	0.1	0.1	0.01
dextrin	9004-53-9	100	---	10	---
diacetone alcohol (odor)	123-42-2	1330	280	133	28
diacetoxy-1-butene, 3,4-	18085-02-4	8750	---	875	---
dialkyl peroxides, all	-----	100	---	10	---
diallylamine	124-02-7	120	---	12	---
diaminodipropylamine, 3,3'	56-18-8	60	11	6	1

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
diaminoethane, 1,2-	107-15-3	250	100	25	10
diatomaceous earth	61790-53-2	40	---	4	---
Diazinon	333-41-5	1	---	0.1	---
diazomethane	334-88-3	3.4	2	0.34	0.2
dibasic ester	53-60-5	100	---	10	---
dibenzo[b,e]pyridine	260-94-6	0.5	---	0.05	---
diborane	19287-45-7	1.1	1	0.11	0.1
dibrom	300-76-5	30	---	3	---
dibromoacetonitrile	3252-43-5	33	4	3.3	0.4
dibromochloropropane	96-12-8	0.1	0.01	0.01	0.001
dibromoethane, 1,2	106-93-4	3.8	0.5	0.38	0.05
dibutyl acrylate	-----	550	---	55	---
dibutylamine, n- (odor)	111-92-2	65	---	6.5	---
dibutylaminoethanol, 2-N-	102-81-8	140	20	14	2
dibutyl maleate	105-76-0	2600	280	260	28
dibutyl phenyl phosphate	2528-36-1	35	3	3.5	0.3
dibutyl phosphate	107-66-4	86	10	8.6	1
dibutyl phthalate	84-74-2	50	4.4	5	0.44
Dicamba	1918-00-9	100	---	10	---
dichloroacetylene	7572-29-4	3.9	1	0.39	0.1
dichloroaniline, 2,5-	95-82-9	210	32	21	3.2
dichloroaniline, 3,4-	95-76-1	80	12	8	1.2
dichlorobenzene, m-	541-73-1	2500	415	250	41.5
dichlorobenzene, o-	95-50-1	1500	250	150	25
dichlorobenzene, p-	106-46-7	600	100	60	10
dichlorobenzotrifluoride	-----	890	---	89	---
dichlorobutadiene	28577-62-0	165	---	17	---
dichloro-1-butene, 3,4-	760-23-6	135	26	14	2.6
dichloro-2-butene, 1,3-	7415-31-8	56	11	5.6	1.1
dichloro-2-butene, 1,4-	764-41-0	6	1.2	0.6	0.12
dichlorobutylene	11069-19-5	18	---	1.8	---
dichlorodifluoromethane	75-71-8	49500	10000	4950	1000
dichlorodimethylhydantoin	118-52-5	2	---	0.2	---
dichloroethane, 1,1-	75-34-3	4000	1000	400	100
dichloroethane, 1,2-	107-06-2	160	40	4	1
dichloroethane, 1,2- (24 hour)	107-06-2	16 (24 hr)	4 (24 hr)	4	1
dichloroethylene, 1,1-	75-35-4	40	10	4	1
dichloroethylene, 1,2-	540-59-0	7930	2000	793	200
dichloroethyl ether	111-44-4	290	50	29	5
dichlorofluoroethane	1717-00-6	4350	---	435	---
dichlorofluoromethane	75-43-4	420	100	42	10
dichlorohydrin	96-23-1	130	25	13	2.5
dichloromethyl ether	542-88-1	0.047	0.01	0.0047	0.001
dichloromethane	75-09-2	260	75	26	7.5
dichloromethoxybenzoic acid	1918-00-9	100	---	10	---
dichloromethyl phosphine oxide	676-97-1	3	---	0.3	---
dichloro-4-nitroaniline, 2,6-	99-30-9	100	---	10	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
2,6-dichloro-4-nitroaniline	-----	100	---	10	---
dichloronitrobenzene, all isomers	-----	9	---	0.9	---
dichloro-1-nitroethane, 1,1-	594-72-9	120	20	12	2
dichlorophenol, 2,4-	120-83-2	525	---	53	---
dichlorophenol, 2,6- (odor)	87-65-0	20	---	2	---
dichlorophenoxy acetic acid	94-75-7	10	---	1	---
2-(3,4-dichlorophenyl)-methyl-1,2,4-oxadiazolidine					
3,5-dione	-----	35	---	3.5	---
dichloropropane, 1,2- (odor)	78-87-5	1150	250	115	25
dichloropropene, 1,3-	542-75-6	45	10	4.5	1
dichloropropionanilide	709-98-8	15	---	1.5	---
dichloropropionic acid, 2,2-	75-99-0	58	10	5.8	1
dichlorosilane	-----	3	---	0.3	---
dichlorotetrafluoroethane	76-14-2	69900	10000	6990	1000
dichlorotrifluoroethane	306-83-2	5500	---	550	---
Dichlorvos	62-73-7	9	1	0.9	0.1
Dicrotophos	141-66-2	2.5	---	0.25	---
dicyclohexylmethane-4,4'-diisocyanate	5124-30-1	0.54	0.05	0.054	0.005
dicyclopentadiene (odor)	77-73-6	31	6	3.1	0.6
dicyclopentadienyl iron, respirable	102-54-5	50	---	5	---
Dieldrin	60-57-1	2.5	---	0.25	---
Dienochlor	2227-17-0	8	---	0.8	---
diepoxybutane, 3,4-	1464-53-5	5	1.4	0.5	0.14
diesel fuel combustion products	-----	1.5	---	0.15	---
diesel fuel combustion vapors	-----	90	---	9	---
diesel fuel (vapor)	-----	1000	135	100	14
diethanolamine	111-42-2	20	4.6	2	0.46
diethylamine	109-89-7	150	50	15	5
diethylaminoethanol, 2- (odor)	100-37-8	55	11	5.5	1.1
diethylaniline, N,N-	91-66-7	100	---	10	---
diethylbenzene	25340-17-4	2500	455	250	46
diethylene glycol, particulate	111-46-6	100	---	10	---
diethylene glycol, vapor	111-46-6	2200	507	220	51
diethylene glycol dimethyl ether	111-96-6	270	50	27	5
diethylene glycol divinyl ether	764-99-8	550	85	55	8.5
diethylene glycol ethyl methyl ether	1002-67-1	500	80	50	8
diethylene glycol ethyl vinyl ether	10143-53-0	720	110	72	11
diethylene glycol monobutyl ether	112-34-5	1060	160	106	16
diethylene glycol monoethyl ether	111-90-0	1500	208	150	21
diethylene glycol monoisobutyl ether	18912-80-6	1330	200	133	20
diethylene glycol monomethyl ether	111-77-3	270	54	27	5
diethylene glycol mono-2-methyl pentyl ether	10143-56-3	260	34	26	3
diethylene glycol monovinyl ether	929-37-3	290	54	29	5.4
diethylene triamine	111-40-0	42	10	4.2	1
diethyl ether (odor)	60-29-7	927	306	93	31
di(2-ethylhexyl)adipate	103-23-1	1240	80	124	8
di(2-ethylhexyl)phthalate	117-81-7	50	---	5	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
diethyl hydroxylamine	3710-84-7	400	---	40	---
diethyl ketone	96-22-0	7050	2000	705	200
diethyl phosphorochlorodithioate	2524-04-1	70	---	7	---
diethyl phthalate	84-66-2	50	5.5	5	0.55
diethyl sulfate	64-67-5	25	---	2.5	---
diethyl sulfide (odor)	352-93-2	16	---	1.6	---
diethylthiourea	105-55-5	50	---	5	---
difluorodibromomethane	75-61-6	8580	1000	858	100
difluoroethane	75-37-6	13500	5000	1350	500
diglycidyl ether	2238-07-5	5.3	1	0.53	0.1
diglycidyl bisphenol A ether	1675-54-3	14	1	1.4	0.1
diglycolamine	929-06-6	380	---	38	---
dihydroxybenzene	123-31-9	20	---	2	---
diisobutylamine	110-96-3	125	---	13	---
diisobutylcarbinol (odor)	108-82-7	188	---	18.8	---
diisobutylene	-----	1800	---	180	---
diisobutyl ketone (odor)	108-83-8	639	110	63.9	11
diisobutyl phthalate	84-69-5	50	---	5	---
diisononyl phthalate	-----	50	---	5	---
diisopropanolamine	110-97-4	460	---	46	---
diisopropylamine	108-18-9	210	50	21	5
diisopropylbenzene, all isomers	-----	3320	500	332	50
diisopropylene glycol	-----	100	---	10	---
dimeryl diisocyanate	68239-06-5	0.25	---	0.025	---
dimethanonaphthalene	465-73-6	3.2	---	0.32	---
dimethoxybenzene, 1,2	91-16-7	24	4.2	2.4	0.42
dimethoxyethane, 1,2-	110-71-4	220	60	22	6
dimethoxymethane	109-87-5	31100	10000	3110	1000
dimethyl acetamide	127-19-5	360	100	36	10
dimethyl adipate	627-93-0	100	---	10	---
dimethylamine	124-40-3	92	50	9.2	5
dimethylaminobenzene	1300-73-8	25	5	2.5	0.5
dimethylaminoethanol, 2- (odor)	108-01-0	55	---	5.5	---
dimethylaminoethoxyethanol	1704-62-7	130	24	13	2.4
2-(2-(2-dimethylamino ethoxy)-ethylmethylamino)-ethanol	83016-70-0	210	---	21	---
dimethylaminoethyl methacrylate	2867-47-2	200	31	20	3.1
dimethylamino-2-propanol	108-16-7	750	---	75	---
dimethylaminopropylamine	109-55-7	130	32	13	3.2
dimethylaminoxylylmethylcarbamate	-----	5	---	0.5	---
dimethylaniline, N,N- (odor)	121-69-7	64	32	6.4	3.2
dimethyl arsenic acid (as As)	75-60-5	5	---	0.5	---
dimethylbenzene (odor)	1330-20-7	3700	850	370	85
dimethyl benzidine	119-93-7	0.2	---	0.02	---
dimethylbenzylamine, N,N-	103-83-3	108	20	11	2
dimethyl butane	75-83-2	3500	1000	350	100
dimethylcarbamoyl chloride	79-44-7	0.5	---	0.05	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
dimethylcyclohexylamine, N,N-	98-94-2	100	---	10	---
dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate	300-76-5	30	---	3	---
dimethylethanolamine (odor)	108-01-0	55	---	5.5	---
dimethyl ether	115-10-6	19100	10000	1910	1000
dimethylethoxysilane	14857-34-2	21	5	2.1	0.5
dimethyl ethyl amine, N,N-	598-56-1	750	250	75	25
dimethylformamide	68-12-2	300	100	30	10
dimethyl glutarate	1119-40-0	100	---	10	---
dimethyl-4-heptanol, 2,6- (odor)	108-82-7	188	---	18.8	---
dimethyl-4-heptanone, 2,6 (odor)	108-83-8	639	110	63.9	11
dimethyl hexynediol	142-30-3	100	---	10	---
dimethyl hydrazine, 1,1-	57-14-7	0.25	0.1	0.025	0.01
dimethyl-3-hydroxythiophene, 2,4-	-----	100	---	10	---
dimethyl oxazolidinone	-----	2500	---	250	---
dimethylphenol	1300-71-6	165	---	16.5	---
dimethylphthalate	131-11-3	50	---	5	---
dimethylphosphorochloridothioate, O,O-	2524-03-0	30	---	3	---
dimethylpiperazine	25155-35-5	430	90	43	9
dimethyl propanolamine	3179-63-3	750	---	75	---
dimethyl succinate	106-65-0	100	---	10	---
dimethyl sulfate	77-78-1	5.2	1	0.52	0.1
dimethyl sulfide (odor)	75-18-3	3	---	0.3	---
dimethyl sulfoxide	67-68-5	140	---	14	---
dimethyl terephthalate, respirable	120-61-6	50	---	5	---
dimethyl thionates	-----	50	---	5	---
dimethyl zinc	-----	10	---	1	---
dinitolmide	148-01-6	50	---	5	---
dinitrobenzene (all isomers)	528-29-0	10	1.5	1	0.15
dinitro-o-cresol	534-52-1	2	---	0.2	---
dinitrophenol, 2,6-	25550-58-7	3	---	0.3	---
dinitrotoluene, all isomers	25321-14-6	1.5	---	0.15	---
dioctyldiphenylamine	101-67-7	100	---	10	---
di-sec-octyl phthalate	117-81-7	50	---	5	---
dioctyl azelate	103-24-2	100	---	10	---
dioxane, 1,4-	123-91-1	900	250	90	25
Dioxathion	78-34-2	2	---	0.2	---
dioxin, 2,3,7,8-tetrachlorinated, dibenzo-	1746-01-6	---	---	3.00E-08	---
dioxins, polychlorinated, dibenzo-	-----	use TCDD toxicity equivalents approach			
dioxolane, 1,3-	646-06-0	520	172	52	17
diphenylamine	122-39-4	100	---	10	---
diphenyldimethoxysilane	6843-66-9	1000	100	100	10
diphenyl ether (odor)	101-84-8	8	1.1	0.8	0.11
diphenylethylene	588-59-0	50	---	5	---
diphenylmethane-4,4'-diisocyanate	101-68-8	0.51	0.05	0.051	0.005
dipropylamine	142-84-7	200	48	20	5
dipropylene glycol	110-98-5	1200	220	120	22



TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
dipropylene glycol dibenzoate	94-51-9	220	---	22	---
dipropylene glycol ethyl ether	15764-24-6	2190	330	219	33
dipropylene glycol monomethyl ether	34590-94-8	3000	500	300	50
dipropylene triamine	56-18-8	60	11	6	1
dipropyl ether	111-43-3	2500	600	250	60
dipropyl ketone	123-19-3	2330	500	233	50
Diquat, respirable	231-36-7	1	---	0.1	---
Diquat dibromide, respirable	85-00-7	1	---	0.1	---
Diquat dibromide monohydrate, respirable	6385-62-2	1	---	0.1	---
Disulfiram	97-77-8	20	---	2	---
Disulfoton	298-04-4	1	---	0.1	---
di-tert-amyl phenol	25231-47-4	700	---	70	---
di-tert-butyl-p-cresol, 2,6-	128-37-0	100	---	10	---
di-tert-butyl peroxide	110-05-4	100	.18	10	1.8
ditridecyl phthalate	119-06-2	100	---	10	---
Diuron	330-54-1	100	---	10	---
divinyl benzene	1321-74-0	530	100	53	10
dodecanoic acid (odor)	143-07-7	28	---	2.8	---
dodecenylsuccinic anhydride	25377-73-5	40	3.6	4	0.36
dodecylamine	124-22-1	100	---	10	---
dodecyl benzene sulfonic acid, vapor	25155-30-0	1000	---	100	---
dodecyl benzene sulfonic acid, particulate	25155-30-0	100	---	10	---
dodecyl diphenyl oxide disulfonate	-----	50	---	5	---
dodecyl mercaptan	112-55-0	41	5	4	0.5
dodecyl phenol	27193-86-8	1200	110	120	11
Dowfax 2A1	-----	50	---	5	---
Dowtherm 4000 (46% ethylene glycol)	107-21-1	260	100	26	10
Dowtherm G	-----	20	---	2	---
Dowtherm LF (mixture of phenyl ether, alkyl biphenyls)	-----	13	---	1.3	---
Dripolene	-----	3500	---	350	---
Dursban	2921-88-2	2	---	0.2	---
emery, respirable	1302-74-5	50	---	5	---
Endosulfan	115-29-7	1	---	0.1	---
Endrin	72-20-8	1	---	0.1	---
enflurane	13838-16-9	5660	750	566	75
enzymes	1395-21-7	0.0006	---	0.00006	---
epichlorohydrin	106-89-8	19	5	1.9	0.5
epinephrine	329-65-7	0.4	---	0.04	---
EPN	2104-64-5	5	---	0.5	---
Epoxide 7	55838-67-0	800	---	80	---
Epoxide 8	39390-62-0	800	---	80	---
epoxypropane	75-56-9	210	84	21	8.4
epoxy-1-propanol, 2,3-	556-52-5	61	20	6.1	2
epoxy resin	25068-38-6	40	---	4	---
erythromycin	114-07-8	30	---	3	---
ethane	74-84-0		simple asphyxiant		

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
ethanethiol (odor)	75-08-1	0.8	---	0.08	---
ethanolamine	141-43-5	75	30	7.5	3
ethenylcyclohexene, 4-	100-40-3	4	1	0.4	0.1
Ethion	563-12-2	4	---	0.4	---
ethoxyethanol, 2-	110-80-5	180	50	18	5
ethoxyethanol acetate, 2-	111-15-9	270	50	27	5
ethoxypropionitrile, beta	14631-45-9	2000	---	200	---
ethoxytriglycol	112-50-5	160	---	16	---
ethyl acetate	141-78-6	14400	4000	1440	400
ethyl acrolein	-----	60	18	6	1.8
ethyl acrylate (odor)	140-88-5	5	1.25	0.5	0.125
ethyl alcohol	64-17-5	18800	10000	1880	1000
ethylamine	75-04-7	92	50	9.2	50
ethyl amyl ketone	541-85-5	1310	250	131	25
ethyl aniline	103-69-5	20	---	2	---
ethylanthraquinone	84-51-5	50	---	5	---
ethyl benzene (odor)	100-41-4	2000	461	200	46.1
ethyl benzene hydroperoxide	-----	4350	---	435	---
ethyl benzoate	93-89-0	245	40	25	4
ethyl bromide	74-96-4	220	50	22	5
ethyl-n-butyl ether	628-81-9	2340	560	234	56
ethyl-t-butyl ether	637-92-3	2500	600	250	60
ethyl butyl ketone	106-35-4	2340	500	234	50
ethyl butyrate (odor)	105-54-4	39	---	3.9	---
ethyl Carbitol	111-90-0	1500	208	150	21
ethyl chloride	75-00-3	500	190	50	19
ethyl chlorocarbonate	541-41-3	5	---	0.5	---
ethyl cyanide	107-12-0	140	60	14	6
ethylcyanoacrylate	7085-85-0	10	2	1	0.2
ethylcyclohexane	-----	18670	---	1867	---
ethylcyclopentane	1640-89-7	16300	---	1630	---
ethylene	74-85-1	1170	---	---	---
ethylene amine	593-67-9	200	---	20	---
ethylene bisdithiocarbamates	-----	50	---	5	---
ethylene chlorohydrin	107-07-3	33	10	3.3	1
ethylene cyanide	110-61-2	200	60	20	6
ethylene cyanohydrin	109-78-4	50	---	5	---
ethylenediamine	107-15-3	250	100	25	10
ethylene dibromide	106-93-4	3.8	0.5	0.38	0.05
ethylene dichloride	107-06-2	160	40	4	1
ethylene dichloride (24 hour)	107-06-2	16	4	4	1
ethylene glycol, vapor	107-21-1	260	100	26	10
ethylene glycol butyl ethyl ether	4413-13-2	185	31	19	3
ethylene glycol butyl vinyl ether	4223-11-4	940	160	94	16
ethylene glycol carbonate	96-49-1	100	---	10	---
ethylene glycol diacetate (odor)	111-55-7	555	---	55.5	---
ethylene glycol diallyl ether	7529-27-3	90	15	9	1.5

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
ethylene glycol dibutyl ether	112-48-1	1500	210	150	21
ethylene glycol diethyl ether	629-14-1	350	70	35	7
ethylene glycol dimethyl ether	110-71-4	220	60	22	6
ethylene glycol dinitrate	628-96-6	1	0.16	0.1	0.016
ethylene glycol monobenzyl ether	622-08-2	100	16	10	1.6
ethylene glycol monobutyl ether	111-76-2	240	50	24	5
ethylene glycol mono-sec-butyl ether	7795-91-7	360	75	36	7.5
ethylene glycol monobutyl ether acetate	112-07-2	310	50	31	5
ethylene glycol monoethyl ether	110-80-5	180	50	18	5
ethylene glycol monoethyl ether acetate	111-15-9	270	50	27	5
ethylene glycol monohexyl ether	112-25-4	420	70	42	7
ethylene glycol monoisobutyl ether	4439-24-1	770	160	77	16
ethylene glycol monoisopropyl ether	109-59-1	1060	250	106	25
ethylene glycol monomethyl ether	109-86-4	160	50	16	5
ethylene glycol monomethyl ether acetate	110-49-6	240	50	24	5
ethylene glycol mono-2-methyl pentyl ether	10137-96-9	110	19	11	2
ethylene glycol monophenyl ether	122-99-6	170	30	17	3
ethylene glycol monopropyl ether	2807-30-9	1500	250	150	25
ethylene naphthalene*	83-32-9	1	---	0.1	---
ethylene oxide	75-21-8	18	10	1.8	1
ethylene thiourea	96-45-7	50	---	5	---
ethyleneimine**	151-56-4	8.8	5	0.88	0.5
ethyl ether (odor)	60-29-7	927	306	93	31
ethyl-3-ethoxypropionate	763-69-9	400	67	40	7
ethyl formate	109-94-4	3000	1000	300	100
ethyl hexane	-----	3500	---	350	---
ethyl hexanediol, 2-	94-96-2	500	---	50	---
ethylhexanoic acid, 2-	149-57-5	250	---	25	---
ethylhexyl alcohol, 2- (odor)	104-76-7	735	138	73.5	13.8
ethylhexyl aldehyde	123-05-7	1400	267	140	27
ethylhexyl nitrate	-----	1050	---	105	---
ethylhexoic acid, 2-	149-57-5	250	---	25	---
ethylidene chloride	75-34-3	4000	1000	400	100
ethylidene-2-norbornene, 5- (odor)	16219-75-3	70	14	7	1.4
ethyl lactate	97-64-3	1390	290	139	29
ethyl mercaptan** (odor)	75-08-1	0.8	---	0.08	---
ethyl methacrylate (odor)	97-63-2	32	7	3.2	0.7
ethyl-2-methylallylamine	18328-90-0	50	---	5	---
ethyl morpholine, N-	100-74-3	240	50	24	5
ethylpentane, 3-	-----	3500	1100	350	110
ethyl propionate	105-37-3	130	32	13	3
ethyl-3-propyl acrolein	645-62-5	150	29	15	3
ethyl silicate	78-10-4	850	100	85	10
ethyl sulfide (odor)	352-93-2	16	---	1.6	---
ethyl thioacetate	59094-77-8	75	18	7.5	1.8
ethyltoluene, m-	620-14-4	1250	250	125	25
ethyltoluene, p-	622-96-8	1250	250	125	25

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
ethyltoluene, o-	611-14-3	1250	250	125	25
ethyl trichloroacetate	515-84-4	70	---	7	---
Exxate 600	-----	2750	---	275	---
famotidine	76824-35-6	50	---	5	---
famphur	52-85-7	13	---	1.3	---
fatty acids	-----	1000	---	100	---
fatty alcohols (C <sub>8</sub> -C <sub>20</sub> )	-----	2700	---	270	---
fatty amines	-----	100	---	10	---
fatty oils	-----	1000	---	100	---
Fenamiphos	22224-92-6	1	---	0.1	---
Fenpropathrin	39515-41-8	50	---	5	---
Fensulfothion	115-90-2	1	---	0.1	---
Fenthion	55-38-9	2	---	0.2	---
Fenvalerate	51630-58-1	50	---	5	---
Ferbam, respirable	14484-64-1	50	---	5	---
ferrovanadium dust	12604-58-9	10	---	1	---
fibrous glass dust	-----	50	---	5	---
fluorene	86-73-7	10	---	1	---
fluorides & HF (as HF, 3hr)	-----	4.9	3.5	0.5	0.35
fluorine	7782-41-4	2	1	0.2	0.1
fluorobenzene	462-06-6	390	110	39	11
fluoromethane	593-53-3	6960	5000	696	500
fluorotrichloromethane (odor)	75-69-4	28000	5000	2800	500
fluroxene	406-90-6	103	20	10	2
Fonophos	944-22-9	1	---	0.1	---
formaldehyde	50-00-0	15	12	1.5	1.2
formamide	75-12-7	180	100	18	10
formalin (37-50% formaldehyde)	50-00-0	30	---	3	---
formic acid	64-18-6	94	50	9.4	5
formic acid, ethyl ester	109-94-4	3000	1000	300	100
formic acid, methyl ester	107-31-3	2500	1000	250	100
Freon TE	-----	68300	---	6830	---
Freon TF (113)	76-13-1	38000	5000	3800	500
Freon TMS	-----	28300	---	2830	---
Freon 11 (odor)	75-69-4	28000	5000	2800	500
Freon 12	75-71-8	49500	10000	4950	1000
Freon 14	75-73-0	18000	5000	1800	500
Freon 21	75-43-4	420	100	42	10
Freon 22	75-45-6	18000	5000	1800	500
Freon 41	593-53-3	6960	5000	696	500
Freon 112	76-11-9	41700	5000	4170	500
Freon 113	76-13-1	38000	5000	3800	500
Freon 114	76-14-2	69900	10000	6990	1000
Freon 123	306-83-2	5500	---	550	---
Freon 141b	1717-00-6	4350	---	435	---
Freon 142b	75-68-3	61700	18750	6170	1875

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
Freon 143a	420-46-2	17140	5000	1714	500
Freon 152a	75-37-6	13500	5000	1350	500
fuel oils	-----	1000	140	100	14
furan	110-00-9	280	100	28	10
furans, polychlorinated, dibenzo-	-----	use TCDD toxicity equivalents approach			
furatone	794-93-4	50	---	5	---
furfural	98-01-1	79	20	8	2
furfuryl alcohol	98-00-0	400	100	40	10
gallium arsenide (as As)	1303-00-0	0.1	---	0.01	---
Garlon 3A	57213-69-1	40	---	4	---
gasoline, < 0.9% benzene	8006-61-9	3500	1180	350	118
gasoline additives, vapor	-----	3000	---	300	---
gasoline additives, mist	-----	50	---	5	---
germanium tetrahydride	7782-65-2	6.3	2	0.63	0.2
glutaraldehyde	111-30-8	2	0.5	0.2	0.05
glycerin mist, respirable	56-81-5	50	---	5	---
glycidol	556-52-5	61	20	6.1	2
glycidyl ether, C10	-----	800	---	80	---
glycidyl methacrylate	106-91-2	580	100	58	10
glycolonitrile	107-16-4	50	20	5	2
glyoxylic acid	298-12-4	75	---	7.5	---
Glyphosate	38641-30-6	50	---	5	---
glyoxal	107-22-2	70	---	7	---
grain dust (oats, wheat, barley), total	-----	40	---	4	---
graphite, natural, respirable	7782-42-5	20	---	2	---
graphite, synthetic, respirable	7782-42-5	20	---	2	---
guaifenesin	93-14-1	100	---	10	---
guthion	86-50-0	2	---	0.2	---
gypsum, respirable	7778-18-9	50	---	5	---
hafnium	7440-58-6	5	---	0.5	---
HALAR, not containing NiO	-----	40	---	4	---
halothane	151-67-7	162	20	16	2
HCFC-124	2837-89-0	27900	5000	2790	500
HFC-134a	811-97-2	20860	5000	2086	500
helium	7440-59-7	simple asphyxiant			
hemimellitene	526-73-8	1250	250	125	25
Heptachlor	76-44-8	0.5	---	0.05	---
Heptachlor epoxide	1024-57-3	0.5	---	0.05	---
heptal chloride, n- (odor)	-----	60	---	6	---
heptane	142-82-5	3500	850	350	85
heptanoic acid (odor)	111-14-8	108	---	10.8	---
heptanone, 2- (odor)	110-43-0	94	20	9.4	2
heptanone, 3-	106-35-4	2340	500	234	50
heptene (odor)	-----	16	---	1.6	---
heptyl alcohol (odor)	111-70-6	1900	---	190	---
heptyl aldehyde (odor)	111-71-7	240	50	24	5
heptylmercaptan (odor)	1639-09-4	1	---	0.1	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
hexachlorobenzene	118-74-1	0.25	---	0.025	---
hexachlorobutadiene	87-68-3	2.1	0.2	0.21	0.02
hexachlorobutene	-----	24	---	2.4	---
hexachlorocyclohexane, gamma-	58-89-9	5	---	0.5	---
hexachlorocyclopentadiene	77-47-4	1.1	0.1	0.11	0.01
hexachloroethane	67-72-1	97	10	9.7	1
hexachloronaphthalene	1335-87-1	2	---	0.2	---
hexachloropropene	1888-71-7	60	---	6	---
hexadecyl mercaptan	2917-26-2	53	5	5	0.5
hexadiene (odor)	42296-74-2	1675	500	167.5	50
hexafluoroacetone	684-16-2	7	1	0.7	0.1
hexafluoroisobutylene	382-10-5	34	---	3	---
hexamethyl disilizane	999-97-3	200	---	20	---
hexamethylene diamine (odor)	124-09-4	3.2	0.7	0.32	0.07
hexamethylene diisocyanate	822-06-0	0.34	0.05	0.034	0.005
hexamethylene diisocyanate polymer	28182-81-2	4	0.2	0.4	0.02
hexamethylene glycol	629-11-8	750	---	75	---
hexamethyleneimine	111-49-9	100	25	10	2.5
hexamethylenetetramine	100-97-0	170	---	17	---
hexane, n-	110-54-3	1760	500	176	50
hexane, other isomers	-----	3500	1000	350	100
hexanediamine, 1,6- (odor)	124-09-4	3.2	0.7	0.32	0.07
hexanediol diacrylate	-----	10	---	1	---
hexanitrostilbene	20062-22-0	20	---	2	---
hexanone, 2-	591-78-6	40	10	4	1
hexanoic acid (odor)	142-62-1	29	6	2.9	0.6
Hexazinone	51235-04-2	50	---	5	---
hexene (odor)	592-41-6	70	20	7	2
hexone	108-10-1	2050	500	205	50
hexyl acetate, sec- (odor)	108-84-9	412	70	41.2	7
hexyl alcohol (odor)	111-27-3	42	---	4.2	---
hexyl bromide	111-25-1	135	20	14	2
hexylene glycol	107-41-5	1210	250	121	25
hexyl mercaptan	111-31-9	27	5	2.7	0.5
High Flash Naphtha	64742-95-6	1230	250	123	25
hydramethylnon	67485-29-4	14	---	1.4	---
hydraulic oil	-----	1000	---	100	---
hydrazine	302-01-2	0.13	0.1	0.013	0.01
hydrazoic acid (N <sub>3</sub> H)	7782-79-8	1.8	1	0.18	0.1
hydrogen	1333-74-0		simple asphyxiant		
hydrogenated terphenyls	37275-59-5	50	5	5	0.5
hydrogen bromide**	10035-10-6	99	30	10	3
hydrogen chloride**	7647-01-0	75	50	0.1	---
hydrogen cyanide	74-90-8	50	4.7	5	0.47
hydrogen fluoride** (3hr)	7664-39-3	4.9	5.6	0.5	0.56
hydrogen iodide	10034-85-2	150	30	15	3

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
hydrogen peroxide	7722-84-1	14	10	1.4	1
hydrogen selenide	7783-07-5	1.6	0.5	0.16	0.05
hydrogen sulfide**	7783-06-4		TACB Reg. II		
hydroquinone	123-31-9	20	---	2	---
hydroquinone monomethyl ether	150-76-5	50	---	5	---
hydroxyacetophenone, 2-	118-93-4	1250	---	125	---
hydroxyacetophenone, 4-	99-93-4	2500	---	250	---
hydroxyacetophenone oxime, 4-	-----	1250	---	125	---
hydroxyethyl acrylate, 2-	818-61-1	50	---	5	---
N-(2-hydroxyethyl)-1,2-diaminoethane	-----	50	---	5	---
hydroxyethylethylene urea	-----	100	---	10	---
hydroxyethyl ethylenediamine	111-64-1	640	150	64	15
hydroxyethyl methacrylate, 2-	868-77-9	3170	595	317	60
1-(2-hydroxyethyl)-2-(tall oil-alkyl)-2-imidazoline	61791-39-7	50	---	5	---
4-hydroxy-4-methyl-2-pentanone (odor)	123-42-2	1330	280	133	28
hydroxy-2-phenyl acetophenone	119-53-9	3440	396	344	40
hydroxypivaldehyde	-----	1800	---	180	---
hydroxypropyl acrylate, 2-	999-61-1	28	5	2.8	0.5
hydroxypropyl methacrylate	-----	90	---	9	---
Ibuprofen	15687-27-1	40	---	4	---
Imidacloprid	105827-78-9	33	---	3.3	---
iminobis(propylamine), 3,3'-	56-18-8	60	11	6	1
indene (odor)	95-13-6	71	15	7.1	1.5
indium & compounds	7440-74-6	1	---	0.1	---
iodine	7553-56-2	10	1	1	0.1
iodoform (odor)	75-47-8	6	0.36	0.6	0.4
iodopropynyl butyl carbamate	-----	100	---	10	---
Iprodione	36734-19-7	50	---	5	---
Irganox	-----	100	---	10	---
iron oxide (fume)	1309-37-1	50	---	5	---
iron pentacarbonyl (as Fe)	13463-40-6	8	1	0.8	0.1
iron salts, soluble	-----	10	---	1	---
isatoic anhydride	118-48-9	100	---	10	---
isoamyl acetate (odor)	123-92-2	1330	250	133	25
isoamyl alcohol (odor)	123-51-3	151	42	15	4.2
isoamylene, alpha- or beta- (odor)	563-45-1	715	250	72	25
isoamyl ketone	-----	1000	---	100	---
isobutane (odor)	75-28-5	4845	---	484.5	---
isobutanolamine	124-68-5	400	---	40	---
isobutene (odor)	115-11-7	1403	---	140	---
isobutyl acetate (odor)	110-19-0	630	132	63	13.2
isobutyl acrylate (odor)	106-63-8	11	---	1.1	---
isobutyl alcohol	78-83-1	1520	500	152	50
isobutylamine	78-81-9	150	50	15	5
isobutyl isobutyrate	97-85-8	6000	980	600	98
isobutyl heptyl ketone	123-17-1	3750	500	375	50
isobutyl methacrylate	97-86-9	1900	330	190	33

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
isobutyraldehyde (odor)	78-84-2	138	---	13.8	---
isobutyric acid (odor)	79-31-2	3.6	1	0.36	0.1
isobutyronitrile	78-82-0	220	80	22	8
isocyanobenzotrifluoride	71121-36-3	0.38	---	0.038	---
isodecyl methacrylate	29964-84-9	8000	860	800	86
isodrin	465-73-6	3.2	---	0.32	---
isoheptane	-----	3070	750	307	75
isoheptyl alcohol	-----	2700	---	270	---
isohexane (odor)	107-83-5	289	---	29	---
isononyl alcohol	2430-22-0	2700	---	270	---
isooctane	540-84-1	3500	750	350	75
isooctyl alcohol	26952-21-6	2660	500	266	50
isooctyl thioglycolate	25103-09-7	30	---	3	---
Isopar G,H,K,L,M	-----	---	3000	---	300
Isopar C,E	-----	---	4000	---	400
isopentanoic acid (odor)	503-74-2	11	2.6	1.1	0.26
isopentyl nitrite	110-46-3	100	20	10	2
isophorone	78-59-1	230	40	23	4
isophorone diisocyanate **	4098-71-9	0.45	0.05	0.045	0.005
isoprene (odor)	78-79-5	14	5	1.5	0.5
isopropanolamine	78-96-6	200	---	20	---
isopropanolamine dodecylbenzene sulfonate	-----	20	---	2	---
isopropoxyethanol	109-59-1	1060	250	106	25
isopropyl acetate (odor)	108-21-4	3755	1530	375.5	153
isopropyl alcohol (odor)	67-63-0	7856	3195	785	320
isopropylamine	75-31-0	120	50	12	5
isopropylaniline	768-52-5	110	20	11	2
isopropyl benzene (odor)	98-82-8	500	100	50	10
isopropyl chloride	75-29-6	15000	---	1500	---
isopropyl ether (odor)	108-20-3	71	---	7.1	---
isopropyl glycidyl ether	4016-14-2	2380	500	238	50
isopropyl phenol	88-69-7	190	---	19	---
isopropyl pyridine	-----	150	---	15	---
isovaleraldehyde	590-86-3	1800	510	180	51
isovaleric acid (odor)	503-74-2	11	2.6	1.1	0.26
Jeffamine D-230	-----	180	---	18	---
Jeffamine ED-600	-----	500	---	50	---
jet fuel	-----	1000	---	100	---
kaolin, respirable	1332-58-7	20	---	2	---
Kelthane	115-32-2	10	---	1	---
Kepone	143-50-0	0.01	---	0.001	---
kerosene	8008-20-6	1000	140	100	14
ketene	463-51-4	9	5	0.9	0.5
lactic acid	50-21-5	50	---	5	---
Lactofen	77501-63-4	50	---	5	---
lactol spirits	64742-89-8	3500	---	350	---
lactose (milk sugar)	63-42-3	100	---	10	---



TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
Laktane	-----	3500	---	350	---
lanthanum oxide	1312-81-8	50	---	5	---
Lasiocarpine	303-34-4	29	---	2.9	---
latex	9016-00-6	100	---	10	---
lauric acid (odor)	143-07-7	28	---	2.8	---
lauryl amine	124-22-1	100	---	10	---
lauryl mercaptan	112-55-0	41	5	4	0.5
lead	7439-92-1	must meet NAAQS			
lead arsenate (as As)	7784-40-9	0.1	---	0.01	---
lead chromate (as Cr)	7758-97-6	0.1	---	0.01	---
Ligroine	8032-32-4	3500	875	350	88
limestone, respirable	1317-65-3	50	---	5	---
Lindane	58-89-9	5	---	0.5	---
Linuron	330-55-2	40	---	4	---
liquid plastic	-----	50	---	5	---
liquid resins	-----	40	---	4	---
liquified petroleum gas	68746-85-7	18000	10000	1800	1000
liquid detergent	-----	50	---	5	---
lithium hydride	7580-67-0	0.25	---	0.025	---
lithium hydroxide	1310-65-2	10	---	1	---
lithium oxide	12057-24-8	10	---	1	---
Lupersols	-----	100	---	10	---
lube oil and additives	-----	1000	---	100	---
magnesite, respirable	546-93-0	50	---	5	---
magnesium chloride	7786-30-3	100	---	10	---
magnesium oxide (fume), respirable	1309-48-4	50	---	5	---
Malathion, respirable	121-75-5	50	---	5	---
maleic acid	110-16-7	14	---	1.4	---
maleic anhydride	108-31-6	10	2.5	1	0.25
malononitrile	109-77-3	80	30	8	3
maneb	12427-38-2	2	---	0.2	---
manganese fume	7439-96-5	2	---	0.2	---
manganese dust & inorganic compounds	7439-96-5	2	---	0.2	---
manganese cyclopentadienyl tricarbonyl	12079-65-1	1	---	0.1	---
manganese and inorganic compounds	7439-96-5	2	---	0.2	---
manganese tetroxide	1317-35-7	10	---	1	---
marble, respirable	1317-65-3	50	---	5	---
melphalan	148-82-3	0.2	---	0.02	---
menthane-1,8-diamine, p-	80-52-4	20	3	2	0.3
mercaptobenzothiazole (MBT)	149-30-4	35	---	3.5	---
mercury, alkyls	7439-97-6	0.1	---	0.01	---
mercury, aryl	-----	1	---	0.1	---
mercury, metal & inorganic forms	-----	0.25	---	0.025	---
mercury, vapor	-----	0.25	---	0.025	---
mesitylene (1,3,5-trimethyl benzene)	108-67-8	1250	250	125	25
mesityl oxide (odor)	141-79-7	204	51	20.4	5.1
Metalaxyl	57837-19-1	50	---	5	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
methacrolein	78-85-3	3.7	1.3	0.37	0.13
methacrylamide	79-39-0	10	---	1	---
methacrylic acid	79-41-4	700	20	70	2
methacrylonitrile	126-98-7	27	10	2.7	1
methacryloxyethyl ethylene urea	-----	100	---	10	---
methane	74-82-8	simple asphyxiant			
methanesulfonic acid	75-75-2	100	---	10	---
methanethiol** (odor)	74-93-1	2	1	0.2	0.1
methapyrilene	91-80-5	38	---	3.8	---
Methomyl	16752-77-5	25	---	2.5	---
methoxybenzene	100-66-3	100	22	10	2.2
Methoxychlor, respirable	72-43-5	50	---	5	---
methoxyethanol, 2-	109-86-4	160	50	16	5
methoxyethyl acetate, 2-	110-49-6	240	50	24	5
methoxyflurane	76-38-0	135	20	13.5	2
methoxyphenol, 4-	150-76-5	50	---	5	---
methoxy-1-propanol, 2-	1589-47-5	750	200	75	20
methoxypropionitrile, 3-	110-67-8	2000	---	200	---
methoxypropyl-1-acetate, 2-	70657-70-4	1100	200	110	20
methoxypropylamine, 3-	5332-73-0	370	---	37	---
methyl acetate	79-20-9	6060	2000	606	20
methyl acetoacetate	105-45-3	3000	---	300	---
methyl acetylene	74-99-7	16400	10000	1640	1000
methyl acrylate (odor)	96-33-3	58	17	5.8	1.7
methyl acrylonitrile	126-98-7	27	10	2.7	1
methylal	109-87-5	31100	10000	3110	1000
methyl alcohol	67-56-1	2620	2000	262	200
methylamine	74-89-5	64	50	6.4	5
methyl amyl acetate (odor)	108-84-9	412	70	41.2	7
✓ methyl amyl alcohol (odor)	108-11-2	292	70	29.2	7
methyl amyl ether, n- (odor)	628-80-8	520	125	52	12.5
methyl amyl ether, tert- (odor)	984-05-2	520	125	52	12.5
methyl amyl ketone (odor)	110-43-0	94	20	9.4	2
methyl aniline	100-61-8	22	5	2.2	0.5
methylaziridine	75-55-8	50	20	5	2
methyl benzoate	93-58-3	160	30	16	3
methylbenzyl alcohol	589-18-4	600	120	60	12
methyl bromide**	74-83-9	39	10	3.9	1
methyl butene, all isomers (odor)	563-46-2	715	250	71.5	25
methylbutyl acetate, 3- (odor)	-----	27	---	2.7	---
methyl t-butyl ether* (odor)	1634-04-4	450	125	45	12.5
methyl n-butyl ketone	591-78-6	40	10	4	1
methyl butyraldehyde	590-86-3	1800	510	180	51
methyl butyrate (odor)	623-42-7	8.5	---	0.9	---
methyl chloride	74-87-3	1030	500	103	50
methyl chloroform	71-55-6	10800	2000	1080	200
methyl chloroformate	79-22-1	2	---	0.2	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
methyl cumene, p-	99-87-6	2745	500	275	50
methyl 2-cyanoacrylate	137-05-3	91	20	9.1	2
methyl cyclohexane	108-87-2	16100	4000	1610	400
methyl cyclohexanol	25639-42-3	2340	500	234	50
methyl cyclohexanone, o-	583-60-8	2290	500	229	50
methyl cyclopentadienyl manganese tricarbonyl (as Mn)	12108-13-3	2	---	0.2	---
methyl cyclopentane	96-37-7	2580	750	258	75
methyl demeton	8022-00-2	5	---	0.5	---
methyl dichlorosilane	75-54-7	7.5	1.6	0.75	0.16
methyl diethanolamine	105-59-9	500	100	50	10
methyl disulfide (odor)	-----	22	---	2.2	---
methylene bis(2-chloroaniline), 4,4'-	101-14-4	1.1	0.1	0.11	0.01
methylene bis(4,4'-cyclohexylaminè)	-----	100	---	10	---
methylene bis(4-cyclohexylisocyanate)	5124-30-1	0.54	0.05	0.054	0.005
methylene bisphenyl diisocyanate	101-68-8	0.51	0.05	0.051	0.005
methylene bisphenyl diisocyanate, polymer (PMDI)	-----	3	0.2	0.3	0.02
methylene bromide	74-95-3	1320	---	132	---
methylene chloride	75-09-2	260	75	26	7.5
methylene chlorobromide (odor)	74-97-5	1680	320	168	32
methylene dianiline, 4,4'-	101-77-9	8.1	1	0.81	0.1
methyl ethanolamine	109-83-1	140	45	14	4.5
methyl ether	115-10-6	19100	10000	1910	1000
methyl ethyl aniline	24549-06-2	100	---	10	---
methyl ethyl benzene, all isomers	-----	1250	250	125	25
methyl ethyl ketone (odor)	78-93-3	3900	1320	390	132
methyl ethyl ketone oxime	96-29-7	1960	550	196	55
methyl ethyl ketone peroxide	1388-23-4	15	2	1.5	0.2
methyl-5-ethylpyridine, 2- (odor)	104-90-5	4	---	0.4	---
methyl formamide	123-39-7	110	45	11	4.5
methyl formate	107-31-3	2500	1000	250	100
methyl furan, 2-	534-22-5	550	---	55	---
methyl glutaronitrile	4553-62-2	84	19	8.4	1.9
methyl heptane	540-84-1	3500	750	350	75
methyl-3-heptanone, 5-	541-85-5	1310	250	131	25
methyl hexane, 2-	-----	3070	750	307	75
methyl hexyl ketone	111-13-7	5100	970	510	97
methyl hydrazine	60-34-4	0.19	0.1	0.019	0.01
methyl imidazole, 1-	616-47-7	100	---	10	---
methyl imidazole, 2-	693-98-1	100	---	10	---
methyl imidazole, 4-	822-36-6	50	---	5	---
methyl indenes	-----	470	---	47	---
methyl iodide	74-88-4	120	20	12	2
methyl isoamyl ketone (odor)	110-12-3	56	12	5.6	1.2
methyl isobutyl carbinol (odor)	108-11-2	292	70	29.2	7
methyl isobutyl ketone	108-10-1	2050	500	205	50

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
methyl isobutyrate	547-63-7	100	---	10	---
methyl isocyanate	624-83-9	0.47	0.2	0.047	0.02
methyl isopropylbenzene, 4-	99-87-6	2745	500	275	50
methyl isopropyl ketone	563-80-4	7050	2000	705	200
methyl isothiocyanate	556-61-6	1	---	0.1	---
methyl mercaptan (odor)	74-93-1	2	1	0.2	0.1
methyl methacrylate (odor)	80-62-6	339	83	33.9	8.3
methyl-3-methoxy propionate	3852-09-3	140	28	14	2.8
methyl morpholine	109-02-4	350	---	35	---
methyl mustard oil	556-61-6	1	---	0.1	---
methyl naphthalenes, alpha-* (odor)	90-12-0	58	---	5.8	---
methyl naphthalenes, beta-* (odor)	91-57-6	58	---	5.8	---
2-methyloctanal	7786-29-0	1500	258	150	26
Methyl parathion	298-00-0	2	---	0.2	---
methyl pentane, 2- (odor)	107-83-5	289	---	28.9	---
methyl pentane, 3-	96-14-0	3500	1000	350	100
methyl-2-pentanol, 4- (odor)	108-11-2	292	70	29.2	7
methyl phenyl ether	100-66-3	100	22	10	2.2
methyl phosphonic dichloride	676-97-1	3	---	0.3	---
methyl propionate	554-12-1	367	---	37	---
methyl propyl ketone	107-87-9	5300	1500	530	150
methyl pyrrolidine, n-	120-94-5	70	---	7	---
methyl-2-pyrrolidone, n-	872-50-4	800	200	80	20
methyl silicate	681-84-5	60	10	6	1
methyl styrene, alpha- (odor)	98-83-9	250	52	25	5.2
methylstyrylphenol, p-	-----	140	---	14	---
methyl sulfide (odor)	75-18-3	3	---	0.3	---
methyl trichlorosilane	75-79-6	14	2.3	1.4	0.23
methyltrimethoxy silane	1185-55-3	550	100	55	10
methyl vinyl compounds	-----	see vinyl methyl compounds			
Metolachlor	51218-45-2	100	---	10	---
Metribuzin	21087-64-9	50	---	5	---
Mevinphos	7786-34-7	0.92	0.1	0.092	0.01
mica	12001-26-2	30	---	3	---
mineral oil mist	8012-95-1	50	---	5	---
mineral spirits	8032-32-4	3500	875	350	88
mineral wool fibers	-----	50	---	5	---
molasses	-----	100	---	10	---
molybdenum: soluble compounds	7439-98-7	50	---	5	---
molybdenum: insoluble compounds	7439-98-7	100	---	10	---
monochlorohydrin	96-24-2	50	11	5	1
Monocrotophos	6923-22-4	2.5	---	0.25	---
morpholine (odor)	110-91-8	36	10	3.6	1
Naled	300-76-5	30	---	3	---
naphtha, coal tar	8030-30-6	3500	875	350	88
naphtha, VM&P	8032-32-4	3500	875	350	88
naphthalene* (odor)	91-20-3	440	85	44	8.5

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
naphthalene diisocyanate	25551-28-4	0.4	---	0.04	---
naphthalene diisocyanate, 1,5-	3173-72-6	0.9	0.1	0.09	0.01
naphthathiourea, beta-	-----	3	---	0.3	---
naphthenic acid	1338-24-5	16000	---	1600	---
naphthoquinone, 1,4-	130-15-4	1	---	0.1	---
naphthylthiourea, alpha-	86-88-4	3	---	0.3	---
natural gas condensate	-----	18000	---	1800	---
Neodol	-----	2700	---	270	---
neohexane	75-83-2	3500	1000	350	100
neon	7440-01-9		simple asphyxiant		
neopentyl glycol	126-30-7	500	---	50	---
nickel, metal & insoluble cpds	7440-02-0	0.15	---	0.015	---
nickel, soluble compounds	7440-02-0	0.15	---	0.015	---
nickel carbonyl	13463-39-3	0.15	---	0.015	---
nickel oxide	1313-99-1	0.15	---	0.015	---
nickel sulfide	11113-75-0	0.15	---	0.015	---
nickel sulfide roasting, fume & dust	-----	0.15	---	0.015	---
nicotine	54-11-5	5	---	0.5	---
Nitrapyrin, respirable	1929-82-4	50	---	5	---
nitric acid	7697-37-2	52	20	5.2	2
nitric oxide	10102-43-9	310	250	31	25
nitrioltriacetic acid	139-13-9	10	---	1	---
nitroaniline, p-	100-01-6	30	---	3	---
nitrobenzene (odor)	98-95-3	24	5	2.4	0.5
nitrochlorobenzene, p-	100-00-5	6.4	1	0.64	0.1
nitroethane	79-24-3	3070	1000	307	100
nitroethanol	625-48-9	3100	---	310	---
nitrogen dioxide	10102-44-0		must meet NAAQS		
nitrogen trifluoride	7783-54-2	290	100	29	10
nitroglycerin	55-63-0	1	0.1	0.1	0.01
nitromethane	75-52-5	500	200	50	20
nitrophenol, m-	554-84-7	40	---	4	---
nitrophenol, o-	88-75-5	40	---	4	---
nitrophenol, p-	100-02-7	10	---	1	---
nitropropane, 1-	108-03-2	910	250	91	25
nitropropane, 2-	79-46-9	50	14	5	1.4
nitrosoguanidine	70-25-7	30	---	3	---
nitrosomethylvinylamine	4549-40-0	8	---	0.8	---
nitrosomorpholine, N-	59-89-2	140	30	14	3
nitrotoluene, m-	99-08-1	110	20	11	2
nitrotoluene, o-	88-72-2	110	20	11	2
nitrotoluene, p-	99-99-0	110	20	11	2
nitrotrichloromethane	76-06-2	6.7	1	0.67	0.1
nitrous oxide	10024-97-2	900	500	90	50
nonane	111-84-2	10500	2000	1050	200
nonene (odor)	124-11-8	26	---	2.6	---
nonoic acid (odor)	112-05-0	4.6	---	0.46	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
nonoyl aldehyde	124-19-6	1500	258	150	26
nonylmercaptan, n-	1455-21-6	33	5	3.3	0.5
nonylphenol, mixed isomers	25154-52-3	400	45	40	4.5
nonyl phenol ethoxylate	9016-45-9	600	24	60	2.4
nonyl phenol propoxylate	9064-15-7	600	---	60	---
nonylphenyl polyethyleneglycol ether, nonionic	9016-45-9	600	24	60	2.4
Norflurazone	27314-13-2	100	---	10	---
Norpar 12, 13, 15	-----	---	3000	---	300
octachloronaphthalene	2234-13-1	1	---	0.1	---
octadecenylamine	112-90-3	310	---	31	---
octadecyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate	-----	100	---	10	---
octadecyl mercaptan	2885-00-9	60	5	6	0.5
octadiene, 1,7-	3710-30-3	300	66	30	6.6
octane	111-65-9	3500	750	350	75
octanoic acid (odor)	124-07-2	48	8	4.8	0.8
octanone, 2-	111-13-7	5100	970	510	97
octene, 1- (odor)	-----	20	---	2	---
octyl alcohol, 1- (odor)	111-87-5	101	---	10	---
octyl amine	111-86-4	60	11	6	1
octyl epoxy tallate	61789-01-3	1000	---	100	---
octyl mercaptan	111-88-6	30	5	3	0.5
octyl phenol	27193-28-8	20	---	2	---
octyl pyrrolidone, N-	2687-94-7	100	---	10	---
oil, crude (vapor)	8002-05-9	3500	570	350	57
oil, fuel	-----	1000	188	100	19
oil, hydraulic	-----	1000	---	100	---
oil, lube	-----	1000	---	100	---
oil additives, lube	-----	1000	---	100	---
oil mist, mineral, severely refined	8012-95-1	50	---	5	---
oil mist, mildly refined, containing PAH's	-----	2	---	0.2	---
oils (misc., particulate)	-----	100	---	10	---
oils (misc., vapor)	-----	1000	---	100	---
oleic acid	112-80-1	100	---	10	---
oleic diethanol amide	93-83-4	20	---	2	---
Orthene	30560-19-1	70	---	7	---
osmium tetroxide	20816-12-0	0.016	0.002	0.0016	0.0002
oxalic acid	144-62-7	10	---	1	---
Oxinol	-----	4570	---	457	---
oxo-hexyl acetate	-----	2750	---	275	---
oxybis(N,N-dimethylethylamine)	3033-62-3	216	33	22	3.3
Oxyfluorofen	42874-03-3	16	---	1.6	---
oxygen difluoride (also evaluate HF)	7783-41-7	0.55	0.25	0.055	0.025
oxylated glycol ester	-----	190	---	19	---
ozone	10028-15-6	must meet NAAQS			
paraffinic distillate	64741-89-5	50	---	5	---
paraffin oil	8012-95-1	50	---	5	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
paraffin wax fume	8002-74-2	20	---	2	---
paraformaldehyde	30525-89-4	60	---	6	---
paraldehyde	123-63-7	440	80	44	8
Paraquat	4685-14-7	1	---	0.1	---
Parathion	56-38-2	0.5	---	0.05	---
pelargonic acid (odor)	112-05-0	4.6	---	0.46	---
Pendimethalin	40487-42-1	100	---	10	---
pentaborane	19624-22-7	0.13	0.05	0.013	0.005
pentachlorobenzenes	-----	1000	---	100	---
pentachloroethane	76-01-7	400	50	40	5
pentachloronaphthalene	1321-64-8	5	---	0.5	---
pentachloronitrobenzene	82-68-8	5	---	0.5	---
pentachlorophenol	87-86-5	5	---	0.5	---
pentadiene, all isomers	-----	1800	---	180	---
pentaerythritol, respirable	115-77-5	50	---	5	---
pentaerythritol tetranitrate	78-11-5	50	---	5	---
pentaerythritol triacrylate	3524-68-3	10	---	1	---
pentaethylene hexamine	4067-16-7	625	---	62.5	---
pentamethylene diamine	-----	200	---	20	---
pentane	109-66-0	3500	1200	350	120
pentanedione (odor)	123-54-6	835	170	83.5	17
pentanone, 2-	107-87-9	5300	1500	530	150
pentene, all isomers (odor)	-----	90	30	9	3
pentene nitrile, 3-	4635-87-4	70	---	7	---
pentyl alcohol, n- (odor)	71-41-0	430	120	43	12
pentylmercaptan (odor)	110-66-7	0.1	0.02	0.01	0.002
perchloroethylene	127-18-4	340	50	34	5
perchloromethyl mercaptan	594-42-3	7.5	1	0.8	0.1
perchloryl fluoride (as HF, 3hr)	7616-94-6	4.9	3.5	0.5	0.35
perfluoro compounds	86508-42-1	200	---	20	---
perfluoroisobutylene	382-21-8	0.82	0.1	0.082	0.01
perlite, respirable	93763-70-3	50	---	5	---
Permethrin	52645-53-1	50	---	5	---
peroxydisulfuric acid	-----	10	---	1	---
persulfates	-----	100	---	10	---
petroleum coke, calcined	-----	100	---	10	---
petroleum coke, uncalcined (green), PAH content <1,000 ppm	64741-79-3	50	---	5	---
petroleum distillates	-----	3500	875	350	88
petroleum ether	8030-30-6	3500	875	350	88
petroleum jelly	-----	100	---	10	---
petroleum oil	8002-05-9	3500	570	350	57
petroleum spirits	8032-32-4	3500	875	350	88
petroleum wax	-----	100	---	10	---
phenacyl chloride	532-27-4	3.2	0.5	0.32	0.05
phenanthrene	85-01-8	0.5	---	0.05	---
phenetidine, p-	156-43-4	150	---	15	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
phenetole	103-73-1	130	26	13	3
phenol (odor)	108-95-2	154	40	15.4	4
phenol/formaldehyde resin	-----	28	---	3	---
phenothiazine	92-84-2	50	---	5	---
phenylene diamine, m-	108-45-2	1	---	0.1	---
phenylene diamine, o-	94-54-5	1	---	0.1	---
phenylene diamine, p-	106-50-3	1	---	0.1	---
phenyl ether (odor)	101-84-8	8	1.1	0.8	0.11
phenyl ethyl alcohol	60-12-8	500	---	50	---
phenylethylene (odor)	100-42-5	215	50	21.5	5
phenyl glycidyl ether	122-60-1	60	10	6	1
phenyl hydrazine	100-63-0	4.4	1	0.44	0.1
phenyl isocyanate	103-71-9	5	---	0.5	---
phenyl isothiocyanate	103-72-0	0.5	---	0.05	---
phenyl mercaptan (odor)	108-98-5	4	0.9	0.4	0.09
phenyl methyl acetate	140-11-4	600	100	60	10
phenylphosphine	638-21-1	2.3	0.5	0.23	0.05
phenylpropyl alcohol	122-97-4	1100	---	110	---
phenylthiourea	103-85-5	4	---	0.4	---
Phorate	298-02-2	0.5	---	0.05	---
Phosdrin	7786-34-7	0.92	0.1	0.092	0.01
phosgene**	75-44-5	4	1	0.4	0.1
Phosmet	732-11-6	20	---	2	---
phosphine**	7803-51-2	4.2	3	0.42	0.3
phosphoric acid	7664-38-2	10	---	1	---
phosphoric fertilizer	-----	50	---	5	---
phosphorodithioic acid ester, zinc salt	2929-95-5	1500	---	150	---
phosphorous acid	13598-36-2	10	---	1	---
phosphorus (yellow)	7723-14-0	1	---	0.1	---
phosphorus oxychloride	10025-87-3	6.3	1	0.63	0.1
phosphorus pentachloride	10026-13-8	8.5	1	0.85	0.1
phosphorus pentasulfide	1314-80-3	10	---	1	---
phosphorus pentoxide	1314-56-3	10	---	1	---
phosphorus trichloride	7719-12-2	11	2	1.1	0.2
phthalate ester	-----	50	---	5	---
phthalic acid	88-99-3	60	---	6	---
phthalic anhydride	85-44-9	61	10	6.1	1
phthalodinitrile, m-	626-17-5	50	---	5	---
Picloram, respirable	1918-02-1	50	---	5	---
picoline, 2- (odor)	109-06-8	53	14	5.3	1.4
picoline, 3-	108-99-6	80	21	8	2.1
picoline, 4-	108-89-4	46	12	4.6	1.2
picric acid (odor)	88-89-1	0.5	---	0.05	---
Pindone	83-26-1	1	---	0.1	---
pinene, all isomers (odor)	-----	64	11	6.4	1.1
piperazine	110-85-0	34	---	3.5	---
piperazine dihydrochloride	142-64-3	50	---	5	---



TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
piperidine	110-89-4	36	---	3.6	---
piperylene (pentadiene, 1,3-)	504-60-9	1800	---	180	---
pivalic acid	72-98-9	250	---	25	---
pivaloyl chloride	3282-30-2	40	---	4	---
pivaloyl-1,3-indandione, 2-	83-26-1	1	---	0.1	---
Plaster of Paris, respirable	10101-41-4	50	---	5	---
plastic dust	-----	50	---	5	---
platinum, metal	7440-06-4	10	---	1	---
platinum, soluble salts	7440-06-4	0.02	---	0.002	---
polybutenes	-----	5000	---	500	---
polychlorinated biphenyls	1336-36-3	0.1	---	0.01	---
polycyclic aromatic HC's, particulate, <10% b(a)p, not otherwise classified*	-----	0.5	---	0.05	---
polyethylene	9002-88-4	100	---	10	---
polyethylene glycol 450 nonyl phenyl ether, nonionic surfactant	9016-45-9	600	24	60	2.4
polyethylene glycol monooleate	9004-96-0	200	---	20	---
polyethylene glycols	25322-68-3	100	---	10	---
polyethylene glycols (vapor)	25322-68-4	1000	---	100	---
polyisobutyleneamine	-----	770	---	77	---
polymeric hexamethylene diisocyanate	28182-81-2	4	0.2	0.4	0.02
polymethylene polyphenylisocyanate	9016-87-9	3	0.2	0.3	0.02
polyoxyethylene sorbitol ether	-----	100	---	10	---
polypropylene	9003-07-0	50	---	5	---
polypropylene glycol	-----	100	---	10	---
polypropylene glycol (vapor)	-----	1000	---	100	---
polysaccharides	-----	100	---	10	---
polystyrene	9003-53-6	100	---	10	---
polyurethane	9009-54-5	20	---	2	---
polyvinyl chloride	9002-86-2	50	---	5	---
poly(1-vinyl-2-pyrrolidinone)	9003-39-8	100	---	10	---
Portland cement, respirable	65997-15-1	50	---	5	---
potassium	7440-09-7	20	---	2	---
potassium bromate	7758-01-2	1	---	0.1	---
potassium carbonate	584-08-7	50	---	5	---
potassium hydroxide	1310-58-3	20	---	2	---
potassium permanganate	7722-64-7	20	---	2	---
Primene	68955-53-3	38	---	3.8	---
Probe	20354-26-1	35	---	3.5	---
propane	74-98-6	18000	10000	1800	1000
Propanil	709-98-8	15	---	1.5	---
propargyl alcohol	107-19-7	23	10	2.3	1
Propazine	139-40-2	100	---	10	---
Propiconazole	60207-90-1	65	---	7	---
propiolactone, beta-	57-57-8	15	5	1.5	0.5
propionaldehyde (odor)	123-38-6	21	---	2.1	---
propionic acid	79-09-4	103	33	10.3	3.3

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
propionic anhydride (odor)	123-62-6	250	---	25	---
propionitrile	107-12-0	140	60	14	6
propiophenone	93-55-0	190	35	19	3.5
Propoxur	114-26-1	5	---	0.5	---
propoxyethanol	2807-30-9	1500	250	150	25
propyl acetate (odor)	109-60-4	626	150	62.6	15
propyl acrylate (odor)	925-60-0	50	---	5	---
propyl alcohol	71-23-8	4920	2000	492	200
propyl amines	107-10-8	120	---	12	---
propyl chloride	540-54-5	30000	---	3000	---
propylene	115-07-1	117000	68120	---	---
propylene carbonate, particulate	108-32-7	100	---	10	---
propylene carbonate, vapor	108-32-7	500	---	50	---
propylene chlorohydrin	78-89-7	170	---	17	---
propylene diamine (odor)	78-90-0	42	---	4.2	---
propylene dichloride (odor)	78-87-5	1150	250	115	25
propylene glycol, particulate	57-55-6	20	---	2	---
propylene glycol, vapor	57-55-6	1560	500	156	50
propylene glycol allyl ether	1331-17-5	330	70	33	7
propylene glycol dinitrate	6433-43-4	3	0.5	0.3	0.05
propylene glycol isobutyl ether	23436-19-3	2500	460	250	46
propylene glycol isopropyl ether	110-48-5	2600	540	260	54
propylene glycol mono-n-butyl ether	10215-33-5	730	135	73	14
propylene glycol mono-t-butyl ether	-----	730	135	73	14
propylene glycol monoethyl ether	1569-02-4	3830	900	383	90
propylene glycol monomethyl ether	107-98-2	3690	1000	369	100
propylene glycol monomethyl ether acetate	108-65-6	2750	500	275	50
propylene glycol monopropyl ether	1569-01-3	1280	265	128	27
propylene glycol phenyl ether	4169-04-4	1860	300	186	30
propylene imine**	75-58-8	47	20	4.7	2
propylene oxide	75-56-9	210	84	21	8.4
propyl ether	111-43-3	2500	600	250	60
propyl formate	110-74-7	6475	---	648	---
propyl mercaptan, n- (odor)	107-03-9	2.3	0.7	0.23	0.07
propyl nitrate	627-13-4	1070	250	107	25
propyl propasol	1569-01-3	1280	265	128	27
propyl propionate	106-36-5	4750	1000	475	100
propyne	74-99-7	16400	10000	1640	1000
pseudocumene	95-63-6	1250	250	125	25
PVC	9002-86-2	50	---	5	---
pyrene*	129-00-0	0.5	---	0.05	---
Pyrethrum	8003-34-7	50	---	5	---
pyridine (odor)	110-86-1	69	23	6.9	2.3
pyridines, alkyl	68391-11-7	150	---	15	---
pyrocatechol	120-80-9	230	50	23	5
pyromelletic acid	89-05-4	2.5	0.24	0.25	0.024
pyromelletic dianhydride	89-32-7	2.5	0.28	0.25	0.028

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
pyronaphtha	-----	40	10	4	1
pyrrole	109-97-7	21	---	2.1	---
pyrrolidine, 2-	123-75-1	70	---	7	---
pyrrolidone, 2-	616-45-5	140	---	14	---
quartz (silica, crystalline)*	14808-60-7	1	---	0.1	---
quinoline	91-22-5	5	---	0.5	---
quinone	106-51-4	4	1	0.4	0.1
RDX	121-82-4	5	---	0.5	---
reformate	-----	2000	---	200	---
Reserpine	50-55-5	7	---	0.7	---
resinol	-----	190	---	19	---
resorcinol	108-46-3	450	100	45	10
rhodium, metal & insoluble cpds	7440-16-6	1	---	0.1	---
rhodium, soluble cpds	7440-16-6	0.01	---	0.001	---
Ronnel	299-84-3	100	---	10	---
rosin core solder, decomposition products	8050-09-7	1	---	0.1	---
Rotenone	83-79-4	50	---	5	---
rouge, respirable	1309-37-4	50	---	5	---
Roundup herbicide	38641-94-0	50	---	5	---
rubber dust	9006-04-6	50	---	5	---
rubber solvent	8030-30-6	3500	875	350	88
rubidium	7440-17-7	25	---	2.5	---
Saccharin	81-07-2	50	---	5	---
safrole	94-59-7	350	---	35	---
SC-100	-----	1250	---	125	---
SC-150	-----	1250	---	125	---
selenious acid (as Se)	7783-00-8	2	---	0.2	---
selenium & compounds	7782-49-2	2	---	0.2	---
selenium hexafluoride (as HF, 3hr)	7783-79-1	4	0.5	0.4	0.05
selenium oxide	12640-89-0	2	---	0.2	---
Sesone, respirable	136-78-7	50	---	5	---
Sevin	63-25-2	50	---	5	---
silane	7803-62-5	70	50	7	5
silica-amorphous: diatomaceous earth	61790-53-2	40	---	4	---
silica-amorphous: gel & precipitated silica	112926-00-8	40	---	4	---
silica-amorphous: silica fume, respirable	69012-64-2	20	---	2	---
silica-amorphous: silica, fused	60676-86-0	0.5	---	0.05	---
silica-crystalline: cristobalite, respirable*	14464-46-1	0.5	---	0.05	---
silica-crystalline: quartz, respirable*	14808-60-7	1	---	0.1	---
silica-crystalline: tridymite, respirable*	15468-32-3	0.5	---	0.05	---
silica-crystalline: tripoli*	1317-95-9	0.5	---	0.05	---
silicate of soda	-----	50	---	5	---
silicon, respirable	7440-21-3	50	---	5	---
silicon carbide	409-21-2	40	---	4	---
silicone, all	-----	50	---	5	---
silicon fluoride (as HF, 3hr)	7783-61-1	4.9	3.5	0.5	0.35
silicon nitride	-----	100	---	10	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
silicon tetrabromide	7789-66-4	25	---	2.5	---
silicon tetrachloride	10026-04-7	18	---	1.8	---
silicon tetrafluoride (as HF, 3hr)	7783-61-1	4.9	3.5	0.5	0.35
silicon tetrahydride	7803-62-5	70	50	7	5
silicon tetraiodide	-----	37	---	3.7	---
silver, soluble compounds	7440-22-4	0.1	---	0.01	---
silver cyanide	506-64-9	0.1	---	0.01	---
silver metal	7440-22-4	0.1	---	0.01	---
silver nitrate	7761-88-8	0.1	---	0.01	---
soapstone, respirable	-----	30	---	3	---
soda ash	497-19-8	50	---	5	---
sodium acifluorfen	62476-59-9	100	---	10	---
sodium acrylamido-2-methypropane sulfonic acid	-----	50	---	5	---
sodium alumina	-----	20	---	2	---
sodium aluminate	1302-42-7	20	---	2	---
sodium azide	26628-22-8	2	0.7	0.2	0.07
sodium bisulfite	7631-90-5	50	---	5	---
sodium borohydride	16940-66-2	1	---	0.1	---
sodium chlorate	7775-09-9	50	---	5	---
sodium, 2,4-dichlorophenoxyethyl sulfate, respirable	136-78-7	50	---	5	---
sodium dimethyldithiocarbamate	148-18-5	50	---	5	---
sodium dodecyl benzene sulfonate	25155-30-0	1000	---	100	---
sodium fluoroacetate	62-74-8	0.5	---	0.05	---
sodium hydrogen carbonate	144-55-8	20	---	2	---
sodium hydrosulfide	7775-14-6	140	---	14	---
sodium hydroxide	1310-73-2	20	---	2	---
sodium hypochlorite	7681-52-9	15	---	1.5	---
sodium metabisulfite	7681-57-4	50	---	5	---
sodium metasilicate	6834-92-0	50	---	5	---
sodium methylate	124-41-4	20	---	2	---
sodium perfluoroacetate	62-74-8	0.5	---	0.05	---
sodium pyrithione	3811-73-2	10	---	1	---
sodium pyrophosphate	7722-88-5	50	---	5	---
sodium sulfate	7757-82-6	50	---	5	---
sodium thiosulfate	7772-98-7	50	---	5	---
sodium xylenesulfonate	1300-72-7	20	---	2	---
Sol 100	64742-95-6	1230	250	123	25
Solvesso 100	-----	250	---	25	---
Solvesso 150	-----	1000	---	100	---
soybean oil epoxide	8013-07-8	100	---	10	---
starch, respirable	9005-25-8	50	---	5	---
stearates	-----	100	---	10	---
stearyl mercaptan	2885-00-9	60	5	6	0.5
Steptozotocin	18883-66-4	69	---	6.9	---
stibine	7803-52-3	5	1	0.5	0.1

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
stilbene	588-59-0	50	---	5	---
Stoddard solvent	8052-41-3	3500	667	350	67
strontium and compounds	-----	20	---	2	---
strontium chromate (as Cr)	7789-06-2	0.1	---	0.01	---
strychnine	57-24-9	1.5	---	0.15	---
styrene, monomer (odor)	100-42-5	215	50	21.5	5
styrene oxide	96-09-3	309	---	---	---
Subtilisins	1395-21-7	0.0006	---	0.00006	---
succinic anhydride	108-30-5	25	---	2.5	---
succinonitrile	110-61-2	200	60	20	6
sucrose, respirable	57-50-1	50	---	5	---
Sulfinol	-----	230	---	23	---
sulfolane	126-33-0	20	---	2	---
sulfolane raffinate	68410-71-9	3500	1000	350	100
sulfometuron methyl	74222-97-2	50	---	5	---
sulfonates, alkyl	-----	5	---	0.5	---
sulfonates, inorganic	-----	20	---	2	---
Sulfonic N-95	75-22-4	1000	---	100	---
Sulfotep	3689-24-5	2	---	0.2	---
sulfur	7704-34-9	50	---	5	---
sulfur chloride (odor)	10025-67-9	5.6	1	0.56	0.1
sulfur dioxide**	7446-09-5		TACB Reg. II		
sulfur hexafluoride	2551-62-4	600	---	60	---
sulfuric acid	7664-93-9		TACB Reg. II		
sulfurized isobutylenes	-----	1750	---	175	---
sulfur monochloride (odor)	10025-67-9	5.6	1	0.56	0.1
sulfur pentafluoride (also evaluate HF)	5714-22-7	0.5	0.1	0.05	0.01
sulfur tetrafluoride (also evaluate HF)	7783-60-0	2.2	0.5	0.22	0.05
sulfur trioxide	7446-11-9	10	---	1	---
sulfuryl chloride	7791-25-5	36	6.5	3.6	0.7
sulfuryl fluoride	2699-79-8	210	50	21	5
Sulprofos	35400-43-2	10	---	1	---
Surfonamine	-----	180	---	18	---
Systox	8065-48-3	1	0.1	0.1	0.01
2,4,5-T	93-76-5	100	---	10	---
2,4,5-TP	93-72-1	100	---	10	---
Tackle	62476-59-9	100	---	10	---
talc (no asbestos)	14807-96-6	20	---	2	---
talc (with asbestos)	14807-96-6	0.03	---	0.003	---
tall oil	-----	100	---	10	---
tallow	-----	100	---	10	---
tallow diamine	61791-55-7	100	---	10	---
tantalum, metal	7440-25-7	50	---	5	---
tantalum oxide	1314-61-0	50	---	5	---
TEDP	3689-24-5	2	---	0.2	---
tellurium and cmpds	13494-80-9	1	---	0.1	---
tellurium hexafluoride (as Te)	7783-80-4	2	0.2	0.2	0.02

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
Temephos, respirable	3383-96-8	50	---	5	---
Tenneco T500-100	-----	2700	550	270	55
TEPP	107-49-3	0.47	0.04	0.047	0.004
terephthalic acid	100-21-0	100	---	10	---
Tergitol TP-9	9016-45-9	600	24	60	2.4
terpenes	68956-56-9	2000	---	200	---
terphenyls	26140-60-3	50	5	5	0.5
tert-amyl methyl ether (odor)	994-05-8	520	125	52	12.5
tetrabromoethane, 1,1,2,2-	79-27-6	140	10	14	1
tetrachlorobenzenes (odor)	634-66-2	1000	---	100	---
tetrachlorodibenzo-p-dioxin, 2,3,7,8-*	1746-01-6	---	---	3E-08	---
tetrachloro-2,2-difluoroethane, 1,1,1,2-	76-11-9	41700	5000	4170	500
tetrachloro-1,2-difluoroethane, 1,1,2,2-	76-12-0	16900	2000	1690	200
tetrachloroethane, 1,1,2,2-	79-34-5	70	10	7	1
tetrachloroethylene	127-18-4	340	50	34	5
tetrachloromethane	56-23-5	126	20	13	2
tetrachloronaphthalene	1335-88-2	20	---	2	---
tetrachlorophenol, 2,3,4,6- (odor)	58-90-2	20	---	2	---
tetraethyl ammonium bromide	71-91-0	10	---	1	---
tetraethylene glycol	112-60-7	100	---	10	---
tetraethylene glycol diacrylate	17831-71-9	10	---	1	---
tetraethylene pentamine	112-57-2	400	---	40	---
tetraethyl lead	78-00-2	0.75	---	0.075	---
tetraethylorthosilicate	78-10-4	850	100	85	10
tetraethylpyrophosphate	107-49-3	0.47	0.04	0.047	0.004
tetrahydroammonium hydroxide	-----	20	---	2	---
tetrahydrofuran	109-99-9	5900	2000	590	200
tetrahydronaphthalene	119-64-2	3030	560	303	56
tetramethylammonium hydroxide	75-59-2	10	---	1	---
tetramethyl decyndiol	9014-85-1	2200	---	220	---
tetramethylene diamine	110-60-1	180	---	18	---
tetramethyl lead	75-74-1	0.75	---	0.075	---
tetramethyl succinonitrile	3333-52-6	28	5	2.8	0.5
tetranitromethane	509-14-8	0.4	0.05	0.04	0.005
tetrapropenylsuccinic anhydride	26544-38-7	40	3.6	4	0.36
tetrasodium pyrophosphate	7722-88-5	50	---	5	---
tetryl	479-45-8	1	---	0.1	---
Texanol	25265-77-4	835	140	84	14
thallic oxide	1314-32-5	1	---	0.1	---
thallium & compounds	7440-28-0	1	---	0.1	---
thiobis(6-t-butyl-m-cresol), 4,4'-, respirable	96-69-5	50	---	5	---
Thiofanox	39196-18-4	8	---	0.8	---
thioglycolic acid (odor)	68-11-1	1.25	0.4	0.125	0.04
thionyl chloride	7719-09-7	50	10	5	1
thiourea	62-56-6	50	---	5	---
Thiram	137-26-8	10	---	1	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
tin compounds: metal, oxide, and inorganic cpds	7440-31-5	20	---	2	---
tin compounds: organic compounds	7440-31-5	1	---	0.1	---
titanium dioxide, respirable	13463-67-7	50	---	5	---
titanium tetrachloride	7550-45-0	10	---	1	---
tolidine, o-	119-93-7	0.2	---	0.02	---
toluene	108-88-3	1880	500	188	50
toluene-2,4-diamine	95-80-7	50	---	5	---
toluene-2,4-diisocyanate	584-84-9	0.36	0.05	0.036	0.005
toluene-2,6-diisocyanate	91-08-7	0.7	0.1	0.07	0.01
toluenesulfonic acid, all isomers	-----	20	---	2	---
toluene sulfonyl chloride	-----	50	---	5	---
toluidine, o-	95-53-4	88	20	8.8	2
toluidine, m	108-44-1	88	20	8.8	2
toluidine, p	106-49-0	88	20	8.8	2
tolyl glycidyl ether	26447-14-3	30	---	3	---
tolylsulfonyl hydrazine	1576-35-8	30	4	3	0.4
Toxaphene	8001-35-2	5	---	0.5	---
triadimenol	55219-65-3	30	---	3	---
triallylamine	102-70-5	60	---	6	---
triaminotrinitrobenzene	3058-38-6	20	---	2	---
triazole-3-thiol, 1H-1,2,4-	3179-31-5	63	---	6.3	---
tributyl phosphate	126-73-8	22	2	2.2	0.2
tributyl phosphine	998-40-3	4	---	0.4	---
tributyl phosphite	102-85-2	20	2	2	0.2
tributyltin oxide	56-35-9	0.5	0.02	0.05	0.002
trichloroacetic acid	76-03-9	70	10	7	1
trichloroacetyl chloride	76-02-8	9	1.2	0.9	0.12
trichlorobenzene, 1,2,4-	120-82-1	400	50	40	5
trichlorobenzene, all isomers	12002-48-1	400	50	40	5
trichloroethane, 1,1,1-	71-55-6	10800	2000	1080	200
trichloroethane, 1,1,2-	79-00-5	550	100	55	10
trichloroethylene	79-01-6	1350	250	135	25
trichlorofluoromethane	75-69-4	28000	5000	2800	500
trichloromethane	67-66-3	98	20	9.8	2
trichloronaphthalene	1321-65-9	50	---	5	---
trichloronitromethane	76-06-2	6.7	1	0.67	0.1
trichlorophenol, 2,4,5-	95-95-4	440	---	44	---
trichlorophenol, 2,4,6 (odor)	88-06-2	21	---	2.1	---
trichloropropane, 1,2,3-	96-18-4	600	100	60	10
trichloropropene, 1,2,3-	96-19-5	80	13.5	8	1.4
trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	38000	5000	3800	500
triclopyr	55335-06-3	40	---	4	---
triclesyl phosphate	1330-78-5	5	---	0.5	---
tricyclohexyltin hydroxide	13121-70-5	50	---	5	---
tridecyl alcohol	112-70-9	2700	---	270	---
tridymite*	15468-32-3	0.5	---	0.05	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
triethanolamine	102-71-6	50	---	5	---
triethyl acetyl citrate	77-89-4	100	---	10	---
triethylamine	121-44-8	40	10	4	1
triethylene diamine	280-57-9	370	80	37	8
triethylene glycol	112-27-6	100	---	10	---
triethylene glycol diacrylate	1680-21-3	10	---	1	---
triethylene glycol monobutyl ether	143-22-6	1000	120	100	12
triethylene glycol monoethyl ether	112-50-5	160	---	16	---
triethylene tetramine	112-24-3	240	40	24	4
triethyl phosphate	78-40-0	500	67	50	6.7
triethyl phosphite	122-52-1	200	30	20	3
trifluoroacetoacetyl chloride	-----	20	---	2	---
trifluorobromomethane	75-63-8	61000	10000	6100	1000
trifluoroethane, 1,1,1-	420-46-2	17140	5000	1714	500
trifluoromethylbenzene	42874-03-3	16	---	1.6	---
Trifluralin	1582-09-8	100	---	10	---
triglycidyl-s-triazinetriene	2451-62-9	0.5	---	0.05	---
tri(isobutenyl)succinic anhydride	63979-83-9	10	1	1	0.1
triisopropyl phosphine	-----	4	---	0.4	---
trimellitic anhydride	552-30-7	0.4	0.05	0.04	0.005
trimetacresyl phosphate	563-04-2	3	---	0.3	---
trimethoxybenzoate, 3,4,5-	50-55-5	7	---	0.7	---
trimethyl acetic acid	75-98-9	250	---	25	---
trimethylamine (odor)	75-50-3	1	0.4	0.1	0.04
trimethylammoniumacrylate chloride	-----	135	---	14	---
trimethyl benzene	25551-13-7	1250	250	125	25
trimethyl bicyclohep-3-ene, 3,7,7-	13466-78-9	220	40	22	4
trimethyl borate	121-43-7	13	---	1.3	---
trimethylene diamine	109-76-2	50	---	5	---
trimethyl-4-nonanone, 2,6,8-	123-17-1	3750	500	375	50
trimethylol propane	77-99-6	50	---	5	---
trimethylol propane triacrylate	15625-89-5	10	---	1	---
trimethylol propane trimethyl acrylate	-----	10	---	1	---
2,2,4-trimethyl-1,3-pentanediol isobutyrate	25265-77-4	835	140	84	14
trimethyl phosphite (odor)	121-45-9	0.5	0.1	0.05	0.01
trimethyl trioxane	123-63-7	440	80	44	8
trinitrophenol (odor)	88-89-1	0.5	---	0.05	---
trinitrophenyl methylinitramine	479-45-8	1	---	0.1	---
trinitrotoluene	118-96-7	1	---	0.1	---
triorthocresyl phosphate	78-30-8	1	---	0.1	---
trioxane	110-88-3	190	---	19	---
triparacresyl phosphate	78-32-0	3	---	0.3	---
triphenylamine	603-34-9	50	---	5	---
triphenyl phosphate	115-86-6	30	---	3	---
triphenyl phosphine	603-35-0	4	---	0.4	---
triphenyl phosphite	101-02-0	25	2	2.5	0.2
tripoli*	1317-95-9	0.5	---	0.05	---



TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
tripropylamine	102-69-2	16	---	1.6	---
tripropylene glycol, particulate	24800-44-0	25	---	2.5	---
tripropylene glycol, vapor	24800-44-0	400	---	40	---
tris(1-aziridinyl)phosphine sulfide	52-24-4	0.6	---	0.06	---
tris(chloropropyl)phosphate	-----	1250	---	125	---
tris(dimethylaminomethyl)phenol	90-72-2	420	---	42	---
tris(hydroxyphenyl)ethane	27955-94-8	60	---	6	---
tris(nonylphenol)phosphite	26523-78-4	30	---	3	---
trisodium phosphate	7601-54-9	50	---	5	---
Trithion	786-19-6	1	---	0.1	---
tritoyl phosphate	1330-78-5	5	---	0.5	---
Triton X-100 Surfactant	9002-93-1	1000	---	100	---
tungsten, insoluble cmpds	7440-33-7	50	---	5	---
tungsten, soluble compounds	7440-33-7	10	---	1	---
turpentine	8006-64-2	5560	1000	556	100
undecanoic acid (odor)	112-37-8	11	---	1.1	---
undecyl mercaptan	5332-52-5	39	---	3.9	---
uracil mustard	66-75-1	0.8	---	0.08	---
uranium, insoluble compounds	7440-61-1	2	---	0.2	---
uranium, soluble compounds	7440-61-1	0.5	---	0.05	---
urea	57-13-6	100	---	10	---
urethane	51-79-6	5	---	0.5	---
valeraldehyde (odor)	110-62-3	98	28	9.8	2.8
valeric acid (odor)	109-52-4	3	---	0.3	---
vanadium pentoxide	1314-62-1	0.5	---	0.05	---
vanillin	121-33-5	100	---	10	---
Varsol	-----	3500	---	350	---
vegetable oil mists, respirable	68956-68-3	50	---	5	---
Velpar	51235-04-2	50	---	5	---
Veratrole	91-16-7	24	4.2	2.4	4.2
Versamine	60-40-2	250	---	25	---
vinyl acetate	108-05-4	150	40	15	4
vinyl benzene (odor)	100-42-5	215	50	21.5	5
vinyl bromide	593-60-2	200	50	20	5
vinyl chloride	75-01-4	130	50	13	5
vinyl cyanide	107-13-1	43	20	4.3	2
vinyl cyclohexene, 4-	100-40-3	4	1	0.4	0.1
vinyl cyclohexene dioxide	106-87-6	570	100	57	10
vinyl 2,2-dimethyl propanoate	3377-92-2	55	11	5.5	1.1
vinyl-2-ethylhexoate	94-04-2	200	29	20	2.8
vinyl fluoride	75-02-5	19	10	2	1
vinylidene chloride	75-35-4	40	10	4	1
vinylidene fluoride	75-38-7	26	10	2.6	1
vinyl methyl ether	107-25-5	9700	---	970	---
vinyl-2-norbornene, 5-	3048-64-4	425	86	42.5	8.6
vinyl pivalate	3377-92-2	55	11	5.5	1.1
vinyl-2-pyrrolidone, 1-	88-12-0	180	---	18	---

TNRCC Effects Screening Levels (ESL's) reported in ug/m<sup>3</sup> and ppb [9/5/97]

Constituent	CAS #	short-term ESL		long-term ESL	
		ug/m <sup>3</sup>	ppb	ug/m <sup>3</sup>	ppb
vinyl toluene	25013-15-4	2420	500	242	50
V,M&P naphtha	8032-32-4	3500	875	350	88
Warfarin	81-81-2	1	---	0.1	---
water conditioners	-----	10	---	1	---
welding fumes	-----	50	---	5	---
wollastonite	13983-17-0	50	---	5	---
wood dust, hardwoods	-----	10	---	1	---
wood dust, soft woods	-----	50	---	5	---
wood dust, Western red cedar	-----	10	---	1	---
xylene, mixed or all isomers, except p- (odor)	1330-20-7	3700	850	370	85
xylene, p- (odor)	106-42-3	2079	480	208	48
xylene-a,a'-diamine, m-	1477-55-0	1	---	0.1	---
xylenol, all isomers	1300-71-6	165	---	16.5	---
xylidine, mixed isomers	1300-73-8	25	5	2.5	0.5
yttrium	7440-65-5	10	---	1	---
zinc beryllium silicate (as Be)	39413-47-3		TACB Reg. III		
zinc bromide	7699-45-8	10	---	1	---
zinc chloride fume	7646-85-7	10	---	1	---
zinc chromates (as Cr)	13530-65-9	0.1	---	0.01	---
zinc oxide fume	1314-13-2	50	---	5	---
zinc oxide dust	1314-13-2	50	---	5	---
zinc stearate, respirable	557-05-1	50	---	5	---
zirconium compounds (as Zr)	7440-67-7	50	---	5	---
zoalene	148-01-6	50	---	5	---
Zorial	27314-13-2	100	---	10	---

Footnotes:

\* after chemical name notes ESL is under review.

\*\* after chemical name notes chemical has disaster potential