

2011 ACGIH Threshold Limit Values (TLVs), Toxic Screening Levels (TSLs) and Emission Threshold Values (ETVs)

The purpose of this document is to serve as aid to NSR Engineers, Consultants, and the General Public in their interpretation of the applicability of UACR307-410-5 when preparing or reviewing a Notice of Intent.

UACR307-410-5 requires any source submitting a NOI, which proposes to increase emission of HAP, to use Table 2 in the rule to determine whether or not a dispersion modeling analysis of each pollutant is required as part of a complete NOI. If new emissions of the HAP (expressed in lb/hr) exceeds the emission threshold value, dispersion modeling is required.

When selecting the proper Emission Threshold Factor, the following release scenario should be determined as follows.

"Vertically Restricted Emissions Release" means the release of an air contaminant through a stack or opening whose flow is directed in a downward or horizontal direction due to the alignment of the opening or a physical obstruction placed beyond the opening, or at a height which is less than 1.3 times the height of an adjacent building or structure, as measured from ground level.

"Vertically Unrestricted Emissions Release" means the release of an air contaminant through a stack or opening whose flow is directed upward without any physical obstruction placed beyond the opening, and at a height which is at least 1.3 times the height of an adjacent building or structure, as measured from ground level.

The user should identify the proper venting classification (from the two listed above) and the distance of the stack or emission release point to the nearest property boundary. For multiple stack processes, the user may add the emissions increase from all stacks together and select the distance associated with the nearest stack to the property boundary, or use a weighted stack approach, similar to the one in Appendix I of the Utah Division of Air Quality Modeling Guidelines http://www.airquality.utah.gov/Planning/Modeling/NSR_Permit_Modeling

A listing of TLVs, TSLs, and ETVs are shown in the table below.

If you have additional questions, please contact UDAQ Modeling Staff for further information on the application of UAC307-410-5 for these HAPs:

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2011 ACGIH Threshold Limit Values (TLVs), Toxic Screening Levels (TSLs) and Emission Threshold Values (ETVs)

ACUTE Hazardous Air Pollutants	Health Classification	Applicable Factor Safety	TLV-Ceiling 1-Hour (ug/m3)	TLV-Ceiling 1-Hour (ppm)	Molecular Weight	Toxic Screening Level (TSL) 1-Hour Average ug/m3	Acute Emission Threshold Values (in lb/hr)							
							Distance to Property Boundary and Emission Threshold Factors							
							Vertically Restricted/Fugitive Releases			Vertically Unrestricted Releases				
<20 m	20-50 m	50-100 m	>100 m	<50 m	50-100 m	>100 m								
Acetaldehyde	Acute	10	45041	25.0	44.05	4504	1.7116	2.2971	4.1438	8.1074	6.9363	10.0892	13.9627	
Acrolein	Acute	10	229	0.1	56.06	23	0.0087	0.0117	0.0211	0.0413	0.0353	0.0514	0.0711	
Benzotrchloride	Acute/Carc.	10	800	0.1	195.50	80	0.0304	0.0408	0.0736	0.1439	0.1231	0.1791	0.2479	
Ethylene glycol	Acute	10	100000	39.4	62.07	10000	3.8000	5.1000	9.2000	18.0000	15.4000	22.4000	31.0000	
Formaldehyde	Acute/Carc.	10	368	0.3	30.03	37	0.0140	0.0188	0.0339	0.0663	0.0567	0.0825	0.1142	
Hydrogen Chloride	Acute	10	2983	2.0	36.47	298	0.1134	0.1521	0.2745	0.5370	0.4594	0.6682	0.9248	
Hydrogen Cyanide / Cyanide Salts	Acute	10	5196	4.7	27.03	520	0.1974	0.2650	0.4780	0.9353	0.8002	1.1639	1.6107	
Hydrogen fluoride (Hydrofluoric acid)	Acute	10	1637	2.0	20.01	164	0.0622	0.0835	0.1506	0.2946	0.2521	0.3666	0.5074	
Isophorone	Acute	10	28262	5.0	138.20	2826	1.0739	1.4413	2.6001	5.0871	4.3523	6.3306	8.7611	
m-Xylenes	Acute	10	100	0.018	136.20	10	0.0038	0.0051	0.0092	0.0180	0.0154	0.0224	0.0310	
1,2,4-Trichlorobenzene	Acute	10	37,108	5.0	181.46	3711	1.4101	1.8925	3.4140	6.6795	5.7147	8.3123	11.5036	
CARCINOGENIC Hazardous Air Pollutants	Health Classification	Applicable Factor Safety	TLV-TWA 8-Hour (ug/m3)	TLV-TWA 8-Hour (ppm)	Molecular Weight	Toxic Screening Level (TSL) 24-Hour Average ug/m3	Carcinogenic Emission Threshold Values (in lb/hr)							
							Distance to Property Boundary and Emission Threshold Factors							
							Vertically Restricted/Fugitive Releases			Vertically Unrestricted Releases				
<20 m	20-50 m	50-100 m	>100 m	<50 m	50-100 m	>100 m								
Arsenic Compounds (inorg. incl. arsine)	A1 Carc.	90	10.0	0.003	74.92	0.11	0.0005	0.0007	0.0012	0.0027	0.0020	0.0024	0.0037	
Benzene (incl. benzene for gas)	A1 Carc.	90	1,597	0.5	78.11	18	0.0815	0.1054	0.1965	0.4297	0.3163	0.3898	0.5878	
Beryllium Compounds	A1 Carc.	90	0.05	0.0001	9.01	0.001	0.000003	0.000003	0.000006	0.000013	0.000010	0.000012	0.000018	
Bis(chloromethyl)ether	A1 Carc.	90	4.7	0.001	114.96	0.052	0.0001	0.0001	0.0002	0.0004	0.0003	0.0004	0.0006	
1,3-Butadiene	A2 Carc.	90	4425	2.00	54.09	49	0.0752	0.0973	0.1814	0.3982	0.2920	0.3584	0.5442	
Cadium Compounds	A2 Carc.	90	2	na	Various MWs	0.022	0.0000	0.0000	0.0001	0.0002	0.0001	0.0002	0.0002	
Carbon tetrachloride	A2 Carc.	90	31460	5.00	153.84	350	0.5348	0.6921	1.2899	2.8314	2.0764	2.5483	3.8696	
Chromium Compounds	A1 Carc.	90	10	na	Various MWs	0.11	0.0002	0.0002	0.0004	0.0009	0.0007	0.0008	0.0012	
Diazomethane	A2 Carc.	90	344	0.20	42.04	4	0.0058	0.0076	0.0141	0.0309	0.0227	0.0279	0.0423	
Dimethyl carbamoyl chloride	A2 Carc.	90	22	0.005	107.54	0.24	0.0004	0.0005	0.0009	0.0020	0.0015	0.0018	0.0027	
Ethylene oxide	A2 Carc.	90	1802	1.00	44.05	20	0.0919	0.1189	0.2216	0.4846	0.3567	0.4396	0.6630	
4,4-Methylene bis(2-chloraniline)	A2 Carc.	90	109	0.01	267.17	1.21	0.0019	0.0024	0.0045	0.0098	0.0072	0.0089	0.0134	
Nickel Compounds	A1 Carc.	90	100	na	Various MWs	1.11	0.0017	0.0022	0.0041	0.0090	0.0066	0.0081	0.0123	
Trichloroethylene	A2 Carc.	90	53742	10.00	131.40	597	0.9136	1.1823	2.2034	4.8368	3.5470	4.3531	6.6103	
Vinyl chloride	A1 Carc.	90	2556	1.00	62.50	28	0.0435	0.0562	0.1048	0.2301	0.1687	0.2071	0.3144	
UNCLASSIFIED														
4-Aminobiphenyl	A1 Carc.	Benzidine				A1 Carc.	4-Nitrobiphenyl				A2 Carc.			
Asbestos	A1 Carc.	Chloromethyl methyl ether				A2 Carc.	2,3,7,8-Tetrachlorodibenzo-p-dioxin				A1 Carc.			

2011 ACGIH Threshold Limit Values (TLVs), Toxic Screening Levels (TSLs) and Emission Threshold Values (ETVs)

CHRONIC Hazardous Air Pollutants	Health Classification	Applicable Factor Safety	TLV-TWA 8-Hour (ug/m3)	TLV-TWA 8-Hour (ppm)	Molecular Weight	Toxic Screening Level (TSL) 24-Hour Average ug/m3	Chronic Emission Threshold Values (in lb/hr)						
							Distance to Property Boundary and Emission Threshold Factors						
							Vertically Restricted/Fugitive Releases				Vertically Unrestricted Releases		
							<20 m	20-50 m	50-100 m	>100 m	<50 m	50-100 m	>100 m
0.051	0.066	0.123	0.269	0.198	0.244	0.368							
Acetonitrile	Chronic	30	33,579	20	41.05	1,119	1.713	2.216	4.130	9.033	6.649	8.193	12.357
Acetophenone	Chronic	30	49,141	10	120.15	1,638	2.506	3.243	6.044	13.219	9.730	11.990	18.084
Acrylamide	Chronic	30	30	0.010	71.08	1.00	0.002	0.002	0.004	0.008	0.006	0.007	0.011
Acrylic acid	Chronic	30	5,894	2	72.06	196	0.301	0.389	0.725	1.586	1.167	1.438	2.169
Acrylonitrile	Chronic	30	4339	2.00	53.05	145	0.221	0.286	0.534	1.167	0.859	1.059	1.597
Allyl chloride	Chronic	30	3,129	1	76.50	104	0.160	0.207	0.385	0.842	0.620	0.763	1.151
Aniline	Chronic	30	7,617	2	93.12	254	0.388	0.503	0.937	2.049	1.508	1.859	2.803
Antimony Compounds	Chronic	30	500	0.1004	121.75	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
Benzyl chloride	Chronic	30	5,177	1	126.58	173	0.264	0.342	0.637	1.393	1.025	1.263	1.905
Biphenyl	Chronic	30	1,261	0.2	154.20	42	0.064	0.083	0.155	0.339	0.250	0.308	0.464
Bis(2-ethylhexyl)phthalate (DEHP)	Chronic	30	5,000	0.31	390.54	167	0.255	0.330	0.615	1.345	0.990	1.220	1.840
Bromoform	Chronic	30	5,170	0.5	252.80	172	0.264	0.341	0.636	1.391	1.024	1.261	1.902
Calcium cyanamide	Chronic	30	500	0.15	80.11	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
Caprolactam	Chronic	30	5,000	1.08	113.16	167	0.255	0.330	0.615	1.345	0.990	1.220	1.840
Captan	Chronic	30	5,000	0.41	300.60	167	0.255	0.330	0.615	1.345	0.990	1.220	1.840
Carbaryl	Chronic	30	500	0.06	201.20	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
Carbon disulfide	Chronic	30	3,114	1	76.14	104	0.159	0.206	0.383	0.838	0.617	0.760	1.146
Carbonyl sulfide	Chronic	30	12,286	5	60.08	410	0.627	0.811	1.511	3.305	2.433	2.998	4.521
Catechol	Chronic	30	22,517	5	110.11	751	1.148	1.486	2.770	6.057	4.458	5.494	8.286
Chloroacetic acid	Chronic	30	1,933	0.50	94.50	64	0.099	0.128	0.238	0.520	0.383	0.472	0.711
Chlordane	Chronic	30	500	0.030	409.80	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
2-Chloracetophenone	Chronic	30	316	0.05	154.59	11	0.016	0.021	0.039	0.085	0.063	0.077	0.116
Chlorine	Chronic	30	1,450	0.50	70.91	48	0.074	0.096	0.178	0.390	0.287	0.354	0.534
Chlorobenzene	Chronic	30	46,037	10.00	112.56	1,535	2.348	3.038	5.663	12.384	9.115	11.233	16.942
Chloroform	Chronic	30	48,826	10.00	119.38	1,628	2.490	3.223	6.006	13.134	9.668	11.914	17.968
Chloroprene	Chronic	30	36,213	10.00	88.54	1,207	1.847	2.390	4.454	9.741	7.170	8.836	13.326
Cobalt Compounds	Chronic	30	20	na	Various MWs	0.67	0.001	0.001	0.002	0.005	0.004	0.005	0.007
Cresols/Cresylic acid	Chronic	30	88,458	20.00	108.14	2,949	4.511	5.838	10.880	23.795	17.515	21.584	32.553
Cumene	Chronic	30	245,787	50.00	120.19	8,193	12.535	16.222	30.232	66.117	48.666	59.972	90.450
DDT	Chronic	30	1,000	0.07	354.50	33	0.051	0.066	0.123	0.269	0.198	0.244	0.368
Dibutyl phthalate	Chronic	30	5,000	0.44	278.34	167	0.255	0.330	0.615	1.345	0.990	1.220	1.840
Dichlorethyl ether (Bis(2-chloroethyl)eth	Chronic	30	29,284	5.00	143.20	976	1.493	1.933	3.602	7.877	5.798	7.145	10.777
1,4-Dichlorobenzene(p)	Chronic	30	60,127	10.00	147.01	2,004	3.066	3.968	7.396	16.174	11.905	14.671	22.127
1,3-Dichloropropene	Chronic	30	4,539	1.00	110.98	151	0.231	0.300	0.558	1.221	0.899	1.108	1.670
Dichlorvos	Chronic	30	100	0.01	220.98	3.3	0.005	0.007	0.012	0.027	0.020	0.024	0.037
Diethanolamine	Chronic	30	1,000	0.23	105.14	33	0.051	0.066	0.123	0.269	0.198	0.244	0.368
Dimethyl formamide	Chronic	30	29,894	10.00	73.09	996	1.525	1.973	3.677	8.041	5.919	7.294	11.001
1,1-Dimethyl hydrazine	Chronic	30	25	0.01	60.12	0.82	0.001	0.002	0.003	0.007	0.005	0.006	0.009
Dimethyl phthalate	Chronic	30	5,000	0.63	194.19	167	0.255	0.330	0.615	1.345	0.990	1.220	1.840
Dimethyl sulfate	Chronic	30	516	0.10	126.10	17	0.026	0.034	0.063	0.139	0.102	0.126	0.190
4,6-Dinitro-o-cresol, and salts	Chronic	30	200	0.025	198.13	6.67	0.010	0.013	0.025	0.054	0.040	0.049	0.074
2,4-Dinitrotoluene	Chronic	30	200	0.03	182.15	6.7	0.010	0.013	0.025	0.054	0.040	0.049	0.074
1,4-Dioxane (1,4-Diethyleneoxide)	Chronic	30	72,065	20.00	88.10	2,402	3.675	4.756	8.864	19.386	14.269	17.584	26.520
Epichlorohydrin (1-Chloro-2,3-epoxypro	Chronic	30	1,892	0.50	92.53	63	0.097	0.125	0.233	0.509	0.375	0.462	0.696
Ethyl acrylate	Chronic	30	20472	5.00	100.11	682	0.3480	0.4504	0.8394	1.8425	1.3512	1.6583	2.5181
Ethyl benzene	Chronic	30	86,838	20.00	106.16	2,895	4.429	5.731	10.681	23.360	17.194	21.189	31.957
Ethyl chloride (Chloroethane)	Chronic	30	263,885	100.00	64.52	8,796	13.458	17.416	32.458	70.985	52.249	64.388	97.110

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Ethylene dichloride (1,2-Dichloroethane)	Chronic	30	40,474	10.00	98.96	1,349	2.064	2.671	4.978	10.888	8.014	9.876	14.895
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2011 ACGIH Threshold Limit Values (TLVs), Toxic Screening Levels (TSLs) and Emission Threshold Values (ETVs)

CHRONIC Hazardous Air Pollutants	Health Classification	Applicable Factor Safety	TLV-TWA 8-Hour (ug/m3)	TLV-TWA 8-Hour (ppm)	Molecular Weight	Toxic Screening Level (TSL) 24-Hour Average ug/m3	Chronic Emission Threshold Values (in lb/hr)						
							Distance to Property Boundary and Emission Threshold Factors						
							Vertically Restricted/Fugitive Releases				Vertically Unrestricted Releases		
							<20 m	20-50 m	50-100 m	>100 m	<50 m	50-100 m	>100 m
							0.051	0.066	0.123	0.269	0.198	0.244	0.368
Ethylene imine (Aziridine)	Chronic	30	88	0.05	43.08	3	0.004	0.006	0.011	0.024	0.017	0.021	0.032
Ethylidene dichloride (1,2-Dichloroethane)	Chronic	30	40,474	10.00	98.96	1,349	2.064	2.671	4.978	10.888	8.014	9.876	14.895
Fine mineral fibers/3/	Chronic	30	1,000	na	Various MWs	33	0.051	0.066	0.123	0.269	0.198	0.244	0.368
Heptachlor	Chronic	30	50	0.0033	373.32	1.7	0.003	0.003	0.006	0.013	0.010	0.012	0.018
Hexachlorobenzene	Chronic	30	2	0.0002	260.76	0.067	0.000	0.000	0.000	0.001	0.000	0.000	0.001
Hexachlorobutadiene	Chronic	30	213	0.02	260.76	7.1	0.011	0.014	0.026	0.057	0.042	0.052	0.078
Hexachlorocyclopentadiene	Chronic	30	112	0.01	272.75	3.7	0.006	0.007	0.014	0.030	0.022	0.027	0.041
Hexachloroethane	Chronic	30	9,683	1.00	236.74	323	0.494	0.639	1.191	2.605	1.917	2.363	3.563
Hexamethylene-1,6-diisocyanate	Chronic	30	34	0.005	168.22	1.15	0.002	0.002	0.004	0.009	0.007	0.008	0.013
Hexane	Chronic	30	176,237	50.00	86.18	5,875	8.988	11.632	21.677	47.408	34.895	43.002	64.855
Hydrazine	Chronic	30	13	0.01	32.05	0.44	0.001	0.001	0.002	0.004	0.003	0.003	0.005
Hydrogen sulfide	Chronic	30	1,394	1.00	34.08	46	0.071	0.092	0.171	0.375	0.276	0.340	0.513
Hydroquinone	Chronic	30	1,000	0.22	110.11	33	0.051	0.066	0.123	0.269	0.198	0.244	0.368
Lindane (all isomers)	Chronic	30	500	0.04	290.85	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
m-Cresol	Chronic	30	88,458	20.00	108.14	2,949	4.511	5.838	10.880	23.795	17.515	21.584	32.553
Maleic anhydride	Chronic	30	401	0.10	98.06	13	0.020	0.026	0.049	0.108	0.079	0.098	0.148
Manganese Compounds	Chronic	30	200	na	Various MWs	6.7	0.010	0.013	0.025	0.054	0.040	0.049	0.074
Mercury Compounds	Chronic	30	10	na	Various MWs	0.33	0.001	0.001	0.001	0.003	0.002	0.002	0.004
Methanol	Chronic	30	278,446	200.00	34.04	9,282	14.201	18.377	34.249	74.902	55.132	67.941	102.468
Methoxychlor	Chronic	30	10,000	0.7074	345.65	333	0.510	0.660	1.230	2.690	1.980	2.440	3.680
Methyl bromide (Bromomethane)	Chronic	30	3,883	1.00	94.95	129	0.198	0.256	0.478	1.045	0.769	0.948	1.429
Methyl chloride (Chloromethane)	Chronic	30	103,252	50.00	50.49	3,442	5.266	6.815	12.700	27.775	20.444	25.193	37.997
Methyl chloroform (1,1,1-Trichloroethane)	Chronic	30	1,909,898	350.00	133.42	63,663	97.405	126.053	234.917	513.762	378.160	466.015	702.842
Methyl ethyl ketone (2-Butanone)	Chronic	30	589,775	200.00	72.10	19,659	30.079	38.925	72.542	158.649	116.775	143.905	217.037
Methyl hydrazine	Chronic	30	19	0.01	46.07	0.63	0.001	0.001	0.002	0.005	0.004	0.005	0.007
Methyl iodide (Iodomethane)	Chronic	30	11,611	2.00	141.95	387	0.592	0.766	1.428	3.123	2.299	2.833	4.273
Methyl isobutyl ketone (Hexone)	Chronic	30	93,415	20.00	114.20	3,114	4.764	6.165	11.490	25.129	18.496	22.793	34.377
Methyl isocyanate	Chronic	30	47	0.02	57.05	1.6	0.002	0.003	0.006	0.013	0.009	0.011	0.017
Methyl methacrylate	Chronic	30	204,765	50.00	100.13	6,825	10.443	13.514	25.186	55.082	40.543	49.963	75.353
Methyl tert butyl ether	Chronic	30	180,307	50.00	88.17	6,010	9.196	11.900	22.178	48.503	35.701	43.995	66.353
Methylene chloride (Dichloromethane)	Chronic	30	173,681	50.00	84.93	5,789	8.858	11.463	21.363	46.720	34.389	42.378	63.915
4,4'-Methylene dianiline	Chronic	30	811	0.10	198.26	27	0.041	0.054	0.100	0.218	0.161	0.198	0.298
Methylene diphenyl diisocyanate (MDI)	Chronic	30	51	0.01	250.26	1.7	0.003	0.003	0.006	0.014	0.010	0.012	0.019
N,N-Diethyl aniline (N,N-Dimethylaniline)	Chronic	30	25,000	5.00	121.18	833	1.275	1.650	3.075	6.725	4.950	6.100	9.200
2-Nitropropane	Chronic	30	36,438	10.00	89.09	1,215	1.858	2.405	4.482	9.802	7.215	8.891	13.409
Naphthalene	Chronic	30	52,429	10.00	128.19	1,748	2.674	3.460	6.449	14.104	10.381	12.793	19.294
Nitrobenzene	Chronic	30	5,035	1.00	123.11	168	0.257	0.332	0.619	1.354	0.997	1.229	1.853
o-Anisidine	Chronic	30	500	0.10	123.15	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
o-Cresol	Chronic	30	88,458	20.00	108.14	2,949	4.511	5.838	10.880	23.795	17.515	21.584	32.553
o-Toluidine	Chronic	30	8,765	2.00	107.15	292	0.447	0.578	1.078	2.358	1.735	2.139	3.225
o-Xylenes	Chronic	30	434,192	100.00	106.16	14,473	22.144	28.657	53.406	116.798	85.970	105.943	159.783
p-Cresol	Chronic	30	88,458	20.00	108.14	2,949	4.511	5.838	10.880	23.795	17.515	21.584	32.553
p-Phenylenediamine	Chronic	30	100	0.02	108.05	3.3	0.005	0.007	0.012	0.027	0.020	0.024	0.037
p-Xylenes	Chronic	30	434,192	100.00	106.16	14,473	22.144	28.657	53.406	116.798	85.970	105.943	159.783
Parathion	Chronic	30	50	0.0042	291.27	1.7	0.003	0.003	0.006	0.013	0.010	0.012	0.018
Pentachloronitrobenzene (Quintobenzene)	Chronic	30	500	0.041	295.36	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
Pentachlorophenol	Chronic	30	500	0.046	266.35	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184

2011 ACGIH Threshold Limit Values (TLVs), Toxic Screening Levels (TSLs) and Emission Threshold Values (ETVs)

CHRONIC Hazardous Air Pollutants	Health Classification	Applicable Factor Safety	TLV-TWA 8-Hour (ug/m3)	TLV-TWA 8-Hour (ppm)	Molecular Weight	Toxic Screening Level (TSL) 24-Hour Average ug/m3	Chronic Emission Threshold Values (in lb/hr)						
							Distance to Property Boundary and Emission Threshold Factors						
							Vertically Restricted/Fugitive Releases				Vertically Unrestricted Releases		
							<20 m	20-50 m	50-100 m	>100 m	<50 m	50-100 m	>100 m
							0.051	0.066	0.123	0.269	0.198	0.244	0.368
Phenol	Chronic	30	19,245	5.00	94.11	642	0.982	1.270	2.367	5.177	3.811	4.696	7.082
Phosgene	Chronic	30	405	0.10	98.92	13	0.021	0.027	0.050	0.109	0.080	0.099	0.149
Phosphine	Chronic	30	417	0.30	34.00	14	0.021	0.028	0.051	0.112	0.083	0.102	0.154
Phosphorus	Chronic	30	100	0.020	123.92	3.3	0.005	0.007	0.012	0.027	0.020	0.024	0.037
Phthalic anhydride	Chronic	30	6,058	1.00	148.11	202	0.309	0.400	0.745	1.630	1.199	1.478	2.229
Polychlorinated biphenyls (Aroclors)	Chronic	30	500			17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
1,2-Propylenimine (2-Methyl aziridine)	Chronic	30	4,670	2.00	57.09	156	0.238	0.308	0.574	1.256	0.925	1.139	1.719
beta-Propiolactone	Chronic	30	1,474	0.50	72.06	49	0.075	0.097	0.181	0.396	0.292	0.360	0.542
Propoxur (Baygon)	Chronic	30	500	0.058	209.24	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
Propylene dichloride (1,2-Dichloropropane)	Chronic	30	46,213	10.00	112.99	1,540	2.357	3.050	5.684	12.431	9.150	11.276	17.006
Propylene oxide	Chronic	30	4,751	2.00	58.08	158	0.242	0.314	0.584	1.278	0.941	1.159	1.748
Quinone	Chronic	30	442	0.10	108.09	15	0.023	0.029	0.054	0.119	0.088	0.108	0.163
Selenium Compounds	Chronic	30	200	0.062	78.96	6.7	0.010	0.013	0.025	0.054	0.040	0.049	0.074
Styrene	Chronic	30	85,202	20.00	104.16	2,840	4.345	5.623	10.480	22.919	16.870	20.789	31.355
Styrene oxide	Chronic	30	85,202	20.00	104.16	2,840	4.345	5.623	10.480	22.919	16.870	20.789	31.355
1,1,2,2-Tetrachloroethane	Chronic	30	6,865	1.00	167.86	229	0.350	0.453	0.844	1.847	1.359	1.675	2.526
Tetrachloroethylene (Perchloroethylene)	Chronic	30	169,530	25.00	165.80	5,651	8.646	11.189	20.852	45.603	33.567	41.365	62.387
Toluene	Chronic	30	75,362	20.00	92.13	2,512	3.843	4.974	9.270	20.272	14.922	18.388	27.733
2,4-Toluene diisocyanate	Chronic	30	36	0.005	174.05	1.2	0.002	0.002	0.004	0.010	0.007	0.009	0.013
Toxaphene (chlorinated camphene)	Chronic	30	500	0.030	414.00	17	0.026	0.033	0.062	0.135	0.099	0.122	0.184
1,1,2-Trichloroethane	Chronic	30	54,560	10.00	133.40	1,819	2.783	3.601	6.711	14.677	10.803	13.313	20.078
Triethylamine	Chronic	30	4,139	1.00	101.19	138	0.211	0.273	0.509	1.113	0.819	1.010	1.523
Vinyl acetate	Chronic	30	35,211	10.00	86.09	1,174	1.796	2.324	4.331	9.472	6.972	8.591	12.958
Vinyl bromide	Chronic	30	2,187	0.50	106.96	73	0.112	0.144	0.269	0.588	0.433	0.534	0.805
Vinylidene chloride (1,1-Dichloroethylene)	Chronic	30	19,826	5.00	96.95	661	1.011	1.309	2.439	5.333	3.926	4.838	7.296
Xylenes (isomers and mixture)	Chronic	30	434,192	100.00	106.16	14,473	22.144	28.657	53.406	116.798	85.970	105.943	159.783
UNCLASSIFIED	Chronic	Hazardous	Air	Pollutants									
Acetamide	Chlorobenzilate			3,3-Dichlorobenzidine	3,3'-Dimethyl benzidine			Ethyl carbamate (Urethane)		Hexamethyl phosphoramide			
2-Acetaminofluorene	Coke Oven Emissions			Diethyl sulfate	2,4-Dinitrophenol			Ethylene dibromide (Dibromoethane)		4-Nitrophenol			
Chloramben	Dibenzofurans			Dimethyl aminoazobenzene	1,2-Diphenylhydrazine			Ethylene thiourea		N-Nitrosodimethylamine			
	1,2-Dibromo-3-chloropropane			3,3-Dimethoxybenzidine	1,2-Epoxybutane			Glycol ethers/2/		N-Nitrosomorpholine			
										N-Nitroso-N-methylurea			

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