HAP Threshold Values

Hazardous Air Pollutant	Current Sub. 8/22 (lb/yr) [i]	Previous Analysis with 20ft stack 45ft distance [a] (lb/yr)	2017 90th Percentile [b,e] (lb/yr)	2017 80th Percentile [b,f] (lb/yr)	2017 98% of Full dataset [c,g] (lb/yr)	2017 99% of Full dataset [c,h] (lb/yr)	% Reduction from Current to 90th (2nd to 4th Columns)
Acetaldehyde	1800	21.02	20.21	21.65	21.02	19.76	98.88%
Acetamide	200	2.31	2.22	2.38	2.31	2.17	98.89%
Acetonitrile	800	2000.00	2000.00	2000.00	2000.00	2000.00	-150.00%
Acetophenone	200	0.93	0.89	0.95	0.93	0.87	99.56%
Acetylaminofluorene (2-)	1	0.03	0.03	0.03	0.03	0.03	97.00%
Acrolein	8	0.93	0.89	0.95	0.93	0.87	88.88%
Acrylamide	4	0.46	0.44	0.47	0.46	0.43	89.00%
Acrylic acid	120	46.24	44.46	47.63	46.24	43.46	62.95%
Acrylonitrile	60	0.68	0.65	0.70	0.68	0.64	98.92%
Allyl chloride	200	7.71	7.41	7.94	7.71	7.24	96.30%
Aminobiphenyl (4-)	200	0.01	0.01	0.01	0.01	0.01	99.995%
Aniline	200	28.90	27.79	29.77	28.90	27.17	86.11%
Anisidine (o-)	200	1.15	1.11	1.19	1.15	1.09	99.45%
Antimony trioxide	200	9.25	8.89	9.52	9.25	8.69	95.56%
Arsenic (inorganic)	1	0.01	0.01	0.01	0.01	0.01	99.00%
Arsine	1	2.31	2.22	2.38	2.31	2.17	-122.00%
Benzene	400	5.93	5.7	6.11	5.93	5.57	98.58%
Benzidine	0.06	0.001	0.001	0.00	0.001	0.001	98.33%
Benzo(a)pyrene	2	0.04	0.04	0.04	0.04	0.04	98.00%
Benzotrichloride	1.2	0.01	0.01	0.01	0.01	0.01	99.17%
Benzyl chloride	20	0.95	0.91	0.97	0.95	0.89	95.45%
Beryllium	1.6	0.02	0.019	0.02	0.02	0.02	98.81%
Biphenyl	2000	18.50	17.79	19.06	18.50	17.39	99.11%
Bis(2-ethylhexyl)phthalate	1000	19.27	18.53	19.85	19.27	18.11	98.15%
Bis(chloromethyl)ether	0.06	0.001	0.001	0.00	0.001	0.001	98.33%
Bromoform	2000	42.04	40.42	43.30	42.04	39.51	97.98%
Butadiene (1,3-)	14	1.54	1.48	1.59	1.54	1.45	89.43%
Cadmium	2	0.01	0.01	0.01	0.01	0.01	99.50%
Calcium cyanamide	2000	N/A	N/A	N/A	N/A	N/A	N/A

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Hazardous Air Pollutant	Current Sub. 8/22 (lb/yr) [i]	Previous Analysis with 20ft stack 45ft distance [a] (lb/yr)	2017 90th Percentile [b,e] (lb/yr)	2017 80th Percentile [b,f] (lb/yr)	2017 98% of Full dataset [c,g] (lb/yr)	2017 99% of Full dataset [c,h] (lb/yr)	% Reduction from Current to 90th (2nd to 4th Columns)
Captan	2000	70.06	67.37	72.17	70.06	65.86	96.63%
Carbaryl	2000	N/A	N/A	N/A	N/A	N/A	N/A
Carbon disulfide	200	2000.00	2000.00	2000.00	2000.00	2000.00	-900.00%
Carbon tetrachloride	200	7.71	7.41	7.94	7.71	7.24	96.30%
Carbonyl sulfide	1000	N/A	N/A	N/A	N/A	N/A	N/A
Catechol	1000	N/A	N/A	N/A	N/A	N/A	N/A
Chloramben	200	N/A	N/A	N/A	N/A	N/A	N/A
Chlordane	2	0.46	0.44	0.47	0.46	0.43	78.00%
Chlorine	20	9.25	8.89	9.52	9.25	8.69	55.55%
Chloroacetic acid	20	N/A	N/A	N/A	N/A	N/A	N/A
Chloroacetophenone (2-)	12	1.38	1.33	1.42	1.38	1.30	88.92%
Chlorobenzene	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Chlorobenzilate	80	1.49	1.43	1.53	1.49	1.40	98.21%
Chloroform	180	2.01	1.93	2.07	2.01	1.89	98.93%
Chloromethyl methyl ether	20	0.06	0.06	0.06	0.06	0.06	99.70%
Chloroprene	200	0.16	0.15	0.16	0.16	0.15	99.93%
Chromic acid mists (Cr VI)	0.4	0.37	0.36	0.39	0.37	0.35	10.00%
Chromium VI (total)	0.4	0.004	0.004	0.00	0.004	0.004	99.00%
Chromium VI dissolved aerosols	0.4	0.37	0.36	0.39	0.37	0.35	10.00%
Chromium VI particulates	0.4	4.63	4.45	4.77	4.63	4.35	-1012.50%
Cobalt	20	0.01	0.005	0.01	0.01	0.00	99.98%
Coke oven emissions	6	0.07	0.07	0.07	0.07	0.07	98.83%
Cresol mixtures	200	2000.00	2000.00	2000.00	2000.00	2000.00	-900.00%
Cumene	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
D (2,4-), salts & esters	2000	N/A	N/A	N/A	N/A	N/A	N/A
DDE	2	0.48	0.46	0.49	0.48	0.45	77.00%
Diazomethane	200	N/A	N/A	N/A	N/A	N/A	N/A
Dibenzofurans	1000	N/A	N/A	N/A	N/A	N/A	N/A
Dibromo-3-chloropropane (1,2-)	2	0.02	0.02	0.02	0.02	0.02	99.00%
Dibutylphthalate	2000	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorobenzene (1,4-)	600	4.20	4.04	4.33	4.20	3.95	99.33%

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Hazardous Air Pollutant	Current Sub. 8/22 (lb/yr) [i]	Previous Analysis with 20ft stack 45ft distance [a] (lb/yr)	2017 90th Percentile [b,e] (lb/yr)	2017 80th Percentile [b,f] (lb/yr)	2017 98% of Full dataset [c,g] (lb/yr)	2017 99% of Full dataset [c,h] (lb/yr)	% Reduction from Current to 90th (2nd to 4th Columns)
Dichlorobenzidine (3,3'-)	40	0.14	0.13	0.14	0.14	0.13	99.68%
Dichloroethyl ether	12	0.14	0.13	0.14	0.14	0.13	98.92%
Dichloropropene (1,3-)	200	11.56	11.12	11.91	11.56	10.87	94.44%
Dichlorvos	40	0.56	0.54	0.58	0.56	0.53	98.65%
Diethanolamine	1000	138.73	133.39	142.89	138.73	130.40	86.66%
Diethyl sulfate	200	N/A	N/A	N/A	N/A	N/A	N/A
Dimethoxybenzidine (3,3-)	20	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl sulfate	20	0.01	0.01	0.01	0.01	0.01	99.95%
Dimethylaminoazobenzene (4-)	200	0.03	0.03	0.03	0.03	0.03	99.99%
Dimethylaniline (N,N-)	200	N/A	N/A	N/A	N/A	N/A	N/A
Dimethylbenzidine (3,3-)	2	N/A	N/A	N/A	N/A	N/A	N/A
Dimethylcarbamyl chloride	4	0.01	0.01	0.01	0.01	0.01	99.75%
Dimethylformamide (N,N-)	200	1387.36	1334	1428.98	1387.36	1304.12	-567.00%
Dimethylhydrazine (1,1-)	1.6	0.09	0.09	0.10	0.09	0.09	94.38%
Dimethylphthalate	2000	N/A	N/A	N/A	N/A	N/A	N/A
Dinitro-o-cresol (4,6-)	20	N/A	N/A	N/A	N/A	N/A	N/A
Dinitrophenol (2,4-)	200	N/A	N/A	N/A	N/A	N/A	N/A
Dinitrotoluene (2,4-)	4	0.52	0.5	0.54	0.52	0.49	87.50%
Dioxane (1,4-)	1200	9.25	8.89	9.52	9.25	8.69	99.26%
Diphenylhydrazine (1,2-)	18	0.21	0.2	0.21	0.21	0.20	98.89%
Epichlorohydrin	400	38.53	37.05	39.69	38.53	36.22	90.74%
Epoxybutane (1,2-)	200	924.56	889	952.30	924.56	869.09	-344.50%
Ethyl acrylate	200	370.24	356	381.35	370.24	348.03	-78.00%
Ethyl carbamate	160	0.16	0.15	0.16	0.16	0.15	99.91%
Ethyl chloride	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Ethylbenzene	2000	18.50	17.79	19.06	18.50	17.39	99.11%
Ethylene dibromide	20	0.07	0.07	0.07	0.07	0.07	99.65%
Ethylene dichloride	160	1.78	1.71	1.83	1.78	1.67	98.93%
Ethylene glycol	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Ethylene glycol monobutyl ether	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Ethylene glycol monoethyl ether	1000	2000.00	2000.00	2000.00	2000.00	2000.00	-100.00%

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Ethylene glycol monoethyl ether acetate	1000	516.88	497	532.39	516.88	485.87	50.30%
Ethylene glycol monomethyl ether	1000	343.20	330	353.50	343.20	322.61	67.00%
Ethylene glycol monomethyl ether acetate	1000	2000.00	2000.00	2000.00	2000.00	2000.00	-100.00%
Ethylene oxide	20	0.02	0.015	0.02	0.02	0.01	99.93%
Ethylene thiourea	120	3.56	3.42	3.66	3.56	3.34	97.15%
Ethyleneimine	0.6	0.002	0.0023	0.00	0.002	0.002	99.62%
Ethylidene dichloride	200	28.90	27.79	29.77	28.90	27.17	86.11%
Formaldehyde	400	3.56	3.42	3.66	3.56	3.34	99.15%
Heptachlor	4	0.03	0.03	0.03	0.03	0.03	99.25%
Hexachlorobenzene	2	0.10	0.1	0.11	0.10	0.10	95.00%
Hexachlorobutadiene	180	2.10	2.02	2.16	2.10	1.97	98.88%
Hexachlorocyclohexane (gamma-)	2	0.15	0.14	0.15	0.15	0.14	93.00%
Hexachlorocyclopentadiene	20	9.25	8.89	9.52	9.25	8.69	55.55%
Hexachloroethane	1000	4.20	4.04	4.33	4.20	3.95	99.60%
Hexamethylene diisocyanate	4	0.46	0.44	0.47	0.46	0.43	89.00%
Hexamethylphosphoramide	2	N/A	N/A	N/A	N/A	N/A	N/A
Hexane (N-)	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Hydrazine	0.8	0.01	0.01	0.01	0.01	0.01	98.75%
Hydrogen chloride	2000	924.87	889.3	952.62	924.87	869.38	55.54%
Hydrogen cyanide	1000	36.99	35.57	38.10	36.99	34.77	96.44%
Hydrogen fluoride	20	647.92	623	667.36	647.92	609.04	-3015.00%
Hydrogen selenide	20	18.51	17.8	19.07	18.51	17.40	11.00%
Hydroquinone	200	N/A	N/A	N/A	N/A	N/A	N/A
Isophorone	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Lead [d]	2	N/A	4.10	4.10	4.10	4.10	-105.00%
Maleic anhydride	200	32.38	31.13	33.35	32.38	30.43	84.44%
Manganese	160	0.62	0.6	0.64	0.62	0.59	99.63%
Mercury (elemental)	2	N/A	N/A	N/A	N/A	N/A	N/A
Mercury (inorganic)	2	1.38	1.33	1.42	1.38	1.30	33.50%
Methanol	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Methoxychlor	2000	N/A	N/A	N/A	N/A	N/A	N/A

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Methyl bromide	2000	231.21	222.32	238.15	231.21	217.34	88.88%
Methyl chloride	2000	25.69	24.7	26.46	25.69	24.15	98.77%
Methyl chloroform	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Methyl ethyl ketone	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Methyl hydrazine	12	N/A	N/A	N/A	N/A	N/A	N/A
Methyl iodide	200	N/A	N/A	N/A	N/A	N/A	N/A
Methyl isobutyl ketone	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Methyl isocyanate	20	46.24	44.46	47.63	46.24	43.46	-122.30%
Methyl methacrylate	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Methyl tert butyl ether	2000	177.86	171.02	183.20	177.86	167.19	91.45%
Methylene bis(2-chloroaniline) (4,4'-)	40	0.10	0.1	0.11	0.10	0.10	99.75%
Methylene chloride	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Methylenediphenyl diisocyanate (4,4'-)	20	27.75	26.68	28.58	27.75	26.08	-33.40%
Naphthalene	2000	1.36	1.31	1.40	1.36	1.28	99.93%
Nickel and compounds	200	0.64	0.62	0.66	0.64	0.61	99.69%
Nickel oxide	200	0.93	0.89	0.95	0.93	0.87	99.56%
Nickel refinery dust	16	0.20	0.19	0.20	0.20	0.19	98.81%
Nickel subsulfide	8	0.09	0.09	0.10	0.09	0.09	98.88%
Nickel, soluble salts	200	9.25	8.89	9.52	9.25	8.69	95.56%
Nitrobenzene	200	1.15	1.11	1.19	1.15	1.09	99.45%
Nitrobiphenyl (4-)	200	N/A	N/A	N/A	N/A	N/A	N/A
Nitrophenol (4-)	1000	N/A	N/A	N/A	N/A	N/A	N/A
Nitropropane (2-)	200	0.02	0.02	0.02	0.02	0.02	99.99%
Nitrosodimethylamine (N-)	0.2	0.00	0.003	0.00	0.003	0.003	98.50%
Nitrosomorpholine (N-)	200	0.02	0.02	0.02	0.02	0.02	99.99%
Nitroso-n-methylurea (N-)	0.04	0.00	0.001	0.00	0.001	0.001	97.50%
Parathion	20	N/A	N/A	N/A	N/A	N/A	N/A
Pentachloronitrobenzene	60	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	140	9.07	8.72	9.34	9.07	8.52	93.77%
Phenol	20	2000.00	2000.00	2000.00	2000.00	2000.00	-9900.00%
Phenylenediamine (p-)	2000	N/A	N/A	N/A	N/A	N/A	N/A

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Phosgene	20	13.87	13.34	14.29	13.87	13.04	33.30%
Phosphine	1000	13.87	13.34	14.29	13.87	13.04	98.67%
Phosphorus (white)	20	3.23	3.11	3.33	3.23	3.04	84.45%
Phthalic anhydride	1000	924.87	889.3	952.62	924.87	869.38	11.07%
Polychlorinated biphenyls (PCBs)	1.8	0.46	0.44	0.47	0.46	0.43	75.56%
Propane sultone (1,3-)	6	0.06	0.06	0.06	0.06	0.06	99.00%
Propiolactone (beta-)	20	0.01	0.01	0.01	0.01	0.01	99.95%
Propionaldehyde	1000	369.95	355.72	381.05	369.95	347.75	64.43%
Propoxur	2000	N/A	N/A	N/A	N/A	N/A	N/A
Propylene dichloride	200	4.63	4.45	4.77	4.63	4.35	97.78%
Propylene oxide	1000	12.50	12.02	12.88	12.50	11.75	98.80%
Propylenimine	1	N/A	N/A	N/A	N/A	N/A	N/A
Quinoline	1.2	0.05	0.05	0.05	0.05	0.05	95.83%
Quinone	1000	N/A	N/A	N/A	N/A	N/A	N/A
Selenium and compounds	20	924.56	889	952.30	924.56	869.09	-4345.00%
Styrene	200	81.13	78.01	83.56	81.13	76.26	61.00%
Styrene oxide	200	1.01	0.97	1.04	1.01	0.95	99.52%
Tetrachlorodibenzo(p)dioxin (2,3,7,8-)	1.20E-04	1.25E-06	1.20E-06	1.29E-06	1.25E-06	1.17E-06	99.00%
Tetrachloroethane (1,1,2,2-)	60	0.80	0.77	0.82	0.80	0.75	98.72%
Tetrachloroethylene	2000	177.86	171.02	183.20	177.86	167.19	91.45%
Titanium tetrachloride	20	4.63	4.45	4.77	4.63	4.35	77.75%
Toluene	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%
Toluene diisocyanate (2,4-)	20	3.23	3.11	3.33	3.23	3.04	84.45%
Toluene-2,4-diamine	4	0.04	0.04	0.04	0.04	0.04	99.00%
Toluidine (o-)	200	0.90	0.87	0.93	0.90	0.85	99.57%
Toxaphene	2	0.15	0.14	0.15	0.15	0.14	93.00%
Trichlorobenzene (1,2,4-)	2000	92.49	88.93	95.26	92.49	86.94	95.55%
Trichloroethane (1,1,2-)	200	2.89	2.78	2.98	2.89	2.72	98.61%
Trichloroethylene	2000	11.28	10.85	11.62	11.28	10.61	99.46%
Trichlorophenol (2,4,5-)	200	N/A	N/A	N/A	N/A	N/A	N/A
Trichlorophenol (2,4,6-)	1200	14.91	14.34	15.36	14.91	14.02	98.81%

Hazardous Air Pollutant	Current Sub. 8/22 (lb/yr) [i]	Previous Analysis with 20ft stack 45ft distance [a] (lb/yr)	2017 90th Percentile [b,e] (lb/yr)	2017 80th Percentile [b,f] (lb/yr)	2017 98% of Full dataset [c,g] (lb/yr)	2017 99% of Full dataset [c,h] (lb/yr)	% Reduction from Current to 90th (2nd to 4th Columns)
Triethylamine	2000	323.70	311.25	333.41	323.70	304.28	84.44%
Trifluralin	1800	21.02	20.21	21.65	21.02	19.76	98.88%
Trimethylpentane (2,2,4-)	1000	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl acetate	200	2000.00	2000.00	2000.00	2000.00	2000.00	-900.00%
Vinyl bromide	120	1.45	1.39	1.49	1.45	1.36	98.84%
Vinyl chloride	40	5.25	5.05	5.41	5.25	4.94	87.38%
Vinylidene chloride	80	2000.00	2000.00	2000.00	2000.00	2000.00	-2400.00%
Xylene (m-,o-,p-, or mixed isomers)	2000	2000.00	2000.00	2000.00	2000.00	2000.00	0.00%

(a) Based on current risk screening worksheet with a 20ft stack and 45ft distance to property line
(b) Based on newer modeling using approximately 300 values of stacks less than 35ft and within a 100ft of stack
(c) Based on approximately 2,500 values from all stacks and distances
(d) Based on short-term modeling impacts adjusted to 3-month NAAQS lead standard
(e) Approximately 4% lower value with the newer modeling/analysis than the current risk screening worksheet methodology
(f) Approximately 3% higher value with the newer modeling/analysis than the current risk screening worksheet methodology
(g) A nearly identical value with the newer modeling/analysis and the current risk screening worksheet methodology
(h) Approximately 6% lower value with the newer modeling/analysis than the current risk screening worksheet methodology
(i) Chemicals that will retain the current Sub. 8/22 threshod are denoted by N/A

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