TITLE V PERMIT RENEWAL APPLICATION
2010 POTENTIAL EMISSIONS INVENTORY
KOPPERS INC.
FOLLANSBEE TAR PLANT

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SUMMARY

Table1-1.

2010 Potential Emissions Inventory, Summary of Potential Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Pollutant	HAP	POM	Potential Emissions (tons/yr)															
			Boilers	Tube Heaters, Pencil Pitch Area (Combustion)	Flare/Thermal Oxidizer (Combustion)	Process Vents	Equipment Leaks	Storage Tanks	Product Loading	Creosote Processing	Melt Pot	Heat-up Losses	Wastewater Treatment	Tankcar Cleaning	Slop and Pitch Recycling Conveyor	Railcar Residue Recycling Operation	Paved Roadways	Total
PM			38.24	2.272	1.207	2.540			0.147		0.013				0.028		9.066	53.513
PM-10			34.35	2.272	1.207	1.489			0.069		0.006				0.013		1.739	41.147
PM-2.5			26.02	2.272	1.207	1.489			0.022		0.002				0.004		0.248	31.265
NOx			246.42	29.900	20.788													297.107
SO2			109.35	0.179	0.095													109.623
CO			84.15	25.116	24.690													133.958
VOC			5.43	1.645	0.874	3.880	2.331	7.025	6.661	0.131	0.010	0.323	1.910	0.124	0.008	0.012		30.368
Benzene	X		0.002	0.001	0.000	0.644	0.096	0.798	1.204	0.026	0.003	0.073	0.157	0.000	0.000	0.000		3.005
Biphenyl	X	X				0.000	0.021	0.060	0.107	0.001	0.000	0.000		0.002	0.000	0.000		0.192
m-Cresol	X					0.000	0.005	0.010	0.017	0.000	0.000	0.000		0.000	0.000	0.000		0.032
o-Cresol	X					0.001	0.003	0.006	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.032
p-Cresol	X					0.000	0.005	0.010	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.032
Cumene	X					0.010	0.004	0.008	0.009	0.000	0.000	0.000		0.000	0.000	0.000		0.031
Dibenzofuran	X	X				0.003	0.045	0.239	0.213	0.001	0.001	0.000	0.003	0.005	0.001	0.000		0.511
Ethylbenzene	X		0.000			0.008	0.003	0.024	0.003	0.000	0.000	0.004	0.011	0.000	0.000	0.000		0.055
Naphthalene	X	X	0.003	0.000	0.000	0.079	0.489	1.986	1.623	0.056	0.011	0.109	0.563	0.010	0.000	0.004		4.935
Phenol	X					0.003	0.008	0.030	0.046	0.001	0.000	0.001	0.000	0.000	0.000	0.000		0.089
Quinoline	X	X				0.001	0.018	0.103	0.149	0.003	0.000	0.001		0.001	0.000	0.001		0.277
Styrene	X					0.025	0.012	0.079	0.040	0.000	0.000	0.009	0.280	0.000	0.000	0.000		0.446
Toluene	X		0.019	0.001	0.001	0.118	0.031	0.219	0.313	0.002	0.001	0.023	0.052	0.000	0.000	0.000		0.780
m-Xylene	X					0.025	0.012	0.102	0.073	0.000	0.000	0.008	0.005	0.000	0.000	0.000		0.225
o-Xylene	X		0.000			0.011	0.006	0.040	0.031	0.000	0.000	0.003		0.000	0.000	0.000		0.092
p-Xylene	X					0.013	0.008	0.093	0.062	0.000	0.000	0.008		0.000	0.000	0.000		0.184
Acenaphthene	X	X				0.004	0.091	0.678	0.656	0.006	0.001	0.001	0.032	0.008	0.004	0.001		1.483
Acenaphthylene	X	X				0.004	0.033	0.221	0.187	0.001	0.000	0.000	0.001	0.000	0.001	0.000		0.449
Anthracene	X	X				0.004	0.036	0.093	0.047	0.000	0.000	0.000	0.121	0.003	0.001	0.000		0.306
Benzo(a)anthracene	X	X				0.020	0.017	0.017	0.024	0.000	0.000	0.000	0.000	0.002	0.000	0.000		0.081
Benzo(b)fluoranthene	X	X				0.036	0.016	0.014	0.013	0.000	0.000	0.000		0.001	0.000	0.000		0.080
Benzo(k)fluoranthene	X	X				0.013	0.005	0.001	0.002	0.000	0.000	0.000		0.000	0.000	0.000		0.022
Benzo(g,h,i)perylene	X	X				0.030	0.006	0.001	0.003	0.000	0.000	0.000		0.000	0.000	0.000		0.041
Benzo(a)pyrene	X	X				0.032	0.014	0.003	0.006	0.000	0.000	0.000		0.001	0.000	0.000		0.057
Chrysene	X	X				0.020	0.016	0.005	0.007	0.000	0.000	0.000	0.000	0.002	0.000	0.000		0.051
Dibenzo(a,h)anthracene	X	X				0.031	0.003	0.000	0.002	0.000	0.000	0.000		0.000	0.000	0.000		0.037
Fluoranthene	X	X				0.027	0.068	0.188	0.267	0.000	0.001	0.000	0.286	0.010	0.002	0.000		0.850
Fluorene	X	X				0.000	0.051	0.174	0.170	0.002	0.001	0.000	0.004	0.006	0.001	0.000		0.409
Indeno(1,2,3-cd)pyrene	X	X				0.026	0.007	0.000	0.002	0.000	0.000	0.000		0.000	0.000	0.000		0.036
Phenanthrene	X	X				0.009	0.116	0.202	0.200	0.000	0.002	0.000	0.069	0.016	0.002	0.000		0.617
Pyrene	X	X				0.023	0.044	0.058	0.070	0.000	0.001	0.000	0.000	0.009	0.001	0.000		0.206
16 PAH minus napthalene	X	X	0.004	0.000	0.000													0.004
Formalehyde	X		0.135	0.022	0.012													0.169
Hexane	X		1.632	0.538	0.286													2.456
HAP Metals	X		0.291	0.002	0.001													0.294
Total HAP			2.087	0.564	0.300	1.171	1.289	5.466	4.860	0.098	0.016	0.243	1.585	0.079	0.013	0.007		17.779
Total POM	X		0.007	0.000	0.000	0.317	1.097	4.045	3.026	0.068	0.013	0.112	1.079	0.079	0.015	0.007		9.867

Table 1-2. 2010 Potential Emissions Inventory, Summary of Potential Emissions, Sources Venting to the Flare/Thermal Oxidizer Control Devices
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Potential Emissions (tons/yr)

Pollutant	HAP	POM	#1 Column	#2 Column	#4 Column	#4 Pitch Flash Column	Decanters	Melt Pot	Debenzo-lizer	#32 Column	#32 Decanter	Petro Tar Loading	Naphthalene Loading	PSB, MPSB, RT Loading	Creosote Loading	Tanks 221-224	Tank 6	Tank 7	Tank 9	Tank 10	Tank 11	Tank 13	Tank 14	Tank 17	Tank 30	Tank 40	Tank 41	Tank 48
VOC			0.122	0.072	0.062	0.000	0.006	0.010	0.662	0.333	0.000	0.009	0.370	1.189	0.050	0.081	0.154	0.351	0.350	0.014	0.064	0.046	0.046	0.062	0.141	0.143	0.143	0.153
Benzene	X		0.032	0.019	0.032	0.000	0.002	0.003	0.553	0.006	0.000	0.000	0.000	0.000	0.010	0.016	0.062	0.050	0.050	0.005	0.049	0.000	0.000	0.022	0.057	0.058	0.058	0.062
Biphenyl	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.064	0.001	0.001	0.002	0.001	0.001	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000
m-Cresol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001
o-Cresol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001
p-Cresol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001
Cumene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	X	X	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	X		0.002	0.001	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	X	X	0.037	0.022	0.011	0.000	0.002	0.011	0.000	0.001	0.000	0.002	0.370	0.209	0.022	0.034	0.027	0.149	0.149	0.004	0.000	0.007	0.007	0.016	0.025	0.025	0.025	0.027
Phenol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.003	0.003	0.003	0.003
Quinoline	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.073	0.001	0.002	0.001	0.001	0.001	0.000	0.000	0.002	0.002	0.000	0.001	0.001	0.001	0.001
Styrene	X		0.004	0.002	0.000	0.000	0.000	0.000	0.001	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002
Toluene	X		0.010	0.006	0.008	0.000	0.001	0.001	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.015	0.019	0.019	0.001	0.009	0.000	0.000	0.006	0.014	0.014	0.014	0.015
m-Xylene	X		0.003	0.002	0.000	0.000	0.000	0.000	0.003	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.006	0.006	0.006	0.006
o-Xylene	X		0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.003
p-Xylene	X		0.003	0.002	0.000	0.000	0.000	0.000	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.006	0.006	0.006	0.006
Acenaphthene	X	X	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.125	0.002	0.003	0.003	0.001	0.001	0.000	0.000	0.006	0.006	0.001	0.001	0.001	0.001	0.001
Acenaphthylene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001
Anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	X	X	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000
Fluorene	X	X	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.044	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.004	0.003	0.000	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	X	X	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.000
Pyrene	X	X	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total HAP			0.092	0.055	0.052	0.000	0.005	0.016	0.655	0.067	0.000	0.006	0.370	0.615	0.037	0.061	0.131	0.256	0.256	0.011	0.059	0.031	0.030	0.048	0.121	0.122	0.122	0.131
Total POM			0.038	0.022	0.011	0.000	0.002	0.013	0.000	0.001	0.000	0.006	0.370	0.615	0.027	0.042	0.030	0.153	0.153	0.004	0.000	0.031	0.030	0.018	0.028	0.028	0.028	0.030

Table 1-2.

2010 Potential Emissions Inventory, Summary of Potential Emissions, Sources Venting to the Flare/Thermal Oxidizer Control Devices
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Potential Emissions (tons/yr)

Pollutant	HAP	POM	Tank 49	Tank 50	Tank 55	Tank 56	Tank 58	Tank 82	Tank 83	Tank 89	Tank 251	Tank 252	Tank 253	Tank 254	Tank 406	Tank 407	Tank 623	RCO Tankcar Heating	Slop & Pitch Conveying & Recycling[1]	Total	Total Uncontrolled (assuming 98% Eff)
VOC			0.153	0.026	0.262	0.262	0.149	0.148	0.146	0.223	0.042	0.042	0.042	0.042	0.043	0.043	0.166	0.001	0.001	6.428	321.377
Benzene	X		0.062	0.000	0.038	0.038	0.060	0.000	0.000	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.378	68.923
Biphenyl	X	X	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.091	4.564
m-Cresol	X		0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.464
o-Cresol	X		0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.324
p-Cresol	X		0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.457
Cumene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.488
Dibenzofuran	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.065	3.247
Ethylbenzene	X		0.000	0.000	0.003	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	1.310
Naphthalene	X	X	0.027	0.006	0.111	0.111	0.026	0.148	0.146	0.095	0.006	0.006	0.006	0.006	0.007	0.007	0.166	0.000	0.000	2.056	102.803
Phenol	X		0.003	0.000	0.001	0.001	0.003	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	1.498
Quinoline	X	X	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.104	5.207
Styrene	X		0.002	0.000	0.007	0.007	0.002	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	4.016
Toluene	X		0.015	0.000	0.014	0.014	0.015	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.318	15.895
m-Xylene	X		0.006	0.000	0.006	0.006	0.006	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.098	4.924
o-Xylene	X		0.003	0.000	0.002	0.002	0.003	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	2.088
p-Xylene	X		0.006	0.000	0.006	0.006	0.006	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.088	4.401
Acenaphthene	X	X	0.001	0.004	0.001	0.001	0.001	0.000	0.000	0.001	0.006	0.006	0.006	0.006	0.006	0.006	0.000	0.000	0.000	0.200	9.982
Acenaphthylene	X	X	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.697
Anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.015	0.773
Benzo(a)anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.052
Benzo(b)fluoranthene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.027
Benzo(k)fluoranthene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
Benzo(g,h,i)perylene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
Benzo(a)pyrene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
Chrysene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020
Dibenzo(a,h)anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
Fluoranthene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.028	1.390
Fluorene	X	X	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.000	0.000	0.000	0.081	4.042
Indeno(1,2,3-cd)pyrene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Phenanthrene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.004	0.004	0.004	0.004	0.000	0.000	0.000	0.067	3.351
Pyrene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.275
Total HAP			0.131	0.016	0.191	0.191	0.127	0.148	0.146	0.163	0.028	0.028	0.028	0.028	0.029	0.029	0.166	0.001	0.001	4.801	240.060
Total POM			0.030	0.016	0.114	0.114	0.029	0.148	0.146	0.097	0.028	0.028	0.028	0.028	0.029	0.029	0.166	0.000	0.001	2.713	135.628

[1] Slop heating and loading are controlled by flare/thermal oxidizer.

Table 1-3.

2010 Potential Emissions Inventory, Summary of Potential Emissions, Sources Venting to the Scrubber E and the Pencil Pitch Baghouse
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Potential Emissions (tons/yr)

			Scrubber E										Pencil Pitch Baghouse		
Pollutant	HAP	POM	Pitch Loading	Tank 801	Tank 802	Tank 804	Tank 805	Tank 806	Tank 808	Slop & Pitch Conveying and Recycling Operation[1]	Total Controlled	Total Uncontrolled (assuming 80% DRE)	Pencil Pitch Dryer	Total Controlled	Total Uncontrolled (assuming 99% Eff)
PM													2.540	2.5404	254.040
PM-10													1.489	1.4892	148.920
PM-2.5													1.489	1.4892	148.920
VOC			0.637	0.248	0.248	0.248	0.244	0.248	0.268	0.007	2.149	10.745		0.000	
Benzene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biphenyl	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Cresol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	X	X	0.152	0.033	0.033	0.033	0.032	0.033	0.035	0.001	0.351	1.754	0.003	0.003	0.330
Ethylbenzene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenol	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quinoline	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Styrene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Xylene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	X		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	X	X	0.392	0.085	0.085	0.085	0.084	0.085	0.093	0.004	0.914	4.570	0.000	0.000	0.000
Acenaphthylene	X	X	0.146	0.031	0.031	0.031	0.031	0.031	0.033	0.001	0.338	1.688	0.002	0.002	0.229
Anthracene	X	X	0.038	0.014	0.014	0.014	0.014	0.014	0.015	0.000	0.123	0.617	0.004	0.004	0.381
Benzo(a)anthracene	X	X	0.022	0.003	0.003	0.003	0.003	0.003	0.003	0.000	0.039	0.196	0.020	0.020	2.007
Benzo(b)fluoranthene	X	X	0.011	0.002	0.002	0.002	0.002	0.002	0.003	0.000	0.025	0.127	0.036	0.036	3.557
Benzo(k)fluoranthene	X	X	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.011	0.013	0.013	1.321
Benzo(g,h,i)perylene	X	X	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.010	0.030	0.030	2.998
Benzo(a)pyrene	X	X	0.004	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.007	0.035	0.032	0.032	3.226
Chrysene	X	X	0.006	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.011	0.053	0.020	0.020	2.032
Dibenzo(a,h)anthracene	X	X	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.031	0.031	3.074
Fluoranthene	X	X	0.249	0.029	0.029	0.029	0.028	0.029	0.031	0.001	0.425	2.123	0.025	0.025	2.540
Fluorene	X	X	0.077	0.017	0.017	0.017	0.016	0.017	0.018	0.001	0.178	0.892	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	X	X	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.026	0.026	2.617
Phenanthrene	X	X	0.160	0.027	0.027	0.027	0.027	0.027	0.030	0.001	0.327	1.637	0.009	0.009	0.864
Pyrene	X	X	0.066	0.009	0.009	0.009	0.009	0.009	0.010	0.000	0.123	0.613	0.023	0.023	2.337
Total HAP			0.637	0.246	0.246	0.246	0.242	0.246	0.266	0.007	2.134	10.669	0.231	0.231	23.143
Total POM			0.637	0.246	0.246	0.246	0.242	0.246	0.266	0.009	2.136	10.679	0.231	0.231	23.143

[1] Pitch addition to tanks and pitch loading are controlled by Scrubber E.

COMBUSTION SOURCES

Table 2-1. Assumptions for the 2010 Potential Emissions Inventory, Combustion Sources
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Boiler 2
Rated Capacity (MMBtu/hr) = 50
Fuels = Liquid Fuel

Boiler 3
Rated Capacity (MMBtu/hr) = 75
Fuels = Liquid Fuel, Natural Gas

Boiler 5
Rated Capacity (MMBtu/hr) = 132
Fuels = Natural Gas

Fuel Characterisitics:
Liquid Fuel
Sulfur Content = 0.25 % by weight, maximum expected
Heating Value = 137,000 Btu/gal

Natural Gas
Heating Value = 1,000 Btu/cf

Liquid Fuel is a blend of Debenzolizer Overheads and Unwashed Solvent.

#1 Tube Heater
Rated Capacity (MMBtu/hr) = 10
Fuels = Natural Gas

#2 Tube Heater
Rated Capacity (MMBtu/hr) = 10
Fuels = Natural Gas

#4 Tube Heater
Rated Capacity (MMBtu/hr) = 10
Fuels = Natural Gas

#31 Tube Heater
Rated Capacity (MMBtu/hr) = 27
Fuels = Natural Gas, Process Gas

Pencil Pitch Hot Oil Heater
Rated Capacity (MMBtu/hr) = 5
Fuels = Natural Gas

Pencil Pitch Dryer
Rated Capacity (MMBtu/hr) = 6
Fuels = Natural Gas

Fuel Characterisitics:
Natural Gas
Heating Value = 1,000 Btu/cf

Flares
UFEG Flare
Assist Gas 13,775 scfh, Manufacturer Data
Pilot 237 scfh, Manufacturer Data

Natural Gas
Heating Value = 1,000 Btu/cf

Thermal Oxidizer
Burner Capacities (MMBtu/hr): 22.3 (3 burners)

Table 2-2. 2010 Revised Potential Emissions Inventory, Boilers, Potential Emissions on Individual Basis
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

			BOILER #2		BOILER #3						BOILER #5		TOTAL	
			Liquid Fuel		Natural Gas		Liquid Fuel				Natural Gas			
Rated Capacity (MMBtu/hr)			50			75					132			
Potential Natural Gas Usage (mmcf/hr)[3]			0		0.075		0				0.132			
Potential Natural Gas Usage (mmcf/yr)[3]			0		657		0				1,156			
Potential Liquid Fuel Usage (gal/hr)[4]			365		0		547				0			
Potential Liquid Fuel Usage (gal/yr)[4]			3,197,080		0		2,357,143 Limit				0			
	Emission Factors													
	Natural Gas[1]	Liquid Fuel[2]	Emissions		Emissions		Emissions		Maximum Emissions		Emissions		TOTAL EMISSIONS	
Pollutant	(lb/mmcf)	(lb/10³ gal)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
PM	10.9	11.5	4.20	18.38	0.82	3.58	6.30	13.55	6.30	13.55	1.44	6.30	11.93	38.24
PM-10	10.9	10.1	3.69	16.15	0.82	3.58	5.53	11.90	5.53	11.90	1.44	6.30	10.65	34.35
PM-2.5	10.9	7.1	2.59	11.35	0.82	3.58	3.89	8.37	3.89	8.37	1.44	6.30	7.92	26.02
NOx	123.6	63	22.99	100.71	9.27	40.60	34.49	74.25	34.49	74.25	16.32	71.46	73.80	246.42
SO2	0.6	39.25	14.32	62.74	0.05	0.20	21.49	46.26	21.49	46.26	0.08	0.35	35.89	109.35
CO	84	5	1.82	7.99	6.30	27.59	2.74	5.89	6.30	27.59	11.09	48.57	19.21	84.15
VOC	5.5	0.28	0.10	0.45	0.41	1.81	0.15	0.33	0.41	1.81	0.73	3.18	1.24	5.43
Benzene	2.10E-03	2.14E-04	7.81E-05	3.42E-04	1.58E-04	6.90E-04	1.17E-04	2.52E-04	1.58E-04	6.90E-04	2.77E-04	1.21E-03	0.00	0.00
Ethylbenzene		6.36E-05	2.32E-05	1.02E-04	0.00E+00	0.00E+00	3.48E-05	7.50E-05	3.48E-05	7.50E-05	0.00E+00	0.00E+00	0.00	0.00
Naphthalene	6.10E-04	1.13E-03	4.12E-04	1.81E-03	4.58E-05	2.00E-04	6.19E-04	1.33E-03	6.19E-04	1.33E-03	8.05E-05	3.53E-04	0.00	0.00
Toluene	3.40E-03	6.20E-03	2.26E-03	9.91E-03	2.55E-04	1.12E-03	3.39E-03	7.31E-03	3.39E-03	7.31E-03	4.49E-04	1.97E-03	0.01	0.02
o-Xylene		0.000109	3.98E-05	1.74E-04	0.00E+00	0.00E+00	5.97E-05	1.28E-04	5.97E-05	1.28E-04	0.00E+00	0.00E+00	0.00	0.00
POM	8.82E-05	1.30E-03	4.74E-04	2.08E-03	6.62E-06	2.90E-05	7.12E-04	1.53E-03	7.12E-04	1.53E-03	1.16E-05	5.10E-05	0.00	0.00
Formaldehyde	7.50E-02	3.30E-02	1.20E-02	5.28E-02	5.63E-03	2.46E-02	1.81E-02	3.89E-02	1.81E-02	3.89E-02	9.90E-03	4.34E-02	0.04	0.14
Hexane	1.80E+00		0.00E+00	0.00E+00	1.35E-01	5.91E-01	0.00E+00	0.00E+00	1.35E-01	5.91E-01	2.38E-01	1.04E+00	0.37	1.63
Antimony		5.25E-03	1.92E-03	8.39E-03	0.00E+00	0.00E+00	2.87E-03	6.19E-03	2.87E-03	6.19E-03	0.00E+00	0.00E+00	0.00	0.01
Arsenic	2.00E-04	1.32E-03	4.82E-04	2.11E-03	1.50E-05	6.57E-05	7.23E-04	1.56E-03	7.23E-04	1.56E-03	2.64E-05	1.16E-04	0.00	0.00
Beryllium	1.20E-05	2.78E-05	1.01E-05	4.44E-05	9.00E-07	3.94E-06	1.52E-05	3.28E-05	1.52E-05	3.28E-05	1.58E-06	6.94E-06	0.00	0.00
Cadmium	1.10E-03	3.98E-04	1.45E-04	6.36E-04	8.25E-05	3.61E-04	2.18E-04	4.69E-04	2.18E-04	4.69E-04	1.45E-04	6.36E-04	0.00	0.00
Chromium	1.40E-03	8.45E-04	3.08E-04	1.35E-03	1.05E-04	4.60E-04	4.63E-04	9.96E-04	4.63E-04	9.96E-04	1.85E-04	8.09E-04	0.00	0.00
Cobalt	8.40E-05	6.02E-03	2.20E-03	9.62E-03	6.30E-06	2.76E-05	3.30E-03	7.10E-03	3.30E-03	7.10E-03	1.11E-05	4.86E-05	0.01	0.02
Lead	0.0005	0.00151	5.51E-04	2.41E-03	3.75E-05	1.64E-04	8.27E-04	1.78E-03	8.27E-04	1.78E-03	6.60E-05	2.89E-04	0.00	0.00
Manganese	3.80E-04	3.00E-03	1.09E-03	4.80E-03	2.85E-05	1.25E-04	1.64E-03	3.54E-03	1.64E-03	3.54E-03	5.02E-05	2.20E-04	0.00	0.01
Mercury	2.60E-04	1.13E-04	4.12E-05	1.81E-04	1.95E-05	8.54E-05	6.19E-05	1.33E-04	6.19E-05	1.33E-04	3.43E-05	1.50E-04	0.00	0.00
Nickel	2.10E-03	8.45E-02	3.08E-02	1.35E-01	1.58E-04	6.90E-04	4.63E-02	9.96E-02	4.63E-02	9.96E-02	2.77E-04	1.21E-03	0.08	0.24
Selenium	2.40E-05	6.83E-04	2.49E-04	1.09E-03	1.80E-06	7.88E-06	3.74E-04	8.05E-04	3.74E-04	8.05E-04	3.17E-06	1.39E-05	0.00	0.00
Total HAP			5.32E-02	2.33E-01	1.42E-01	6.20E-01	7.98E-02	1.72E-01	2.15E-01	7.63E-01	2.49E-01	1.09E+00	0.52	2.09
Total POM			8.87E-04	3.88E-03	5.24E-05	2.29E-04	1.33E-03	2.86E-03	1.33E-03	2.86E-03	9.22E-05	4.04E-04	2.31E-03	7.15E-03

[1] The higher emissions factor from either the May 2005 stack test on Boiler #3 or AP-42, Section 1.4, Natural Gas Combustion, 7/98 have been used. For the PM emission factor, condensable PM from AP-42 was added to the stack test results (filterable). PM-10 was assumed equal to PM. The NOx emissions factor was from the May 2005 stack test. SO2, CO, VOC and HAPS were from AP-42.

[2] The higher emission factor from either the May 2005 stack test on Boiler #3 or AP-42, Section 1.3, Fuel Oil Combustion, 9/98 (No. 6 fuel oil) have been used. For the PM emission factor, condensable and filterable PM from AP-42 was used. PM-10 emissions are calculated by multiplying filterable PM rates by the cumulative mass percent in Table 1.3-7 of AP-42, then adding the condensable PM factor of 1.5. The NOx emission factor was from the May 2006 stack test. SO2, CO, VOC and lead were from AP-42. The sulfur content of the liquid fuel was assumed to be: 0.25 %, maximum expected

[3] Heating value of liquid fuel = 137,000 Btu/gal, analyzed 6-13-03 and 9-15-03 by Microbac

[4] Heating value of natural gas = 1,000 Btu/cf

Table 2-3. 2010 Revised Potential Emissions Inventory, Combustion Sources, Tube Heaters and Pencil Pitch Combustion Units
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Pollutant	Emission Factor[1] (lb/mmcf)	#1 Tube Heater		#2 Tube Heater		#4 Tube Heater		#4 Tube Heater		Pencil Pitch Hot Oil Heater		Pencil Pitch Dryer		Total	
Rated Capacity (MMBtu/hr)		10		10		10		27		5		6			
Potential Fuel Usage (mmcf/hr)[3]		0.010		0.010		0.010		0.027		0.005		0.006			
Potential Fuel Usage (mmcf/yr)		88		88		88		237		44		53			
		Emissions		Emissions		Emissions		Emissions		Emissions		Emissions		Emissions	
		(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
PM[2]	7.6	0.076	0.334	0.076	0.334	0.076	0.334	0.205	0.901	0.038	0.167	0.046	0.201	0.517	2.272
PM-10[2]	7.6	0.076	0.334	0.076	0.334	0.076	0.334	0.205	0.901	0.038	0.167	0.046	0.201	0.517	2.272
PM-2.5[2]	7.6	0.076	0.334	0.076	0.334	0.076	0.334	0.205	0.901	0.038	0.167	0.046	0.201	0.517	2.272
NOx	100	1.000	4.400	1.000	4.400	1.000	4.400	2.700	11.850	0.500	2.200	0.600	2.650	6.800	29.900
SO2	0.6	0.006	0.026	0.006	0.026	0.006	0.026	0.016	0.071	0.003	0.013	0.004	0.016	0.041	0.179
CO	84	0.840	3.696	0.840	3.696	0.840	3.696	2.268	9.954	0.420	1.848	0.504	2.226	5.712	25.116
VOC	5.5	0.055	0.242	0.055	0.242	0.055	0.242	0.149	0.652	0.028	0.121	0.033	0.146	0.374	1.645
Benzene	2.10E-03	0.0000	9.24E-05	0.0000	9.24E-05	0.0000	9.24E-05	0.0001	2.49E-04	0.0000	4.62E-05	0.0000	5.57E-05	0.000	0.001
Naphthalene	6.10E-04	0.0000	2.68E-05	0.0000	2.68E-05	0.0000	2.68E-05	0.0000	7.23E-05	0.0000	1.34E-05	0.0000	1.62E-05	0.000	0.000
Toluene	3.40E-03	0.0000	1.50E-04	0.0000	1.50E-04	0.0000	1.50E-04	0.0001	4.03E-04	0.0000	7.48E-05	0.0000	9.01E-05	0.000	0.001
POM	8.82E-05	0.0000	3.88E-06	0.0000	3.88E-06	0.0000	3.88E-06	0.0000	1.05E-05	0.0000	1.94E-06	0.0000	2.34E-06	0.000	0.000
Formaldehyde	7.50E-02	0.0008	3.30E-03	0.0008	3.30E-03	0.0008	3.30E-03	0.0020	8.89E-03	0.0004	1.65E-03	0.0005	1.99E-03	0.005	0.022
Hexane	1.80E+00	0.0180	7.92E-02	0.0180	7.92E-02	0.0180	7.92E-02	0.0486	2.13E-01	0.0090	3.96E-02	0.0108	4.77E-02	0.122	0.538
Arsenic	2.00E-04	0.0000	8.80E-06	0.0000	8.80E-06	0.0000	8.80E-06	0.0000	2.37E-05	0.0000	4.40E-06	0.0000	5.30E-06	0.000	0.000
Beryllium	1.20E-05	0.0000	5.28E-07	0.0000	5.28E-07	0.0000	5.28E-07	0.0000	1.42E-06	0.0000	2.64E-07	0.0000	3.18E-07	0.000	0.000
Cadmium	1.10E-03	0.0000	4.84E-05	0.0000	4.84E-05	0.0000	4.84E-05	0.0000	1.30E-04	0.0000	2.42E-05	0.0000	2.92E-05	0.000	0.000
Chromium	1.40E-03	0.0000	6.16E-05	0.0000	6.16E-05	0.0000	6.16E-05	0.0000	1.66E-04	0.0000	3.08E-05	0.0000	3.71E-05	0.000	0.000
Cobalt	8.40E-05	0.0000	3.70E-06	0.0000	3.70E-06	0.0000	3.70E-06	0.0000	9.95E-06	0.0000	1.85E-06	0.0000	2.23E-06	0.000	0.000
Lead	0.0005	0.0000	2.20E-05	0.0000	2.20E-05	0.0000	2.20E-05	0.0000	5.93E-05	0.0000	1.10E-05	0.0000	1.33E-05	0.000	0.000
Manganese	3.80E-04	0.0000	1.67E-05	0.0000	1.67E-05	0.0000	1.67E-05	0.0000	4.50E-05	0.0000	8.36E-06	0.0000	1.01E-05	0.000	0.000
Mercury	2.60E-04	0.0000	1.14E-05	0.0000	1.14E-05	0.0000	1.14E-05	0.0000	3.08E-05	0.0000	5.72E-06	0.0000	6.89E-06	0.000	0.000
Nickel	2.10E-03	0.0000	9.24E-05	0.0000	9.24E-05	0.0000	9.24E-05	0.0001	2.49E-04	0.0000	4.62E-05	0.0000	5.57E-05	0.000	0.001
Selenium	2.40E-05	0.0000	1.06E-06	0.0000	1.06E-06	0.0000	1.06E-06	0.0000	2.84E-06	0.0000	5.28E-07	0.0000	6.36E-07	0.000	0.000
Total HAP		0.0189	0.0830	0.0189	0.0830	0.0189	0.0830	0.0510	0.2236	0.0094	0.0415	0.0113	0.0500	0.1283	0.5643
Total POM		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002

[1] Emission factors contained in AP-42, Section 1.4, *Natural Gas Combustion,* 7/98.

[2] Emission factor is the sum of condensable and filterable PM.

[3] Heating value of natural gas = 1,000 Btu/cf

Table 2-4. 2010 Revised Potential Emissions Inventory, Combustion Sources, Flare and Thermal Oxidizer
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Pollutant	Emission Factor[1] (lb/mmcf)	Flare				Thermal Oxidizer				TOTAL	
Rated Capacity (MMBtu/hr)						22.300					
Potential Fuel Usage (mmcf/hr)		0.014				**0.022**					
Potential Fuel Usage (mmcf/yr)		**123**				**195**					
		Emission Factor[1]	Units	Emissions (lb/hr)	Emissions (tons/yr)	Emission Factor[1]	Units	Emissions (lb/hr)	Emissions (tons/yr)	Emissions (lb/hr)	Emissions (tons/yr)
PM[2]		7.6	lb/mmcf	0.106	0.466	7.6	lb/mmcf	0.167	0.741	0.274	1.207
PM-10[2]		7.6	lb/mmcf	0.106	0.466	7.6	lb/mmcf	0.167	0.741	0.274	1.207
PM-2.5[2]		7.6	lb/mmcf	0.106	0.466	7.6	lb/mmcf	0.167	0.741	0.274	1.207
NOx		100	lb/mmcf	1.401	6.137	0.15	lb/MMBtu[4]	3.345	14.651	4.746	20.788
SO2		0.6	lb/mmcf	0.008	0.037	0.6	lb/mmcf	0.013	0.059	0.022	0.095
CO		84	lb/mmcf	1.177	5.155	0.2	lb/MMBtu[4]	4.460	19.535	5.637	24.690
VOC		5.5	lb/mmcf	0.077	0.338	5.5	lb/mmcf	0.121	0.536	0.198	0.874
Benzene		2.10E-03	lb/mmcf	0.000	0.000	2.10E-03	lb/mmcf	0.000	0.000	0.000	0.000
Naphthalene		6.10E-04	lb/mmcf	0.000	0.000	6.10E-04	lb/mmcf	0.000	0.000	0.000	0.000
Toluene		3.40E-03	lb/mmcf	0.000	0.000	3.40E-03	lb/mmcf	0.000	0.000	0.000	0.001
POM		8.82E-05	lb/mmcf	0.000	0.000	8.82E-05	lb/mmcf	0.000	0.000	0.000	0.000
Formaldehyde		7.50E-02	lb/mmcf	0.001	0.005	7.50E-02	lb/mmcf	0.002	0.007	0.003	0.012
Hexane		1.80E+00	lb/mmcf	0.025	0.110	1.80E+00	lb/mmcf	0.040	0.176	0.065	0.286
Arsenic		2.00E-04	lb/mmcf	0.000	0.000	2.00E-04	lb/mmcf	0.000	0.000	0.000	0.000
Beryllium		1.20E-05	lb/mmcf	0.000	0.000	1.20E-05	lb/mmcf	0.000	0.000	0.000	0.000
Cadmium		1.10E-03	lb/mmcf	0.000	0.000	1.10E-03	lb/mmcf	0.000	0.000	0.000	0.000
Chromium		1.40E-03	lb/mmcf	0.000	0.000	1.40E-03	lb/mmcf	0.000	0.000	0.000	0.000
Cobalt		8.40E-05	lb/mmcf	0.000	0.000	8.40E-05	lb/mmcf	0.000	0.000	0.000	0.000
Lead		0.0005	lb/mmcf	0.000	0.000	0.0005	lb/mmcf	0.000	0.000	0.000	0.000
Manganese		3.80E-04	lb/mmcf	0.000	0.000	3.80E-04	lb/mmcf	0.000	0.000	0.000	0.000
Mercury		2.60E-04	lb/mmcf	0.000	0.000	2.60E-04	lb/mmcf	0.000	0.000	0.000	0.000
Nickel		2.10E-03	lb/mmcf	0.000	0.000	2.10E-03	lb/mmcf	0.000	0.000	0.000	0.000
Selenium		2.40E-05	lb/mmcf	0.000	0.000	2.40E-05	lb/mmcf	0.000	0.000	0.000	0.000
Total HAP				0.0264	0.1158			0.0415	0.1840	0.068	0.300
Total POM				0.0000	0.0000			0.0000	0.0001	0.000	0.000

[1] Emission factors contained in AP-42, Section 1.4, *Natural Gas Combustion,* 7/98.

[2] Emission factor is the sum of condensable and filterable PM.

[3] Heating value of natural gas = 1,000 Btu/cf

[4] Provided by manufacturer

PROCESS VENTS

Table 3-1. Assumptions for the 2010 Potential Emissions Inventory, Process Vents
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Process Group	Process Vent	Controls	Destruction Efficiency of the Vent Handling System (%)	TOC Operating Pressure (mmHg)	System Parameters: Exhaust Temp. (F)	Air Leakage Rate (lbs/hr)	Exhaust Flow Rate (acfh)	Maximum Operating Hours	Feedstock		Saturated With Condensate
Tar Refining Unit #1	#1 Column	VP P115/P116, SOT V109 to VHS	98	150	120	20	4,856	8,760	Option 1	Crude Tar	Crude RCO
				1/17/06 meeting, data provided by Carl Mueller					Option 2	Petro Tar	Petro Distillate
									Option 3	Decanted Oil	Decanted Oil Distillate
	#1 Pitch Flash Column	None		60	120	20	825	8,760	Option 1	Crude Tar	Crude Heavy Oil
				1/17/06 meeting, data provided by Carl Mueller					Option 2	Petro Tar	Petro Pitch
									Option 3	Decanted Oil	Decanted Oil Pitch
Tar Refining Unit #2/4 (operating together or separetely)	#2 Column	VP P412A/P412B, SOT V421, VHS	98	250	120	20	6,590	8,760	Option 1	Crude Tar	Crude RCO
				1/17/06 meeting, data provided by Carl Mueller					Option 2	Petro Tar	Petro Distillate
									Option 3	Decanted Oil	Decanted Oil Distillate
	#4 Column	VP X/Y, SOT A, VHS	98	150	120	20	4,780	8,760	Option 1	Crude Tar	Crude Sidestream
				1/17/06 meeting, data provided by Carl Mueller					Option 2	Petro Tar	Petro Distillate
									Option 3	Decanted Oil	Decanted Oil Distillate
	#4 Pitch Flash Column	VP P413/P413B, SOT A, VHS	98	70	120	20	867	8,760	Option 1	Crude Tar	Crude Heavy Oil
				1/17/06 meeting, data provided by Carl Mueller					Option 2	Petro Tar	Petro Pitch
									Option 3	Decanted Oil	Decanted Oil Pitch
Decanters - Tar Refining	Decanters 62, 63, 64	VHS	98	atmospheric	110	NA	97	8,760	Option 1	Crude Tar	Crude RCO
				Existing data, verified by Carl Mueller, 1-17-07					Option 2	Petro Tar	Petro Distillate
									Option 3	Decanted Oil	Decanted Oil Distillate
Debenzolizer Column	Debenzolizer Column	VP101, SOT T102, VHS	98	250	85	6		8,760	Option 1	Crude RCO	Debenzolizer Overheads Crude
				1/17/06 meeting, data provided by Carl Mueller							
Naphthalene Distillation Unit	#32 Column	VHS	98	100	105	20	3,210	8,760	Option 1	Crude BFO	Unwashed Solvent Crude
				1/17/06 meeting, data provided by Carl Mueller							
Base Washers	Base Washer #2	None		atmospheric		NA	364	8,760			
	Base Washer #3	None		atmospheric		NA	364	8,760			
Pencil Pitch Area	Pencil Pitch Dryer	Baghouse	99	atmospheric		NA		8,760	Option 1	Coal Tar Pitch	
									Option 2	Type A/B Pitch	

VP = Vacuum Pumps
SOT = Seal Oil Tank
VHS = Vent Handling System = Flare or Thermal Oxidizer

#32 Decanter Assumptions

1. Decanter Dimensions
   - Diameter: 7 ft
   - Height: 18 ft
   - Volume: 692.7 cf; 5182 gal
2. Material in Decanter: Unwashed Solvent/Water Mixture
3. Temperature of Material: 110
4. Number of NDU Start-ups: 5
5. Liquid Level Maintenance: 75 % of Liquid Height
   Liqud Level is maintained after startup
6. Initial Throughput During Startup: 519.54 cf/startup
   Assumed to be the air displaced
7. Pump Rate to Decanter: 100 gal/min; 13.36809 cfm
8. Minutes for initial fill: 38.86 minutes
9. Controls: Thermal Oxidizer/Flare; 98 % efficiency

Input data supplied by Mark Cilley,except where noted

Table 3-2. 2010 Potential Emissions Inventory, Summary of Potential Emissions, Process Vents
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Pollutant	Potential Emissions (tons/yr)											
	#1 Column	#1 Pitch Flash Column	#2 Column	#4 Column	#4 Pitch Flash Column	Tar Refining Decanters	Debenzolizer Column	#32 Column	#32 Decanter	Base Washers	Pencil Pitch Baghouse	Total
PM											2.540	2.540
PM-10											1.489	1.489
PM-2.5											1.489	1.489
VOC	0.122	0.009	0.072	0.062	0.000	0.006	0.662	0.333	0.000	2.613		3.880
Benzene	0.032	0.000	0.019	0.032	0.000	0.002	0.553	0.006	0.000	0.000	0.000	0.644
Biphenyl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
m-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
o-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.001
p-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000		0.000	0.010
Dibenzofuran	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.003	0.003
Ethylbenzene	0.002	0.000	0.001	0.000	0.000	0.000	0.002	0.003	0.000		0.000	0.008
Naphthalene	0.037	0.000	0.022	0.011	0.000	0.002	0.000	0.001	0.000	0.005	0.000	0.079
Phenol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.003
Quinoline	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.001
Styrene	0.004	0.000	0.002	0.000	0.000	0.000	0.001	0.018	0.000		0.000	0.025
Toluene	0.010	0.000	0.006	0.008	0.000	0.001	0.094	0.000	0.000		0.000	0.118
m-Xylene	0.003	0.000	0.002	0.000	0.000	0.000	0.003	0.017	0.000		0.000	0.025
o-Xylene	0.001	0.000	0.001	0.000	0.000	0.000	0.001	0.008	0.000		0.000	0.011
p-Xylene	0.003	0.000	0.002	0.000	0.000	0.000	0.003	0.005	0.000		0.000	0.013
Acenaphthene	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.004
Acenaphthylene	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.002	0.004
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.004	0.004
Benzo(a)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.020	0.020
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.036	0.036
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.013	0.013
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.030	0.030
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.032	0.032
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.020	0.020
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.031	0.031
Fluoranthene	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.025	0.027
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.026	0.026
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.009	0.009
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.023	0.023
Total HAP	0.092	0.006	0.055	0.052	0.000	0.005	0.655	0.067	0.000	0.007	0.231	1.171
Total POM	0.038	0.006	0.022	0.011	0.000	0.002	0.000	0.001	0.000	0.005	0.231	0.317

Table 3-3. 2010 Potential Emissions Inventory, Tar Refining Unit #1, #1 Column Vent and #1 Pitch Flash Column Vent
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure

$S_e = MW_i * (L_a/29) * (P_{system}/(P_{system} - P_i) - 1)$

where:
S_e = VOC Emissions, lb/hr
MWi = Molecular weight of VOC, lb/lb-mol
La = Total air leakage rate in the system, lb/hr
P_{system} = Pressure of receiving vessel or ejector outlet conditions, mmHg
P_i = Vapor pressure of VOC at receiver temperature, mmHg
29 = Molecular weight of air, lb/lb-mol

Input Data

		#1 Column				#1 Pitch Flash Column			
Air Leak Rate, L_a		20 lb/hr				20 lb/hr			
System Pressure, P_{system}		150 mmHg				60 mmHg			
Temperature, Vacuum Outlet		120 F				120 F			
Maximum Operating Hours		8,760 hrs/yr				8,760 hrs/yr			
Controls		VP P115/P116, SOT V109 to VHS				None			
Control Efficiency		98 %				0 %			
		Saturated with							
VOC Molecular Weight, MWi	Option 1	Crude RCO	103.97	lb/lb-mole		Crude Heavy Oil	166.71	lb/lb-mole	
	Option 2	Petro Distillate	92.35	lb/lb-mole		Petro Pitch	156.52	lb/lb-mole	
	Option 3	Decanted Oil Distillate	176.62	lb/lb-mole		Decanted Oil Pitch	156.52	lb/lb-mole	
VOC Vapor Pressure, Pi	Option 1	Crude RCO	0.0551	psia	2.849 mmHg	Crude Heavy Oil	1.3E-05	psia	0.001 mmHg
	Option 2	Petro Distillate	0.0319	psia	1.652 mmHg	Petro Pitch	2.3E-05	psia	0.001 mmHg
	Option 3	Decanted Oil Distillate	0.0012	psia	0.062 mmHg	Decanted Oil Pitch	2.3E-05	psia	0.001 mmHg

Emission Calculations

	#1 Column Vent											#1 Pitch Flash Column Vent										
	Option 1 - Crude Tar Distillation			Option 2 - Petro Tar Distillation			Option 3 - Decanted Oil Distillation			Maximum Potential Emissions		Option 1 - Crude Tar Distillation			Option 2 - Petro Tar Distillation			Option 3 - Decanted Oil Distillation			Maximum Potential Emissions	
Pollutant	% in Vapor	(lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	Se (tons/yr)	% in Vapor	Se (lb/hr)	Se (tons/yr)	(lbs/hr)	(tons/yr)	% in Vapor	(lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	Se (tons/yr)	% in Vapor	Se (lb/hr)	Se (tons/yr)	(lbs/hr)	(tons/yr)
VOC		0.028	0.122		0.014	0.062		0.001	0.004	0.028	0.122		0.001	0.006		0.002	0.009		0.002	0.009	0.002	0.009
Benzene	25.062	0.007	0.030	51.851	0.007	0.032	0.000	0.000	0.000	0.007	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biphenyl	0.063	0.000	0.000	0.265	0.000	0.000	1.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Cresol	0.081	0.000	0.000	0.251	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.434	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.060	0.000	0.000	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.015	0.000	0.000	0.023	0.000	0.000	0.118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	1.518	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	30.744	0.009	0.037	17.178	0.002	0.011	5.434	0.000	0.000	0.009	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenol	0.165	0.000	0.000	0.436	0.000	0.000	1.202	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quinoline	0.198	0.000	0.000	0.369	0.000	0.000	0.561	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Styrene	2.941	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	8.090	0.002	0.010	12.554	0.002	0.008	0.000	0.000	0.000	0.002	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Xylene	2.580	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	1.046	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	2.696	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	0.001	0.000	0.000	0.007	0.000	0.000	0.216	0.000	0.000	0.000	0.000	67.762	0.001	0.004	1.390	0.000	0.000	1.390	0.000	0.000	0.001	0.004
Acenaphthylene	0.048	0.000	0.000	0.121	0.000	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.716	0.000	0.001	10.716	0.000	0.001	0.000	0.001
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	0.003	0.000	0.000	0.016	0.000	0.000	0.034	0.000	0.000	0.000	0.000	0.131	0.000	0.000	1.704	0.000	0.000	1.704	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.055	0.000	0.000	0.055	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	29.432	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total HAP		0.021	0.092		0.012	0.052		0.000	0.000	0.021	0.092		0.001	0.006		0.000	0.001		0.000	0.001	0.001	0.006
Total POM		0.009	0.038		0.003	0.011		0.000	0.000	0.009	0.038		0.001	0.006		0.000	0.001		0.000	0.001	0.001	0.006

VP = Vacuum Pumps
SOT = Seal Oil Tank
VHS = Vent Handling System = Flare or Thermal Oxidizer

Table 3-4. 2010 Potential Emissions Inventory, Tar Refining Unit #2, #2 Column Vent, #4 Column Vent and #4 Pitch Flash Column Vent
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure

$S_e = MW_i * (L_a/29) * (P_{system}/(P_{system} - P_i) - 1)$

where:
S_e = VOC Emissions, lb/hr
MWi = Molecular weight of VOC, lb/lb-mol
La = Total air leakage rate in the system, lb/hr
P_{system} = Pressure of receiving vessel or ejector outlet conditions, mmHg
P_i = Vapor pressure of VOC at receiver temperature, mmHg
29 = Molecular weight of air, lb/lb-mol

Input Data

		#2 Column			#4 Column			#4 Pitch Flash Column		
Air Leak Rate, L_a		20 lb/hr			20 lb/hr			20 lb/hr		
System Pressure, P_{system}		250 mmHg			150 mmHg			70 mmHg		
Temperature, Vacuum Outlet		120 F			120 F			120 F		
Maximum Operating Hours		8,760 hrs/yr			8,760 hrs/yr			8,760 hrs/yr		
Controls		VP P412A/P412B, SOT V421, VHS			VP X/Y, SOT A, VHS			VP P413/P413B, SOT A, VHS		
Control Efficiency		98 %			98 %			98 %		
		Saturated with:			Saturated with:			Saturated with:		
VOC Molecular Weight, MWi	Option 1	Crude RCO	103.97 lb/lb-mole		Crude Sidestream	118.74 lb/lb-mole		Crude Heavy Oil	166.71 lb/lb-mole	
	Option 2	Petro Distillate	92.35 lb/lb-mole		Petro Distillate	92.35 lb/lb-mole		Petro Pitch	156.52 lb/lb-mole	
	Option 3	Decanted Oil Distillate	176.62 lb/lb-mole		Decanted Oil Distillate	176.62 lb/lb-mole		Decanted Oil Pitch	156.52 lb/lb-mole	
VOC Vapor Pressure, Pi	Option 1	Crude RCO	0.0551 psia	2.849 mmHg	Crude Sidestream	0.0072 psia	0.371 mmHg	Crude Heavy Oil	1.32E-05 psia	0.001 mmHg
	Option 2	Petro Distillate	0.0319 psia	1.652 mmHg	Petro Distillate	0.0319 psia	1.652 mmHg	Petro Pitch	2.26E-05 psia	0.001 mmHg
	Option 3	Decanted Oil Distillate	0.0012 psia	0.062 mmHg	Decanted Oil Distillate	0.0012 psia	0.062 mmHg	Decanted Oil Pitch	2.26E-05 psia	0.001 mmHg

Emission Calculations

	#2 Column Vent											
	Option 1 - Crude Tar Distillation			Option 2 - Petro Tar Distillation			Option 3 - Decanted Tar Distillation			Maximum Potential Emissions		
Pollutant	% in Vapor	(lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	(tons/yr)	(lbs/hr)	(tons/yr)
VOC		0.017	0.072		0.008	0.037		0.001	0.003	0.017	0.072
Benzene	25.062	0.004	0.018	51.851	0.004	0.019	0.000	0.000	0.000	0.004	0.019
Biphenyl	0.063	0.000	0.000	0.265	0.000	0.000	1.450	0.000	0.000	0.000	0.000
m-Cresol	0.081	0.000	0.000	0.251	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.434	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.060	0.000	0.000	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.015	0.000	0.000	0.023	0.000	0.000	0.118	0.000	0.000	0.000	0.000
Ethylbenzene	1.518	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Naphthalene	30.744	0.005	0.022	17.178	0.001	0.006	5.434	0.000	0.000	0.005	0.022
Phenol	0.165	0.000	0.000	0.436	0.000	0.000	1.202	0.000	0.000	0.000	0.000
Quinoline	0.198	0.000	0.000	0.369	0.000	0.000	0.561	0.000	0.000	0.000	0.000
Styrene	2.941	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Toluene	8.090	0.001	0.006	12.554	0.001	0.005	0.000	0.000	0.000	0.001	0.006
m-Xylene	2.580	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
o-Xylene	1.046	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
p-Xylene	2.696	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Acenaphthene	0.001	0.000	0.000	0.007	0.000	0.000	0.216	0.000	0.000	0.000	0.000
Acenaphthylene	0.048	0.000	0.000	0.121	0.000	0.000	0.167	0.000	0.000	0.000	0.000
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	0.003	0.000	0.000	0.016	0.000	0.000	0.034	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total HAP		0.012	0.055		0.007	0.031		0.000	0.000	0.012	0.055
Total POM		0.005	0.022		0.002	0.007		0.000	0.000	0.005	0.022

	#4 Column Vent											
	Option 1 - Crude Tar Distillation			Option 2 - Petro Tar Distillation			Option 3 - Decanted Tar Distillation			Maximum Potential Emissions		
Pollutant	% in Vapor	(lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	(tons/yr)	(lbs/hr)	(tons/yr)
VOC		0.004	0.018		0.014	0.062		0.001	0.004	0.014	0.062
Benzene	11.824	0.000	0.002	51.851	0.007	0.032	0.000	0.000	0.000	0.007	0.032
Biphenyl	0.226	0.000	0.000	0.265	0.000	0.000	1.450	0.000	0.000	0.000	0.000
m-Cresol	0.000	0.000	0.000	0.251	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.434	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.000	0.000	0.000	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.201	0.000	0.000	0.023	0.000	0.000	0.118	0.000	0.000	0.000	0.000
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	61.359	0.002	0.011	17.178	0.002	0.011	5.434	0.000	0.000	0.002	0.011
Phenol	0.000	0.000	0.000	0.436	0.000	0.000	1.202	0.000	0.000	0.000	0.000
Quinoline	0.741	0.000	0.000	0.369	0.000	0.000	0.561	0.000	0.000	0.000	0.000
Styrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	0.000	0.000	0.000	12.554	0.002	0.008	0.000	0.000	0.000	0.002	0.008
m-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	0.108	0.000	0.000	0.007	0.000	0.000	0.216	0.000	0.000	0.000	0.000
Acenaphthylene	0.933	0.000	0.000	0.121	0.000	0.000	0.167	0.000	0.000	0.000	0.000
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	0.132	0.000	0.000	0.016	0.000	0.000	0.034	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.001	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total HAP		0.003	0.013		0.012	0.052		0.000	0.000	0.012	0.052
Total POM		0.003	0.011		0.003	0.011		0.000	0.000	0.003	0.011

	#4 Pitch Flash Column Vent											
	Option 1 - Crude Tar Distillation			Option 2 - Petro Tar Distillation			Option 3 - Decanted Tar Distillation			Maximum Potential Emissions		
Pollutant	% in Vapor	(lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	(tons/yr)	% in Vapor	Se (lb/hr)	(tons/yr)	(lbs/hr)	(tons/yr)
VOC		0.000	0.000		0.000	0.000		0.000	0.000	0.000	0.000
Benzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biphenyl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quinoline	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Styrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	67.762	0.000	0.000	1.390	0.000	0.000	1.390	0.000	0.000	0.000	0.000
Acenaphthylene	0.000	0.000	0.000	10.716	0.000	0.000	10.716	0.000	0.000	0.000	0.000
Anthracene	0.470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	0.131	0.000	0.000	1.704	0.000	0.000	1.704	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.048	0.000	0.000	0.055	0.000	0.000	0.055	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	29.432	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	1.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pyrene	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total HAP		0.000	0.000		0.000	0.000		0.000	0.000	0.000	0.000
Total POM		0.000	0.000		0.000	0.000		0.000	0.000	0.000	0.000

VP = Vacuum Pumps
SOT = Seal Oil Tank
VHS = Vent Handling System = Flare or Thermal Oxidizer

Table 3-5. 2010 Potential Emissions Inventory, Tar Refining Units, Tar Decanters 62, 63, 64
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure

Assumed a saturated exhaust vapor with light ends at the operating temperature after the last condenser

VOC Emissions = Exhaust Flow (scfh) x Vapor Pressure/14.7 x Molecular Weight /385 cf/lb-mol

HAP Emissions = VOC Emissions (lbs/hr) x VOC vapor % by weight (%)/100

Input Data

Operating Temperature			110 F, Engineering Estimate
Exhaust Flowrate			97 scfh, Design Flow Rate
Controls			VHS
Control Efficiency			98 %
Maximum Operating Hours			8,760 hrs/yr
VOC Molecular Weight		Saturated with	
	Option 1	Crude RCO	102.96 lb/lb-mole
	Option 2	Petro Distillate	91.37 lb/lb-mole
	Option 3	Decanted Oil Distillate	176.41 lb/lb-mole
VOC Vapor Pressure	Option 1	Crude RCO	0.0420 psia
	Option 2	Petro Distillate	0.0249 psia
	Option 3	Decanted Oil Distillate	0.0008 psia

Emissions Calculations

	Option 1 - Crude Tar Distillation			Option 2 - Petro Tar Distillation			Option 3 - Decanted Oil Distillation			Maximum Potential Emissions	
Compound	vapors % by weight	Hourly Emissions (lb/hr)	Annual Emissions (tons/yr)	vapors % by weight	Hourly Emissions (lb/hr)	Annual Emissions (tons/yr)	vapors % by weight	Hourly Emissions (lb/hr)	Annual Emissions (tons/yr)	(lbs/hr)	(tons/yr)
VOC	-	0.001	0.006	-	0.001	0.003	-	0.000	0.000	0.001	0.006
Benzene	26.707	0.000	0.002	54.005	0.000	0.002	0.000	0.000	0.000	0.000	0.002
Biphenyl	0.056	0.000	0.000	0.230	0.000	0.000	1.413	0.000	0.000	0.000	0.000
m-Cresol	0.074	0.000	0.000	0.225	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.392	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.054	0.000	0.000	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.013	0.000	0.000	0.019	0.000	0.000	0.111	0.000	0.000	0.000	0.000
Ethylbenzene	1.545	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	29.188	0.000	0.002	15.939	0.000	0.001	5.662	0.000	0.000	0.000	0.002
Phenol	0.152	0.000	0.000	0.391	0.000	0.000	1.213	0.000	0.000	0.000	0.000
Quinoline	0.185	0.000	0.000	0.336	0.000	0.000	0.573	0.000	0.000	0.000	0.000
Styrene	2.961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	8.450	0.000	0.001	12.815	0.000	0.000	0.000	0.000	0.000	0.000	0.001
m-Xylene	2.617	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	1.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	2.741	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	0.001	0.000	0.000	0.006	0.000	0.000	0.205	0.000	0.000	0.000	0.000
Acenaphthylene	0.043	0.000	0.000	0.106	0.000	0.000	0.165	0.000	0.000	0.000	0.000
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	0.002	0.000	0.000	0.013	0.000	0.000	0.030	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total HAP		0.001	0.005		0.001	0.003		0.000	0.000	0.001	0.005
Total POM		0.000	0.002		0.000	0.001		0.000	0.000	0.000	0.002

VHS = Vent Handling System = Flare or Thermal Oxidizer

Table 3-6. 2010 Potential Emissions Inventory, Debenzolizer Unit, Debenzolizer/Decanter Vent
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure

$S_e = MW_i * (L_a/29) * (P_{system}/(P_{system} - P_i) -1)$

where:
S_e = VOC Emissions, lb/hr
MWi = Molecular weight of VOC, lb/lb-mol
La = Total air leakage rate in the system, lb/hr
P_{system} = Pressure of receiving vessel or ejector outlet conditions, mmHg
P_i = Vapor pressure of VOC at receiver temperature, mmHg
29 = Molecular weight of air, lb/lb-mol

Input Data

	#1 Debenzolizer Column/Decanter		
Air Leak Rate, L_a	6 lb/hr		
System Pressure, P_{system}	250 mmHg		
Temperature, Vacuum Outlet	85 F		
Maximum Operating Hours	8,760 hrs/yr		
Controls	VP101, SOT T102, VHS		
Control Efficiency	98 %		
	Saturated with		
VOC Molecular Weight, MWi	Debenzolizer Overheads Crude	80.15 lb/lb-mole	
VOC Vapor Pressure, Pi	Debenzolizer Overheads Crude	1.5492 psia	80.094 mmHg

Emission Calculations

	Debenzolizer/Decanter Vent		
	Crude Tar Distillation		
Pollutant	% in Vapor	(lb/hr)	(tons/yr)
VOC		0.151	0.662
Benzene	83.490	0.126	0.553
Biphenyl	0.000	0.000	0.000
m-Cresol	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000
p-Cresol	0.000	0.000	0.000
Cumene	0.000	0.000	0.000
Dibenzofuran	0.000	0.000	0.000
Ethylbenzene	0.231	0.000	0.002
Naphthalene	0.004	0.000	0.000
Phenol	0.000	0.000	0.000
Quinoline	0.000	0.000	0.000
Styrene	0.143	0.000	0.001
Toluene	14.243	0.022	0.094
m-Xylene	0.388	0.001	0.003
o-Xylene	0.110	0.000	0.001
p-Xylene	0.408	0.001	0.003
Acenaphthene	0.000	0.000	0.000
Acenaphthylene	0.000	0.000	0.000
Anthracene	0.000	0.000	0.000
Benzo(a)anthracene	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000
Fluorene	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000
Pyrene	0.000	0.000	0.000
Total HAP		0.150	0.655
Total POM		0.000	0.000

VP = Vacuum Pumps
SOT = Seal Oil Tank
VHS = Vent Handling System = Flare or Thermal Oxidizer

Table 3-7. 2010 Potential Emissions Inventory, Naphthalene Distillation Unit, #32 Column and #32 Decanter Vents
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure - #32 Column

$S_e = MW_i * (L_a/29) * (P_{system}/(P_{system} - P_i) - 1)$

where:
S_e = VOC Emissions, lb/hr
MWi = Molecular weight of VOC, lb/lb-mol
La = Total air leakage rate in the system, lb/hr
P_{system} = Pressure of receiving vessel or ejector outlet conditions, mmHg
P_i = Vapor pressure of VOC at receiver temperature, mmHg
29 = Molecular weight of air, lb/lb-mol

Calculation Procedure - #32 Decanter

E = V/RT x ∑(Pi)(MWi) (from 63.1365(c)(2))

E = Mass of constituent emitted
V = Volume of gas displaced from the vessel
R = Ideal gas law constant = 10.731 psi-cf/lb-mole-R
T = Temperature of the vessel vapor space (absolute)
Pi = Partial pressure of the individual constituent
MWi = Molecular weight of the individual constituent

Input Data - #32 Column

	#1 Debenzolizer Column/Decanter		
Air Leak Rate, L_a	20 lb/hr		
System Pressure, P_{system}	100 mmHg		
Temperature, Vacuum Outlet	105 F		
Maximum Operating Hours	8,760 hrs/yr		
Controls	VHS		
Control Efficiency	98 %		
VOC Molecular Weight, MWi		114.02 lb/lb-mole	
VOC Vapor Pressure, Pi		0.0892 psia	4.612 mmHg

Input Data

Initial Throughput	520 cf/startup
Number of Startups	5 per year
Minutes to Fill	38.86 min/startup
Fill Temperature	110 F, or
	570 R
Controls	Thermal Oxidizer/Flare
	98 %

Emission Calculations

	#32 Column Vent			#32 Decanter						
	Crude Tar Distillation									
Pollutant	% in Vapor	(lb/hr)	(tons/yr)	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (lb/startup)	E (lb/hr)	E (lbs/yr)	E (tons/yr)
VOC		0.076	0.333	114.07	1.03E-01	11.7801	0.020	0.031	0.100	0.0001
Benzene	1.714	0.001	0.006	78.10	2.50E-03	0.1949	0.000	0.001	0.002	0.0000
Biphenyl	0.000	0.000	0.000	154.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
m-Cresol	0.000	0.000	0.000	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
o-Cresol	0.000	0.000	0.000	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
p-Cresol	0.000	0.000	0.000	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Cumene	2.869	0.002	0.010	120.20	2.80E-03	0.3367	0.001	0.001	0.003	0.0000
Dibenzofuran	0.000	0.000	0.000	168.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Ethylbenzene	1.017	0.001	0.003	106.20	1.12E-03	0.1184	0.000	0.000	0.001	0.0000
Naphthalene	0.228	0.000	0.001	128.20	2.15E-04	0.0276	0.000	0.000	0.000	0.0000
Phenol	0.000	0.000	0.000	94.10	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Quinoline	0.000	0.000	0.000	129.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Styrene	5.493	0.004	0.018	104.20	6.17E-03	0.6429	0.001	0.002	0.005	0.0000
Toluene	0.000	0.000	0.000	92.40	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
m-Xylene	5.161	0.004	0.017	106.20	5.67E-03	0.6018	0.001	0.002	0.005	0.0000
o-Xylene	2.425	0.002	0.008	106.20	2.67E-03	0.2833	0.000	0.001	0.002	0.0000
p-Xylene	1.352	0.001	0.005	106.20	1.48E-03	0.1575	0.000	0.000	0.001	0.0000
Acenaphthene	0.000	0.000	0.000	154.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Acenaphthylene	0.000	0.000	0.000	152.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Anthracene	0.000	0.000	0.000	178.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Benzo(a)anthracene	0.000	0.000	0.000	228.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Benzo(b)fluoranthene	0.000	0.000	0.000	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Benzo(k)fluoranthene	0.000	0.000	0.000	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Benzo(g,h,i)perylene	0.000	0.000	0.000	276.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Benzo(a)pyrene	0.000	0.000	0.000	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Chrysene	0.000	0.000	0.000	228.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	278.40	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Fluoranthene	0.000	0.000	0.000	202.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Fluorene	0.000	0.000	0.000	166.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	276.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Phenanthrene	0.000	0.000	0.000	178.20	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Pyrene	0.000	0.000	0.000	202.30	0.00E+00	0.0000	0.000	0.000	0.000	0.0000
Total HAP		0.015	0.067				0.004	0.006	0.020	0.0000
Total POM		0.000	0.001				0.000	0.000	0.000	0.0000

VP = Vacuum Pumps
SOT = Seal Oil Tank
VHS = Vent Handling System = Flare or Thermal Oxidizer

Table 3-8. 2010 Revised Potential Emissions Inventory, Base Washers, Base Washer #2 and #3
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure
Using emission data from a February 1, 1993 Stack Test. Note that the benzene concentration was scaled down proportionally using the ratio of the benzene being reduced in the solvent from 3.5% to 0.04% from the Debenzolizer.

Hourly Emissions = Measured Data (mg/m^3) / 1000 mg/g / 454 g/lb / 35.315 cf/m^3 x Exhaust Flow (cfh). Multiplied by 1.5 for safety factor

Input Data

Base Washer #2		
Exhaust Flowrate for Base Washer #2	364	acfm
Maximum Operating Hours	8,760	hrs/yr
Base Washer #3		
Exhaust Flowrate for Base Washer #3	364	acfh
Maximum Operating Hours	8,760	hrs/yr

Emissions Calculations

	Base Washer #2			Base Washer #3			TOTAL Potential Emissions	
Compound	Feb-93 Measured Data (mg/m^3)	Hourly Emissions (lbs/hr)	Annual Emissions (tons/yr)	Feb-93 Measured Data (mg/m^3)	Hourly Emissions (lbs/hr)	Annual Emissions (tons/yr)	Hourly Emissions (lbs/hr)	Annual Emissions (tons/yr)
VOC	8,759	0.298	1.306	8,759	0.298	1.306	0.597	2.613
Benzene	0.47	0.00002	0.00007	0.47	0.00002	0.00007	0.000	0.000
Naphthalene	18	0.00061	0.00268	18	0.00061	0.00268	0.001	0.005
Phenol	6	0.00020	0.00089	6	0.00020	0.00089	0.000	0.002
Total HAPS		0.001	0.004		0.001	0.004	0.002	0.007
Total POM		0.001	0.003		0.001	0.003	0.001	0.005

Table 3-9. 2010 Potential Emissions Inventory, Pencil Pitch Manufacturing, Pencil Pitch Dryer, Baghouse
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculation Procedure
Using data froma June 2, 1993 Stack Test. Note that PM-2.5 was assumed to be equal to PM-10.

Input Data

Controls	Baghouse	
Control Efficiency	99	%
Maximum Operating Hours	8,760	hrs/yr

Emissions Calculations

Compound	Jun-93 Measured Outlet Data (lbs/hr)	Option 1 - Coal Tar Pitch % by weight in Pitch	Hourly Emissions (lbs/hr)	Annual Emissions (tons/yr)	Option 2 - Type A/B Pitch % by weight in Pitch	Hourly Emissions (lbs/hr)	Annual Emissions (tons/yr)	Maximum Potential Emissions (lbs/hr)	(tons/yr)
PM	0.58		0.580	2.540		0.580	2.540	0.580	2.540
PM-10	0.34		0.340	1.489		0.340	1.489	0.340	1.489
PM-2.5	0.34		0.340	1.489		0.340	1.489	0.340	1.489
Benzene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Biphenyl		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
m-Cresol		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
o-Cresol		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
p-Cresol		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Cumene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Dibenzofuran		0.13	0.001	0.003	0.00	0.000	0.000	0.001	0.003
Ethylbenzene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Naphthalene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Phenol		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Quinoline		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Styrene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Toluene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
m-Xylene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
o-Xylene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
p-Xylene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Acenaphthene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Acenaphthylene		0.09	0.001	0.002	0.00	0.000	0.000	0.001	0.002
Anthracene		0.15	0.001	0.004	0.10	0.001	0.003	0.001	0.004
Benzo(a)anthracene		0.67	0.004	0.017	0.79	0.005	0.020	0.005	0.020
Benzo(b)fluoranthene		1.40	0.008	0.036	0.70	0.004	0.018	0.008	0.036
Benzo(k)fluoranthene		0.52	0.003	0.013	0.52	0.003	0.013	0.003	0.013
Benzo(g,h,i)perylene		1.14	0.007	0.029	1.18	0.007	0.030	0.007	0.030
Benzo(a)pyrene		1.27	0.007	0.032	1.21	0.007	0.031	0.007	0.032
Chrysene		0.76	0.004	0.019	0.80	0.005	0.020	0.005	0.020
Dibenzo(a,h)anthracene		1.21	0.007	0.031	0.24	0.001	0.006	0.007	0.031
Fluoranthene		0.75	0.004	0.019	1.00	0.006	0.025	0.006	0.025
Fluorene		0.00	0.000	0.000	0.00	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene		0.21	0.001	0.005	1.03	0.006	0.026	0.006	0.026
Phenanthrene		0.14	0.001	0.004	0.34	0.002	0.009	0.002	0.009
Pyrene		0.67	0.004	0.017	0.92	0.005	0.023	0.005	0.023
Total HAPS			0.053	0.231		0.051	0.224	0.053	0.231
Total POM			0.053	0.231		0.051	0.224	0.053	0.231

EQUIPMENT LEAKS

Table 4-1. Assumptions for the 2010 Potential Emissions Inventory, Equipment Leaks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia.

Potential Hours: 8,760 hrs/yr

Commodity		Estimated Component Count P/C	Ag	V	PRV	OEL	FL [1]	Total
NON-REGULATED EQUIPMENT [2]		Estimated Component Count						
Crude Tar	HL	10	3	291	0	86	837	1,227
	Gas	0	0	59	5	30	212	306
Petro Tar	HL	1	1	69	0	15	192	278
	Gas	0	0	3	2	3	10	18
Crude Tar/Petro Tar/ Decant Oil	HL	8	0	90	0	12	268	378
	Gas	0	0	0	0	0	0	0
Crude RCO	HL	13	2	242	0	54	711	1,022
	Gas	0	0	95	10	30	363	498
Crude/Petro/Decant Distillate	HL	13	3	297	0	59	992	1,364
	Gas	0	0	168	2	36	577	783
CTP, Type A Pitch, Petro Pitch, or Decant Pitch	HL	7	5	107	0	27	301	447
	Gas	0	0	49	7	15	201	272
PSB or MPSB or RT	HL	4	7	123	0	23	409	566
	Gas	0	0	40	8	2	159	209
Crude Cap Water	HL	7	2	224	0	85	606	924
	Gas	0	0	8	1	4	50	63
Unwashed Solvent	HL	7	2	178	0	59	603	849
	Gas	0	0	46	7	14	200	267
CMN	HL	2	0	24	0	2	65	93
	Gas	0	0	7	1	1	40	49
NSR	HL	1	0	101	0	25	317	444
	Gas	0	0	16	2	2	73	93
BFO	HL	5	0	162	0	54	485	706
	Gas	0	0	3	0	0	31	34
TOTAL		78	25	2,402	45	638	7,702	10,890
REGULATED EQUIPMENT								
BFO[3]	HL	8	2	137	0	42	325	514
	Gas	0	0	7	0	3	27	37
CMN[5]	HL	0	0	11	0	0	37	48
	Gas	0	0	0	0	0	0	0
Concentrated Solvent[4]	LL	2	1	31	0	6	30	70
	Gas	2	0	42	2	22	28	96
Liquid Fuel[4]	LL	2	0	64	0	10	105	181
	Gas	0	0	0	0	0	0	0
Unwashed Solvent[4]	HL	10	1	140	1	20	400	572
	Gas	0	0	0	0	0	0	0
Naphthalene[5]	HL	3	0	81	0	12	126	222
	Gas	0	0	9	0	9	22	40
P2 Creosote[6]	HL	7	2	82	0	82	255	428
	Gas	0	0	8	5	25	11	49
TOTAL		34	6	612	8	231	1,366	2,257
PLANT-WIDE TOTAL		112	31	3,014	53	869	9,068	13,147

[1] Flanges include flanges, connectors, screw connectors, instrumentation, manways, and gate/access hatches.

[2] Count from the Plant-wide Fugitive Emissions Monitoring Program conducted at the plant one-third each in 2007-2009.

[3] Equipment count from HON Fugitive Emissions Monitoring Program, where the equipment was inititally identified in June 2002. Note the two (2) agitators were considered pumps.

[4] Equipment count from HON Fugitive Emissions Monitoring Program, where equipment was inititally identified October 2001.

[5] Equipment count from HON Fugitive Emissions Monitoring Program, where equipment was inititally identified October 1995, and re-identified October 2001 and again in October 2009.

[6] Equipment count from PAI Fugitive Emissions Monitoring Program, where equipment was inititally identified November 2003.

[7] Estimated additions to Non-Regulated Unwashed Solvent count for Decanter #32 (Used #64 Decanter equipment count). To be identified in field.

Table 4-2.

2010 Potential Emissions Inventory, Equipmnet Leaks, VOC Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Commodity		Potential Operating Hours	Number of Equipment Type						TOC Potential Emissions (lb/hr)							TOC Potential Emissions (tons/yr)						
			P	Ag	V	PRV	OEL	FL	P	Ag	V	PRV	OEL	FL	TOTAL	P	Ag	V	PRV	OEL	FL	TOTAL
NON-REGULATED EQUIPMENT																						
Crude Tar	HL	8,760	10	3	291		86	837	4.6E-03	5.0E-03	1.2E-02			2.9E-02	5.0E-02	0.020	0.022	0.052			0.125	0.220
	Gas	8,760			59	5	30	212			1.2E-03	7.8E-04		7.2E-03	9.2E-03			0.005	0.003		0.032	0.040
Petro Tar	HL	8,760	1	1	69		15	192	4.6E-04	1.7E-03	2.8E-03			6.6E-03	1.2E-02	0.002	0.007	0.012			0.029	0.050
	Gas	8,760			3	2	3	10			6.0E-05	3.1E-04		3.4E-04	7.2E-04			0.000	0.001		0.001	0.003
Crude Tar/Petro Tar/ Decant Oil	HL	8,760	8		90		12	268	3.6E-03		3.7E-03			9.2E-03	1.7E-02	0.016		0.016			0.040	0.072
	Gas	8,760																				
Crude RCO	HL	8,760	13	2	242		54	711	5.9E-03	3.3E-03	9.9E-03			2.4E-02	4.4E-02	0.026	0.015	0.044			0.106	0.191
	Gas	8,760			95	10	30	363			1.9E-03	1.6E-03		1.2E-02	1.6E-02			0.008	0.007		0.054	0.070
Crude/Petro/Decant Oil Distillate	HL	8,760	13	3	297		59	992	5.9E-03	5.0E-03	1.2E-02			3.4E-02	5.7E-02	0.026	0.022	0.053			0.149	0.250
	Gas	8,760			168	2	36	577			3.4E-03	3.1E-04		2.0E-02	2.3E-02			0.015	0.001		0.086	0.103
CTP, Type A, Petro, Decant Pitch	HL	8,760	7	5	107		27	301	3.2E-03	8.4E-03	4.4E-03			1.0E-02	2.6E-02	0.014	0.037	0.019			0.045	0.115
	Gas	8,760			49	7	15	201			9.9E-04	1.1E-03		6.9E-03	9.0E-03			0.004	0.005		0.030	0.039
PSB or MPSB or RT	HL	8,760	4	7	123		23	409	1.8E-03	1.2E-02	5.0E-03			1.4E-02	3.3E-02	0.008	0.051	0.022			0.061	0.143
	Gas	8,760			40	8	2	159			8.1E-04	1.3E-03		5.4E-03	7.5E-03			0.004	0.005		0.024	0.033
Crude Cap Water	HL	8,760	7	2	224		85	606	3.2E-03	3.3E-03	9.2E-03			2.1E-02	3.6E-02	0.014	0.015	0.040			0.091	0.160
	Gas	8,760			8	1	4	50			1.6E-04	1.6E-04		1.7E-03	2.0E-03			0.001	0.001		0.007	0.009
Unwashed Solvent	HL	8,760	7	2	178		59	603	3.2E-03	3.3E-03	7.3E-03			2.1E-02	3.4E-02	0.014	0.015	0.032			0.090	0.151
	Gas	8,760			46	7	14	200			9.3E-04	1.1E-03		6.8E-03	8.9E-03			0.004	0.005		0.030	0.039
CMN	HL	8,760	2		24		2	65	9.1E-04		9.9E-04			2.2E-03	4.1E-03	0.004		0.004			0.010	0.018
	Gas	8,760			7	1	1	40			1.4E-04	1.6E-04		1.4E-03	1.7E-03			0.001	0.001		0.006	0.007
NSR	HL	8,760	1		101		25	317	4.6E-04		4.1E-03			1.1E-02	1.5E-02	0.002		0.018			0.047	0.068
	Gas	8,760			16	2	2	73			3.2E-04	3.1E-04		2.5E-03	3.1E-03			0.001	0.001		0.011	0.014
BFO	HL	8,760	5		162		54	485	2.3E-03		6.6E-03			1.7E-02	2.6E-02	0.010		0.029			0.073	0.112
	Gas	8,760			3			31			6.0E-05			1.1E-03	1.1E-03			0.000			0.005	0.005
TOTAL			78	25	2,402	45	638	7,702							4.4E-01							1.909
REGULATED EQUIPMENT																						
BFO	HL	8,760	8	2	137		42	325	0.004	0.003	0.006			0.011	0.024	0.016	0.015	0.025			0.049	0.104
	Gas	8,760			7		3	27			0.000			0.001	0.001			0.001			0.004	0.005
CMN	HL	8,760			11			37			0.000			0.001	0.002			0.002			0.006	0.008
	Gas	8,760																				
Concentrated Solvent	LL	8,760	2	1	31		6	30	0.001	0.002	0.001			0.001	0.005	0.004	0.007	0.006			0.004	0.021
	Gas	8,760	2		42	2	22	28			0.001	0.000		0.001	0.002			0.004	0.001		0.004	0.009
Liquid Fuel	LL	8,760	2		64		10	105	0.001		0.003			0.004	0.007	0.004		0.012			0.016	0.031
	Gas	8,760																				
Unwashed Solvent	HL	8,760	10	1	140	1	20	400	0.005	0.002	0.006			0.014	0.026	0.020	0.007	0.025			0.060	0.112
	Gas	8,760																				
Naphthalene	HL	8,760	3		81		12	126	0.001		0.003			0.004	0.009	0.006		0.015			0.019	0.039
	Gas	8,760			9		9	22			0.000			0.001	0.001			0.001			0.003	0.004
P2 Creosote	HL	8,760	7	2	82		82	255	0.003	0.003	0.003			0.009	0.019	0.014	0.015	0.015			0.038	0.082
	Gas	8,760			8	5	25	11			0.000	0.001		0.000	0.001			0.001	0.003		0.002	0.006
Total			34	6	612	8	231	1,366							0.096							0.421
GRAND TOTAL			112	31	3,014	53	869	9,068							0.532							2.331

1. The Correlation Approach in EPA 453/R-95-017, *"Protocol for Equipment Leak Emission Estimates"*, November 1995, will be used to calculate emissions. The following assumptions will be used:

A. 98 % of count with screening value at ppmv

B. 2 % of count with screening value as follows: Ag = 10,000 ppmv
P = 2,000 ppmv
V, PRVs, FL = 500 ppmv

C. The light liquid pumps emission factors were used for heavy liquid pumps, pressure relief devices, agitator seals, per the protocol. The light liquid valve emission factors were used for heavy liquid valves. The connectors emission factors were used for all flanges, hatches, instrumentation and connectors.

Equipment Type	Service	SOCMI Leak Rate (Table 2-9) Leak Rate (kg/hr) = (a) (SV)^b a	b	(kg/hr)	(lb/hr)	Default Zero Values (Table 2-11) (kg/hr)	(lb/hr)
Pump Seals	LL or HL	1.90E-05	0.824	9.97E-03	2.20E-02	7.50E-06	1.65E-05
Agitator Seals	LL or HL	1.90E-05	0.824	3.76E-02	8.27E-02	7.50E-06	1.65E-05
Valves	LL or HL	6.41E-06	0.797	9.08E-04	2.00E-03	4.90E-07	1.08E-06
	Gas	1.87E-06	0.873	4.25E-04	9.35E-04	6.60E-07	1.45E-06
PRV	Gas	1.90E-05	0.824	3.18E-03	7.01E-03	7.50E-06	1.65E-05
Flanges	Gas, LL or HL	3.05E-06	0.885	7.46E-04	1.64E-03	6.10E-07	1.34E-06

2. Open ended lines under the HON/PAI program have all been capped, plugged, etc. Therefore, in accordance with EPA 453/R-95-017, this has a control reduction of 100%. OELs will also be plugged/capped under voluntary LDAR program.

KEY

P - Pumps
Ag - Agitators
V - Valve
PRV - Pressure Relief Valves
OEL - Open-ended Lines or Valves

SV - Screening Value
LL - Light Liquid
HL - Heavy Liquid
FL - Flanges, connectors, manwaus, access hatches

Table 4-3 2010 Potential Emissions Inventory, Equipment Leaks, HAP Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Liquid Components

	Potential Emissions (Tons/yr)																
Pollutant	Crude Tar	Petro Tar	Crude Tar/ Petro Tar/ Decant Oil	Crude RCO	Crude/ Petro/ Decant Distllate	CTP/ Type A/ Decant/ Petro Pitch	Refined Tar, PSB, MPSB	Crude Cap Water	Solvent	CMN	NSR	BFO	Concentrated Solvent	Liquid Fuel[1]	Naphthlane	Creosote	TOTAL
VOC	0.220	0.050	0.072	0.191	0.250	0.115	0.143	0.160	0.263	0.026	0.068	0.216	0.021	0.031	0.039	0.082	1.945
Benzene	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.001	0.000	0.000	0.015
Biphenyl	0.002	0.001	0.001	0.002	0.004	0.000	0.001	0.000	0.000	0.001	0.002	0.002	0.000	0.000	0.000	0.001	0.017
m-Cresol	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.004
o-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.002
p-Cresol	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.004
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Dibenzofuran	0.005	0.001	0.002	0.003	0.004	0.000	0.002	0.002	0.000	0.001	0.005	0.004	0.000	0.000	0.000	0.003	0.032
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Naphthalene	0.026	0.000	0.008	0.106	0.025	0.000	0.002	0.009	0.004	0.001	0.003	0.120	0.000	0.006	0.039	0.007	0.356
Phenol	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.005
Quinoline	0.001	0.000	0.000	0.002	0.001	0.000	0.001	0.000	0.000	0.002	0.001	0.002	0.000	0.000	0.000	0.001	0.013
Styrene	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.007
Toluene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.001	0.000	0.000	0.009
m-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.006
o-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
p-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.004
Acenaphthene	0.007	0.001	0.002	0.006	0.010	0.000	0.004	0.002	0.000	0.002	0.007	0.006	0.000	0.000	0.000	0.006	0.055
Acenaphthylene	0.005	0.001	0.002	0.002	0.005	0.000	0.000	0.002	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.021
Anthracene	0.008	0.001	0.003	0.002	0.008	0.000	0.002	0.003	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.003	0.033
Benzo(a)anthracene	0.004	0.001	0.001	0.000	0.005	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.015
Benzo(b)fluoranthene	0.006	0.000	0.002	0.000	0.002	0.002	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.015
Benzo(k)fluoranthene	0.001	0.000	0.000	0.000	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Benzo(g,h,i)perylene	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
Benzo(a)pyrene	0.004	0.000	0.001	0.000	0.003	0.001	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.014
Chrysene	0.003	0.000	0.001	0.000	0.005	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.015
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Fluoranthene	0.009	0.001	0.003	0.002	0.017	0.001	0.005	0.003	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.006	0.050
Fluorene	0.006	0.001	0.002	0.004	0.007	0.000	0.002	0.002	0.000	0.001	0.006	0.005	0.000	0.000	0.000	0.004	0.041
Indeno(1,2,3-cd)pyrene	0.002	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
Phenanthrene	0.016	0.003	0.005	0.006	0.030	0.001	0.008	0.006	0.000	0.000	0.008	0.007	0.000	0.000	0.000	0.011	0.102
Pyrene	0.007	0.002	0.002	0.001	0.012	0.001	0.004	0.002	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.006	0.039
TOTAL HAPS	0.118	0.012	0.039	0.139	0.147	0.013	0.041	0.043	0.017	0.008	0.037	0.157	0.020	0.015	0.039	0.053	0.900
TOTAL POM	0.112	0.012	0.037	0.135	0.144	0.013	0.041	0.041	0.004	0.008	0.037	0.153	0.000	0.006	0.039	0.052	0.837

Gas/Vapor Components

	Potential Emissions (Tons/yr)																
Pollutant	Crude Tar	Petro Tar	Crude Tar/ Petro Tar/ Decant Oil	Crude RCO	Crude/ Petro/ Decant Distllate	CTP/ Type A/ Decant/ Petro Pitch	Refined Tar, PSB, MPSB	Crude Cap Water	Solvent	CMN	NSR	BFO	Concentrated Solvent	Liquid Fuel[1]	Naphthlane	Creosote	TOTAL
VOC	0.040	0.003	0.000	0.070	0.103	0.039	0.033	0.009	0.039	0.007	0.014	0.010	0.009	0.000	0.004	0.006	0.385
Benzene	0.016	0.000	0.000	0.012	0.037	0.000	0.000	0.005	0.001	0.000	0.000	0.002	0.008	0.000	0.000	0.000	0.081
Biphenyl	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
m-Cresol	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
o-Cresol	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
p-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Dibenzofuran	0.000	0.000	0.000	0.000	0.001	0.011	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014
Ethylbenzene	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Naphthalene	0.007	0.001	0.000	0.027	0.074	0.000	0.006	0.001	0.000	0.002	0.005	0.004	0.000	0.000	0.004	0.003	0.133
Phenol	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Quinoline	0.000	0.000	0.000	0.000	0.001	0.000	0.002	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.006
Styrene	0.001	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Toluene	0.004	0.000	0.000	0.004	0.010	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.022
m-Xylene	0.002	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
o-Xylene	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
p-Xylene	0.002	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Acenaphthene	0.000	0.000	0.000	0.000	0.005	0.024	0.005	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.037
Acenaphthylene	0.000	0.000	0.000	0.000	0.001	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
Anthracene	0.000	0.000	0.000	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
Benzo(a)anthracene	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000	0.000	0.000	0.017	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
Fluorene	0.000	0.000	0.000	0.000	0.002	0.005	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.011	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
Pyrene	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
TOTAL HAPS	0.034	0.002	0.000	0.051	0.135	0.088	0.025	0.008	0.008	0.003	0.008	0.007	0.009	0.000	0.004	0.005	0.389
TOTAL POM	0.008	0.002	0.000	0.028	0.086	0.088	0.025	0.001	0.000	0.003	0.008	0.004	0.000	0.000	0.004	0.004	0.261

Table 4-4. 2010 Potential Emissions Inventory, Equipment Leaks, HAP's in Liquid Composition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Liquid Composition, % by Weight

Pollutant	Crude Tar	Petro Tar	Crude Tar/ Petro Tar/ Decant Oil	Crude RCO	Crude/ Petro/ Decant Distillate	CTP/ Type A/ Decant/ Petro Pitch	Refined Tar, PSB, MPSB	Crude Cap Water	Solvent	CMN	NSR	BFO	Concentrated Solvent	Liquid Fuel[1]	Naphthlane	Creosote
Benzene	0.33	0.00	0.33	0.21	0.14	0.00	0.00	0.16	0.04	0.00	0.00	0.21	54.45	2.78	0.00	0.01
Biphenyl	0.70	1.10	1.10	1.10	1.50	0.00	0.80	0.30	0.00	5.10	2.60	1.10	0.00	0.00	0.00	1.40
m-Cresol	0.40	0.00	0.40	0.20	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	3.60	0.00	0.00
o-Cresol	0.20	0.00	0.20	0.00	0.20	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00
p-Cresol	0.50	0.00	0.50	0.20	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	3.60	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	2.20	1.10	2.20	1.80	1.77	0.13	1.53	1.10	0.00	3.64	7.00	1.80	0.00	0.07	0.00	3.84
Ethylbenzene	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.10	1.40	0.70	0.00	0.00
Naphthalene	11.70	0.63	11.70	55.60	10.01	0.00	1.08	5.85	1.37	3.92	4.50	55.60	0.84	20.06	100.00	8.11
Phenol	0.76	0.00	0.76	0.20	0.17	0.00	0.00	0.38	0.00	0.00	0.00	0.20	0.03	3.40	0.00	0.11
Quinoline	0.60	0.14	0.60	0.90	0.54	0.00	0.65	0.30	0.00	8.27	1.80	0.90	0.00	0.08	0.00	1.32
Styrene	0.10	0.00	0.10	0.30	0.00	0.00	0.00	0.00	1.70	0.00	0.00	0.30	1.40	2.20	0.00	0.00
Toluene	0.20	0.00	0.20	0.20	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.20	29.50	3.10	0.00	0.00
m-Xylene	0.20	0.00	0.20	0.20	0.00	0.00	0.00	0.10	1.20	0.00	0.00	0.20	2.80	2.00	0.00	0.00
o-Xylene	0.10	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.10	1.00	1.30	0.00	0.00
p-Xylene	0.20	0.00	0.20	0.20	0.00	0.00	0.00	0.10	0.30	0.00	0.00	0.20	2.80	2.00	0.00	0.00
Acenaphthene	3.00	2.80	3.00	3.00	4.17	0.32	2.90	1.50	0.00	8.14	10.70	3.00	0.00	0.11	0.00	6.82
Acenaphthylene	2.30	1.00	2.30	1.30	2.16	0.09	0.05	1.15	0.00	0.00	1.90	1.30	0.00	0.01	0.00	0.28
Anthracene	3.70	2.30	3.70	0.80	3.02	0.19	1.47	1.85	0.00	0.20	2.90	0.80	0.00	0.04	0.00	3.20
Benzo(a)anthracene	1.60	1.05	1.60	0.00	1.81	0.79	1.28	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
Benzo(b)fluoranthene	2.60	0.10	2.60	0.00	0.70	1.40	0.70	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80
Benzo(k)fluoranthene	0.42	0.13	0.42	0.00	0.78	0.52	0.53	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
Benzo(g,h,i)perylene	0.61	0.00	0.61	0.00	0.52	1.18	0.78	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Benzo(a)pyrene	1.90	0.00	1.90	0.00	1.29	1.27	1.15	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
Chrysene	1.40	0.60	1.40	0.00	2.15	0.80	1.20	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97
Dibenzo(a,h)anthracene	0.15	0.00	0.15	0.00	0.15	1.21	0.20	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
Fluoranthene	3.90	1.40	3.90	0.80	6.65	1.00	3.75	1.95	0.00	0.03	2.20	0.80	0.00	0.05	0.00	7.97
Fluorene	2.80	2.40	2.80	2.10	3.00	0.10	1.70	1.40	0.00	2.36	8.60	2.10	0.00	0.00	0.00	4.80
Indeno(1,2,3-cd)pyrene	0.80	0.00	0.80	0.00	0.49	1.03	0.81	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
Phenanthrene	7.40	6.79	7.40	3.20	12.15	0.44	5.49	3.70	0.00	0.78	11.80	3.20	0.00	0.15	0.00	13.12
Pyrene	3.10	3.21	3.21	0.50	4.78	0.92	2.73	1.55	0.00	0.02	1.40	0.50	0.00	0.05	0.00	7.09
TOTAL HAPS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Gas Composition, % by weight

Pollutant	Crude Tar	Petro Tar	Crude Tar/ Petro Tar/ Decant Oil	Crude RCO	Crude/ Petro/ Decant Distillate	CTP/ Type A/ Decant/ Petro Pitch	Refined Tar, PSB, MPSB	Crude Cap Water	Solvent	CMN	NSR	BFO	Concentrated Solvent	Liquid Fuel[1]	Naphthlane	Creosote
Assumed Gas Temp. (F)	220	250	250	180	200	500	450	130	70	70	160	180	95	95	230	200
Benzene	40.48	0.00	40.48	17.17	35.83	0.00	0.00	56.11	2.23	0.00	0.00	17.17	83.13	51.68	0.00	7.96
Biphenyl	0.19	7.68	7.68	0.11	1.73	0.00	5.37	0.06	0.00	1.93	2.65	0.11	0.00	0.00	0.00	1.74
m-Cresol	0.60	0.00	0.60	0.13	0.50	0.00	0.00	0.28	0.00	0.00	0.00	0.13	0.00	0.15	0.00	0.00
o-Cresol	0.48	0.00	0.48	0.00	0.81	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
p-Cresol	0.63	0.00	0.63	0.10	0.41	0.00	0.00	0.21	0.00	0.00	0.00	0.10	0.00	0.11	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	0.12	1.74	1.74	0.03	0.49	27.46	5.84	0.03	0.00	0.17	1.24	0.03	0.00	0.00	0.00	0.82
Ethylbenzene	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	1.11	0.00	0.00	1.33	0.24	1.47	0.00	0.00
Naphthalene	17.52	21.21	21.21	39.06	72.07	0.00	17.60	10.63	0.19	20.64	34.78	39.06	0.00	1.28	100.00	53.76
Phenol	2.22	0.00	2.22	0.25	1.12	0.00	0.00	1.06	0.00	0.00	0.00	0.25	0.00	0.30	0.00	1.36
Quinoline	0.42	2.27	2.27	0.28	0.97	0.00	6.15	0.22	0.00	15.70	5.92	0.28	0.00	0.00	0.00	4.88
Styrene	1.62	0.00	1.62	2.73	0.00	0.00	0.00	0.00	5.75	0.00	0.00	2.73	0.15	2.90	0.00	0.00
Toluene	9.84	0.00	9.84	6.17	9.97	0.00	0.00	12.12	0.00	0.00	0.00	6.17	14.50	18.55	0.00	0.00
m-Xylene	4.00	0.00	4.00	2.30	0.00	0.00	0.00	3.97	5.57	0.00	0.00	2.30	0.41	3.54	0.00	0.00
o-Xylene	1.68	0.00	1.68	0.95	0.00	0.00	0.00	0.00	2.57	0.00	0.00	0.95	0.12	1.85	0.00	0.00
p-Xylene	4.12	0.00	4.12	2.38	0.00	0.00	0.00	4.15	1.47	0.00	0.00	2.38	0.43	3.72	0.00	0.00
Acenaphthene	0.63	14.33	14.33	0.27	4.77	61.59	13.97	0.29	0.00	3.63	9.79	0.27	0.00	0.00	0.00	6.03
Acenaphthylene	0.49	5.12	5.12	0.12	0.89	26.41	0.18	0.22	0.00	0.00	1.74	0.12	0.00	0.00	0.00	0.25
Anthracene	0.03	0.48	0.48	0.00	0.10	6.66	2.43	0.01	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.10
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	3.86	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	1.99	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.65	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chrysene	0.00	0.00	0.00	0.00	0.00	0.99	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.03	0.33	0.33	0.00	0.31	43.41	4.59	0.01	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.26
Fluorene	0.28	6.05	6.05	0.08	1.58	12.03	8.41	0.11	0.00	0.38	3.40	0.08	0.00	0.00	0.00	1.95
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.06	1.59	1.59	0.01	0.43	27.89	10.11	0.01	0.00	0.00	0.23	0.01	0.00	0.00	0.00	0.38
Pyrene	0.00	0.05	0.05	0.00	0.01	11.56	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
TOTAL HAPS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] Debenzolizer Overhead Solvent Composition Data used for Liquid Fuel to assume worst case scenario

STORAGE TANKS

Table 5-1A. Assumptions for the 2010 Potential Emissions Inventory, Storage Tanks, Tar Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emission Source	Dimensions Diameter (ft)	Height (ft)	Volume (gal)	Control Device	Efficiency	Typical Service	Maximum Storage Temp. (F)	Estimated Annual Throughput (gal/yr)	Blending	Maximum Temp. of Material to be Blended (F)	Estimated Additional Throughput for Blending (gal/yr)
100% Crude Tar Refining											
Tank 30	32	35	210,566	Flare or TO	98	Crude Tar	220	11,142,857			
Tank 40	35	35	251,898	Flare or TO	98	Crude Tar	220	11,142,857			
Tank 41	35	35	251,898	Flare or TO	98	Crude Tar	220	11,142,857			
Tank 48	50	35	514,077	Flare or TO	98	Crude Tar	220	11,142,857			
Tank 49	50	35	514,077	Flare or TO	98	Crude Tar	220	11,142,857			
Tank 58	42	42	435,280	Flare or TO	98	Crude Tar	220	11,142,857			
Tank 6	50.0	35.3	518,484	Flare or TO	98	Crude Tar	220	11,142,857			
						Assumptions:					
						a. Maximum Crude Tar Throughput:		60,000,000 gal/yr			
						Add 30% for double transfers:		78,000,000 gal/yr			
						b. Equal distribution between tanks					
Tank 5	50	35	514,077	None		Cap Water (from Crude Tar Only)	130	3,000,000			
Tank 51	72	35	1,065,991	None		Cap Water (from Crude Tar Only)	130	3,000,000			
Tank 52	72	35	1,065,991	None		Cap Water (from Crude Tar Only)	130	3,000,000			
						Assumptions					
						a. Maximum Crude Tar Throughput:		60,000,000 gal/yr			
						% Water in Crude Tar:		15 %			
						Maximum Water Throughput:		9,000,000 gal/yr			
						b. Equal distribution between tanks					
Tank 89	24.5	30	105,797	Flare or TO	98	Crude RCO	210	17,520,000			
Tank 55	72	30	913,707	Flare or TO	98	Crude RCO	210	17,520,000			
Tank 56	72	30	913,707	Flare or TO	98	Crude RCO	210	17,520,000			
						Assumptions:					
						a. RCO is cut from tar refining columns and brought in from other facilties.					
						b. Debenzolizer RCO Capacity:		100 gal/min			
								52,560,000 gal/yr			
						c. Equal distribution between tanks.					
Tank 17	16	40	60,162	Flare or TO	98	Crude Distillate	200	15,000,000			
Tank 223	16	36	54,146	Flare or TO	98	Crude Distillate	200	12,000,000			
Tank 10	22	35	99,525	Flare or TO	98	Crude Distillate	200	3,000,000			
						Assumptions					
						a. Maximum Crude Tar Throughput:		60,000,000 gal/yr			
						% Yield Middle Oil/Heavy from Feed:		25 %			
						Maximum Middle Oil/Heavy Oil Throughput:		15,000,000 gal/yr			
						All of the Distillate goes to Tank 17; then Distillate goes to Tanks 10 and 223				80 % to Tank 223	
										20 % to Tank 10	
										12,000,000 gal/yr to Tank 223	
										3,000,000 gal/yr to Tank 10	
Coal Tar Pitch/Type A/B Pitch Blending						*Coal Tar Pitch - Case 1*					
Tank 801	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000			
Tank 802	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000			
Tank 804	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000			
Tank 805	18	18	34,264	Scrubber E	80	Coal Tar Pitch	500	3,850,000			
Tank 806	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000			
Tank 808	30	45	237,944	Scrubber E	80	Coal Tar Pitch	500	3,850,000			
						Assumptions:					
						a. Maximum Crude Tar Throughput:		60,000,000 gal/yr			
						b. Percent of tar for pitch production:		70 %			
						c. Tar Throughput to Stills for Pitch Production		42,000,000 gal/yr			
						% Yield Pitch Yield from Feed:		55 %			
						Maximum Pitch Throughput		23,100,000 gal/yr			
						d. Equal distribution between tanks					
						Addition of Petroleum Pitch to Make Type A/B Pitch - Case 2					
Tank 801	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000	Petro Pitch	500	2,566,667
Tank 802	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000	Petro Pitch	500	2,566,667
Tank 804	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000	Petro Pitch	500	2,566,667
Tank 805	18	18	34,264	Scrubber E	80	Coal Tar Pitch	500	3,850,000	Petro Pitch	500	2,566,667
Tank 806	26	16	63,546	Scrubber E	80	Coal Tar Pitch	500	3,850,000	Petro Pitch	500	2,566,667
Tank 808	30	45	237,944	Scrubber E	80	Coal Tar Pitch	500	3,850,000	Petro Pitch	500	2,566,667
						Assumptions:					
						a. Coal tar pitch throughput the same as in Case 1.					
						b. Petroleum Pitch Additive for Type A/B Pitch:					
						Type A/B Pitch is Coal Tar		60 %			
						Petroleum Pitch		40 %			
						Maximum Type A/B Pitch =		38,500,000 gal/yr			
						Maximum petroleum pitch for Type A/B production:		15,400,000 gal/yr			
						c. Equal distribution between tanks					
PSB/MPSB/RT Blending						*Pavement Sealer Base - Case 1*					
Tank 13	24	20	67,682	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 14	24	16.8	56,853	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 251	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 252	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 253	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 254	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 406	12	27	22,843	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
Tank 407	12	27	22,843	Flare or TO	98	Pavement Sealer Base	450	1,395,000			
						Assumptions					
						a. Maximum Crude Tar Throughput:		60,000,000 gal/yr			
						b. Percent of tar for PSB production:		30 %			
						c. Tar Throughput to Stills for PSB Production:		18,000,000 gal/yr			
						% Yield PSB Yield from Feed:		62 %			
						Maximum PSB Throughput		11,160,000 gal/yr			
						d. Equal distribution between tanks					
						Addition of Petro Tar to Make Modified PSB - Case 2					
Tank 13	24	20	67,682	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 14	24	16.8	56,853	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 251	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 252	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 253	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 254	10	34	19,976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 406	12	27	22,843	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
Tank 407	12	27	22,843	Flare or TO	98	Pavement Sealer Base	450	1,395,000	Petro Tar	250	597,857
						Assumptions					
						a. PSB throughput - Same throughput as Case 1					
						b. Petro Tar Additive for MPSB:					
						MPSB is PSB:		70 %			
						Petro Tar		30 %			
						Maximum MPSB =		15,942,857 gal/yr			
						Maximum petro tar throughput for MPSB production:		4,782,857 gal/yr			
						Equal distribution between tanks					

Table 5-1A

Assumptions for the 2010 Potential Emissions Inventory, Storage Tanks, Tar Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emission Source	Dimensions Diameter (ft)	Dimensions Height (ft)	Dimensions Volume (gal)	Control Device	Efficiency	Typical Service	Maximum Storage Temp. (F)	Estimated Annual Throughput (gal/yr)	Blending	Maximum Temp. of Material to be Blended (F)		Estimated Additional Throughput for Blending (gal/yr)
						Addition of NSR. CMN to make Refined Tar - Case 3				CMN Temp	NSR Temp	
Tank 13	24	20	67.682	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 14	24	16.8	56.853	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 251	10	34	19.976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 252	10	34	19.976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 253	10	34	19.976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 254	10	34	19.976	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 406	12	27	22.843	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
Tank 407	12	27	22,843	Flare or TO	98	Pavement Sealer Base	450	1,395,000	CMN/NSR	70	160	597.857
						Assumptions						
						a. PSB throughput - Same throughput as Case 1						
						b. CMN/BOC Additive for Refined Tar						
						Refined Tar is PSB:		70	%			
						CMN or NSR		30	%			
						Maximum Refined Tar =		15,942,857	gal/yr			
						Maximum CMN or NSR throughput for RT production:		4,782,857	gal/yr			
						Equal distribution between tanks						
100% Petro Tar Refining												
Tank 50	72	35	1,065,991	Flare or TO	98	Petro Tar	250	15,000,000				
Tank 6	50.0	35.3	518,484	Flare or TO	98	Petro Tar	250	15,000,000				
						Assumptions:						
						a. Maximum Petro Tar Throughput		30,000,000	gal/yr			
						b. Equal distribution between tanks						
Tank 17	16	40	60.162	Flare or TO	98	Petro Distillate	200	13,500,000				
Tank 223	16	36	54.146	Flare or TO	98	Petro Distillate	200	10,800,000				
Tank 10	22	35	99,525	Flare or TO	98	Petro Distillate	200	2,700,000				
						Assumptions						
						a. Maximum Petro Tar Throughput:		30,000,000	gal/yr			
						% Yield Middle Oil/Heavy from Feed:		45	% NO LIGHT CUT			
						Maximum Middle Oil/Heavy Oil Throughput:		13,500,000	gal/yr			
						All of the Distillate goes to Tank 17; then Distillate goes to Tanks 10 and 223				80	% to Tank 223	
										20	% to Tank 10	
										10,800,000	gal/yr to Tank 223	
										2,700,000	gal/yr to Tank 10	
Tank 801	26	16	63.546	Scrubber E	80	Petroleum Pitch	500	2,750,000				
Tank 802	26	16	63.546	Scrubber E	80	Petroleum Pitch	500	2,750,000				
Tank 804	26	16	63.546	Scrubber E	80	Petroleum Pitch	500	2,750,000				
Tank 805	18	18	34.264	Scrubber E	80	Petroleum Pitch	500	2,750,000				
Tank 806	26	16	63.546	Scrubber E	80	Petroleum Pitch	500	2,750,000				
Tank 808	30	45	237,944	Scrubber E	80	Petroleum Pitch	500	2,750,000				
						Assumptions:						
						a. Maximum Petro Tar Throughput:		30,000,000	gal/yr			
						b. Percent of tar for pitch production:		100	%			
						c. Tar Throughput to Stills for Pitch Production		30,000,000	gal/yr			
						% Yield Pitch Yield from Feed:		55	%			
						Maximum Pitch Throughput		16,500,000	gal/yr			
						d. Equal distribution between tanks						
Tank 406	12	27	22.843	Flare or TO	98	Petro Tar	250	112,320				
Tank 407	12	27	22,843	Flare or TO	98	Petro Distillate	200	12,480				
						Assumptions:						
						a. Maximum Refined Tar. Petroleum Based. Production:		124,800	gal/yr			
						Refined Tar, Petroleum Based, is Petro Tar:		90	%			
						Petro Distillate:		10	%			
						Maximum Petro Tar =		112,320	gal/yr			
						Maximum Petro Distillate for RT. pet based. production:		12,480	gal/yr			
						Equal distribution between tanks						
100% Decanted Oil Refining												
Tank 50	72	35	1,065,991	Flare or TO	98	Decanted Oil	250	15,000,000				
Tank 6	50.0	35.3	518,484	Flare or TO	98	Decanted Oil	250	15,000,000				
						Assumptions:						
						a. Maximum Decant Oil Throughput		30,000,000	gal/yr			
						b. Equal distribution between tanks						
Tank 17	16	40	60.162	Flare or TO	98	Decanted Oil Distillate	200	13,500,000				
Tank 223	16	36	54.146	Flare or TO	98	Decanted Oil Distillate	200	10,800,000				
Tank 10	22	35	99,525	Flare or TO	98	Decanted Oil Distillate	200	2,700,000				
						Assumptions						
						a. Maximum Decant Oil Throughput:		30,000,000	gal/yr			
						% Yield Middle Oil/Heavy from Feed:		45	% NO LIGHT CUT			
						Maximum Middle Oil/Heavy Oil Throughput:		13,500,000	gal/yr			
						All of the Distillate goes to Tank 17; then Distillate goes to Tanks 10 and 223				80	% to Tank 223	
										20	% to Tank 10	
										10,800,000	gal/yr to Tank 223	
										2,700,000	gal/yr to Tank 10	
Tank 801	26	16	63.546	Scrubber E	80	Decanted Oil Pitch	500	2,750,000				
Tank 802	26	16	63.546	Scrubber E	80	Decanted Oil Pitch	500	2,750,000				
Tank 804	26	16	63.546	Scrubber E	80	Decanted Oil Pitch	500	2,750,000				
Tank 805	18	18	34.264	Scrubber E	80	Decanted Oil Pitch	500	2,750,000				
Tank 806	26	16	63.546	Scrubber E	80	Decanted Oil Pitch	500	2,750,000				
Tank 808	30	45	237,944	Scrubber E	80	Decanted Oil Pitch	500	2,750,000				
						Assumptions:						
						a. Maximum Decant Oil Throughput:		30,000,000	gal/yr			
						b. Percent of oil for pitch production:		100	%			
						c. Tar Throughput to Stills for Pitch Production		30,000,000	gal/yr			
						% Yield Pitch Yield from Feed:		55	%			
						Maximum Pitch Throughput		16,500,000	gal/yr			
						d. Equal distribution between tanks						

Turnover factor set to 1 for all calculations.
Tax, Tan, and I were taken from Tank4.09 Database.
Liquid height assemed to be 50% of tank height.
An anlysis of decanted oil pitch not provided; instructed by Koppers (M. Alan, 6/23/10 email) to use petro pitch composition for decanted oil pitch.

Table 5-1B. Assumptions for the 2010 Potential Emissions Inventory, Storage Tanks, Naphthalene Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emission Source	Dimensions Diameter (ft)	Height (ft)	Volume (gal)	Control Device		Typical Service	Maximum Storage Temp. (F)	Estimated Annual Throughput (gal/yr)
Tank 7	50	36	528,765	Flare or TO	98	BFO	210	26,280,000
						Clairton RCO	210	7,800,000
Tank 9	50	35	514,077	Flare or TO	98	BFO	210	26,280,000
						Clairton RCO	210	7,800,000
Tank 84	24.5	30	105,797	None		BFO	210	423,189
						Assumptions:		
						BFO		
						a. Debenzolizer Capacity RCO to Debenzolizer:		100 gal/min
						Maximum BFO Throughput, assuming 100% BFO:		52,560,000 gal/yr
						b. Equal distribution between Tanks 7 and 9		
						c. Tank 84 is a flow through tank that operate at a constant level after the initial fill.		
						Assume startup of process occurs		4 times per year. No standing losses.
						Clairton RCO		
						a. Clairton RCO Throughput (Max from Clairton):		15,600,000 gal/yr
						b. Equal distribution between Tanks 7 and 9		
Tank 24	20	25	58,752	None		Unwashed Solvent	70	2,628,000
Tank 25	20	25	58,752	None		Unwashed Solvent	70	2,628,000
Tank 10	22	35	99,525	Flare or TO	98	Unwashed Solvent	70	2,628,000
Tank 33	10.5	24	15,546	None		Unwashed Solvent	70	31,091
Tank 360	14	22.5	25,910	None		Unwashed Solvent	70	51,819
Tank 361	14	22.5	25,910	None		Unwashed Solvent	70	51,819
Tank 362	14	22.5	25,910	None		Unwashed Solvent	70	51,819
Tank 363	14	22.5	25,910	None		Unwashed Solvent	70	51,819
Tank 364	14	22.5	25,910	None		Unwashed Solvent	70	51,819
						Assumptions:		
						a. Naphthalene Distillation Unit Capacity (BFO Feed):		100 gal/min
						Maximum BFO Throughput, assuming 100% BFO:		52,560,000 gal/yr
						% Yield Solvent from Feed:		10 %, estimate
						Maximum Solvent Production:		5,256,000 gal/yr
						b. Equal distribution between 24 and 25		
						c. % of Solvent Production through Tank 10:		50 %
						d. Tanks 360, 361, 362, 364, 363, 33 - Assume		2 turnover/yr each tank
Tank 11	22	35	99,525	Flare or TO	98	Unwashed Solvent	70	5,256,000
						Debenzolizer Overheads:	95	977,616
						Assumptions:		
						a. Maximum Solvent Production:		5,256,000 gal/yr
						Debenzolizer Overheads:		977,616 gal/yr, 1.86 gal/min
						Total		6,233,616 gal/yr
Tank 1M	14	22.5	25,910	None		Crude Methyl Naphthalene	70	2,628,000
						Assumptions:		
						a. Maximum BFO Feed:		52,560,000 gal/yr
						% Yield CMN from Feed:		5 %
						Maximum CMN Production:		2,628,000 gal/yr
Tank 88	24.5	30	105,797	None		Naphthalene Still Residue	195	21,024,000
						Assumptions:		
						a. Maximum BFO Feed:		52,560,000 gal/yr
						% Yield NSR from Feed:		40 %
						Maximum NSR Production:		21,024,000 gal/yr
						b. Equal distribution between tanks		
Tank 82	24.5	42	148,116	Flare or TO	98	Naphthalene	240	7,884,000
Tank 83	24.5	30	105,797	Flare or TO	98	Naphthalene	240	7,884,000
Tank 623	43	42	456,254	Flare or TO	98	Naphthalene	240	7,884,000
						Assumptions:		
						a. Maximum BFO Feed:		52,560,000 gal/yr
						% Yield Naphthalene from Feed:		45 %
						Maximum Naphthalene Production:		23,652,000 gal/yr
						b. Equal distribution between tanks		

Turnover factor set to 1 for all calculations.
Tax, Tan, and I were taken from Tank4.09 Database.
Liquid height assemed to be 50% of tank height.

Table 5-1C. Assumptions for the 2007 Revised Potential Emissions Inventory, Storage Tanks with Negligilbe Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emission Source	Dimensions Diameter (ft)	Height (ft)	Volume (gal)	Control Device	Typical Service
Tanks with Negligible Emissions or Other Tanks					
Tank 1	50.0	30.0	440,638	None	NA
Tank 2	50.0	30.0	440,638	None	Slop/Distillate
Tank 3	50.0	35.0	514,077	None	NA
Tank 4	50.0	35.0	514,077	None	NA
Tank 8	50.0	36.0	528,765	None	Slop (Naphthalene)
Tank 15	16.0	40.0	60,162	None	Water
Tank 16	16.0	40.0	60,162	None	NA
Tank 18	16.0	40.0	60,162	None	NA
Tank 20	16.0	25.2	37,902	None	NA
Tank 21	20.0	40.0	94,003	None	NA
Tank 23	20.0	40.0	94,003	None	NA
Tank 28	20.0	25.0	58,752	None	Plant Water
Tank 42	35.0	35.0	251,898	None	NA
Tank 53	72.0	34.9	1,062,945	None	River Water
Tank 54	50.0	35.0	514,077	None	Slop/Distillate
Tank 57	50.0	30.0	440,638	None	NA
Tank 59	50.0	35.0	514,077	None	NA
Tank 70	9.8	17.1	9,649	None	NA
Tank 71	9.8	17.1	9,649	None	NA
Tank 72	9.8	17.1	9,649	None	NA
Tank 73	9.8	17.1	9,649	None	NA
Tank 85	24.5	30.0	105,797	None	NA
Tank 87	24.5	29.9	105,444	None	Soda Ash
Tank 100	13.0	18.0	17,872	None	NA
Tank 126	16.0	40.0	60,162	Flare, Thermal Oxidizer	NA
Tank 127	16.0	40.0	60,162	Flare, Thermal Oxidizer	NA
Tank 151	25.0	30.0	110,159	None	WWTP Sludge
Tank 152	30.0	30.0	158,630	None	WWTP Sludge
Tank 153	10.0	20.0	11,750	None	Caustic Soda
Tank 300	8.0	14.2	5,339	None	NA
Tank 301	7.2	17.3	5,269	None	NA
Tank 302	7.2	17.2	5,239	None	NA
Tank 303	7.2	17.3	5,269	None	NA
Tank 304	7.2	17.3	5,269	None	NA
Tank 305	7.2	17.3	5,269	None	NA
Tank 308	10.9	19.9	13,891	None	Sulfuric Acid
Tank 323	10.0	17.0	9,988	None	Caustic Soda
Tank 337	10.0	34.0	19,976	None	Caustic Soda
Tank 351	10.5	25.0	16,193	None	NA
Tank 352	10.3	25.9	16,143	None	NA
Tank 377	12.0	15.9	13,452	None	NA
Tank 378	12.0	15.9	13,452	None	NA
Tank 381	24.5	30.0	105,797	None	Slop (Solvent)
Tank 383	10.0	36.0	21,151	None	NA
Tank 408	12.0	27.0	22,843	None	NA
Tank 501	45.0	42.0	499,683	None	Wastewater (Non-process)
Tank 502	45.0	42.0	499,683	None	Wastewater (Non-process)
Tank 553	11.0	30.0	21,327	None	NA
Tank 560	11.0	36.0	25,592	None	DAF Sludge
Tank 561	11.0	36.0	25,592	None	DAF Sludge
Tank 580	25.0	30.0	110,159	None	Wastewater (Combined)
Tank 803	10.4	17.8	11,311	None	NA
Tank 2N	14.0	22.5	25,910	Flare, Thermal Oxidizer	Slop
Tank 3N	11.5	19.8	15,384	Flare, Thermal Oxidizer	Slop (Naphthalene)
Tank 4N	14.0	22.5	25,910	None	NA
Tank 5N	14.0	22.5	25,910	None	NA
Tank 6R	14.0	22.5	25,910	None	NA

Table 5-2A. 2010 Revised Potential Emissions Inventory, Storage Tanks, Summary of Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

OVERALL SUMMARY

Pollutant	100% Crude Tar (lbs/yr)	100% Petro Tar (lbs/yr)	100% Decant Oil (lbs/yr)	MAX (lbs/yr)	(tons/yr)
VOC	14,050.26	8,458.60	8,309.62	14,050.26	7.03
Benzene	1,596.26	481.34	391.02	1,596.26	0.80
Biphenyl	119.29	89.19	80.38	119.29	0.06
m-Cresol	19.16	5.18	3.94	19.16	0.01
o-Cresol	12.81	4.37	2.35	12.81	0.01
p-Cresol	19.06	4.64	3.61	19.06	0.01
Cumene	16.42	16.42	16.42	16.42	0.01
Dibenzofuran	477.87	43.08	41.19	477.87	0.24
Ethylbenzene	48.73	30.29	30.29	48.73	0.02
Naphthalene	3,972.30	2,868.95	2,782.64	3,972.30	1.99
Phenol	60.39	9.49	7.82	60.39	0.03
Quinoline	206.60	161.38	157.63	206.60	0.10
Styrene	158.88	86.53	86.53	158.88	0.08
Toluene	438.67	146.42	121.32	438.67	0.22
m-Xylene	203.81	78.22	78.22	203.81	0.10
o-Xylene	80.13	31.82	31.82	80.13	0.04
p-Xylene	186.24	56.83	56.83	186.24	0.09
Acenaphthene	1,356.36	1,319.06	1,302.92	1,356.36	0.68
Acenaphthylene	442.93	56.41	49.62	442.93	0.22
Anthracene	186.50	88.81	88.28	186.50	0.09
Benzo(a)anthracene	34.60	5.00	5.00	34.60	0.02
Benzo(b)fluoranthene	28.70	0.00	0.00	28.70	0.01
Benzo(k)fluoranthene	2.04	0.06	0.06	2.04	0.00
Benzo(g,h,i)perylene	1.64	0.00	0.00	1.64	0.00
Benzo(a)pyrene	6.63	0.51	0.51	6.63	0.00
Chrysene	10.12	1.76	1.76	10.12	0.01
Dibenzo(a,h)anthracene	0.96	0.00	0.00	0.96	0.00
Fluoranthene	376.70	64.65	64.38	376.70	0.19
Fluorene	348.55	306.69	299.89	348.55	0.17
Indeno(1,2,3-cd)pyrene	0.17	0.00	0.00	0.17	0.00
Phenanthrene	403.52	256.79	255.03	403.52	0.20
Pyrene	116.39	39.50	39.45	116.39	0.06
Total HAP	10,931.37	6,253.40	5,998.91	10,931.37	5.47
Total POM	8,090.79	5,301.84	5,168.74	8,090.79	4.05

100% CRUDE TAR REFINING

	100% Crude Tar Distillation Potential Emissions (lbs/yr)													
Pollutant	BFO	Clairton RCO	Unwashed Solvent	Liquid Fuel	CMN	NSR	Naphthalene	Crude Tar	Cap Water	RCO	Crude Distillate	Pitch	PSB, MPSB, RT	Total
VOC	1,929.72	330.12	547.46	127.13	7.21	2,564.47	919.20	2,072.62	266.81	1,494.40	86.07	3,011.03	694.02	14,050.26
Benzene	276.98	3.38	12.29	98.38	0.00	0.00	0.00	840.79	149.96	214.49	0.00	0.00	0.00	1,596.26
Biphenyl	2.78	0.65	0.00	0.00	0.14	76.18	0.00	3.90	0.16	2.15	0.36	0.00	32.96	119.29
m-Cresol	2.85	1.09	0.00	0.00	0.00	0.00	0.00	12.28	0.73	2.21	0.00	0.00	0.00	19.16
o-Cresol	0.00	2.35	0.00	0.00	0.00	0.00	0.00	9.84	0.63	0.00	0.00	0.00	0.00	12.81
p-Cresol	2.39	1.22	0.00	0.00	0.00	0.00	0.00	13.05	0.55	1.85	0.00	0.00	0.00	19.06
Cumene	0.00	0.00	16.15	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.42
Dibenzofuran	0.92	0.36	0.00	0.00	0.01	39.83	0.00	2.56	0.09	0.72	0.42	394.82	38.13	477.87
Ethylbenzene	23.82	0.00	6.09	0.39	0.00	0.00	0.00	0.00	0.00	18.44	0.00	0.00	0.00	48.73
Naphthalene	819.02	211.35	1.04	0.02	1.49	829.01	919.20	362.09	28.23	634.26	62.04	0.00	104.54	3,972.30
Phenol	5.61	1.80	0.00	0.00	0.00	0.00	0.00	45.83	2.82	4.34	0.00	0.00	0.00	60.39
Quinoline	6.06	1.71	0.00	0.00	1.13	148.55	0.00	8.61	0.59	4.70	0.83	0.00	34.43	206.60
Styrene	50.06	4.27	31.50	0.70	0.00	0.00	0.00	33.59	0.00	38.76	0.00	0.00	0.00	158.88
Toluene	104.22	0.00	0.00	17.10	0.00	0.00	0.00	204.29	32.36	80.71	0.00	0.00	0.00	438.67
m-Xylene	41.42	5.30	30.51	0.98	0.00	0.00	0.00	82.92	10.59	32.08	0.00	0.00	0.00	203.81
o-Xylene	17.36	0.00	14.09	0.37	0.00	0.00	0.00	34.87	0.00	13.44	0.00	0.00	0.00	80.13
p-Xylene	42.67	5.46	8.05	0.64	0.00	0.00	0.00	85.31	11.05	33.05	0.00	0.00	0.00	186.24
Acenaphthene	6.05	2.27	0.00	0.00	0.26	258.94	0.00	13.06	0.77	4.69	4.10	969.66	96.54	1,356.36
Acenaphthylene	2.62	0.69	0.00	0.00	0.00	45.98	0.00	10.01	0.59	2.03	0.00	380.28	0.71	442.93
Anthracene	0.05	0.01	0.00	0.00	0.00	1.90	0.00	0.53	0.01	0.04	0.08	169.90	13.98	186.50
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.84	0.76	34.60
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.50	0.20	28.70
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02	0.02	2.04
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	0.01	1.64
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.57	0.06	6.63
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.98	0.14	10.12
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.96
Fluoranthene	0.06	0.01	0.00	0.00	0.00	1.92	0.00	0.68	0.03	0.05	0.24	348.96	24.75	376.70
Fluorene	1.98	0.75	0.00	0.00	0.03	94.93	0.00	5.77	0.30	1.53	1.36	189.33	52.59	348.55
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.01	0.17
Phenanthrene	0.22	0.06	0.00	0.00	0.00	8.46	0.00	1.17	0.03	0.17	0.37	333.05	59.99	403.52
Pyrene	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03	0.00	0.00	0.01	111.88	4.42	116.39
Total HAP	1,407.15	242.74	119.72	118.85	3.06	1,505.75	919.20	1,771.18	239.48	1,089.71	69.81	2,981.56	463.16	10,931.37
Total POM	839.77	217.85	1.04	0.02	3.06	1,505.75	919.20	408.42	30.80	650.33	69.81	2,981.56	463.16	8,090.79

Table 5-2A. 2010 Revised Potential Emissions Inventory, Storage Tanks, Summary of Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

100% PETRO TAR REFINING

	100% Petro Tar Distillation Potential Emissions (lbs/yr)											
Pollutant	BFO	Clairton RCO	Unwashed Solvent	Liquid Fuel	CMN	NSR	Naphthalene	Petro Tar	Petro Distillate	Petro Pitch	RT, Petroleum	Total
VOC	1,929.72	330.12	547.46	127.13	7.21	2,564.47	919.20	100.98	249.67	1,679.94	2.70	8,458.60
Benzene	276.98	3.38	12.29	98.38	0.00	0.00	0.00	0.00	89.72	0.00	0.60	481.34
Biphenyl	2.78	0.65	0.00	0.00	0.14	76.18	0.00	7.75	1.61	0.00	0.09	89.19
m-Cresol	2.85	1.09	0.00	0.00	0.00	0.00	0.00	0.00	1.23	0.00	0.01	5.18
o-Cresol	0.00	2.35	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.01	4.37
p-Cresol	2.39	1.22	0.00	0.00	0.00	0.00	0.00	0.00	1.02	0.00	0.01	4.64
Cumene	0.00	0.00	16.15	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.42
Dibenzofuran	0.92	0.36	0.00	0.00	0.01	39.83	0.00	1.76	0.18	0.00	0.02	43.08
Ethylbenzene	23.82	0.00	6.09	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.29
Naphthalene	819.02	211.35	1.04	0.02	1.49	829.01	919.20	21.45	65.71	0.00	0.66	2,868.95
Phenol	5.61	1.80	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.00	0.01	9.49
Quinoline	6.06	1.71	0.00	0.00	1.13	148.55	0.00	2.29	1.60	0.00	0.03	161.38
Styrene	50.06	4.27	31.50	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.53
Toluene	104.22	0.00	0.00	17.10	0.00	0.00	0.00	0.00	24.94	0.00	0.17	146.42
m-Xylene	41.42	5.30	30.51	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.22
o-Xylene	17.36	0.00	14.09	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.82
p-Xylene	42.67	5.46	8.05	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.83
Acenaphthene	6.05	2.27	0.00	0.00	0.26	258.94	0.00	14.47	1.63	1,035.28	0.16	1,319.06
Acenaphthylene	2.62	0.69	0.00	0.00	0.00	45.98	0.00	5.17	1.89	0.00	0.07	56.41
Anthracene	0.05	0.01	0.00	0.00	0.00	1.90	0.00	0.48	0.05	86.32	0.01	88.81
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.06
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.51
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	0.00	1.76
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.06	0.01	0.00	0.00	0.00	1.92	0.00	0.33	0.05	62.27	0.00	64.65
Fluorene	1.98	0.75	0.00	0.00	0.03	94.93	0.00	6.11	0.68	202.14	0.07	306.69
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.22	0.06	0.00	0.00	0.00	8.46	0.00	1.60	0.17	246.26	0.02	256.79
Pyrene	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.00	39.40	0.00	39.50
Total HAP	1,407.15	242.74	119.72	118.85	3.06	1,505.75	919.20	61.45	194.55	1,679.01	1.93	6,253.40
Total POM	839.77	217.85	1.04	0.02	3.06	1,505.75	919.20	61.45	73.56	1,679.01	1.12	5,301.84

100% DECANTED OIL REFINING

	100% Decanted Oil Distillation Potential Emissions (lbs/yr)										
Pollutant	BFO	Clairton RCO	Unwashed Solvent	Liquid Fuel	CMN	NSR	Naphthalene	Decant Oil	Decant Oil Distillate	Decant Pitch	Total
VOC	1,929.72	330.12	547.46	127.13	7.21	2,564.47	919.20	167.76	36.61	1,679.94	8,309.62
Benzene	276.98	3.38	12.29	98.38	0.00	0.00	0.00	0.00	0.00	0.00	391.02
Biphenyl	2.78	0.65	0.00	0.00	0.14	76.18	0.00	0.00	0.63	0.00	80.38
m-Cresol	2.85	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.94
o-Cresol	0.00	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.35
p-Cresol	2.39	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.61
Cumene	0.00	0.00	16.15	0.27	0.00	0.00	0.00	0.00	0.00	0.00	16.42
Dibenzofuran	0.92	0.36	0.00	0.00	0.01	39.83	0.00	0.00	0.07	0.00	41.19
Ethylbenzene	23.82	0.00	6.09	0.39	0.00	0.00	0.00	0.00	0.00	0.00	30.29
Naphthalene	819.02	211.35	1.04	0.02	1.49	829.01	919.20	0.00	1.50	0.00	2,782.64
Phenol	5.61	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	7.82
Quinoline	6.06	1.71	0.00	0.00	1.13	148.55	0.00	0.00	0.17	0.00	157.63
Styrene	50.06	4.27	31.50	0.70	0.00	0.00	0.00	0.00	0.00	0.00	86.53
Toluene	104.22	0.00	0.00	17.10	0.00	0.00	0.00	0.00	0.00	0.00	121.32
m-Xylene	41.42	5.30	30.51	0.98	0.00	0.00	0.00	0.00	0.00	0.00	78.22
o-Xylene	17.36	0.00	14.09	0.37	0.00	0.00	0.00	0.00	0.00	0.00	31.82
p-Xylene	42.67	5.46	8.05	0.64	0.00	0.00	0.00	0.00	0.00	0.00	56.83
Acenaphthene	6.05	2.27	0.00	0.00	0.26	258.94	0.00	0.00	0.12	1,035.28	1,302.92
Acenaphthylene	2.62	0.69	0.00	0.00	0.00	45.98	0.00	0.00	0.32	0.00	49.62
Anthracene	0.05	0.01	0.00	0.00	0.00	1.90	0.00	0.00	0.01	86.32	88.28
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	1.76
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.06	0.01	0.00	0.00	0.00	1.92	0.00	0.00	0.11	62.27	64.38
Fluorene	1.98	0.75	0.00	0.00	0.03	94.93	0.00	0.00	0.07	202.14	299.89
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.22	0.06	0.00	0.00	0.00	8.46	0.00	0.00	0.03	246.26	255.03
Pyrene	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	39.40	39.45
Total HAP	1,407.15	242.74	119.72	118.85	3.06	1,505.75	919.20	0.00	3.44	1,679.01	5,998.91
Total POM	839.77	217.85	1.04	0.02	3.06	1,505.75	919.20	0.00	3.03	1,679.01	5,168.74

Table 5-2B. 2010 Revised Potential Emissions Inventory, Storage Tanks, Summary of Emissions for 100% Crude Tar Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Potential Emissions (lbs/yr)

Pollutant	BFO Tank 7	BFO Tank 9	BFO Tank 84	BFO Potential Emissions	Clairton RCO Tank 7	Clairton RCO Tank 9	Clairton RCO Potential Emissions	Unwashed Solvent Tank 24	Unwashed Solvent Tank 25	Unwashed Solvent Tank 10	Unwashed Solvent Tank 33	Unwashed Solvent Tank 360	Unwashed Solvent Tank 361	Unwashed Solvent Tank 362	Unwashed Solvent Tank 363	Unwashed Solvent Tank 364	Unwashed Solvent Potential Emissions	Liquid Fuel Tank 11 Unwashed	Liquid Fuel Tank 11 Dehen	Liquid Fuel Potential Emissions	CMN Tank 1M	NSR Tank 88
VOC	701.86	700.97	526.89	1,929.72	165.40	164.72	330.12	230.57	230.57	4.93	8.69	14.54	14.54	14.54	14.54	14.54	547.46	9.07	118.06	127.13	7.21	2,564.47
Benzene	100.74	100.61	75.63	276.98	1.69	1.69	3.38	5.18	5.18	0.11	0.20	0.33	0.33	0.33	0.33	0.33	12.29	0.20	98.17	98.38	0.00	0.00
Biphenyl	1.01	1.01	0.76	2.78	0.32	0.32	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	76.18
m-Cresol	1.04	1.03	0.78	2.85	0.55	0.55	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	1.18	1.17	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.87	0.87	0.65	2.39	0.61	0.61	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.80	6.80	0.15	0.26	0.43	0.43	0.43	0.43	0.43	16.15	0.27	0.00	0.27	0.00	0.00
Dibenzofuran	0.34	0.34	0.25	0.92	0.18	0.18	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	39.83
Ethylbenzene	8.66	8.65	6.50	23.82	0.00	0.00	0.00	2.56	2.56	0.05	0.10	0.16	0.16	0.16	0.16	0.16	6.09	0.10	0.28	0.39	0.00	0.00
Naphthalene	297.89	297.51	223.63	819.02	105.89	105.46	211.35	0.44	0.44	0.01	0.02	0.03	0.03	0.03	0.03	0.03	1.04	0.02	0.01	0.02	1.49	829.01
Phenol	2.04	2.04	1.53	5.61	0.90	0.90	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	2.21	2.20	1.66	6.06	0.86	0.85	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	148.55
Styrene	18.21	18.18	13.67	50.06	2.14	2.13	4.27	13.27	13.27	0.28	0.50	0.84	0.84	0.84	0.84	0.84	31.50	0.52	0.18	0.70	0.00	0.00
Toluene	37.90	37.86	28.46	104.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.10	17.10	0.00	0.00
m-Xylene	15.07	15.05	11.31	41.42	2.66	2.65	5.30	12.85	12.85	0.27	0.48	0.81	0.81	0.81	0.81	0.81	30.51	0.51	0.48	0.98	0.00	0.00
o-Xylene	6.31	6.31	4.74	17.36	0.00	0.00	0.00	5.93	5.93	0.13	0.22	0.37	0.37	0.37	0.37	0.37	14.09	0.23	0.14	0.37	0.00	0.00
p-Xylene	15.52	15.50	11.65	42.67	2.74	2.73	5.46	3.39	3.39	0.07	0.13	0.21	0.21	0.21	0.21	0.21	8.05	0.13	0.50	0.64	0.00	0.00
Acenaphthene	2.20	2.20	1.65	6.05	1.14	1.13	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	258.94
Acenaphthylene	0.95	0.95	0.72	2.62	0.34	0.34	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.98
Anthracene	0.02	0.02	0.01	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.02	0.02	0.02	0.06	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92
Fluorene	0.72	0.72	0.54	1.98	0.37	0.37	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	94.93
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.08	0.08	0.06	0.22	0.03	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.46
Pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Total HAP	511.79	511.15	384.21	1,407.15	121.62	121.12	242.74	50.42	50.42	1.08	1.90	3.18	3.18	3.18	3.18	3.18	119.72	1.98	116.86	118.85	3.06	1,505.75
Total POM	305.43	305.05	229.29	839.77	109.13	108.70	217.83	0.44	0.44	0.01	0.02	0.03	0.03	0.03	0.03	0.03	1.04	0.02	0.01	0.02	3.06	1,505.75

Pollutant	Naphthalene Tank 82	Naphthalene Tank 83	Naphthalene Tank 623	Naphthalene Potential Emissions	Crude Tar Tank 30	Crude Tar Tank 40	Crude Tar Tank 41	Crude Tar Tank 48	Crude Tar Tank 49	Crude Tar Tank 58	Crude Tar Tank 6	Crude Tar Potential Emissions	Cap Water Tank 5	Cap Water Tank 51	Cap Water Tank 52	Cap Water Potential Emissions	RCO Tank 89	RCO Tank 55	RCO Tank 56	RCO Potential Emissions	Crude Distillate Tank 17	Crude Distillate Tank 223	Crude Distillate Tank 10	Crude Distillate Potential Emissions
VOC	295.48	292.17	331.55	919.20	282.32	285.65	285.65	306.87	306.87	298.16	307.10	2,072.62	68.31	99.25	99.25	266.81	446.21	524.10	524.10	1,494.40	42.60	34.14	9.33	86.07
Benzene	0.00	0.00	0.00	0.00	114.53	115.88	115.88	124.49	124.49	120.95	124.58	840.79	38.39	55.78	55.78	149.96	64.04	75.22	75.22	214.49	0.00	0.00	0.00	0.00
Biphenyl	0.00	0.00	0.00	0.00	0.53	0.54	0.54	0.58	0.58	0.56	0.58	3.90	0.04	0.06	0.06	0.16	0.64	0.76	0.76	2.15	0.18	0.14	0.04	0.36
m-Cresol	0.00	0.00	0.00	0.00	1.67	1.69	1.69	1.82	1.82	1.77	1.82	12.28	0.19	0.27	0.27	0.73	0.66	0.77	0.77	2.21	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	1.34	1.36	1.36	1.46	1.46	1.41	1.46	9.84	0.16	0.23	0.23	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	1.78	1.80	1.80	1.93	1.93	1.88	1.93	13.05	0.14	0.20	0.20	0.55	0.55	0.65	0.65	1.85	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	0.00	0.00	0.00	0.00	0.35	0.35	0.35	0.38	0.38	0.37	0.38	2.56	0.02	0.03	0.03	0.09	0.21	0.25	0.25	0.72	0.21	0.17	0.05	0.42
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.51	6.47	6.47	18.44	0.00	0.00	0.00	0.00
Naphthalene	295.48	292.17	331.55	919.20	49.32	49.90	49.90	53.61	53.61	52.09	53.65	362.09	7.23	10.50	10.50	28.23	189.38	222.44	222.44	634.26	30.71	24.61	6.73	62.04
Phenol	0.00	0.00	0.00	0.00	6.24	6.32	6.32	6.79	6.79	6.59	6.79	45.83	0.72	1.05	1.05	2.82	1.30	1.52	1.52	4.34	0.00	0.00	0.00	0.00
Quinoline	0.00	0.00	0.00	0.00	1.17	1.19	1.19	1.27	1.27	1.24	1.28	8.61	0.15	0.22	0.22	0.59	1.40	1.65	1.65	4.70	0.41	0.33	0.09	0.83
Styrene	0.00	0.00	0.00	0.00	4.58	4.63	4.63	4.97	4.97	4.83	4.98	33.59	0.00	0.00	0.00	0.00	11.57	13.59	13.59	38.76	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	27.83	28.15	28.15	30.25	30.25	29.39	30.27	204.29	8.28	12.04	12.04	32.36	24.10	28.30	28.30	80.71	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	11.30	11.43	11.43	12.28	12.28	11.93	12.29	82.92	2.71	3.94	3.94	10.59	9.58	11.25	11.25	32.08	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	4.75	4.81	4.81	5.16	5.16	5.02	5.17	34.87	0.00	0.00	0.00	0.00	4.01	4.72	4.72	13.44	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	11.62	11.76	11.76	12.63	12.63	12.27	12.64	85.31	2.83	4.11	4.11	11.05	9.87	11.59	11.59	33.05	0.00	0.00	0.00	0.00
Acenaphthene	0.00	0.00	0.00	0.00	1.78	1.80	1.80	1.93	1.93	1.88	1.94	13.06	0.20	0.29	0.29	0.77	1.40	1.64	1.64	4.69	2.03	1.63	0.44	4.10
Acenaphthylene	0.00	0.00	0.00	0.00	1.36	1.38	1.38	1.48	1.48	1.44	1.48	10.01	0.15	0.22	0.22	0.59	0.61	0.71	0.71	2.03	0.00	0.00	0.00	0.00
Anthracene	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.53	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.04	0.03	0.01	0.08
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.68	0.01	0.01	0.01	0.03	0.01	0.02	0.02	0.05	0.12	0.10	0.03	0.24
Fluorene	0.00	0.00	0.00	0.00	0.79	0.79	0.79	0.85	0.85	0.83	0.85	5.77	0.08	0.11	0.11	0.30	0.46	0.54	0.54	1.53	0.67	0.54	0.15	1.36
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.17	0.17	0.17	0.17	1.17	0.01	0.01	0.01	0.03	0.05	0.06	0.06	0.17	0.18	0.13	0.04	0.37
Pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Total HAP	295.48	292.17	331.55	919.20	241.26	244.11	244.11	262.24	262.24	254.80	262.43	1,771.18	61.31	89.08	89.08	239.48	325.37	382.17	382.17	1,089.71	34.56	27.69	7.57	69.81
Total POM	295.48	292.17	331.55	919.20	55.63	56.29	56.29	60.47	60.47	58.75	60.52	408.42	7.89	11.46	11.46	30.80	194.18	228.07	228.07	650.33	34.56	27.69	7.57	69.81

PSB, MPSB, RT Potential Emissions (lbs/yr)

Pollutant	Tank 13 PSB	Tank 13 MPSB PSB	Tank 13 MPSB Shell	Tank 13 MPSB Total	Tank 13 RT PSB	Tank 13 RT CMN	Tank 13 RT NSR	Tank 13 RT Total CMN	Tank 13 RT Total NSR	Tank 13 RT MAX	Tank 13 Maximum	Tank 14 PSB	Tank 14 MPSB PSB	Tank 14 MPSB Shell	Tank 14 MPSB Total	Tank 14 RT PSB	Tank 14 RT CMN	Tank 14 RT NSR	Tank 14 RT Total CMN	Tank 14 RT Total NSR	Tank 14 RT MAX	Tank 14 Maximum
VOC	90.64	90.64	1.74	92.38	90.64	0.03	1.43	90.67	92.07	92.07	92.38	89.51	89.51	1.74	91.26	89.51	0.03	1.43	89.54	90.95	90.95	91.26
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	4.25	4.25	0.13	4.38	4.25	0.04	4.25	4.29	4.29	4.38	4.38	4.20	4.20	0.13	4.33	4.20	0.00	0.04	4.20	4.24	4.24	4.33
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	5.05	5.05	0.03	5.08	5.05	0.02	5.05	5.07	5.07	5.08	5.08	4.99	4.99	0.03	5.02	4.99	0.00	0.02	4.99	5.01	5.01	5.02
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	13.44	13.44	0.37	13.81	13.44	0.01	0.46	13.45	13.90	13.90	13.90	13.27	13.27	0.37	13.64	13.27	0.01	0.46	13.28	13.74	13.74	13.74
Phenol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	4.50	4.50	0.04	4.54	4.50	0.08	4.51	4.58	4.58	4.58	4.58	4.44	4.44	0.04	4.48	4.44	0.00	0.08	4.45	4.53	4.53	4.53
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	12.60	12.60	0.25	12.85	12.60	0.00	0.14	12.60	12.75	12.75	12.85	12.44	12.44	0.25	12.69	12.44	0.00	0.14	12.45	12.59	12.59	12.69
Acenaphthylene	0.00	0.00	0.09	0.09	0.00	0.00	0.03	0.00	0.03	0.09	0.09	0.00	0.00	0.09	0.09	0.00	0.00	0.03	0.00	0.03	0.03	0.09
Anthracene	1.85	1.85	0.01	1.86	1.85	0.00	0.00	1.85	1.86	1.86	1.86	1.83	1.83	0.01	1.84	1.83	0.00	0.00	1.83	1.83	1.83	1.84
Benzo(a)anthracene	0.10	0.10	0.00	0.10	0.10	0.00	0.00	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.10	0.10	0.00	0.00	0.10	0.10	0.10	0.10
Benzo(b)fluoranthene	0.03	0.03	0.00	0.03	0.03	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.03	0.03	0.00	0.00	0.03	0.03	0.03	0.03
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01
Chrysene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	3.29	3.29	0.01	3.30	3.29	0.00	0.00	3.29	3.29	3.29	3.30	3.25	3.25	0.01	3.26	3.25	0.00	0.00	3.25	3.25	3.25	3.26
Fluorene	6.90	6.90	0.11	7.00	6.90	0.00	0.05	6.90	6.95	6.95	7.00	6.81	6.81	0.11	6.92	6.81	0.00	0.05	6.81	6.86	6.86	6.92
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	7.97	7.97	0.03	7.99	7.97	0.00	0.00	7.97	7.97	7.97	7.99	7.87	7.87	0.03	7.89	7.87	0.00	0.00	7.87	7.87	7.87	7.89
Pyrene	0.59	0.59	0.00	0.59	0.59	0.00	0.00	0.59	0.59	0.59	0.59	0.58	0.58	0.00	0.58	0.58	0.00	0.00	0.58	0.58	0.58	0.58
Total HAP	60.60	60.60	1.06	61.66	60.60	0.01	0.84	60.61	61.44	61.44	61.66	59.85	59.85	1.06	60.91

Table 5-2B. 2010 Revised Potential Emissions Inventory, Storage Tanks, Summary of Emissions for 100% Crude Tar Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

PSB, MPSB, RT Potential Emissions (lbs/yr)

Pollutant	Tank 253 PSB	Tank 253 MPSB PSB	Tank 253 MPSB Shell	Tank 253 MPSB Total	Tank 253 RT PSB	Tank 253 RT CMN	Tank 253 RT NSR	Tank 253 RT Total CMN	Tank 253 RT Total NSR	Tank 253 RT MAX	Tank 253 Maximum
VOC	83.12	83.12	1.74	84.86	83.12	0.03	1.43	83.15	84.55	84.55	84.86
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	3.90	3.90	0.13	4.03	3.90	0.00	0.04	3.90	3.94	3.94	4.03
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	4.63	4.63	0.03	4.66	4.63	0.00	0.02	4.63	4.65	4.65	4.66
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	12.32	12.32	0.37	12.69	12.32	0.01	0.46	12.33	12.79	12.79	12.79
Phenol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	4.13	4.13	0.04	4.17	4.13	0.00	0.08	4.13	4.21	4.21	4.21
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	11.55	11.55	0.25	11.80	11.55	0.00	0.14	11.56	11.70	11.70	11.80
Acenaphthylene	0.00	0.00	0.09	0.09	0.00	0.00	0.03	0.00	0.03	0.03	0.09
Anthracene	1.70	1.70	0.01	1.71	1.70	0.00	0.00	1.70	1.70	1.70	1.71
Benzo(a)anthracene	0.09	0.09	0.00	0.09	0.09	0.00	0.00	0.09	0.09	0.09	0.09
Benzo(b)fluoranthene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01
Chrysene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	3.02	3.02	0.01	3.03	3.02	0.00	0.00	3.02	3.02	3.02	3.03
Fluorene	6.32	6.32	0.11	6.43	6.32	0.00	0.05	6.32	6.38	6.38	6.43
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	7.30	7.30	0.03	7.33	7.30	0.00	0.00	7.30	7.31	7.31	7.33
Pyrene	0.54	0.54	0.00	0.54	0.54	0.00	0.00	0.54	0.54	0.54	0.54
Total HAP	55.57	55.57	1.06	56.63	55.57	0.01	0.84	55.58	56.41	56.41	56.63
Total POM	55.57	55.57	1.06	56.63	55.57	0.01	0.84	55.58	56.41	56.41	56.63

Pollutant	Tank 254 PSB	Tank 254 MPSB PSB	Tank 254 MPSB Shell	Tank 254 MPSB Total	Tank 254 RT PSB	Tank 254 RT CMN	Tank 254 RT NSR	Tank 254 RT Total CMN	Tank 254 RT Total NSR	Tank 254 RT MAX	Tank 254 Maximum
VOC	83.12	83.12	1.74	84.86	83.12	0.03	1.43	83.15	84.55	84.55	84.86
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	3.90	3.90	0.13	4.03	3.90	0.00	0.04	3.90	3.94	3.94	4.03
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	4.63	4.63	0.03	4.66	4.63	0.00	0.02	4.63	4.65	4.65	4.66
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	12.32	12.32	0.37	12.69	12.32	0.01	0.46	12.33	12.79	12.79	12.79
Phenol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	4.13	4.13	0.04	4.17	4.13	0.00	0.08	4.13	4.21	4.21	4.21
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	11.55	11.55	0.25	11.80	11.55	0.00	0.14	11.56	11.70	11.70	11.80
Acenaphthylene	0.00	0.00	0.09	0.09	0.00	0.00	0.03	0.00	0.03	0.03	0.09
Anthracene	1.70	1.70	0.01	1.71	1.70	0.00	0.00	1.70	1.70	1.70	1.71
Benzo(a)anthracene	0.09	0.09	0.00	0.09	0.09	0.00	0.00	0.09	0.09	0.09	0.09
Benzo(b)fluoranthene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01
Chrysene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	3.02	3.02	0.01	3.03	3.02	0.00	0.00	3.02	3.02	3.02	3.03
Fluorene	6.32	6.32	0.11	6.43	6.32	0.00	0.05	6.32	6.38	6.38	6.43
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	7.30	7.30	0.03	7.33	7.30	0.00	0.00	7.30	7.31	7.31	7.33
Pyrene	0.54	0.54	0.00	0.54	0.54	0.00	0.00	0.54	0.54	0.54	0.54
Total HAP	55.57	55.57	1.06	56.63	55.57	0.01	0.84	55.58	56.41	56.41	56.63
Total POM	55.57	55.57	1.06	56.63	55.57	0.01	0.84	55.58	56.41	56.41	56.63

Pollutant	Tank 406 PSB	Tank 406 MPSB PSB	Tank 406 MPSB Shell	Tank 406 MPSB Total	Tank 406 RT PSB	Tank 406 RT CMN	Tank 406 RT NSR	Tank 406 RT Total CMN	Tank 406 RT Total NSR	Tank 406 RT MAX	Tank 406 Maximum
VOC	83.72	83.72	1.74	85.47	83.72	0.03	1.43	83.76	85.16	85.16	85.47
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	3.93	3.93	0.13	4.06	3.93	0.00	0.04	3.93	3.97	3.97	4.06
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	4.66	4.66	0.03	4.69	4.66	0.00	0.02	4.66	4.69	4.69	4.69
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	12.41	12.41	0.37	12.78	12.41	0.01	0.46	12.42	12.88	12.88	12.88
Phenol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	4.16	4.16	0.04	4.20	4.16	0.00	0.08	4.16	4.24	4.24	4.34
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	11.64	11.64	0.25	11.89	11.64	0.00	0.14	11.64	11.78	11.78	11.89
Acenaphthylene	0.00	0.00	0.09	0.09	0.00	0.00	0.03	0.00	0.03	0.03	0.09
Anthracene	1.71	1.71	0.01	1.72	1.71	0.00	0.00	1.71	1.71	1.71	1.72
Benzo(a)anthracene	0.09	0.09	0.00	0.09	0.09	0.00	0.00	0.09	0.09	0.09	0.09
Benzo(b)fluoranthene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01
Chrysene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	3.04	3.04	0.01	3.05	3.04	0.00	0.00	3.04	3.04	3.04	3.05
Fluorene	6.37	6.37	0.11	6.48	6.37	0.00	0.05	6.37	6.42	6.42	6.48
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	7.36	7.36	0.03	7.39	7.36	0.00	0.00	7.36	7.36	7.36	7.39
Pyrene	0.54	0.54	0.00	0.54	0.54	0.00	0.00	0.54	0.54	0.54	0.54
Total HAP	55.98	55.98	1.06	57.04	55.98	0.01	0.84	55.99	56.82	56.82	57.04
Total POM	55.98	55.98	1.06	57.04	55.98	0.01	0.84	55.99	56.82	56.82	57.04

Pollutant	Tank 407 PSB	Tank 407 MPSB PSB	Tank 407 MPSB Shell	Tank 407 MPSB Total	Tank 407 RT PSB	Tank 407 RT CMN	Tank 407 RT NSR	Tank 407 RT Total CMN	Tank 407 RT Total NSR	Tank 407 RT MAX	Tank 407 Maximum	Potential Emissions
VOC	83.72	83.72	1.74	85.47	83.72	0.03	1.43	83.76	85.16	85.16	85.47	694.02
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	3.93	3.93	0.13	4.06	3.93	0.00	0.04	3.93	3.97	3.97	4.06	32.96
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	4.66	4.66	0.03	4.69	4.66	0.00	0.02	4.66	4.69	4.69	4.69	38.13
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	12.41	12.41	0.37	12.78	12.41	0.01	0.46	12.42	12.88	12.88	12.88	104.54
Phenol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	4.16	4.16	0.04	4.20	4.16	0.00	0.08	4.16	4.24	4.24	4.24	34.43
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	11.64	11.64	0.25	11.89	11.64	0.00	0.14	11.64	11.78	11.78	11.89	96.54
Acenaphthylene	0.00	0.00	0.09	0.09	0.00	0.00	0.03	0.00	0.03	0.03	0.09	0.71
Anthracene	1.71	1.71	0.01	1.72	1.71	0.00	0.00	1.71	1.71	1.71	1.72	13.98
Benzo(a)anthracene	0.09	0.09	0.00	0.09	0.09	0.00	0.00	0.09	0.09	0.09	0.09	0.76
Benzo(b)fluoranthene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02	0.20
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Benzo(a)pyrene	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.06
Chrysene	0.02	0.02	0.00	0.02	0.02	0.00	0.00	0.02	0.02	0.02	0.02	0.14
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	3.04	3.04	0.01	3.05	3.04	0.00	0.00	3.04	3.04	3.04	3.05	24.75
Fluorene	6.37	6.37	0.11	6.48	6.37	0.00	0.05	6.37	6.42	6.42	6.48	52.59
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Phenanthrene	7.36	7.36	0.03	7.39	7.36	0.00	0.00	7.36	7.36	7.36	7.39	59.99
Pyrene	0.54	0.54	0.00	0.54	0.54	0.00	0.00	0.54	0.54	0.54	0.54	4.42
Total HAP	55.98	55.98	1.06	57.04	55.98	0.01	0.84	55.99	56.82	56.82	57.04	463.16
Total POM	55.98	55.98	1.06	57.04	55.98	0.01	0.84	55.99	56.82	56.82	57.04	463.16

Pitch Potential Emissions (lbs/yr)

Pollutant	Tank 801 CTP	Tank 801 Type A Pitch CTP	Tank 801 Type A Pitch Petro	Tank 801 Type A Pitch Total	Tank 801 Maximum	Tank 802 CTP	Tank 802 Type A Pitch CTP	Tank 802 Type A Pitch Petro	Tank 802 Type A Pitch Total	Tank 802 Maximum	Tank 804 CTP	Tank 804 Type A Pitch CTP	Tank 804 Type A Pitch Petro	Tank 804 Type A Pitch Total	Tank 804 Maximum
VOC	237.48	237.48	258.93	496.41	496.41	237.48	237.48	258.93	496.41	496.41	237.48	237.48	258.93	496.41	496.41
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	65.22	65.22	0.00	65.22	65.22	65.22	65.22	0.00	65.22	65.22	65.22	65.22	0.00	65.22	65.22
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	0.00	0.00	159.57	159.57	159.57	0.00	0.00	159.57	159.57	159.57	0.00	159.57	159.57	159.57	159.57
Acenaphthylene	62.82	62.82	0.00	62.82	62.82	62.82	62.82	0.00	62.82	62.82	62.82	62.82	0.00	62.82	62.82
Anthracene	14.71	14.71	13.30	28.02	28.02	14.71	14.71	13.30	28.02	28.02	14.71	14.71	13.30	28.02	28.02
Benzo(a)anthracene	4.82	4.82	0.77	5.59	5.59	4.82	4.82	0.77	5.59	5.59	4.82	4.82	0.77	5.59	5.59
Benzo(b)fluoranthene	4.71	4.71	0.00	4.71	4.71	4.71	4.71	0.00	4.71	4.71	4.71	4.71	0.00	4.71	4.71
Benzo(k)fluoranthene	0.33	0.33	0.01	0.33	0.33	0.33	0.33	0.01	0.33	0.33	0.33	0.33	0.01	0.33	0.33
Benzo(g,h,i)perylene	0.27	0.27	0.00	0.27	0.27	0.27	0.27	0.00	0.27	0.27	0.27	0.27	0.00	0.27	0.27
Benzo(a)pyrene	1.01	1.01	0.08	1.08	1.08	1.01	1.01	0.08	1.08	1.08	1.01	1.01	0.08	1.08	1.08
Chrysene	1.38	1.38	0.27	1.65	1.65	1.38	1.38	0.27	1.65	1.65	1.38	1.38	0.27	1.65	1.65
Dibenzo(a,h)anthracene	0.16	0.16	0.00	0.16	0.16	0.16	0.16	0.00	0.16	0.16	0.16	0.16	0.00	0.16	0.16
Fluoranthene	48.01	48.01	9.60	57.61	57.61	48.01	48.01	9.60	57.61	57.61	48.01	48.01	9.60	57.61	57.61
Fluorene	0.00	0.00	31.16	31.16	31.16	0.00	0.00	31.16	31.16	31.16	0.00	0.00	31.16	31.16	31.16
Indeno(1,2,3-cd)pyrene	0.03	0.03	0.00	0.03	0.03	0.03	0.03	0.00	0.03	0.03	0.03	0.03	0.00	0.03	0.03
Phenanthrene	16.91	16.91	37.96	54.87	54.87	16.91	16.91	37.96	54.87	54.87	16.91	16.91	37.96	54.87	54.87
Pyrene	12.39	12.39	6.07	18.46	18.46	12.39	12.39	6.07	18.46	18.46	12.39	12.39	6.07	18.46	18.46
Total HAP	232.75	232.75	258.79	491.54	491.54	232.75	232.75	258.79	491.54	491.54	232.75	232.75	258.79	491.54	491.54
Total POM	232.75	232.75	258.79	491.54	491.54	232.75	232.75	258.79	491.54	491.54	232.75	232.75	258.79	491.54	491.54

Pollutant	Tank 805 CTP	Tank 805 Type A Pitch CTP	Tank 805 Type A Pitch Petro	Tank 805 Type A Pitch Total	Tank 805 Maximum	Tank 806 CTP	Tank 806 Type A Pitch CTP	Tank 806 Type A Pitch Petro	Tank 806 Type A Pitch Total	Tank 806 Maximum	Tank 808 CTP	Tank 808 Type A Pitch CTP	Tank 808 Type A Pitch Petro	Tank 808 Type A Pitch Total	Tank 808 Maximum	Potential Emissions
VOC	234.52	234.52	253.99	488.51	488.51	237.48	237.48	258.93	496.41	496.41	253.15	253.15	283.74	536.89	536.89	3,011.03
Benzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5-2C. 2010 Revised Potential Emissions Inventory, Storage Tanks, Summary of Emissions for 100% Petro Tar Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Potential Emissions (lbs/yr)

Pollutant	BFO				Clariter RCO			Unwashed Solvent										Liquid Fuel			CMN	NSR	Naphthalene			
	Tank 7	Tank 9	Tank 84	Potential Emissions	Tank 7	Tank 9	Potential Emissions	Tank 24	Tank 25	Tank 10	Tank 33	Tank 360	Tank 361	Tank 362	Tank 363	Tank 364	Potential Emissions	Tank 11 Unwashed	Tank 11 Deben	Potential Emissions	Tank 1M	Tank 88	Tank 82	Tank 83	Tank 623	Potential Emissions
VOC	701.86	700.97	526.89	1,929.72	165.40	164.72	330.12	230.57	230.57	4.93	8.69	14.54	14.54	14.54	14.54	14.54	547.46	9.07	118.06	127.13	7.21	2,564.47	295.48	292.17	331.55	919.20
Benzene	100.74	100.61	75.63	276.98	1.69	1.69	3.38	5.18	5.18	0.11	0.20	0.33	0.33	0.33	0.33	0.33	12.29	0.20	98.17	98.38	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	1.01	1.01	0.76	2.78	0.32	0.32	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	76.18	0.00	0.00	0.00	0.00
m-Cresol	1.04	1.03	0.78	2.85	0.55	0.55	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	1.18	1.17	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.87	0.87	0.65	2.39	0.61	0.61	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.80	6.80	0.15	0.26	0.43	0.43	0.43	0.43	0.43	16.15	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	0.34	0.34	0.25	0.92	0.18	0.18	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	39.83	0.00	0.00	0.00	0.00
Ethylbenzene	8.66	8.65	6.50	23.82	0.00	0.00	0.00	2.56	2.56	0.05	0.10	0.16	0.16	0.16	0.16	0.16	6.09	0.10	0.28	0.39	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	297.89	297.51	223.63	819.02	105.89	105.46	211.35	0.44	0.44	0.01	0.02	0.03	0.03	0.03	0.03	0.03	1.04	0.02	0.01	0.02	1.49	829.01	295.48	292.17	331.55	919.20
Phenol	2.04	2.04	1.53	5.61	0.90	0.90	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	2.21	2.20	1.66	6.06	0.86	0.85	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	148.55	0.00	0.00	0.00	0.00
Styrene	18.21	18.18	13.67	50.06	2.14	2.13	4.27	13.27	13.27	0.28	0.50	0.84	0.84	0.84	0.84	0.84	31.50	0.52	0.18	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	37.90	37.86	28.46	104.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.10	17.10	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	15.07	15.05	11.31	41.42	2.66	2.65	5.30	12.85	12.85	0.27	0.48	0.81	0.81	0.81	0.81	0.81	30.51	0.51	0.48	0.98	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	6.31	6.31	4.74	17.36	0.00	0.00	0.00	5.93	5.93	0.13	0.22	0.37	0.37	0.37	0.37	0.37	14.09	0.23	0.14	0.37	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	15.52	15.50	11.65	42.67	2.74	2.73	5.46	3.39	3.39	0.07	0.13	0.21	0.21	0.21	0.21	0.21	8.05	0.13	0.50	0.64	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	2.20	2.20	1.65	6.05	1.14	1.13	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	258.94	0.00	0.00	0.00	0.00
Acenaphthylene	0.95	0.95	0.72	2.62	0.34	0.34	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.98	0.00	0.00	0.00	0.00
Anthracene	0.02	0.02	0.01	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.00	0.00	0.00	0.00
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.02	0.02	0.02	0.06	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.00	0.00	0.00	0.00
Fluorene	0.72	0.72	0.54	1.98	0.37	0.37	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	94.93	0.00	0.00	0.00	0.00
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.08	0.08	0.06	0.22	0.03	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.46	0.00	0.00	0.00	0.00
Pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total HAP	511.79	511.15	384.21	1,407.15	121.62	121.12	242.74	50.42	50.42	1.08	1.90	3.18	3.18	3.18	3.18	3.18	119.72	1.98	116.86	118.85	3.06	1,505.75	295.48	292.17	331.55	919.20
Total POM	305.43	305.05	229.29	839.77	109.15	108.70	217.85	0.44	0.44	0.01	0.02	0.03	0.03	0.03	0.03	0.03	1.04	0.02	0.01	0.02	3.06	1,505.75	295.48	292.17	331.55	919.20

Pollutant	Petro Tar			Petro Distillate				Petro Pitch							Refined Tar, Petroleum Based						
	Tank 6	Tank 59	Potential Emissions	Tank 17	Tank 223	Tank 10	Potential Emissions	Tank 801	Tank 802	Tank 804	Tank 805	Tank 806	Tank 808	Potential Emissions	Petro Tar	Tank 406 Petro Dist	Total	Petro Tar	Tank 407 Petro Dist	Total	Potential Emissions
VOC	48.13	52.86	100.98	123.39	98.92	27.36	249.67	276.68	276.68	276.68	271.74	276.68	301.49	1,679.94	0.52	0.83	1.35	0.52	0.83	1.35	2.70
Benzene	0.00	0.00	0.00	44.34	35.55	9.83	89.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.00	0.30	0.30	0.60
Biphenyl	3.69	4.05	7.75	0.79	0.64	0.18	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.05	0.04	0.01	0.05	0.09
m-Cresol	0.00	0.00	0.00	0.61	0.49	0.14	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
o-Cresol	0.00	0.00	0.00	0.99	0.79	0.22	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01
p-Cresol	0.00	0.00	0.00	0.51	0.41	0.11	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	0.84	0.92	1.76	0.09	0.07	0.02	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.01	0.02
Ethylbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	18.22	11.23	21.45	32.47	26.03	7.20	65.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.22	0.33	0.11	0.22	0.33	0.66
Phenol	0.00	0.00	0.00	1.03	0.82	0.23	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01
Quinoline	1.09	1.20	2.29	0.79	0.63	0.18	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.01	0.01	0.02	0.03
Styrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	0.00	0.00	0.00	12.33	9.88	2.73	24.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00	0.08	0.08	0.17
m-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	6.90	7.57	14.47	0.80	0.64	0.18	1.63	170.51	170.51	170.51	167.46	170.51	185.79	1,035.28	0.07	0.01	0.08	0.07	0.01	0.08	0.16
Acenaphthylene	2.46	2.70	5.17	0.93	0.75	0.21	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.03	0.03	0.01	0.03	0.07
Anthracene	0.23	0.25	0.48	0.02	0.02	0.01	0.05	14.22	14.22	14.22	13.96	14.22	15.49	86.32	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.82	0.82	0.81	0.82	0.90	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.08	0.08	0.09	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.29	0.28	0.29	0.32	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.16	0.17	0.33	0.02	0.02	0.01	0.05	10.26	10.26	10.26	10.07	10.26	11.18	62.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluorene	2.91	3.20	6.11	0.34	0.27	0.07	0.68	33.29	33.29	33.29	32.70	33.29	36.28	202.14	0.03	0.00	0.03	0.03	0.00	0.03	0.07
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.76	0.84	1.60	0.08	0.07	0.02	0.17	40.56	40.56	40.56	39.83	40.56	44.20	246.26	0.01	0.00	0.01	0.01	0.00	0.01	0.02
Pyrene	0.02	0.03	0.05	0.00	0.00	0.00	0.00	6.49	6.49	6.49	6.37	6.49	7.07	39.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total HAP	29.28	32.16	61.45	96.15	77.08	21.32	194.55	276.52	276.52	276.52	271.59	276.52	301.32	1,679.01	0.32	0.65	0.96	0.32	0.65	0.96	1.93
Total POM	29.28	32.16	61.45	36.36	29.15	8.06	73.56	276.52	276.52	276.52	271.59	276.52	301.32	1,679.01	0.32	0.25	0.56	0.32	0.25	0.56	1.12

Table 5-2D. 2010 Revised Potential Emissions Inventory, Storage Tanks, Summary of Emissions for 100% Decant Oil Distillation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

	Potential Emissions (lbs/yr)																																								
	BFO				Clairton RCO			Unwashed Solvent										Liquid Fuel			CMN	NSR	Naphthalene				Decant Oil			Decant Oil Distillate				Decant Pitch							
Pollutant	Tank 7	Tank 9	Tank 84	Potential Emissions	Tank 7	Tank 9	Potential Emissions	Tank 24	Tank 25	Tank 10	Tank 33	Tank 360	Tank 361	Tank 362	Tank 363	Tank 364	Potential Emissions	Tank 11 Unwashed	Tank 11 Deben	Potential Emissions	Tank 1M	Tank 88	Tank 82	Tank 83	Tank 623	Potential Emissions	Tank 6	Tank 50	Potential Emissions	Tank 17	Tank 223	Tank 10	Potential Emissions	Tank 801	Tank 802	Tank 804	Tank 805	Tank 806	Tank 808	Potential Emissions
VOC	701.86	700.97	526.89	1,929.72	165.40	164.72	330.12	230.57	230.57	4.93	8.69	14.54	14.54	14.54	14.54	14.54	547.46	9.07	118.06	127.13	7.21	2,564.47	295.48	292.17	331.55	919.20	87.84	79.92	167.76	18.10	14.51	4.00	36.61	276.68	276.68	276.68	271.74	276.68	301.49	1,679.94
Benzene	100.74	100.61	75.63	276.98	1.69	1.69	3.38	5.18	5.18	0.11	0.20	0.33	0.33	0.33	0.33	0.33	12.29	0.20	98.17	98.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biphenyl	1.01	1.01	0.76	2.78	0.32	0.32	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	76.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.25	0.07	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Cresol	1.04	1.03	0.78	2.85	0.55	0.55	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Cresol	0.00	0.00	0.00	0.00	1.18	1.17	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Cresol	0.87	0.87	0.65	2.39	0.61	0.61	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.80	6.80	0.15	0.26	0.43	0.43	0.43	0.43	0.43	16.15	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dibenzofuran	0.34	0.34	0.25	0.92	0.18	0.18	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	39.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ethylbenzene	8.66	8.65	6.50	23.82	0.00	0.00	0.00	2.56	2.56	0.05	0.10	0.16	0.16	0.16	0.16	0.16	6.09	0.10	0.28	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naphthalene	297.89	297.51	223.63	819.02	105.89	105.46	211.35	0.44	0.44	0.01	0.02	0.03	0.03	0.03	0.03	0.03	1.04	0.02	0.01	0.02	1.49	829.01	295.48	292.17	331.55	919.20	0.00	0.00	0.00	0.74	0.59	0.16	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	2.04	2.04	1.53	5.61	0.90	0.90	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.16	0.04	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Quinoline	2.21	2.20	1.66	6.06	0.86	0.85	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	148.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.07	0.02	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Styrene	18.21	18.18	13.67	50.06	2.14	2.13	4.27	13.27	13.27	0.28	0.50	0.84	0.84	0.84	0.84	0.84	31.50	0.52	0.18	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	37.90	37.86	28.46	104.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.10	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
m-Xylene	15.07	15.05	11.31	41.42	2.66	2.65	5.30	12.85	12.85	0.27	0.48	0.81	0.81	0.81	0.81	0.81	30.51	0.51	0.48	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
o-Xylene	6.31	6.31	4.74	17.36	0.00	0.00	0.00	5.93	5.93	0.13	0.22	0.37	0.37	0.37	0.37	0.37	14.09	0.23	0.14	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-Xylene	15.52	15.50	11.65	42.67	2.74	2.73	5.46	3.39	3.39	0.07	0.13	0.21	0.21	0.21	0.21	0.21	8.05	0.13	0.50	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Acenaphthene	2.20	2.20	1.65	6.05	1.14	1.13	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	258.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.01	0.12	170.51	170.51	170.51	167.46	170.51	185.79	1,035.28
Acenaphthylene	0.95	0.95	0.72	2.62	0.34	0.34	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.13	0.04	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anthracene	0.02	0.02	0.01	0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	14.22	14.22	14.22	13.96	14.22	15.49	86.32
Benzo(a)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.82	0.82	0.81	0.82	0.90	5.00
Benzo(b)fluoranthene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(k)fluoranthene	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06
Benzo(g,h,i)perylene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benzo(a)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.08	0.08	0.09	0.51
Chrysene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.29	0.28	0.29	0.32	1.76
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fluoranthene	0.02	0.02	0.02	0.06	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.01	0.11	10.26	10.26	10.26	10.07	10.26	11.18	62.27
Fluorene	0.72	0.72	0.54	1.98	0.37	0.37	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	94.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.01	0.07	33.29	33.29	33.29	32.70	33.29	36.28	202.14
Indeno(1,2,3-cd)pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenanthrene	0.08	0.08	0.06	0.22	0.03	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.03	40.56	40.56	40.56	39.83	40.56	44.20	246.26
Pyrene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.49	6.49	6.49	6.37	6.49	7.07	39.40
Total HAP	511.79	511.15	384.21	1,407.15	121.62	121.12	242.74	50.42	50.42	1.08	1.90	3.18	3.18	3.18	3.18	3.18	119.72	1.98	116.86	118.85	3.06	1,505.75	295.48	292.17	331.55	919.20	0.00	0.00	0.00	1.70	1.36	0.38	3.44	276.52	276.52	276.52	271.59	276.52	301.32	1,679.01
Total POM	305.43	305.05	229.29	839.77	109.15	108.70	217.85	0.44	0.44	0.01	0.02	0.03	0.03	0.03	0.03	0.03	1.04	0.02	0.01	0.02	3.06	1,505.75	295.48	292.17	331.55	919.20	0.00	0.00	0.00	1.50	1.20	0.33	3.03	276.52	276.52	276.52	271.59	276.52	301.32	1,679.01

Table 5-3. 2010 Potential Emissions Inventory, Crude Tar Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
30	Crude Tar	Flare or TO	98	11,142,857	365	220	32.0	35.0	17.5	210,566	52.9	Y		0.89	1,203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	14,342	17.83	679.00	0.0069	0.035	14.4	0.669	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
841.35	13,274.88	14,116.23	VOC	100.00	16.83	265.50	282.32
			Benzene	40.567	6.83	107.70	114.53
			Biphenyl	0.188	0.03	0.50	0.53
			m-Cresol	0.593	0.10	1.57	1.67
			o-Cresol	0.475	0.08	1.26	1.34
			p-Cresol	0.630	0.11	1.67	1.78
			Cumene				
			Dibenzofuran	0.124	0.02	0.33	0.35
			Ethylbenzene				
			Naphthalene	17.470	2.94	46.38	49.32
			Phenol	2.211	0.37	5.87	6.24
			Quinoline	0.415	0.07	1.10	1.17
			Styrene	1.621	0.27	4.30	4.58
			Toluene	9.856	1.66	26.17	27.83
			m-Xylene	4.001	0.67	10.62	11.30
			o-Xylene	1.682	0.28	4.47	4.75
			p-Xylene	4.116	0.69	10.93	11.62
			Acenaphthene	0.630	0.11	1.67	1.78
			Acenaphthylene	0.483	0.08	1.28	1.36
			Anthracene	0.025	0.00	0.07	0.07
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.09
			Fluorene	0.278	0.05	0.74	0.79
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.01	0.15	0.16
			Pyrene	0.001	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
40	Crude Tar	Flare or TO	98	11,142,857	365	220	35.0	35.0	17.5	251,898	44.2	Y		0.89	1,203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	17,188	17.86	679.00	0.0069	0.035	14.4	0.669	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
1,007.68	13,274.88	14,282.56	VOC	100.00	20.15	265.50	285.65
			Benzene	40.567	8.18	107.70	115.88
			Biphenyl	0.188	0.04	0.50	0.54
			m-Cresol	0.593	0.12	1.57	1.69
			o-Cresol	0.475	0.10	1.26	1.36
			p-Cresol	0.630	0.13	1.67	1.80
			Cumene				
			Dibenzofuran	0.124	0.02	0.33	0.35
			Ethylbenzene				
			Naphthalene	17.470	3.52	46.38	49.90
			Phenol	2.211	0.45	5.87	6.32
			Quinoline	0.415	0.08	1.10	1.19
			Styrene	1.621	0.33	4.30	4.63
			Toluene	9.856	1.99	26.17	28.15
			m-Xylene	4.001	0.81	10.62	11.43
			o-Xylene	1.682	0.34	4.47	4.81
			p-Xylene	4.116	0.83	10.93	11.76
			Acenaphthene	0.630	0.13	1.67	1.80
			Acenaphthylene	0.483	0.10	1.28	1.38
			Anthracene	0.025	0.01	0.07	0.07
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.09
			Fluorene	0.278	0.06	0.74	0.79
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.01	0.15	0.16
			Pyrene	0.001	0.00	0.00	0.00

Table 5-3. 2010 Potential Emissions Inventory, Crude Tar Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
41	Crude Tar	Flare or TO	98	11,142,857	365	220	35.0	35.0	17.5	251,898	44.2	Y		0.89	1,203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	17,188	17.86	679.00	0.0069	0.035	14.4	0.669	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
1,007.68	13,274.88	14,282.56	VOC	100.00	20.15	265.50	285.65
			Benzene	40.567	8.18	107.70	115.88
			Biphenyl	0.188	0.04	0.50	0.54
			m-Cresol	0.593	0.12	1.57	1.69
			o-Cresol	0.475	0.10	1.26	1.36
			p-Cresol	0.630	0.13	1.67	1.80
			Cumene				
			Dibenzofuran	0.124	0.02	0.33	0.35
			Ethylbenzene				
			Naphthalene	17.470	3.52	46.38	49.90
			Phenol	2.211	0.45	5.87	6.32
			Quinoline	0.415	0.08	1.10	1.19
			Styrene	1.621	0.33	4.30	4.63
			Toluene	9.856	1.99	26.17	28.15
			m-Xylene	4.001	0.81	10.62	11.43
			o-Xylene	1.682	0.34	4.47	4.81
			p-Xylene	4.116	0.83	10.93	11.76
			Acenaphthene	0.630	0.13	1.67	1.80
			Acenaphthylene	0.483	0.10	1.28	1.38
			Anthracene	0.025	0.01	0.07	0.07
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.09
			Fluorene	0.278	0.06	0.74	0.79
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.01	0.15	0.16
			Pyrene	0.001	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
48	Crude Tar	Flare or TO	98	11,142,857	365	220	50.0	35.0	17.5	514,077	21.7	Y		0.89	1,203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	35,384	18.02	679.00	0.0069	0.035	14.4	0.667	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,068.48	13,274.88	15,343.36	VOC	100.00	41.37	265.50	306.87
			Benzene	40.567	16.78	107.70	124.49
			Biphenyl	0.188	0.08	0.50	0.58
			m-Cresol	0.593	0.25	1.57	1.82
			o-Cresol	0.475	0.20	1.26	1.46
			p-Cresol	0.630	0.26	1.67	1.93
			Cumene				
			Dibenzofuran	0.124	0.05	0.33	0.38
			Ethylbenzene				
			Naphthalene	17.470	7.23	46.38	53.61
			Phenol	2.211	0.91	5.87	6.79
			Quinoline	0.415	0.17	1.10	1.27
			Styrene	1.621	0.67	4.30	4.97
			Toluene	9.856	4.08	26.17	30.25
			m-Xylene	4.001	1.66	10.62	12.28
			o-Xylene	1.682	0.70	4.47	5.16
			p-Xylene	4.116	1.70	10.93	12.63
			Acenaphthene	0.630	0.26	1.67	1.93
			Acenaphthylene	0.483	0.20	1.28	1.48
			Anthracene	0.025	0.01	0.07	0.08
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.10
			Fluorene	0.278	0.12	0.74	0.85
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.02	0.15	0.17
			Pyrene	0.001	0.00	0.00	0.00

Table 5-3. 2010 Potential Emissions Inventory, Crude Tar Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
49	Crude Tar	Flare or TO	98	11,142,857	365	220	50.0	35.0	17.5	514,077	21.7	Y		0.89	1.203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	35,384	18.02	679.00	0.0069	0.035	14.4	0.667	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,068.48	13,274.88	15,343.36	VOC	100.00	41.37	265.50	306.87
			Benzene	40.567	16.78	107.70	124.49
			Biphenyl	0.188	0.08	0.50	0.58
			m-Cresol	0.593	0.25	1.57	1.82
			o-Cresol	0.475	0.20	1.26	1.46
			p-Cresol	0.630	0.26	1.67	1.93
			Cumene				
			Dibenzofuran	0.124	0.05	0.33	0.38
			Ethylbenzene				
			Naphthalene	17.470	7.23	46.38	53.61
			Phenol	2.211	0.91	5.87	6.79
			Quinoline	0.415	0.17	1.10	1.27
			Styrene	1.621	0.67	4.30	4.97
			Toluene	9.856	4.08	26.17	30.25
			m-Xylene	4.001	1.66	10.62	12.28
			o-Xylene	1.682	0.70	4.47	5.16
			p-Xylene	4.116	1.70	10.93	12.63
			Acenaphthene	0.630	0.26	1.67	1.93
			Acenaphthylene	0.483	0.20	1.28	1.48
			Anthracene	0.025	0.01	0.07	0.08
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.10
			Fluorene	0.278	0.12	0.74	0.85
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.02	0.15	0.17
			Pyrene	0.001	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
58	Crude Tar	Flare or TO	98	11,142,857	365	220	42.0	42.0	21.0	435,280	25.6	Y		0.89	1.203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	29,700	21.44	679.00	0.0069	0.035	14.4	0.627	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
1,633.10	13,274.88	14,907.99	VOC	100.00	32.66	265.50	298.16
			Benzene	40.567	13.25	107.70	120.95
			Biphenyl	0.188	0.06	0.50	0.56
			m-Cresol	0.593	0.19	1.57	1.77
			o-Cresol	0.475	0.15	1.26	1.41
			p-Cresol	0.630	0.21	1.67	1.88
			Cumene				
			Dibenzofuran	0.124	0.04	0.33	0.37
			Ethylbenzene				
			Naphthalene	17.470	5.71	46.38	52.09
			Phenol	2.211	0.72	5.87	6.59
			Quinoline	0.415	0.14	1.10	1.24
			Styrene	1.621	0.53	4.30	4.83
			Toluene	9.856	3.22	26.17	29.39
			m-Xylene	4.001	1.31	10.62	11.93
			o-Xylene	1.682	0.55	4.47	5.02
			p-Xylene	4.116	1.34	10.93	12.27
			Acenaphthene	0.630	0.21	1.67	1.88
			Acenaphthylene	0.483	0.16	1.28	1.44
			Anthracene	0.025	0.01	0.07	0.08
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.10
			Fluorene	0.278	0.09	0.74	0.83
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.02	0.15	0.17
			Pyrene	0.001	0.00	0.00	0.00

Table 5-3. 2010 Potential Emissions Inventory, Crude Tar Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
6	Crude Tar	Flare or TO	98	11,142,857	365	220	50.0	35.3	17.7	518,484	21.5	Y		0.89	1,203	679.44	95.72 at T_{LA}	0.5229 at T_{LA}	510.25	519.8	500.7	19.1	680	690	670	20	690	670	0.6340 at T_{LX}	0.4385 at T_{LN}	0.1954	35,678	18.17	679.00	0.0069	0.035	14.4	0.665	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,079.93	13,274.88	15,354.81	VOC	100.00	41.60	265.50	307.10
			Benzene	40.567	16.88	107.70	124.58
			Biphenyl	0.188	0.08	0.50	0.58
			m-Cresol	0.593	0.25	1.57	1.82
			o-Cresol	0.475	0.20	1.26	1.46
			p-Cresol	0.630	0.26	1.67	1.93
			Cumene				
			Dibenzofuran	0.124	0.05	0.33	0.38
			Ethylbenzene				
			Naphthalene	17.470	7.27	46.38	53.65
			Phenol	2.211	0.92	5.87	6.79
			Quinoline	0.415	0.17	1.10	1.28
			Styrene	1.621	0.67	4.30	4.98
			Toluene	9.856	4.10	26.17	30.27
			m-Xylene	4.001	1.66	10.62	12.29
			o-Xylene	1.682	0.70	4.47	5.17
			p-Xylene	4.116	1.71	10.93	12.64
			Acenaphthene	0.630	0.26	1.67	1.94
			Acenaphthylene	0.483	0.20	1.28	1.48
			Anthracene	0.025	0.01	0.07	0.08
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.033	0.01	0.09	0.10
			Fluorene	0.278	0.12	0.74	0.85
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.056	0.02	0.15	0.17
			Pyrene	0.001	0.00	0.00	0.00

Table 5-4. 2010 Potential Emissions Inventory, Refined Chemical Oil Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	HL (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
89	Crude RCO	Flare or TO	98	17,520,000	365	210	24.5	30.0	15.0	105,797	165.6	Y		0.89	1,203	669.44	111.43 at T_{LA}	0.4695 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.5869 at T_{LX}	0.3827 at T_{LN}	0.2042	7,192	15.26	669.00	0.0073	0.036	14.4	0.725	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
496.90	21,813.36	22,310.26	VOC	100.00	9.94	436.27	446.21
			Benzene	14.353	1.43	62.62	64.04
			Biphenyl	0.144	0.01	0.63	0.64
			m-Cresol	0.148	0.01	0.64	0.66
			o-Cresol				
			p-Cresol	0.124	0.01	0.54	0.55
			Cumene				
			Dibenzofuran	0.048	0.00	0.21	0.21
			Ethylbenzene	1.234	0.12	5.38	5.51
			Naphthalene	42.443	4.22	185.16	189.38
			Phenol	0.291	0.03	1.27	1.30
			Quinoline	0.314	0.03	1.37	1.40
			Styrene	2.594	0.26	11.32	11.57
			Toluene	5.401	0.54	23.56	24.10
			m-Xylene	2.147	0.21	9.36	9.58
			o-Xylene	0.900	0.09	3.93	4.01
			p-Xylene	2.211	0.22	9.65	9.87
			Acenaphthene	0.314	0.03	1.37	1.40
			Acenaphthylene	0.136	0.01	0.59	0.61
			Anthracene	0.003	0.00	0.01	0.01
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.003	0.00	0.01	0.01
			Fluorene	0.102	0.01	0.45	0.46
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.011	0.00	0.05	0.05
			Pyrene	0.000	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	HL (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
55	Crude RCO	Flare or TO	98	17,520,000	365	210	72.0	30.0	15.0	913,707	19.2	Y		0.89	1,203	669.44	111.43 at T_{LA}	0.4695 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.5869 at T_{LX}	0.3827 at T_{LN}	0.2042	64,126	15.75	669.00	0.0073	0.036	14.4	0.718	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
4,391.39	21,813.36	26,204.75	VOC	100.00	87.83	436.27	524.10
			Benzene	14.353	12.61	62.62	75.22
			Biphenyl	0.144	0.13	0.63	0.76
			m-Cresol	0.148	0.13	0.64	0.77
			o-Cresol				
			p-Cresol	0.124	0.11	0.54	0.65
			Cumene				
			Dibenzofuran	0.048	0.04	0.21	0.25
			Ethylbenzene	1.234	1.08	5.38	6.47
			Naphthalene	42.443	37.28	185.16	222.44
			Phenol	0.291	0.26	1.27	1.52
			Quinoline	0.314	0.28	1.37	1.65
			Styrene	2.594	2.28	11.32	13.59
			Toluene	5.401	4.74	23.56	28.30
			m-Xylene	2.147	1.89	9.36	11.25
			o-Xylene	0.900	0.79	3.93	4.72
			p-Xylene	2.211	1.94	9.65	11.59
			Acenaphthene	0.314	0.28	1.37	1.64
			Acenaphthylene	0.136	0.12	0.59	0.71
			Anthracene	0.003	0.00	0.01	0.01
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.003	0.00	0.01	0.02
			Fluorene	0.102	0.09	0.45	0.54
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.011	0.01	0.05	0.06
			Pyrene	0.000	0.00	0.00	0.00

Table 5-4. 2010 Potential Emissions Inventory, Refined Chemical Oil Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	HL (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	b	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
56	Crude RCO	Flare or TO	98	17,520,000	365	210	72.0	30.0	15.0	913,707	19.2	Y		0.89	1,203	669.44	111.43 at T_{LA}	0.4695 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.5869 at T_{LX}	0.3827 at T_{LN}	0.2042	64,126	15.75	669.00	0.0073	0.036	14.4	0.718	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
4,391.39	21,813.36	26,204.75	**VOC**	100.00	87.83	436.27	524.10
			Benzene	14.353	12.61	62.62	75.22
			Biphenyl	0.144	0.13	0.63	0.76
			m-Cresol	0.148	0.13	0.64	0.77
			o-Cresol				
			p-Cresol	0.124	0.11	0.54	0.65
			Cumene				
			Dibenzofuran	0.048	0.04	0.21	0.25
			Ethylbenzene	1.234	1.08	5.38	6.47
			Naphthalene	42.443	37.28	185.16	222.44
			Phenol	0.291	0.26	1.27	1.52
			Quinoline	0.314	0.28	1.37	1.65
			Styrene	2.594	2.28	11.32	13.59
			Toluene	5.401	4.74	23.56	28.30
			m-Xylene	2.147	1.89	9.36	11.25
			o-Xylene	0.900	0.79	3.93	4.72
			p-Xylene	2.211	1.94	9.65	11.59
			Acenaphthene	0.314	0.28	1.37	1.64
			Acenaphthylene	0.136	0.12	0.59	0.71
			Anthracene	0.003	0.00	0.01	0.01
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.003	0.00	0.01	0.02
			Fluorene	0.102	0.09	0.45	0.54
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.011	0.01	0.05	0.06
			Pyrene	0.000	0.00	0.00	0.00

Table 5-5. 2010 Potential Emissions Inventory, Crude Distillate Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
17	Crude Distillate	Flare or TO	98	15,000,000	365	200	16.0	40.0	20.0	60,162	249.3	Y		0.89	1,203	659.44	129.21 at T_{LA}	0.0456 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.0593 at T_{LX}	0.0358 at T_{LN}	0.0234	4,055	20.17	659.00	0.0008	0.023	14.4	0.954	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
27.53	2,102.65	2,130.17	VOC	100.00	0.55	42.05	42.60
			Benzene				
			Biphenyl	0.420	0.00	0.18	0.18
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.489	0.00	0.21	0.21
			Ethylbenzene				
			Naphthalene	72.073	0.40	30.31	30.71
			Phenol				
			Quinoline	0.968	0.01	0.41	0.41
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	4.767	0.03	2.00	2.03
			Acenaphthylene				
			Anthracene	0.097	0.00	0.04	0.04
			Benzo(a)anthracene	0.001	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.281	0.00	0.12	0.12
			Fluorene	1.576	0.01	0.66	0.67
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.429	0.00	0.18	0.18
			Pyrene	0.009	0.00	0.00	0.00

Table 5-6A. 2010 Potential Emissions Inventory, Coal Tar Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
801	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
802	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Table 5-6A. 2010 Potential Emissions Inventory, Coal Tar Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
804	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
805	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	18.0	18.0	9.0	34,264	112.4	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	2,338	9.19	959.00	0.0012	0.017	14.4	0.966	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
16.73	1,155.85	1,172.58	VOC	100.00	3.35	231.17	234.52
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	0.92	63.49	64.41
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	0.89	61.15	62.04
			Anthracene	6.195	0.21	14.32	14.53
			Benzo(a)anthracene	2.029	0.07	4.69	4.76
			Benzo(b)fluoranthene	1.982	0.07	4.58	4.65
			Benzo(k)fluoranthene	0.137	0.00	0.32	0.32
			Benzo(g,h,i)perylene	0.113	0.00	0.26	0.27
			Benzo(a)pyrene	0.423	0.01	0.98	0.99
			Chrysene	0.579	0.02	1.34	1.36
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	0.68	46.74	47.41
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.24	16.47	16.70
			Pyrene	5.216	0.17	12.06	12.23

Table 5-6A. 2010 Potential Emissions Inventory, Coal Tar Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
806	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
808	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	30.0	45.0	22.5	237,944	16.2	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	16,125	22.81	959.00	0.0012	0.017	14.4	0.920	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
109.88	1,155.85	1,265.73	VOC	100.00	21.98	231.17	253.15
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	6.04	63.49	69.53
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	5.81	61.15	66.97
			Anthracene	6.195	1.36	14.32	15.68
			Benzo(a)anthracene	2.029	0.45	4.69	5.14
			Benzo(b)fluoranthene	1.982	0.44	4.58	5.02
			Benzo(k)fluoranthene	0.137	0.03	0.32	0.35
			Benzo(g,h,i)perylene	0.113	0.02	0.26	0.29
			Benzo(a)pyrene	0.423	0.09	0.98	1.07
			Chrysene	0.579	0.13	1.34	1.47
			Dibenzo(a,h)anthracene	0.067	0.01	0.15	0.17
			Fluoranthene	20.217	4.44	46.74	51.18
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	1.57	16.47	18.03
			Pyrene	5.216	1.15	12.06	13.20

Table 5-6B. 2010 Potential Emissions Inventory, Type A Pitch Storage Tanks, Coal Tar Pitch Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
801	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
802	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Table 5-6B. 2010 Potential Emissions Inventory, Type A Pitch Storage Tanks, Coal Tar Pitch Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
804	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
805	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	18.0	18.0	9.0	34,264	112.4	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	2,338	9.19	959.00	0.0012	0.017	14.4	0.966	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
16.73	1,155.85	1,172.58	VOC	100.00	3.35	231.17	234.52
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	0.92	63.49	64.41
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	0.89	61.15	62.04
			Anthracene	6.195	0.21	14.32	14.53
			Benzo(a)anthracene	2.029	0.07	4.69	4.76
			Benzo(b)fluoranthene	1.982	0.07	4.58	4.65
			Benzo(k)fluoranthene	0.137	0.00	0.32	0.32
			Benzo(g,h,i)perylene	0.113	0.00	0.26	0.27
			Benzo(a)pyrene	0.423	0.01	0.98	0.99
			Chrysene	0.579	0.02	1.34	1.36
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	0.68	46.74	47.41
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.24	16.47	16.70
			Pyrene	5.216	0.17	12.06	12.23

Table 5-6B. 2010 Potential Emissions Inventory, Type A Pitch Storage Tanks, Coal Tar Pitch Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
806	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	26.0	16.0	8.0	63,546	60.6	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	4,391	8.27	959.00	0.0012	0.017	14.4	0.970	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
31.53	1,155.85	1,187.38	VOC	100.00	6.31	231.17	237.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	1.73	63.49	65.22
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	1.67	61.15	62.82
			Anthracene	6.195	0.39	14.32	14.71
			Benzo(a)anthracene	2.029	0.13	4.69	4.82
			Benzo(b)fluoranthene	1.982	0.12	4.58	4.71
			Benzo(k)fluoranthene	0.137	0.01	0.32	0.33
			Benzo(g,h,i)perylene	0.113	0.01	0.26	0.27
			Benzo(a)pyrene	0.423	0.03	0.98	1.01
			Chrysene	0.579	0.04	1.34	1.38
			Dibenzo(a,h)anthracene	0.067	0.00	0.15	0.16
			Fluoranthene	20.217	1.27	46.74	48.01
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	0.45	16.47	16.91
			Pyrene	5.216	0.33	12.06	12.39

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
808	Coal Tar Pitch	Scrubber E	80	3,850,000	365	500	30.0	45.0	22.5	237,944	16.2	Y		0.89	1,203	959.44	176.06 at T_{LA}	0.0716 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.0844 at T_{LX}	0.0617 at T_{LN}	0.0227	16,125	22.81	959.00	0.0012	0.017	14.4	0.920	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
109.88	1,155.85	1,265.73	VOC	100.00	21.98	231.17	253.15
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	27.465	6.04	63.49	69.53
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene	26.453	5.81	61.15	66.97
			Anthracene	6.195	1.36	14.32	15.68
			Benzo(a)anthracene	2.029	0.45	4.69	5.14
			Benzo(b)fluoranthene	1.982	0.44	4.58	5.02
			Benzo(k)fluoranthene	0.137	0.03	0.32	0.35
			Benzo(g,h,i)perylene	0.113	0.02	0.26	0.29
			Benzo(a)pyrene	0.423	0.09	0.98	1.07
			Chrysene	0.579	0.13	1.34	1.47
			Dibenzo(a,h)anthracene	0.067	0.01	0.15	0.17
			Fluoranthene	20.217	4.44	46.74	51.18
			Fluorene				
			Indeno(1,2,3-cd)pyrene	0.012	0.00	0.03	0.03
			Phenanthrene	7.123	1.57	16.47	18.03
			Pyrene	5.216	1.15	12.06	13.20

Table 5-6C.

2010 Potential Emissions Inventory, Type A Pitch Storage Tanks, Petro Pitch Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
801	Petro Pitch	Scrubber E	80	2,566,667	365	500	26.0	16.0	8.0	63,546	40.4	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,242.20	1,294.66	VOC	100.00	10.49	248.44	258.93
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	153.10	159.57
			Acenaphthylene				
			Anthracene	5.138	0.54	12.77	13.30
			Benzo(a)anthracene	0.297	0.03	0.74	0.77
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.26	0.27
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.21	9.60
			Fluorene	12.033	1.26	29.89	31.16
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	36.42	37.96
			Pyrene	2.345	0.25	5.83	6.07

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
802	Petro Pitch	Scrubber E	80	2,566,667	365	500	26.0	16.0	8.0	63,546	40.4	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,242.20	1,294.66	VOC	100.00	10.49	248.44	258.93
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	153.10	159.57
			Acenaphthylene				
			Anthracene	5.138	0.54	12.77	13.30
			Benzo(a)anthracene	0.297	0.03	0.74	0.77
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.26	0.27
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.21	9.60
			Fluorene	12.033	1.26	29.89	31.16
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	36.42	37.96
			Pyrene	2.345	0.25	5.83	6.07

Table 5-6C. 2010 Potential Emissions Inventory, Type A Pitch Storage Tanks, Petro Pitch Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
804	Petro Pitch	Scrubber E	80	2,566,667	365	500	26.0	16.0	8.0	63,546	40.4	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,242.20	1,294.66	VOC	100.00	10.49	248.44	258.93
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	153.10	159.57
			Acenaphthylene				
			Anthracene	5.138	0.54	12.77	13.30
			Benzo(a)anthracene	0.297	0.03	0.74	0.77
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.26	0.27
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.21	9.60
			Fluorene	12.033	1.26	29.89	31.16
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	36.42	37.96
			Pyrene	2.345	0.25	5.83	6.07

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
805	Petro Pitch	Scrubber E	80	2,566,667	365	500	18.0	18.0	9.0	34,264	74.9	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	2,338	9.19	959.00	0.0020	0.017	14.4	0.943	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
27.77	1,242.20	1,269.97	VOC	100.00	5.55	248.44	253.99
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	3.42	153.10	156.53
			Acenaphthylene				
			Anthracene	5.138	0.29	12.77	13.05
			Benzo(a)anthracene	0.297	0.02	0.74	0.76
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.26	0.27
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.21	9.21	9.42
			Fluorene	12.033	0.67	29.89	30.56
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	0.81	36.42	37.23
			Pyrene	2.345	0.13	5.83	5.96

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
806	Petro Pitch	Scrubber E	80	2,566,667	365	500	26.0	16.0	8.0	63,546	40.4	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions % wgt Controlled VOC Emissions

Table 5-6C. 2010 Potential Emissions Inventory, Type A Pitch Storage Tanks, Petro Pitch Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
																													L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)				vapors at T_{LA}	L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)	
																													52.46	1,242.20	1,294.66	VOC			100.00	10.49	248.44	258.93	
																																Benzene							
																																Biphenyl							
																																m-Cresol							
																																o-Cresol							
																																p-Cresol							
																																Cumene							
																																Dibenzofuran							
																																Ethylbenzene							
																																Naphthalene							
																																Phenol							
																																Quinoline							
																																Styrene							
																																Toluene							
																																m-Xylene							
																																o-Xylene							
																																p-Xylene							
																																Acenaphthene			61.626	6.47	153.10	159.57	
																																Acenaphthylene							
																																Anthracene			5.138	0.54	12.77	13.30	
																																Benzo(a)anthracene			0.297	0.03	0.74	0.77	
																																Benzo(b)fluoranthene							
																																Benzo(k)fluoranthene			0.003	0.00	0.01	0.01	
																																Benzo(g,h,i)perylene							
																																Benzo(a)pyrene			0.031	0.00	0.08	0.08	
																																Chrysene			0.105	0.01	0.26	0.27	
																																Dibenzo(a,h)anthracene							
																																Fluoranthene			3.707	0.39	9.21	9.60	
																																Fluorene			12.033	1.26	29.89	31.16	
																																Indeno(1,2,3-cd)pyrene							
																																Phenanthrene			14.659	1.54	36.42	37.96	
																																Pyrene			2.345	0.25	5.83	6.07	
808	Petro Pitch	Scrubber E	80	2,566,667	365	500	30.0	45.0	22.5	237,944	10.8	Y	0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	16,125	22.81	959.00	0.0020	0.017	14.4	0.869	1.000
																													Uncontrolled VOC Emissions						% wgt	Controlled VOC Emissions			
																													L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)				vapors at T_{LA}	L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)	
																													176.50	1,242.20	1,418.70	VOC			100.00	35.30	248.44	283.74	
																																Benzene							
																																Biphenyl							
																																m-Cresol							
																																o-Cresol							
																																p-Cresol							
																																Cumene							
																																Dibenzofuran							
																																Ethylbenzene							
																																Naphthalene							
																																Phenol							
																																Quinoline							
																																Styrene							
																																Toluene							
																																m-Xylene							
																																o-Xylene							
																																p-Xylene							
																																Acenaphthene			61.626	21.75	153.10	174.86	
																																Acenaphthylene							
																																Anthracene			5.138	1.81	12.77	14.58	
																																Benzo(a)anthracene			0.297	0.10	0.74	0.84	
																																Benzo(b)fluoranthene							
																																Benzo(k)fluoranthene			0.003	0.00	0.01	0.01	
																																Benzo(g,h,i)perylene							
																																Benzo(a)pyrene			0.031	0.01	0.08	0.09	
																																Chrysene			0.105	0.04	0.26	0.30	
																																Dibenzo(a,h)anthracene							
																																Fluoranthene			3.707	1.31	9.21	10.52	
																																Fluorene			12.033	4.25	29.89	34.14	
																																Indeno(1,2,3-cd)pyrene							
																																Phenanthrene			14.659	5.17	36.42	41.59	
																																Pyrene			2.345	0.83	5.83	6.65	

Table 5-7A. 2010 Potential Emissions Inventory, Pavement Sealer Base Storage Tanks, Case 1 - Pavement Sealer Base
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
13	PSB	Flare or TO	98	1,395,000	365	450	24.0	20.0	10.0	67,682	20.6	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	4,637	10.25	909.00	0.0125	0.034	14.4	0.694	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
495.32	4,036.69	4,532.01	VOC	100.00	9.91	80.73	90.64
			Benzene				
			Biphenyl	4.690	0.46	3.79	4.25
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.55	4.50	5.05
			Ethylbenzene				
			Naphthalene	14.827	1.47	11.97	13.44
			Phenol				
			Quinoline	4.966	0.49	4.01	4.50
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	1.38	11.22	12.60
			Acenaphthylene				
			Anthracene	2.046	0.20	1.65	1.85
			Benzo(a)anthracene	0.111	0.01	0.09	0.10
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.03
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.36	2.93	3.29
			Fluorene	7.609	0.75	6.14	6.90
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.87	7.10	7.97
			Pyrene	0.649	0.06	0.52	0.59

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
14	PSB	Flare or TO	98	1,395,000	365	450	24.0	16.8	8.4	56,853	24.5	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	3,913	8.65	909.00	0.0125	0.034	14.4	0.729	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
438.98	4,036.69	4,475.68	VOC	100.00	8.78	80.73	89.51
			Benzene				
			Biphenyl	4.690	0.41	3.79	4.20
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.49	4.50	4.99
			Ethylbenzene				
			Naphthalene	14.827	1.30	11.97	13.27
			Phenol				
			Quinoline	4.966	0.44	4.01	4.44
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	1.22	11.22	12.44
			Acenaphthylene				
			Anthracene	2.046	0.18	1.65	1.83
			Benzo(a)anthracene	0.111	0.01	0.09	0.10
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.03
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.32	2.93	3.25
			Fluorene	7.609	0.67	6.14	6.81
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.77	7.10	7.87
			Pyrene	0.649	0.06	0.52	0.58

Table 5-7A. 2010 Potential Emissions Inventory, Pavement Sealer Base Storage Tanks, Case 1 - Pavement Sealer Base
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
251	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
252	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7A. 2010 Potential Emissions Inventory, Pavement Sealer Base Storage Tanks, Case 1 - Pavement Sealer Base
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
253	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
254	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7A. 2010 Potential Emissions Inventory, Pavement Sealer Base Storage Tanks, Case 1 - Pavement Sealer Base
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^2	K_E	DT_v (R)	K_S	Turnover Factor
406	PSB	Flare or TO	98	1,395,000	365	450	12.0	27.0	13.5	22,843	61.1	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,541	13.63	909.00	0.0125	0.034	14.4	0.630	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
149.53	4,036.69	4,186.22	VOC	100.00	2.99	80.73	83.72
			Benzene				
			Biphenyl	4.690	0.14	3.79	3.93
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.17	4.50	4.66
			Ethylbenzene				
			Naphthalene	14.827	0.44	11.97	12.41
			Phenol				
			Quinoline	4.966	0.15	4.01	4.16
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.42	11.22	11.64
			Acenaphthylene				
			Anthracene	2.046	0.06	1.65	1.71
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.11	2.93	3.04
			Fluorene	7.609	0.23	6.14	6.37
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.26	7.10	7.36
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^2	K_E	DT_v (R)	K_S	Turnover Factor
407	PSB	Flare or TO	98	1,395,000	365	450	12.0	27.0	13.5	22,843	61.1	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,541	13.63	909.00	0.0125	0.034	14.4	0.630	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
149.53	4,036.69	4,186.22	VOC	100.00	2.99	80.73	83.72
			Benzene				
			Biphenyl	4.690	0.14	3.79	3.93
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.17	4.50	4.66
			Ethylbenzene				
			Naphthalene	14.827	0.44	11.97	12.41
			Phenol				
			Quinoline	4.966	0.15	4.01	4.16
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.42	11.22	11.64
			Acenaphthylene				
			Anthracene	2.046	0.06	1.65	1.71
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.11	2.93	3.04
			Fluorene	7.609	0.23	6.14	6.37
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.26	7.10	7.36
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7B. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
13	PSB	Flare or TO	98	1,395,000	365	450	24.0	20.0	10.0	67,682	20.6	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	4,637	10.25	909.00	0.0125	0.034	14.4	0.694	1.000

Turnover Factor Set to 1 to allow treatment as a process tank, not storage tank
Standing losses calculated to allow for use of storage tank for PSB

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
495.32	4,036.69	4,532.01	VOC	100.00	9.91	80.73	90.64
			Benzene				
			Biphenyl	4.690	0.46	3.79	4.25
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.55	4.50	5.05
			Ethylbenzene				
			Naphthalene	14.827	1.47	11.97	13.44
			Phenol				
			Quinoline	4.966	0.49	4.01	4.50
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	1.38	11.22	12.60
			Acenaphthylene				
			Anthracene	2.046	0.20	1.65	1.85
			Benzo(a)anthracene	0.111	0.01	0.09	0.10
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.03
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.36	2.93	3.29
			Fluorene	7.609	0.75	6.14	6.90
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.87	7.10	7.97
			Pyrene	0.649	0.06	0.52	0.59

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
14	PSB	Flare or TO	98	1,395,000	365	450	24.0	16.8	8.4	56,853	24.5	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	3,913	8.65	909.00	0.0125	0.034	14.4	0.729	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
438.98	4,036.69	4,475.68	VOC	100.00	8.78	80.73	89.51
			Benzene				
			Biphenyl	4.690	0.41	3.79	4.20
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.49	4.50	4.99
			Ethylbenzene				
			Naphthalene	14.827	1.30	11.97	13.27
			Phenol				
			Quinoline	4.966	0.44	4.01	4.44
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	1.22	11.22	12.44
			Acenaphthylene				
			Anthracene	2.046	0.18	1.65	1.83
			Benzo(a)anthracene	0.111	0.01	0.09	0.10
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.03
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.32	2.93	3.25
			Fluorene	7.609	0.67	6.14	6.81
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.77	7.10	7.87
			Pyrene	0.649	0.06	0.52	0.58

Table 5-7B. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
251	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
252	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7B. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
253	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
254	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7B. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	PSB	Flare or TO	98	1,395,000	365	450	12.0	27.0	13.5	22,843	61.1	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,541	13.63	909.00	0.0125	0.034	14.4	0.630	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
149.53	4,036.69	4,186.22	VOC	100.00	2.99	80.73	83.72
			Benzene				
			Biphenyl	4.690	0.14	3.79	3.93
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.17	4.50	4.66
			Ethylbenzene				
			Naphthalene	14.827	0.44	11.97	12.41
			Phenol				
			Quinoline	4.966	0.15	4.01	4.16
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.42	11.22	11.64
			Acenaphthylene				
			Anthracene	2.046	0.06	1.65	1.71
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.11	2.93	3.04
			Fluorene	7.609	0.23	6.14	6.37
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.26	7.10	7.36
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
407	PSB	Flare or TO	98	1,395,000	365	450	12.0	27.0	13.5	22,843	61.1	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,541	13.63	909.00	0.0125	0.034	14.4	0.630	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
149.53	4,036.69	4,186.22	VOC	100.00	2.99	80.73	83.72
			Benzene				
			Biphenyl	4.690	0.14	3.79	3.93
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.17	4.50	4.66
			Ethylbenzene				
			Naphthalene	14.827	0.44	11.97	12.41
			Phenol				
			Quinoline	4.966	0.15	4.01	4.16
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.42	11.22	11.64
			Acenaphthylene				
			Anthracene	2.046	0.06	1.65	1.71
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.11	2.93	3.04
			Fluorene	7.609	0.23	6.14	6.37
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.26	7.10	7.36
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7C. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of Petro Tar
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
13	Petro Tar Addition	Flare or TO	98	597,857	365	250	24.0	20.0	10.0	67,682	8.8	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	at T_{LX}	at T_{LN}		4,637	10.25	709.00	0.0008	0.020	14.4	0.977	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
14	Petro Tar Addition	Flare or TO	98	597,857	365	250	24.0	16.8	8.4	56,853	10.5	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	at T_{LX}	at T_{LN}		3,913	8.65	709.00	0.0008	0.020	14.4	0.981	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Table 5-7C. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of Petro Tar
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
251	Petro Tar Addition	Flare or TO	98	597,857	365	250	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	709.44	143.89	0.0426	510.25	519.8	500.7	19.1	710	720	700	20	720	700				1,343	17.10	709.00	0.0008	0.020	14.4	0.963	1.000
																	at T_{LA}	at T_{LA}											at T_{LX}	at T_{LN}									

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
252	Petro Tar Addition	Flare or TO	98	597,857	365	250	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	709.44	143.89	0.0426	510.25	519.8	500.7	19.1	710	720	700	20	720	700				1,343	17.10	709.00	0.0008	0.020	14.4	0.963	1.000
																	at T_{LA}	at T_{LA}											at T_{LX}	at T_{LN}									

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Table 5-7C. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of Petro Tar
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
253	Petro Tar Addition	Flare or TO	98	597,857	365	250	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	at T_{LX}	at T_{LN}		1,343	17.10	709.00	0.0008	0.020	14.4	0.963	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
254	Petro Tar Addition	Flare or TO	98	597,857	365	250	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	at T_{LX}	at T_{LN}		1,343	17.10	709.00	0.0008	0.020	14.4	0.963	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Table 5-7C. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 2 - Modified Pavement Sealer Base Production, Addition of Petro Tar
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	Petro Tar Addition	Flare or TO	98	597,857	365	250	12.0	27.0	13.5	22,843	26.2	Y	0.89	1.203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700				1,541	13.63	709.00	0.0008	0.020	14.4	0.970	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

at T_{LX}	at T_{LN}			% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
Uncontrolled VOC Emissions							
L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)					
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
407	Petro Tar Addition	Flare or TO	98	597,857	365	250	12.0	27.0	13.5	22,843	26.2	Y	0.89	1.203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700				1,541	13.63	709.00	0.0008	0.020	14.4	0.970	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

at T_{LX}	at T_{LN}			% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
Uncontrolled VOC Emissions							
L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)					
	87.19	87.19	**VOC**	100.00		1.74	1.74
			Benzene				
			Biphenyl	7.670		0.13	0.13
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738		0.03	0.03
			Ethylbenzene				
			Naphthalene	21.238		0.37	0.37
			Phenol				
			Quinoline	2.271		0.04	0.04
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329		0.25	0.25
			Acenaphthylene	5.117		0.09	0.09
			Anthracene	0.475		0.01	0.01
			Benzo(a)anthracene	0.004		0.00	0.00
			Benzo(b)fluoranthene	0.000		0.00	0.00
			Benzo(k)fluoranthene	0.000		0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000		0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325		0.01	0.01
			Fluorene	6.049		0.11	0.11
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583		0.03	0.03
			Pyrene	0.048		0.00	0.00

Table 5-7D. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
13	PSB	Flare or TO	98	1,395,000	365	450	24.0	20.0	10.0	67,682	20.6	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	4,637	10.25	909.00	0.0125	0.034	14.4	0.694	1.000

Turnover Factor Set to 1 to allow treatment as a process tank, not storage tank
Standing losses calculated to allow for use of storage tank for PSB

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
495.32	4,036.69	4,532.01	VOC	100.00	9.91	80.73	90.64
			Benzene				
			Biphenyl	4.690	0.46	3.79	4.25
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.55	4.50	5.05
			Ethylbenzene				
			Naphthalene	14.827	1.47	11.97	13.44
			Phenol				
			Quinoline	4.966	0.49	4.01	4.50
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	1.38	11.22	12.60
			Acenaphthylene				
			Anthracene	2.046	0.20	1.65	1.85
			Benzo(a)anthracene	0.111	0.01	0.09	0.10
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.03
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.36	2.93	3.29
			Fluorene	7.609	0.75	6.14	6.90
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.87	7.10	7.97
			Pyrene	0.649	0.06	0.52	0.59

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
14	PSB	Flare or TO	98	1,395,000	365	450	24.0	16.8	8.4	56,853	24.5	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	3,913	8.65	909.00	0.0125	0.034	14.4	0.729	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
438.98	4,036.69	4,475.68	VOC	100.00	8.78	80.73	89.51
			Benzene				
			Biphenyl	4.690	0.41	3.79	4.20
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.49	4.50	4.99
			Ethylbenzene				
			Naphthalene	14.827	1.30	11.97	13.27
			Phenol				
			Quinoline	4.966	0.44	4.01	4.44
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	1.22	11.22	12.44
			Acenaphthylene				
			Anthracene	2.046	0.18	1.65	1.83
			Benzo(a)anthracene	0.111	0.01	0.09	0.10
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.03
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.32	2.93	3.25
			Fluorene	7.609	0.67	6.14	6.81
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.77	7.10	7.87
			Pyrene	0.649	0.06	0.52	0.58

Table 5-7D. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
251	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
252	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7D. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
253	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
254	PSB	Flare or TO	98	1,395,000	365	450	10.0	34.0	17.0	19,976	69.8	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,343	17.10	909.00	0.0125	0.034	14.4	0.576	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
119.11	4,036.69	4,155.80	VOC	100.00	2.38	80.73	83.12
			Benzene				
			Biphenyl	4.690	0.11	3.79	3.90
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.13	4.50	4.63
			Ethylbenzene				
			Naphthalene	14.827	0.35	11.97	12.32
			Phenol				
			Quinoline	4.966	0.12	4.01	4.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.33	11.22	11.55
			Acenaphthylene				
			Anthracene	2.046	0.05	1.65	1.70
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.09	2.93	3.02
			Fluorene	7.609	0.18	6.14	6.32
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.21	7.10	7.30
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7D. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of PSB
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	PSB	Flare or TO	98	1,395,000	365	450	12.0	27.0	13.5	22,843	61.1	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,541	13.63	909.00	0.0125	0.034	14.4	0.630	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
149.53	4,036.69	4,186.22	VOC	100.00	2.99	80.73	83.72
			Benzene				
			Biphenyl	4.690	0.14	3.79	3.93
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.17	4.50	4.66
			Ethylbenzene				
			Naphthalene	14.827	0.44	11.97	12.41
			Phenol				
			Quinoline	4.966	0.15	4.01	4.16
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.42	11.22	11.64
			Acenaphthylene				
			Anthracene	2.046	0.06	1.65	1.71
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.11	2.93	3.04
			Fluorene	7.609	0.23	6.14	6.37
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.26	7.10	7.36
			Pyrene	0.649	0.02	0.52	0.54

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
407	PSB	Flare or TO	98	1,395,000	365	450	12.0	27.0	13.5	22,843	61.1	Y		0.89	1,203	909.44	149.66 at T_{LA}	0.8124 at T_{LA}	510.25	519.8	500.7	19.1	910	920	900	20	920	900	0.9528 at T_{LX}	0.7025 at T_{LN}	0.2503	1,541	13.63	909.00	0.0125	0.034	14.4	0.630	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
149.53	4,036.69	4,186.22	VOC	100.00	2.99	80.73	83.72
			Benzene				
			Biphenyl	4.690	0.14	3.79	3.93
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	5.571	0.17	4.50	4.66
			Ethylbenzene				
			Naphthalene	14.827	0.44	11.97	12.41
			Phenol				
			Quinoline	4.966	0.15	4.01	4.16
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	13.902	0.42	11.22	11.64
			Acenaphthylene				
			Anthracene	2.046	0.06	1.65	1.71
			Benzo(a)anthracene	0.111	0.00	0.09	0.09
			Benzo(b)fluoranthene	0.029	0.00	0.02	0.02
			Benzo(k)fluoranthene	0.003	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.002	0.00	0.00	0.00
			Benzo(a)pyrene	0.009	0.00	0.01	0.01
			Chrysene	0.021	0.00	0.02	0.02
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	3.633	0.11	2.93	3.04
			Fluorene	7.609	0.23	6.14	6.37
			Indeno(1,2,3-cd)pyrene	0.001	0.00	0.00	0.00
			Phenanthrene	8.789	0.26	7.10	7.36
			Pyrene	0.649	0.02	0.52	0.54

Table 5-7E. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of CMN
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
13	CMN Addition	Flare or TO	98	597,857	365	70	24.0	20.0	10.0	67,682	8.8	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520				4,637	10.25	529.00	0.0000	0.027	14.4	1.000	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

at T_{LX} Uncontrolled VOC Emissions L_S (lb/yr)	at T_{LN} Uncontrolled VOC Emissions L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	VOC	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
14	CMN Addition	Flare or TO	98	597,857	365	70	24.0	16.8	8.4	56,853	10.5	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520				3,913	8.65	529.00	0.0000	0.027	14.4	1.000	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

at T_{LX} Uncontrolled VOC Emissions L_S (lb/yr)	at T_{LN} Uncontrolled VOC Emissions L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	VOC	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Table 5-7E. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of CMN
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
251	CMN Addition	Flare or TO	98	597,857	365	70	10.0	34.0	17.0	19,976	29.9	Y		0.89	1.203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520				1,343	17.10	529.00	0.0000	0.027	14.4	0.999	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

at T_{LX}	at T_{LN}						
Uncontrolled VOC Emissions				% wgt vapors at T_{LA}	Controlled VOC Emissions		
L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)			L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	VOC	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
252	CMN Addition	Flare or TO	98	597,857	365	70	10.0	34.0	17.0	19,976	29.9	Y		0.89	1.203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520				1,343	17.10	529.00	0.0000	0.027	14.4	0.999	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

at T_{LX}	at T_{LN}						
Uncontrolled VOC Emissions				% wgt vapors at T_{LA}	Controlled VOC Emissions		
L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)			L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	VOC	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Table 5-7E. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of CMN
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
253	CMN Addition	Flare or TO	98	597,857	365	70	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	at T_{LX}	at T_{LN}		1,343	17.10	529.00	0.0000	0.027	14.4	0.999	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	**VOC**	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
254	CMN Addition	Flare or TO	98	597,857	365	70	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	at T_{LX}	at T_{LN}		1,343	17.10	529.00	0.0000	0.027	14.4	0.999	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	**VOC**	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Table 5-7E. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of CMN
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	CMN Addition	Flare or TO	98	597,857	365	70	12.0	27.0	13.5	22,843	26.2	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520				1,541	13.63	529.00	0.0000	0.027	14.4	0.999	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr) at T_{LX}	Total (lb/yr) at T_{LN}		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	**VOC**	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
407	CMN Addition	Flare or TO	98	597,857	365	70	12.0	27.0	13.5	22,843	26.2	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520				1,541	13.63	529.00	0.0000	0.027	14.4	0.999	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr) at T_{LX}	Total (lb/yr) at T_{LN}		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	1.56	1.56	**VOC**	100.00		0.03	0.03
			Benzene				
			Biphenyl	1.922		0.00	0.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166		0.00	0.00
			Ethylbenzene				
			Naphthalene	20.677		0.01	0.01
			Phenol				
			Quinoline	15.709		0.00	0.00
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630		0.00	0.00
			Acenaphthylene				
			Anthracene	0.001		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000		0.00	0.00
			Fluorene	0.380		0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003		0.00	0.00
			Pyrene	0.000		0.00	0.00

Table 5-7F. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of NSR
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
13	NSR Addition	Flare or TO	98	597,857	365	160	24.0	20.0	10.0	67,682	8.8	Y		0.89	1.203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610	at T_{LX}	at T_{LN}		4,637	10.25	619.00	0.0003	0.023	14.4	0.993	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	VOC	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
14	NSR Addition	Flare or TO	98	597,857	365	160	24.0	16.8	8.4	56,853	10.5	Y		0.89	1.203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610	at T_{LX}	at T_{LN}		3,913	8.65	619.00	0.0003	0.023	14.4	0.994	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	VOC	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Table 5-7F. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of NSR
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
251	NSR Addition	Flare or TO	98	597,857	365	160	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610	at T_{LX}	at T_{LN}		1,343	17.10	619.00	0.0003	0.023	14.4	0.988	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	VOC	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
252	NSR Addition	Flare or TO	98	597,857	365	160	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610	at T_{LX}	at T_{LN}		1,343	17.10	619.00	0.0003	0.023	14.4	0.988	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	VOC	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Table 5-7F. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of NSR
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
253	NSR Addition	Flare or TO	98	597,857	365	160	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610	at T_{LX}	at T_{LN}		1,343	17.10	619.00	0.0003	0.023	14.4	0.988	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	**VOC**	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
254	NSR Addition	Flare or TO	98	597,857	365	160	10.0	34.0	17.0	19,976	29.9	Y		0.89	1,203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610	at T_{LX}	at T_{LN}		1,343	17.10	619.00	0.0003	0.023	14.4	0.988	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	**VOC**	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Table 5-7F. 2010 Potential Emissions Inventory,Refined Tar/Pavement Sealer Base Storage Tanks, Case 3 - Refined Tar Production, Addition of NSR
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	NSR Addition	Flare or TO	98	597,857	365	160	12.0	27.0	13.5	22,843	26.2	Y		0.89	1,203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610				1,541	13.63	619.00	0.0003	0.023	14.4	0.991	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions at T_{LX} L_S (lb/yr)	at T_{LN} L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	**VOC**	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
407	NSR Addition	Flare or TO	98	597,857	365	160	12.0	27.0	13.5	22,843	26.2	Y		0.89	1,203	619.44	138.66 at T_{LA}	0.0131 at T_{LA}	510.25	519.8	500.7	19.1	620	630	610	20	630	610				1,541	13.63	619.00	0.0003	0.023	14.4	0.991	1.000

No Standing Losses for the addition of material.
Standing losses accounted for in PSB addition
Turnover Factor Set to 1

Uncontrolled VOC Emissions at T_{LX} L_S (lb/yr)	at T_{LN} L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
	25.75	25.75	**VOC**	100.00		0.52	0.52
			Benzene				
			Biphenyl	2.642		0.01	0.01
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.234		0.01	0.01
			Ethylbenzene				
			Naphthalene	34.818		0.18	0.18
			Phenol				
			Quinoline	5.921		0.03	0.03
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	9.787		0.05	0.05
			Acenaphthylene	1.738		0.01	0.01
			Anthracene	0.053		0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.062		0.00	0.00
			Fluorene	3.393		0.02	0.02
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.234		0.00	0.00
			Pyrene	0.001		0.00	0.00

Table 5-8. 2010 Potential Emissions Inventory, Cap Water Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
5	Cap Water	None		3,000,000	365	130	50.0	35.0	17.5	514,077	5.8	Y		0.89	1,203	589.44	89.29 at T_{LA}	0.0063 at T_{LA}	510.25	519.8	500.7	19.1	590	600	580	20	600	580	0.0080 at T_{LX}	0.0051 at T_{LN}	0.0029	35,384	18.02	589.00	0.0001	0.025	14.4	0.994	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
28.13	40.18	68.31	VOC	100.00	28.13	40.18	68.31
			Benzene	56.203	15.81	22.58	38.39
			Biphenyl	0.059	0.02	0.02	0.04
			m-Cresol	0.274	0.08	0.11	0.19
			o-Cresol	0.234	0.07	0.09	0.16
			p-Cresol	0.205	0.06	0.08	0.14
			Cumene				
			Dibenzofuran	0.034	0.01	0.01	0.02
			Ethylbenzene				
			Naphthalene	10.580	2.98	4.25	7.23
			Phenol	1.057	0.30	0.42	0.72
			Quinoline	0.219	0.06	0.09	0.15
			Styrene				
			Toluene	12.127	3.41	4.87	8.28
			m-Xylene	3.970	1.12	1.60	2.71
			o-Xylene				
			p-Xylene	4.143	1.17	1.66	2.83
			Acenaphthene	0.290	0.08	0.12	0.20
			Acenaphthylene	0.222	0.06	0.09	0.15
			Anthracene	0.005	0.00	0.00	0.00
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.010	0.00	0.00	0.01
			Fluorene	0.111	0.03	0.04	0.08
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.011	0.00	0.00	0.01
			Pyrene	0.000	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
51	Cap Water	None		3,000,000	365	130	72.0	35.0	17.5	1,065,991	2.8	Y		0.89	1,203	589.44	89.29 at T_{LA}	0.0063 at T_{LA}	510.25	519.8	500.7	19.1	590	600	580	20	600	580	0.0080 at T_{LX}	0.0051 at T_{LN}	0.0029	74,305	18.25	589.00	0.0001	0.025	14.4	0.994	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
59.07	40.18	99.25	VOC	100.00	59.07	40.18	99.25
			Benzene	56.203	33.20	22.58	55.78
			Biphenyl	0.059	0.04	0.02	0.06
			m-Cresol	0.274	0.16	0.11	0.27
			o-Cresol	0.234	0.14	0.09	0.23
			p-Cresol	0.205	0.12	0.08	0.20
			Cumene				
			Dibenzofuran	0.034	0.02	0.01	0.03
			Ethylbenzene				
			Naphthalene	10.580	6.25	4.25	10.50
			Phenol	1.057	0.62	0.42	1.05
			Quinoline	0.219	0.13	0.09	0.22
			Styrene				
			Toluene	12.127	7.16	4.87	12.04
			m-Xylene	3.970	2.35	1.60	3.94
			o-Xylene				
			p-Xylene	4.143	2.45	1.66	4.11
			Acenaphthene	0.290	0.17	0.12	0.29
			Acenaphthylene	0.222	0.13	0.09	0.22
			Anthracene	0.005	0.00	0.00	0.01
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.010	0.01	0.00	0.01
			Fluorene	0.111	0.07	0.04	0.11
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.011	0.01	0.00	0.01
			Pyrene	0.000	0.00	0.00	0.00

Table 5-8.

2010 Potential Emissions Inventory, Cap Water Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
52	Cap Water	None		3,000,000	365	130	72.0	35.0	17.5	1,065,991	2.8	Y		0.89	1,203	589.44	89.29 at T_{LA}	0.0063 at T_{LA}	510.25	519.8	500.7	19.1	590	600	580	20	600	580	0.0080 at T_{LX}	0.0051 at T_{LN}	0.0029	74,305	18.25	589.00	0.0001	0.025	14.4	0.994	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
59.07	40.18	99.25	VOC	100.00	59.07	40.18	99.25
			Benzene	56.203	33.20	22.58	55.78
			Biphenyl	0.059	0.04	0.02	0.06
			m-Cresol	0.274	0.16	0.11	0.27
			o-Cresol	0.234	0.14	0.09	0.23
			p-Cresol	0.205	0.12	0.08	0.20
			Cumene				
			Dibenzofuran	0.034	0.02	0.01	0.03
			Ethylbenzene				
			Naphthalene	10.580	6.25	4.25	10.50
			Phenol	1.057	0.62	0.42	1.05
			Quinoline	0.219	0.13	0.09	0.22
			Styrene				
			Toluene	12.127	7.16	4.87	12.04
			m-Xylene	3.970	2.35	1.60	3.94
			o-Xylene				
			p-Xylene	4.143	2.45	1.66	4.11
			Acenaphthene	0.290	0.17	0.12	0.29
			Acenaphthylene	0.222	0.13	0.09	0.22
			Anthracene	0.005	0.00	0.00	0.01
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.010	0.01	0.00	0.01
			Fluorene	0.111	0.07	0.04	0.11
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.011	0.01	0.00	0.01
			Pyrene	0.000	0.00	0.00	0.00

Table 5-9. 2010 Potential Emissions Inventory, Petro Tar Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	l	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
50	Petro Tar	Flare or TO	98	15,000,000	365	250	72.0	35.0	17.5	1,065,991	14.1	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	0.0547 at T_{LX}	0.0538 at T_{LN}	0.0209	74,305	18.25	709.00	0.0008	0.022	14.4	0.960	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
455.41	2,187.55	2,642.96	VOC	100.00	9.11	43.75	52.86
			Benzene				
			Biphenyl	7.670	0.70	3.36	4.05
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738	0.16	0.76	0.92
			Ethylbenzene				
			Naphthalene	21.238	1.93	9.29	11.23
			Phenol				
			Quinoline	2.271	0.21	0.99	1.20
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329	1.31	6.27	7.57
			Acenaphthylene	5.117	0.47	2.24	2.70
			Anthracene	0.475	0.04	0.21	0.25
			Benzo(a)anthracene	0.004	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325	0.03	0.14	0.17
			Fluorene	6.049	0.55	2.65	3.20
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583	0.14	0.69	0.84
			Pyrene	0.048	0.00	0.02	0.03

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	l	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
6	Petro Tar	Flare or TO	98	15,000,000	365	250	50.0	35.3	17.7	518,484	28.9	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	0.0547 at T_{LX}	0.0538 at T_{LN}	0.0209	35,678	18.17	709.00	0.0008	0.022	14.4	0.961	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
218.71	2,187.55	2,406.26	VOC	100.00	4.37	43.75	48.13
			Benzene				
			Biphenyl	7.670	0.34	3.36	3.69
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738	0.08	0.76	0.84
			Ethylbenzene				
			Naphthalene	21.238	0.93	9.29	10.22
			Phenol				
			Quinoline	2.271	0.10	0.99	1.09
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329	0.63	6.27	6.90
			Acenaphthylene	5.117	0.22	2.24	2.46
			Anthracene	0.475	0.02	0.21	0.23
			Benzo(a)anthracene	0.004	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325	0.01	0.14	0.16
			Fluorene	6.049	0.26	2.65	2.91
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583	0.07	0.69	0.76
			Pyrene	0.048	0.00	0.02	0.02

Table 5-10. 2010 Potential Emissions Inventory, Petro Distillate Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
17	Petro Distillate	Flare or TO	98	13,500,000	365	200	16.0	40.0	20.0	60,162	224.4	Y		0.89	1,203	659.44	100.64 at T_{LA}	0.1880 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.2328 at T_{LX}	0.1547 at T_{LN}	0.0781	4,055	20.17	659.00	0.0027	0.027	14.4	0.833	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
89.68	6,079.67	6,169.35	VOC	100.00	1.79	121.59	123.39
			Benzene	35.935	0.64	43.69	44.34
			Biphenyl	0.644	0.01	0.78	0.79
			m-Cresol	0.495	0.01	0.60	0.61
			o-Cresol	0.802	0.01	0.98	0.99
			p-Cresol	0.410	0.01	0.50	0.51
			Cumene				
			Dibenzofuran	0.073	0.00	0.09	0.09
			Ethylbenzene				
			Naphthalene	26.317	0.47	32.00	32.47
			Phenol	0.831	0.01	1.01	1.03
			Quinoline	0.640	0.01	0.78	0.79
			Styrene				
			Toluene	9.989	0.18	12.15	12.33
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	0.652	0.01	0.79	0.80
			Acenaphthylene	0.757	0.01	0.92	0.93
			Anthracene	0.020	0.00	0.02	0.02
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.020	0.00	0.02	0.02
			Fluorene	0.274	0.00	0.33	0.34
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.067	0.00	0.08	0.08
			Pyrene	0.001	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
223	Petro Distillate	Flare or TO	98	10,800,000	365	200	16.0	36.0	18.0	54,146	199.5	Y		0.89	1,203	659.44	100.64 at T_{LA}	0.1880 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.2328 at T_{LX}	0.1547 at T_{LN}	0.0781	3,653	18.17	659.00	0.0027	0.027	14.4	0.847	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
82.15	4,863.73	4,945.89	VOC	100.00	1.64	97.27	98.92
			Benzene	35.935	0.59	34.96	35.55
			Biphenyl	0.644	0.01	0.63	0.64
			m-Cresol	0.495	0.01	0.48	0.49
			o-Cresol	0.802	0.01	0.78	0.79
			p-Cresol	0.410	0.01	0.40	0.41
			Cumene				
			Dibenzofuran	0.073	0.00	0.07	0.07
			Ethylbenzene				
			Naphthalene	26.317	0.43	25.60	26.03
			Phenol	0.831	0.01	0.81	0.82
			Quinoline	0.640	0.01	0.62	0.63
			Styrene				
			Toluene	9.989	0.16	9.72	9.88
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	0.652	0.01	0.63	0.64
			Acenaphthylene	0.757	0.01	0.74	0.75
			Anthracene	0.020	0.00	0.02	0.02
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.020	0.00	0.02	0.02
			Fluorene	0.274	0.00	0.27	0.27
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.067	0.00	0.07	0.07
			Pyrene	0.001	0.00	0.00	0.00

Table 5-10. 2010 Potential Emissions Inventory, Petro Distillate Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	l	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	V_V (ft^3)	H_{VO} (ft)	T_B (R)	W_V lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
10	Petro Distillate	Flare or TO	98	2,700,000	365	200	22.0	35.0	17.5	99,525	27.1	Y		0.89	1,203	659.44	100.64 at T_{LA}	0.1880 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.2328 at T_{LX}	0.1547 at T_{LN}	0.0781	6,739	17.73	659.00	0.0027	0.027	14.4	0.850	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
152.14	1,215.93	1,368.07	VOC	100.00	3.04	24.32	27.36
			Benzene	35.935	1.09	8.74	9.83
			Biphenyl	0.644	0.02	0.16	0.18
			m-Cresol	0.495	0.02	0.12	0.14
			o-Cresol	0.802	0.02	0.20	0.22
			p-Cresol	0.410	0.01	0.10	0.11
			Cumene				
			Dibenzofuran	0.073	0.00	0.02	0.02
			Ethylbenzene				
			Naphthalene	26.317	0.80	6.40	7.20
			Phenol	0.831	0.03	0.20	0.23
			Quinoline	0.640	0.02	0.16	0.18
			Styrene				
			Toluene	9.989	0.30	2.43	2.73
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	0.652	0.02	0.16	0.18
			Acenaphthylene	0.757	0.02	0.18	0.21
			Anthracene	0.020	0.00	0.00	0.01
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.020	0.00	0.00	0.01
			Fluorene	0.274	0.01	0.07	0.07
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.067	0.00	0.02	0.02
			Pyrene	0.001	0.00	0.00	0.00

Table 5-11. 2010 Potential Emissions Inventory, Petro Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
801	Petro Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
802	Petro Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Table 5-11. 2010 Potential Emissions Inventory, Petro Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
804	Petro Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
805	Petro Pitch	Scrubber E	80	2,750,000	365	500	18.0	18.0	9.0	34,264	80.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	2,338	9.19	959.00	0.0020	0.017	14.4	0.943	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
27.77	1,330.93	1,358.70	VOC	100.00	5.55	266.19	271.74
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	3.42	164.04	167.46
			Acenaphthylene				
			Anthracene	5.138	0.29	13.68	13.96
			Benzo(a)anthracene	0.297	0.02	0.79	0.81
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.28
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.21	9.87	10.07
			Fluorene	12.033	0.67	32.03	32.70
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	0.81	39.02	39.83
			Pyrene	2.345	0.13	6.24	6.37

Table 5-11. 2010 Potential Emissions Inventory, Petro Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
806	Petro Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
808	Petro Pitch	Scrubber E	80	2,750,000	365	500	30.0	45.0	22.5	237,944	11.6	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	16,125	22.81	959.00	0.0020	0.017	14.4	0.869	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
176.50	1,330.93	1,507.43	VOC	100.00	35.30	266.19	301.49
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	21.75	164.04	185.79
			Acenaphthylene				
			Anthracene	5.138	1.81	13.68	15.49
			Benzo(a)anthracene	0.297	0.10	0.79	0.90
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.01	0.08	0.09
			Chrysene	0.105	0.04	0.28	0.32
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	1.31	9.87	11.18
			Fluorene	12.033	4.25	32.03	36.28
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	5.17	39.02	44.20
			Pyrene	2.345	0.83	6.24	7.07

Table 5-12. 2010 Potential Emissions Inventory, Decanted Oil Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	V_V (ft^3)	H_{VO} (ft)	T_B (R)	W_V lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
50	Decanted Oil	Flare or TO	98	15,000,000	365	250	72.0	35.0	17.5	1,065,991	14.1	Y		0.89	1.203	709.44	190.00 at T_{LA}	0.0535 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	0.0692 at T_{LX}	0.0422 at T_{LN}	0.0270	74,305	18.25	709.00	0.0013	0.022	14.4	0.951	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
762.42	3,629.63	4,392.05	VOC	100.00	15.25	72.59	87.84
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	V_V (ft^3)	H_{VO} (ft)	T_B (R)	W_V lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
6	Decanted Oil	Flare or TO	98	15,000,000	365	250	50.0	35.3	17.7	518,484	28.9	Y		0.89	1.203	709.44	190.00 at T_{LA}	0.0535 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	0.0692 at T_{LX}	0.0422 at T_{LN}	0.0270	35,678	18.17	709.00	0.0013	0.022	14.4	0.951	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
366.16	3,629.63	3,995.79	VOC	100.00	7.32	72.59	79.92
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-13. 2010 Potential Emissions Inventory, Decant Oil Distillate Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
17	Decanted Oil Distillate	Flare or TO	98	13,500,000	365	200	16.0	40.0	20.0	60,162	224.4	Y		0.89	1,203	659.44	177.90 at T_{LA}	0.0156 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.0210 at T_{LX}	0.0119 at T_{LN}	0.0091	4,055	20.17	659.00	0.0004	0.022	14.4	0.984	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
12.83	892.36	905.19	VOC	100.00	0.26	17.85	18.10
			Benzene				
			Biphenyl	1.729	0.00	0.31	0.31
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.185	0.00	0.03	0.03
			Ethylbenzene				
			Naphthalene	4.086	0.01	0.73	0.74
			Phenol	1.125	0.00	0.20	0.20
			Quinoline	0.478	0.00	0.09	0.09
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	0.323	0.00	0.06	0.06
			Acenaphthylene	0.887	0.00	0.16	0.16
			Anthracene	0.016	0.00	0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.312	0.00	0.06	0.06
			Fluorene	0.185	0.00	0.03	0.03
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.070	0.00	0.01	0.01
			Pyrene	0.012	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_E (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
223	Decanted Oil Distillate	Flare or TO	98	10,800,000	365	200	16.0	36.0	18.0	54,146	199.5	Y		0.89	1,203	659.44	177.90 at T_{LA}	0.0156 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.0210 at T_{LX}	0.0119 at T_{LN}	0.0091	3,653	18.17	659.00	0.0004	0.022	14.4	0.985	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
11.58	713.89	725.46	VOC	100.00	0.23	14.28	14.51
			Benzene				
			Biphenyl	1.729	0.00	0.25	0.25
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.185	0.00	0.03	0.03
			Ethylbenzene				
			Naphthalene	4.086	0.01	0.58	0.59
			Phenol	1.125	0.00	0.16	0.16
			Quinoline	0.478	0.00	0.07	0.07
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	0.323	0.00	0.05	0.05
			Acenaphthylene	0.887	0.00	0.13	0.13
			Anthracene	0.016	0.00	0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.312	0.00	0.04	0.05
			Fluorene	0.185	0.00	0.03	0.03
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.070	0.00	0.01	0.01
			Pyrene	0.012	0.00	0.00	0.00

Table 5-13. 2010 Potential Emissions Inventory, Decant Oil Distillate Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol) at T_{LA}	Pva (psia) at T_{LA}	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia) at T_{LX}	P_{LN} (psia) at T_{LN}	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
10	Decanted Oil Distillate	Flare or TO	98	2,700,000	365	200	22.0	35.0	17.5	99,525	27.1	Y		0.89	1,203	659.44	177.90	0.0156	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.0210	0.0119	0.0091	6,739	17.73	659.00	0.0004	0.022	14.4	0.986	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
21.37	178.47	199.84

	% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
VOC	100.00	0.43	3.57	4.00
Benzene				
Biphenyl	1.729	0.01	0.06	0.07
m-Cresol				
o-Cresol				
p-Cresol				
Cumene				
Dibenzofuran	0.185	0.00	0.01	0.01
Ethylbenzene				
Naphthalene	4.086	0.02	0.15	0.16
Phenol	1.125	0.00	0.04	0.04
Quinoline	0.478	0.00	0.02	0.02
Styrene				
Toluene				
m-Xylene				
o-Xylene				
p-Xylene				
Acenaphthene	0.323	0.00	0.01	0.01
Acenaphthylene	0.887	0.00	0.03	0.04
Anthracene	0.016	0.00	0.00	0.00
Benzo(a)anthracene				
Benzo(b)fluoranthene				
Benzo(k)fluoranthene				
Benzo(g,h,i)perylene				
Benzo(a)pyrene				
Chryscne				
Dibenzo(a,h)anthracene				
Fluoranthene	0.312	0.00	0.01	0.01
Fluorene	0.185	0.00	0.01	0.01
Indeno(1,2,3-cd)pyrene				
Phenanthrene	0.070	0.00	0.00	0.00
Pyrene	0.012	0.00	0.00	0.00

Table 5-14. 2010 Potential Emissions Inventory, Decant Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^2	K_E	DT_v (R)	K_S	Turnover Factor
801	Decant Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^2	K_E	DT_v (R)	K_S	Turnover Factor
802	Decant Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Table 5-14. 2010 Potential Emissions Inventory, Decant Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
804	Decant Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
805	Decant Pitch	Scrubber E	80	2,750,000	365	500	18.0	18.0	9.0	34,264	80.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	2,338	9.19	959.00	0.0020	0.017	14.4	0.943	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
27.77	1,330.93	1,358.70	VOC	100.00	5.55	266.19	271.74
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	3.42	164.04	167.46
			Acenaphthylene				
			Anthracene	5.138	0.29	13.68	13.96
			Benzo(a)anthracene	0.297	0.02	0.79	0.81
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.28
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.21	9.87	10.07
			Fluorene	12.033	0.67	32.03	32.70
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	0.81	39.02	39.83
			Pyrene	2.345	0.13	6.24	6.37

Table 5-14. 2010 Potential Emissions Inventory, Decant Pitch Storage Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
806	Decant Pitch	Scrubber E	80	2,750,000	365	500	26.0	16.0	8.0	63,546	43.3	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	4,391	8.27	959.00	0.0020	0.017	14.4	0.948	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
52.46	1,330.93	1,383.39	VOC	100.00	10.49	266.19	276.68
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	6.47	164.04	170.51
			Acenaphthylene				
			Anthracene	5.138	0.54	13.68	14.22
			Benzo(a)anthracene	0.297	0.03	0.79	0.82
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.00	0.08	0.08
			Chrysene	0.105	0.01	0.28	0.29
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	0.39	9.87	10.26
			Fluorene	12.033	1.26	32.03	33.29
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	1.54	39.02	40.56
			Pyrene	2.345	0.25	6.24	6.49

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
808	Decant Pitch	Scrubber E	80	2,750,000	365	500	30.0	45.0	22.5	237,944	11.6	Y		0.89	1,203	959.44	162.58 at T_{LA}	0.1251 at T_{LA}	510.25	519.8	500.7	19.1	960	970	950	20	970	950	0.1452 at T_{LX}	0.1092 at T_{LN}	0.0360	16,125	22.81	959.00	0.0020	0.017	14.4	0.869	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
176.50	1,330.93	1,507.43	VOC	100.00	35.30	266.19	301.49
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene				
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	61.626	21.75	164.04	185.79
			Acenaphthylene				
			Anthracene	5.138	1.81	13.68	15.49
			Benzo(a)anthracene	0.297	0.10	0.79	0.90
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene	0.003	0.00	0.01	0.01
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene	0.031	0.01	0.08	0.09
			Chrysene	0.105	0.04	0.28	0.32
			Dibenzo(a,h)anthracene				
			Fluoranthene	3.707	1.31	9.87	11.18
			Fluorene	12.033	4.25	32.03	36.28
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	14.659	5.17	39.02	44.20
			Pyrene	2.345	0.83	6.24	7.07

Table 5-15. 2010 Potential Emissions Inventory, Refined Tar, Petroleum Based, Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	Petro Tar	Flare or TO	98	112,320	365	250	12.0	27.0	13.5	22,843	4.9	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	0.0547 at T_{LX}	0.0338 at T_{LN}	0.0209	1,541	13.63	709.00	0.0008	0.022	14.4	0.970	1.000

Turnover factor set to 1 - process tank

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
9.54	16.38	25.92	VOC	100.00	0.19	0.33	0.52
			Benzene				
			Biphenyl	7.670	0.01	0.03	0.04
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.738	0.00	0.01	0.01
			Ethylbenzene				
			Naphthalene	21.238	0.04	0.07	0.11
			Phenol				
			Quinoline	2.271	0.00	0.01	0.01
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	14.329	0.03	0.05	0.07
			Acenaphthylene	5.117	0.01	0.02	0.03
			Anthracene	0.475	0.00	0.00	0.00
			Benzo(a)anthracene	0.004	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.325	0.00	0.00	0.00
			Fluorene	6.049	0.01	0.02	0.03
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	1.583	0.00	0.01	0.01
			Pyrene	0.048	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
406	Petro Distillate	Flare or TO	98	12,480	365	200	12.0	27.0	13.5	22,843	0.5	Y		0.89	1,203	659.44	100.64 at T_{LA}	0.1880 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.2328 at T_{LX}	0.1547 at T_{LN}	0.0781	1,541	13.63	659.00	0.0027	0.027	14.4	0.880	1.000

Turnover factor set to 1 - process tank

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
36.04	5.62	41.66	VOC	100.00	0.72	0.11	0.83
			Benzene	35.935	0.26	0.04	0.30
			Biphenyl	0.644	0.00	0.00	0.01
			m-Cresol	0.495	0.00	0.00	0.00
			o-Cresol	0.802	0.01	0.00	0.01
			p-Cresol	0.410	0.00	0.00	0.00
			Cumene				
			Dibenzofuran	0.073	0.00	0.00	0.00
			Ethylbenzene				
			Naphthalene	26.317	0.19	0.03	0.22
			Phenol	0.831	0.01	0.00	0.01
			Quinoline	0.640	0.00	0.00	0.01
			Styrene				
			Toluene	9.989	0.07	0.01	0.08
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	0.652	0.00	0.00	0.01
			Acenaphthylene	0.757	0.01	0.00	0.01
			Anthracene	0.020	0.00	0.00	0.00
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.020	0.00	0.00	0.00
			Fluorene	0.274	0.00	0.00	0.00
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.067	0.00	0.00	0.00
			Pyrene	0.001	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
407	Petro Tar	Flare or TO	98	112,320	365	250	12.0	27.0	13.5	22,843	4.9	Y		0.89	1,203	709.44	143.89 at T_{LA}	0.0426 at T_{LA}	510.25	519.8	500.7	19.1	710	720	700	20	720	700	0.0547 at T_{LX}	0.0338 at T_{LN}	0.0209	1,541	13.63	709.00	0.0008	0.022	14.4	0.970	1.000

Uncontrolled VOC Emissions | % wgt | Controlled VOC Emissions

Table 5-15. 2010 Potential Emissions Inventory, Refined Tar, Petroleum Based, Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor

Table 5-16. 2010 Potential Emissions Inventory, BFO Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
7	BFO	Flare or TO	98	26,280,000	365	210	50.0	36.0	18.0	528,765	49.7	Y		0.89	1,203	669.44	111.43 at T_{LA}	0.4695 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.5869 at T_{LX}	0.3827 at T_{LN}	0.2042	36,366	18.52	669.00	0.0073	0.036	14.4	0.685	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,372.80	32,720.04	35,092.84	VOC	100.00	47.46	654.40	701.86
			Benzene	14.353	6.81	93.93	100.74
			Biphenyl	0.144	0.07	0.94	1.01
			m-Cresol	0.148	0.07	0.97	1.04
			o-Cresol				
			p-Cresol	0.124	0.06	0.81	0.87
			Cumene				
			Dibenzofuran	0.048	0.02	0.31	0.34
			Ethylbenzene	1.234	0.59	8.08	8.66
			Naphthalene	42.443	20.14	277.74	297.89
			Phenol	0.291	0.14	1.90	2.04
			Quinoline	0.314	0.15	2.06	2.21
			Styrene	2.594	1.23	16.97	18.21
			Toluene	5.401	2.56	35.34	37.90
			m-Xylene	2.147	1.02	14.05	15.07
			o-Xylene	0.900	0.43	5.89	6.31
			p-Xylene	2.211	1.05	14.47	15.52
			Acenaphthene	0.314	0.15	2.05	2.20
			Acenaphthylene	0.136	0.06	0.89	0.95
			Anthracene	0.003	0.00	0.02	0.02
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.003	0.00	0.02	0.02
			Fluorene	0.102	0.05	0.67	0.72
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.011	0.01	0.07	0.08
			Pyrene	0.000	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
9	BFO	Flare or TO	98	26,280,000	365	210	50.0	35.0	17.5	514,077	51.1	Y		0.89	1,203	669.44	111.43 at T_{LA}	0.4695 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.5869 at T_{LX}	0.3827 at T_{LN}	0.2042	35,384	18.02	669.00	0.0073	0.036	14.4	0.690	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,328.57	32,720.04	35,048.61	VOC	100.00	46.57	654.40	700.97
			Benzene	14.353	6.68	93.93	100.61
			Biphenyl	0.144	0.07	0.94	1.01
			m-Cresol	0.148	0.07	0.97	1.03
			o-Cresol				
			p-Cresol	0.124	0.06	0.81	0.87
			Cumene				
			Dibenzofuran	0.048	0.02	0.31	0.34
			Ethylbenzene	1.234	0.57	8.08	8.65
			Naphthalene	42.443	19.77	277.74	297.51
			Phenol	0.291	0.14	1.90	2.04
			Quinoline	0.314	0.15	2.06	2.20
			Styrene	2.594	1.21	16.97	18.18
			Toluene	5.401	2.52	35.34	37.86
			m-Xylene	2.147	1.00	14.05	15.05
			o-Xylene	0.900	0.42	5.89	6.31
			p-Xylene	2.211	1.03	14.47	15.50
			Acenaphthene	0.314	0.15	2.05	2.20
			Acenaphthylene	0.136	0.06	0.89	0.95
			Anthracene	0.003	0.00	0.02	0.02
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.003	0.00	0.02	0.02
			Fluorene	0.102	0.05	0.67	0.72
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.011	0.01	0.07	0.08
			Pyrene	0.000	0.00	0.00	0.00

Table 5-16. 2010 Potential Emissions Inventory, BFO Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
84	BFO	None		423,189	365	210	24.5	30.0	15.0	105,797	4.0	Y		0.89	1,203	669.44	111.43 at T_{LA}	0.4695 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.5869 at T_{LX}	0.3827 at T_{LN}	0.2042	7,192	15.26	669.00	0.0073	0.036	14.4	0.725	1.000

No Standing Losses - Flow Through Tank

	Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)	% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
		526.89	526.89	VOC 100.00		526.89	526.89
Benzene				14.353		75.63	75.63
Biphenyl				0.144		0.76	0.76
m-Cresol				0.148		0.78	0.78
o-Cresol							
p-Cresol				0.124		0.65	0.65
Cumene							
Dibenzofuran				0.048		0.25	0.25
Ethylbenzene				1.234		6.50	6.50
Naphthalene				42.443		223.63	223.63
Phenol				0.291		1.53	1.53
Quinoline				0.314		1.66	1.66
Styrene				2.594		13.67	13.67
Toluene				5.401		28.46	28.46
m-Xylene				2.147		11.31	11.31
o-Xylene				0.900		4.74	4.74
p-Xylene				2.211		11.65	11.65
Acenaphthene				0.314		1.65	1.65
Acenaphthylene				0.136		0.72	0.72
Anthracene				0.003		0.01	0.01
Benzo(a)anthracene							
Benzo(b)fluoranthene							
Benzo(k)fluoranthene							
Benzo(g,h,i)perylene							
Benzo(a)pyrene							
Chrysene							
Dibenzo(a,h)anthracene							
Fluoranthene				0.003		0.02	0.02
Fluorene				0.102		0.54	0.54
Indeno(1,2,3-cd)pyrene							
Phenanthrene				0.011		0.06	0.06
Pyrene				0.000		0.00	0.00

Table 5-17. 2010 Potential Emissions Inventory, RCO Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks,11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
7	Clairton RCO	Flare or TO	98	7,800,000	365	210	50.0	36.0	18.0	528,765	14.8	Y		0.89	1,203	669.44	123.15 at T_{LA}	0.2914 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.3722 at T_{LX}	0.2327 at T_{LN}	0.1395	36,366	18.52	669.00	0.0050	0.031	14.4	0.778	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
1,608.32	6,661.54	8,269.86	VOC	100.00	32.17	133.23	165.40
			Benzene	1.023	0.33	1.36	1.69
			Biphenyl	0.196	0.06	0.26	0.32
			m-Cresol	0.331	0.11	0.44	0.55
			o-Cresol	0.712	0.23	0.95	1.18
			p-Cresol	0.371	0.12	0.49	0.61
			Cumene				
			Dibenzofuran	0.110	0.04	0.15	0.18
			Ethylbenzene				
			Naphthalene	64.023	20.59	85.30	105.89
			Phenol	0.544	0.17	0.72	0.90
			Quinoline	0.517	0.17	0.69	0.86
			Styrene	1.294	0.42	1.72	2.14
			Toluene				
			m-Xylene	1.607	0.52	2.14	2.66
			o-Xylene				
			p-Xylene	1.655	0.53	2.21	2.74
			Acenaphthene	0.687	0.22	0.92	1.14
			Acenaphthylene	0.208	0.07	0.28	0.34
			Anthracene	0.004	0.00	0.00	0.01
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.002	0.00	0.00	0.00
			Fluorene	0.226	0.07	0.30	0.37
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.019	0.01	0.03	0.03
			Pyrene	0.000	0.00	0.00	0.00

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
9	Clairton RCO	Flare or TO	98	7,800,000	365	210	50.0	35.0	17.5	514,077	15.2	Y		0.89	1,203	669.44	123.15 at T_{LA}	0.2914 at T_{LA}	510.25	519.8	500.7	19.1	670	680	660	20	680	660	0.3722 at T_{LX}	0.2327 at T_{LN}	0.1395	35,384	18.02	669.00	0.0050	0.031	14.4	0.782	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
1,574.35	6,661.54	8,235.90	VOC	100.00	31.49	133.23	164.72
			Benzene	1.023	0.32	1.36	1.69
			Biphenyl	0.196	0.06	0.26	0.32
			m-Cresol	0.331	0.10	0.44	0.55
			o-Cresol	0.712	0.22	0.95	1.17
			p-Cresol	0.371	0.12	0.49	0.61
			Cumene				
			Dibenzofuran	0.110	0.03	0.15	0.18
			Ethylbenzene				
			Naphthalene	64.023	20.16	85.30	105.46
			Phenol	0.544	0.17	0.72	0.90
			Quinoline	0.517	0.16	0.69	0.85
			Styrene	1.294	0.41	1.72	2.13
			Toluene				
			m-Xylene	1.607	0.51	2.14	2.65
			o-Xylene				
			p-Xylene	1.655	0.52	2.21	2.73
			Acenaphthene	0.687	0.22	0.92	1.13
			Acenaphthylene	0.208	0.07	0.28	0.34
			Anthracene	0.004	0.00	0.00	0.01
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.002	0.00	0.00	0.00
			Fluorene	0.226	0.07	0.30	0.37
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.019	0.01	0.03	0.03
			Pyrene	0.000	0.00	0.00	0.00

Table 5-18. 2010 Potential Emissions Inventory, Unwashed Solvent Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
24	Unwashed Solvent	None		2,628,000	365	70	20.0	25.0	12.5	58,752	44.7	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	3,992	12.71	529.00	0.0006	0.029	14.4	0.981	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
23.76	206.80	230.57	VOC	100.00	23.76	206.80	230.57
			Benzene	2.245	0.53	4.64	5.18
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.70	6.10	6.80
			Dibenzofuran				
			Ethylbenzene	1.112	0.26	2.30	2.56
			Naphthalene	0.190	0.05	0.39	0.44
			Phenol				
			Quinoline				
			Styrene	5.755	1.37	11.90	13.27
			Toluene				
			m-Xylene	5.572	1.32	11.52	12.85
			o-Xylene	2.573	0.61	5.32	5.93
			p-Xylene	1.471	0.35	3.04	3.39
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
25	Unwashed Solvent	None		2,628,000	365	70	20.0	25.0	12.5	58,752	44.7	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	3,992	12.71	529.00	0.0006	0.029	14.4	0.981	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
23.76	206.80	230.57	VOC	100.00	23.76	206.80	230.57
			Benzene	2.245	0.53	4.64	5.18
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.70	6.10	6.80
			Dibenzofuran				
			Ethylbenzene	1.112	0.26	2.30	2.56
			Naphthalene	0.190	0.05	0.39	0.44
			Phenol				
			Quinoline				
			Styrene	5.755	1.37	11.90	13.27
			Toluene				
			m-Xylene	5.572	1.32	11.52	12.85
			o-Xylene	2.573	0.61	5.32	5.93
			p-Xylene	1.471	0.35	3.04	3.39
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-18. 2010 Potential Emissions Inventory, Unwashed Solvent Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_V (R)	K_S	Turnover Factor
10	Unwashed Solvent	Flare or TO	98	2,628,000	365	70	22.0	35.0	17.5	99,525	26.4	Y		0.89	1.203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	6,739	17.73	529.00	0.0006	0.029	14.4	0.973	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
39.81	206.80	246.61	VOC	100.00	0.80	4.14	4.93
			Benzene	2.245	0.02	0.09	0.11
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.02	0.12	0.15
			Dibenzofuran				
			Ethylbenzene	1.112	0.01	0.05	0.05
			Naphthalene	0.190	0.00	0.01	0.01
			Phenol				
			Quinoline				
			Styrene	5.755	0.05	0.24	0.28
			Toluene				
			m-Xylene	5.572	0.04	0.23	0.27
			o-Xylene	2.573	0.02	0.11	0.13
			p-Xylene	1.471	0.01	0.06	0.07
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_V (R)	K_S	Turnover Factor
33	Unwashed Solvent	None		31,091	365	70	10.5	24.0	12.0	15,546	2.0	Y		0.89	1.203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	1,049	12.11	529.00	0.0006	0.029	14.4	0.982	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
6.25	2.45	8.69	VOC	100.00	6.25	2.45	8.69
			Benzene	2.245	0.14	0.05	0.20
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.18	0.07	0.26
			Dibenzofuran				
			Ethylbenzene	1.112	0.07	0.03	0.10
			Naphthalene	0.190	0.01	0.00	0.02
			Phenol				
			Quinoline				
			Styrene	5.755	0.36	0.14	0.50
			Toluene				
			m-Xylene	5.572	0.35	0.14	0.48
			o-Xylene	2.573	0.16	0.06	0.22
			p-Xylene	1.471	0.09	0.04	0.13
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-18. 2010 Potential Emissions Inventory, Unwashed Solvent Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
360	Unwashed Solvent	None		51,819	365	70	14.0	22.5	11.3	25,910	2.0	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	1,754	11.40	529.00	0.0006	0.029	14.4	0.983	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
10.46	4.08	14.54	VOC	100.00	10.46	4.08	14.54
			Benzene	2.245	0.23	0.09	0.33
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.31	0.12	0.43
			Dibenzofuran				
			Ethylbenzene	1.112	0.12	0.05	0.16
			Naphthalene	0.190	0.02	0.01	0.03
			Phenol				
			Quinoline				
			Styrene	5.755	0.60	0.23	0.84
			Toluene				
			m-Xylene	5.572	0.58	0.23	0.81
			o-Xylene	2.573	0.27	0.10	0.37
			p-Xylene	1.471	0.15	0.06	0.21
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
361	Unwashed Solvent	None		51,819	365	70	14.0	22.5	11.3	25,910	2.0	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	1,754	11.40	529.00	0.0006	0.029	14.4	0.983	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
10.46	4.08	14.54	VOC	100.00	10.46	4.08	14.54
			Benzene	2.245	0.23	0.09	0.33
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.31	0.12	0.43
			Dibenzofuran				
			Ethylbenzene	1.112	0.12	0.05	0.16
			Naphthalene	0.190	0.02	0.01	0.03
			Phenol				
			Quinoline				
			Styrene	5.755	0.60	0.23	0.84
			Toluene				
			m-Xylene	5.572	0.58	0.23	0.81
			o-Xylene	2.573	0.27	0.10	0.37
			p-Xylene	1.471	0.15	0.06	0.21
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-18. 2010 Potential Emissions Inventory, Unwashed Solvent Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks.11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
362	Unwashed Solvent	None		51,819	365	70	14.0	22.5	11.3	25,910	2.0	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	1,754	11.40	529.00	0.0006	0.029	14.4	0.983	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
10.46	4.08	14.54	VOC	100.00	10.46	4.08	14.54
			Benzene	2.245	0.23	0.09	0.33
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.31	0.12	0.43
			Dibenzofuran				
			Ethylbenzene	1.112	0.12	0.05	0.16
			Naphthalene	0.190	0.02	0.01	0.03
			Phenol				
			Quinoline				
			Styrene	5.755	0.60	0.23	0.84
			Toluene				
			m-Xylene	5.572	0.58	0.23	0.81
			o-Xylene	2.573	0.27	0.10	0.37
			p-Xylene	1.471	0.15	0.06	0.21
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
363	Unwashed Solvent	None		51,819	365	70	14.0	22.5	11.3	25,910	2.0	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	1,754	11.40	529.00	0.0006	0.029	14.4	0.983	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
10.46	4.08	14.54	VOC	100.00	10.46	4.08	14.54
			Benzene	2.245	0.23	0.09	0.33
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.31	0.12	0.43
			Dibenzofuran				
			Ethylbenzene	1.112	0.12	0.05	0.16
			Naphthalene	0.190	0.02	0.01	0.03
			Phenol				
			Quinoline				
			Styrene	5.755	0.60	0.23	0.84
			Toluene				
			m-Xylene	5.572	0.58	0.23	0.81
			o-Xylene	2.573	0.27	0.10	0.37
			p-Xylene	1.471	0.15	0.06	0.21
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-18. 2010 Potential Emissions Inventory, Unwashed Solvent Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
364	Unwashed Solvent	None		51,819	365	70	14.0	22.5	11.3	25,910	2.0	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	1,754	11.40	529.00	0.0006	0.029	14.4	0.983	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
10.46	4.08	14.54	VOC	100.00	10.46	4.08	14.54
			Benzene	2.245	0.23	0.09	0.33
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.31	0.12	0.43
			Dibenzofuran				
			Ethylbenzene	1.112	0.12	0.05	0.16
			Naphthalene	0.190	0.02	0.01	0.03
			Phenol				
			Quinoline				
			Styrene	5.755	0.60	0.23	0.84
			Toluene				
			m-Xylene	5.572	0.58	0.23	0.81
			o-Xylene	2.573	0.27	0.10	0.37
			p-Xylene	1.471	0.15	0.06	0.21
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-19. 2010 Potential Emissions Inventory, Crude Methyl Naphthalene Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
1M	CMN	None		2,628,000	365	70	14.0	22.5	11.3	25,910	101.4	Y		0.89	1,203	529.44	137.45 at T_{LA}	0.0008 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0012 at T_{LX}	0.0005 at T_{LN}	0.0007	1,754	11.40	529.00	0.0000	0.027	14.4	1.000	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
0.34	6.87	7.21	VOC	100.00	0.34	6.87	7.21
			Benzene				
			Biphenyl	1.922	0.01	0.13	0.14
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.166	0.00	0.01	0.01
			Ethylbenzene				
			Naphthalene	20.677	0.07	1.42	1.49
			Phenol				
			Quinoline	15.709	0.05	1.08	1.13
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.630	0.01	0.25	0.26
			Acenaphthylene				
			Anthracene	0.001	0.00	0.00	0.00
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.000	0.00	0.00	0.00
			Fluorene	0.380	0.00	0.03	0.03
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.003	0.00	0.00	0.00
			Pyrene	0.000	0.00	0.00	0.00

Table 5-20. 2010 Potential Emissions Inventory, NSR Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
88	NSR	None		21,024,000	365	195	24.5	30.0	15.0	105,797	198.7	Y		0.89	1,203	654.44	139.29 at T_{LA}	0.0362 at T_{LA}	510.25	519.8	500.7	19.1	655	665	645	20	665	645	0.0482 at T_{LX}	0.0278 at T_{LN}	0.0204	7,192	15.26	654.00	0.0007	0.023	14.4	0.972	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
42.82	2,521.65	2,564.47	**VOC**	100.00	42.82	2,521.65	2,564.47
			Benzene				
			Biphenyl	2.971	1.27	74.91	76.18
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	1.553	0.67	39.16	39.83
			Ethylbenzene				
			Naphthalene	32.327	13.84	815.17	829.01
			Phenol				
			Quinoline	5.793	2.48	146.07	148.55
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	10.097	4.32	254.62	258.94
			Acenaphthylene	1.793	0.77	45.21	45.98
			Anthracene	0.074	0.03	1.86	1.90
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene	0.075	0.03	1.89	1.92
			Fluorene	3.702	1.59	93.35	94.93
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene	0.330	0.14	8.32	8.46
			Pyrene	0.002	0.00	0.05	0.05

Table 5-21. 2010 Potential Emissions Inventory, Naphthalene Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia
Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	HL (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
82	Naphthalene	Flare or TO	98	7,884,000	365	240	24.5	42.0	21.0	148,116	53.2	Y		0.89	1,203	699.44	128.20 at T_{LA}	0.5784 at T_{LA}	510.25	519.8	500.7	19.1	700	710	690	20	710	690	0.7308 at T_{LX}	0.4664 at T_{LN}	0.2644	10,020	21.26	699.00	0.0099	0.039	14.4	0.605	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
860.04	13,913.94	14,773.97	VOC	100.00	17.20	278.28	295.48
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene	100.000	17.20	278.28	295.48
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	HL (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
83	Naphthalene	Flare or TO	98	7,884,000	365	240	24.5	30.0	15.0	105,797	74.5	Y		0.89	1,203	699.44	128.20 at T_{LA}	0.5784 at T_{LA}	510.25	519.8	500.7	19.1	700	710	690	20	710	690	0.7308 at T_{LX}	0.4664 at T_{LN}	0.2644	7,192	15.26	699.00	0.0099	0.039	14.4	0.681	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
694.62	13,913.94	14,608.56	VOC	100.00	13.89	278.28	292.17
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene	100.000	13.89	278.28	292.17
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-21. 2010 Potential Emissions Inventory, Naphthalene Storage Tanks Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	HL (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	V_V (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
623	Naphthalene	Flare or TO	98	7,884,000	365	240	43.0	42.0	21.0	456,254	17.3	Y		0.89	1,203	699.44	128.20 at T_{LA}	0.5784 at T_{LA}	510.25	519.8	500.7	19.1	700	710	690	20	710	690	0.7308 at T_{LX}	0.4664 at T_{LN}	0.2644	31,147	21.45	699.00	0.0099	0.039	14.4	0.603	1.000

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,663.74	13,913.94	16,577.67	VOC	100.00	53.27	278.28	331.55
			Benzene				
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene				
			Naphthalene	100.000	53.27	278.28	331.55
			Phenol				
			Quinoline				
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Table 5-22. 2010 Potential Emissions Inventory, Liquid Fuel Tank Emission Calculations
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 11/06

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
11	Unwashed Solvent	Flare or TO	98	5,256,000	365	70	22.0	35.0	17.5	99,525	52.8	Y		0.89	1,203	529.44	113.56 at T_{LA}	0.0291 at T_{LA}	510.25	519.8	500.7	19.1	530	540	520	20	540	520	0.0412 at T_{LX}	0.0211 at T_{LN}	0.0201	6,739	17.73	529.00	0.0006	0.029	14.4	0.973	1.000

Turnover factor set to 1 - process tank

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
39.81	413.61	453.42	VOC	100.00	0.80	8.27	9.07
			Benzene	2.245	0.02	0.19	0.20
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene	2.951	0.02	0.24	0.27
			Dibenzofuran				
			Ethylbenzene	1.112	0.01	0.09	0.10
			Naphthalene	0.190	0.00	0.02	0.02
			Phenol				
			Quinoline				
			Styrene	5.755	0.05	0.48	0.52
			Toluene				
			m-Xylene	5.572	0.04	0.46	0.51
			o-Xylene	2.573	0.02	0.21	0.23
			p-Xylene	1.471	0.01	0.12	0.13
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft^3	K_E	DT_v (R)	K_S	Turnover Factor
11	Debenzolizer Overhei	Flare or TO	98	977,616	365	95	22.0	35.0	17.5	99,525	9.8	Y		0.89	1,203	554.44	80.20 at T_{LA}	1.9457 at T_{LA}	510.25	519.8	500.7	19.1	555	565	545	20	565	545	2.4885 at T_{LX}	1.5492 at T_{LN}	0.9393	6,739	17.73	554.00	0.0262	0.100	14.4	0.354	1.000

Turnover factor set to 1 - process tank

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
2,272.37	3,630.81	5,903.18	VOC	100.00	45.45	72.62	118.06
			Benzene	83.154	37.79	60.38	98.17
			Biphenyl				
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran				
			Ethylbenzene	0.241	0.11	0.18	0.28
			Naphthalene	0.004	0.00	0.00	0.01
			Phenol	0.000	0.00	0.00	0.00
			Quinoline				
			Styrene	0.151	0.07	0.11	0.18
			Toluene	14.484	6.58	10.52	17.10
			m-Xylene	0.406	0.18	0.29	0.48
			o-Xylene	0.116	0.05	0.08	0.14
			p-Xylene	0.427	0.19	0.31	0.50
			Acenaphthene				
			Acenaphthylene				
			Anthracene				
			Benzo(a)anthracene				
			Benzo(b)fluoranthene				
			Benzo(k)fluoranthene				
			Benzo(g,h,i)perylene				
			Benzo(a)pyrene				
			Chrysene				
			Dibenzo(a,h)anthracene				
			Fluoranthene				
			Fluorene				
			Indeno(1,2,3-cd)pyrene				
			Phenanthrene				
			Pyrene				

PRODUCT LOADING

Table 6-1.

Assumptions for the 2010 Potential Emissions Inventory, Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Material	Loading Vehicle	Control Device	Control Efficiency	Loading Temperature (F)	Potential Annual Quantity Loaded (gal/yr)	Assumptions		
Crude Tar	Barge	Submerged Loading	0	220	3,000,000	Set during 1-17-07 Meeting by N. Weinstein		
	Truck or Railcar	Submerged Loading			3,000,000	Set during 1-17-07 Meeting by N. Weinstein		
Petro Tar	Truck or Railcar	Flare or TO	98	250	6,000,000	Set during 2-8-08 Meeting by N. Weinstein		
Crude Distillate	Barge, Truck or Railcar	None	0	200	7,500,000	Maximum Crude Tar or Co-Distill Throughput:	60,000,000	gal/yr
						% Yield Middle Oil/Heavy from Feed:	25	%
						Distillate Produced:	15,000,000	gal/yr
						Assume 50 % produced is loaded; remaining used for creosote		
Mixed Petro Oil	Barge, Truck or Railcar	None	0	200	6,750,000	Maximum Petro Tar Throughput:	30,000,000	gal/yr
						% Yield Middle Oil/Heavy from Feed:	45	%
						Distillate Produced:	13,500,000	gal/yr
						Assume 50 % produced is loaded; remaining used for creosote		
Decanted Oil Distillate	Barge, Truck or Railcar	None	0	200	6,750,000	Maximum Decanted Oil Throughput:	30,000,000	gal/yr
						% Yield Middle Oil/Heavy from Feed:	45	%
						Distillate Produced:	13,500,000	gal/yr
						Assume 50 % produced is loaded; remaining used for creosote		
Coal Tar Pitch	Truck or Railcar	Scrubber E	80	500	23,100,000	Maximum Crude Tar Throughput:	60,000,000	gal/yr
						Percent of tar for pitch production:	70	%
						Tar Throughput to Stills for Pitch Production	42,000,000	gal/yr
						Pitch Yield from Feed:	55	%
Type A/B Pitch (Liquid)	Truck or Railcar	Scrubber E	80	500	38,500,000	Total Pitch Producted	23,100,000	gal/yr
						Type A/B Pitch is 60 % Coal Tar Pitch		
						40 % Petroleum Pitch		
Petro Pitch	Truck or Railcar	Scrubber E	80	500	16,500,000	Maximum PetroTar Throughput:	30,000,000	gal/yr
						% Yield Petroleum Pitch from Feed:	55	%
						Pitch Produced	16,500,000	gal/yr
Decanted Oil Pitch	Truck or Railcar	Scrubber E	80	500	16,500,000	Maximum Decanted Oil Throughput:	30,000,000	gal/yr
						% Yield Petroleum Pitch from Feed:	55	%
						Pitch Produced	16,500,000	gal/yr
Pavement Sealer Base	Truck or Railcar	Flare or TO	98	450	11,160,000	Maximum Crude Tar or Co-Distill Throughput:	60,000,000	gal/yr
or						Percent of tar for PSB production:	30	%
Modified Pavement Sealer Base	Truck or Railcar	Flare or TO	98	450	15,942,857	Tar Throughput to Stills for PSB Production:	18,000,000	gal/yr
or						% Yield PSB Yield from Feed:	62	%
Refined Tar	Truck or Railcar	Flare or TO	98	450	15,942,857	PSB Produced:	11,160,000	gal/yr
						MPSB is 70 % PSB		
						30 % Shell Tar		
						Total MPSB	15,942,857	gal/yr
						Refined Tar is 70 % PSB		
						30 % CMN or Naphthalene		
						Total Refined Tar	15,942,857	gal/yr
						Emissions are the greater of refined tar, PSB or MPSB loading		
Unwashed Solvent	Barge, Truck or Railcar	None	0	70	5,256,000	Naphthalene Distillation Unit Capacity (BFO Feed):	100	gal/min
						Maximum BFO Throughput, assuming 100% BFO:	52,560,000	gal/yr
						% Yield Solvent from Feed:	10	%
Crude Methyl Naphthalene	Barge, Truck or Railcar	None	0	70	2,628,000	Naphthalene Distillation Unit Capacity (BFO Feed):	100	gal/min
						Maximum BFO Throughput, assuming 100% BFO:	52,560,000	gal/yr
						% Yield CMN from Feed:	5	%
Naphthalene Still Residue	Barge, Truck or Railcar	None	0	180	21,024,000	Naphthalene Distillation Unit Capacity (BFO Feed):	100	gal/min
						Maximum BFO Throughput, assuming 100% BFO:	52,560,000	gal/yr
						% Yield NSR from Feed:	40	%
Naphthalene	Truck or Railcar	Flare or TO	98	230	23,652,000	Naphthalene Distillation Unit Capacity (BFO Feed):	100	gal/min
						Maximum BFO Throughput, assuming 100% BFO:	52,560,000	gal/yr
						% Yield Naphthalene from Feed:	45	%
Refined Tar, Petroleum Based	Truck or Railcar	Flare or TO	98	250	124,800			
Creosote				**REFER TO CREOSOTE PROCESSING**				
Solid Pitch Loading (Coal Tar, Type A/B, Petro, Decanted Oil Pitches)		None	0	NA		Coal Tar Pitch:	23,100,000	gal/yr
						Assume 50 % of total pitch used for solid production		
						Pitch Density 10 lb/gal		
						Total Pitch 57,750 tons/yr		

Table 6-2. 2010 Potential Emissions Inventory, Summary of Potential Emissions, Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

	Potential Emissions (tons/yr)																					
Pollutant	Crude Tar	Petro Tar	Crude Distillate	Petro Distillate	Decant Oil Distillate	Maximum	Coal Tar Pitch	Type A/B Pitch	Petroleum Pitch	Decant Pitch	Maximum	Solid Coal Tar, Decant or Type A/B Pitch	PSB	MPSB	Refined Tar	Maximum	Unwashed Solvent	Crude Methyl Naphthalene	Naphthalene Still Residue	Naphthalene	Refined Tar Petroleum Based	Total
PM												0.147										0.147
PM-10												0.069										0.069
PM-2.5												0.022										0.022
VOC	1.392	0.009	0.615	1.769	0.260	1.769	0.554	0.574	0.637	0.637	0.637		0.272	0.292	1.189	1.189	0.302	0.005	0.988	0.370	0.000	6.661
Benzene	0.564	0.000	0.000	0.634	0.000	0.634	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1.204
Biphenyl	0.003	0.001	0.003	0.011	0.004	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.009	0.064	0.064	0.000	0.000	0.028	0.000	0.000	0.107
m-Cresol	0.008	0.000	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
o-Cresol	0.007	0.000	0.000	0.014	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021
p-Cresol	0.009	0.000	0.000	0.007	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.009
Dibenzofuran	0.002	0.000	0.003	0.001	0.000	0.003	0.152	0.000	0.000	0.000	0.152	0.000	0.015	0.017	0.041	0.041	0.000	0.000	0.014	0.000	0.000	0.213
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.003
Naphthalene	0.244	0.002	0.443	0.466	0.011	0.466	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.035	0.209	0.209	0.001	0.001	0.329	0.370	0.000	1.623
Phenol	0.031	0.000	0.000	0.015	0.003	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
Quinoline	0.006	0.000	0.006	0.011	0.001	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.015	0.073	0.073	0.000	0.001	0.058	0.000	0.000	0.149
Styrene	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.040
Toluene	0.137	0.000	0.000	0.176	0.000	0.176	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.313
m-Xylene	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.073
o-Xylene	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.031
p-Xylene	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.062
Acenaphthene	0.009	0.001	0.029	0.012	0.001	0.029	0.000	0.000	0.392	0.392	0.392	0.000	0.038	0.041	0.125	0.125	0.000	0.000	0.099	0.000	0.000	0.656
Acenaphthylene	0.007	0.000	0.000	0.013	0.002	0.013	0.146	0.000	0.000	0.000	0.146	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.018	0.000	0.000	0.187
Anthracene	0.000	0.000	0.001	0.000	0.000	0.001	0.034	0.038	0.033	0.033	0.038	0.000	0.006	0.007	0.007	0.007	0.000	0.000	0.001	0.000	0.000	0.047
Benzo(a)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.022	0.002	0.002	0.022	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.009	0.000	0.000	0.011	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.004	0.000	0.000	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.006	0.001	0.001	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Fluoranthene	0.000	0.000	0.002	0.000	0.001	0.002	0.112	0.249	0.024	0.024	0.249	0.001	0.010	0.013	0.013	0.013	0.000	0.000	0.001	0.000	0.000	0.267
Fluorene	0.004	0.001	0.010	0.005	0.000	0.010	0.000	0.000	0.077	0.077	0.077	0.000	0.021	0.025	0.044	0.044	0.000	0.000	0.035	0.000	0.000	0.170
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Phenanthrene	0.001	0.000	0.003	0.001	0.000	0.003	0.040	0.160	0.094	0.094	0.160	0.001	0.024	0.030	0.033	0.033	0.000	0.000	0.003	0.000	0.000	0.200
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.066	0.015	0.015	0.066	0.001	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.070
Total HAP	1.189	0.006	0.499	1.377	0.024	1.377	0.543	0.557	0.637	0.637	0.637	0.013	0.182	0.194	0.615	0.615	0.066	0.002	0.585	0.370	0.000	4.860
Total POM	0.275	0.006	0.499	0.522	0.022	0.522	0.543	0.557	0.637	0.637	0.637	0.013	0.182	0.194	0.615	0.615	0.001	0.002	0.585	0.370	0.000	3.026

Table 6-3. 2010 Potential Emissions Inventory, Solid Pitch Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Calculational Procedure

Particulate emission factors derived using AP-42, Section 13.2.4 *"Aggregate Handling and Storage Piles"*, 1/95.

$$E = k\,(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$$

E = Emission factor (lb/ton)

k = particle size multiplier	PM	0.74	
	PM-10	0.35	
	PM-2.5	0.11	
U = mean wind speed, (mph)		9	mph
M = material moisture content (%)		2	%

Input Data

Pitch Mass Loaded: 57,750 tons/yr

Emission Calculations

Pollutant	Emission Factor (lb/ton)	Option 1 Coal Tar Pitch % by weight in Pitch	Potential Emissions (ton/yr)	Option 2 Type A/B Pitch % by weight in Pitch	Potential Emissions (ton/yr)	Option 3 Petro/Decant Pitch % by weight in Pitch	Potential Emissions (ton/yr)	Maximum Potential Emissions (tons/yr)
PM	0.00508		0.147		0.147		0.147	0.147
PM-10	0.00240		0.069		0.069		0.069	0.069
PM-2.5	0.00076		0.022		0.022		0.022	0.022
Benzene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Biphenyl		0.00	0.000	0.00	0.000	0.00	0.000	0.000
m-Cresol		0.00	0.000	0.00	0.000	0.00	0.000	0.000
o-Cresol		0.00	0.000	0.00	0.000	0.00	0.000	0.000
p-Cresol		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Cumene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Dibenzofuran		0.13	0.000	0.00	0.000	0.00	0.000	0.000
Ethylbenzene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Naphthalene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Phenol		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Quinoline		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Styrene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Toluene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
m-Xylene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
o-Xylene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
p-Xylene		0.00	0.000	0.00	0.000	0.00	0.000	0.000
Acenaphthene		0.00	0.000	0.00	0.000	0.32	0.000	0.000
Acenaphthylene		0.09	0.000	0.00	0.000	0.00	0.000	0.000
Anthracene		0.15	0.000	0.10	0.000	0.19	0.000	0.000
Benzo(a)anthracene		0.67	0.001	0.79	0.001	0.15	0.000	0.001
Benzo(b)fluoranthene		1.40	0.002	0.70	0.001	0.00	0.000	0.002
Benzo(k)fluoranthene		0.52	0.001	0.52	0.001	0.02	0.000	0.001
Benzo(g,h,i)perylene		1.14	0.002	1.18	0.002	0.00	0.000	0.002
Benzo(a)pyrene		1.27	0.002	1.21	0.002	0.14	0.000	0.002
Chrysene		0.76	0.001	0.80	0.001	0.21	0.000	0.001
Dibenzo(a,h)anthracene		1.21	0.002	0.24	0.000	0.00	0.000	0.002
Fluoranthene		0.75	0.001	1.00	0.001	0.21	0.000	0.001
Fluorene		0.00	0.000	0.00	0.000	0.10	0.000	0.000
Indeno(1,2,3-cd)pyrene		0.21	0.000	1.03	0.002	0.00	0.000	0.002
Phenanthrene		0.14	0.000	0.34	0.000	0.44	0.001	0.001
Pyrene		0.67	0.001	0.92	0.001	0.46	0.001	0.001
Total HAP			0.013		0.013		0.003	0.013
Total POM			0.013		0.013		0.003	0.013

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Crude Tar	220	680	95.76	0.5283	0.50	0.464	3,000,000	VOC	100.000	0.696
	Loading Vehicle:		Barge					Benzene	40.484	0.282
	Control:		Submerged Loading					Biphenyl	0.189	0.001
	Control Efficiency:		0 %					m-Cresol	0.595	0.004
								o-Cresol	0.476	0.003
								p-Cresol	0.633	0.004
								Cumene	0.000	0.000
								Dibenzofuran	0.125	0.001
								Ethylbenzene	0.000	0.000
								Naphthalene	17.516	0.122
								Phenol	2.220	0.015
								Quinoline	0.417	0.003
								Styrene	1.621	0.011
								Toluene	9.844	0.069
								m-Xylene	4.001	0.028
								o-Xylene	1.682	0.012
								p-Xylene	4.116	0.029
								Acenaphthene	0.633	0.004
								Acenaphthylene	0.485	0.003
								Anthracene	0.026	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.033	0.000
								Fluorene	0.280	0.002
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.057	0.000
								Pyrene	0.001	0.000
								Total HAP		0.595
Crude Tar	220	680	95.76	0.5283	0.50	0.464	3,000,000	VOC	100.000	0.696
	Loading Vehicle:		Truck or Railcar					Benzene	40.484	0.282
	Control:		Submerged Loading					Biphenyl	0.189	0.001
	Control Efficiency:		0 %					m-Cresol	0.595	0.004
								o-Cresol	0.476	0.003
								p-Cresol	0.633	0.004
								Cumene	0.000	0.000
								Dibenzofuran	0.125	0.001
								Ethylbenzene	0.000	0.000
								Naphthalene	17.516	0.122
								Phenol	2.220	0.015
								Quinoline	0.417	0.003
								Styrene	1.621	0.011
								Toluene	9.844	0.069
								m-Xylene	4.001	0.028
								o-Xylene	1.682	0.012
								p-Xylene	4.116	0.029
								Acenaphthene	0.633	0.004
								Acenaphthylene	0.485	0.003
								Anthracene	0.026	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.033	0.000
								Fluorene	0.280	0.002
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.057	0.000
								Pyrene	0.001	0.000
								Total HAP		0.595

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Petro Tar	250	710	143.90	0.0432	1.45	0.158	6,000,000	VOC	100.000	0.009
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Flare or TO					Biphenyl	7.679	0.001
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	1.742	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	21.211	0.002
								Phenol	0.000	0.000
								Quinoline	2.270	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	14.330	0.001
								Acenaphthylene	5.117	0.000
								Anthracene	0.477	0.000
								Benzo(a)anthracene	0.004	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.326	0.000
								Fluorene	6.054	0.001
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	1.589	0.000
								Pyrene	0.049	0.000
								Total HAP		0.006
Crude Distillate	200	660	129.21	0.0462	1.45	0.164	7,500,000	VOC	100.000	0.615
	Loading Vehicle:		Barge, Truck or Railcar					Benzene	0.000	0.000
	Control:		None					Biphenyl	0.421	0.003
	Control Efficiency:		0 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.491	0.003
								Ethylbenzene	0.000	0.000
								Naphthalene	72.071	0.443
								Phenol	0.000	0.000
								Quinoline	0.968	0.006
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	4.774	0.029
								Acenaphthylene	0.000	0.000
								Anthracene	0.098	0.001
								Benzo(a)anthracene	0.001	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.282	0.002
								Fluorene	1.580	0.010
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.432	0.003
								Pyrene	0.009	0.000
								Total HAP		0.499

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Mixed Petro Oil	200	660	100.70	0.1902	1.45	0.524	6,750,000	VOC	100.000	1.769
	Loading Vehicle:		Barge, Truck or Railcar					Benzene	35.835	0.634
	Control:		None					Biphenyl	0.647	0.011
	Control Efficiency:		0 %					m-Cresol	0.496	0.009
								o-Cresol	0.805	0.014
								p-Cresol	0.412	0.007
								Cumene	0.000	0.000
								Dibenzofuran	0.073	0.001
								Ethylbenzene	0.000	0.000
								Naphthalene	26.374	0.466
								Phenol	0.834	0.015
								Quinoline	0.642	0.011
								Styrene	0.000	0.000
								Toluene	9.970	0.176
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	0.654	0.012
								Acenaphthylene	0.759	0.013
								Anthracene	0.020	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.020	0.000
								Fluorene	0.275	0.005
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.068	0.001
								Pyrene	0.001	0.000
								Total HAP		1.377
Decanted Oil Distillate	200	660	177.91	0.0159	1.45	0.077	6,750,000	VOC	100.000	0.260
	Loading Vehicle:		Barge, Truck or Railcar					Benzene	0.000	0.000
	Control:		None					Biphenyl	1.730	0.004
	Control Efficiency:		0 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.185	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	4.078	0.011
								Phenol	1.125	0.003
								Quinoline	0.477	0.001
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	0.323	0.001
								Acenaphthylene	0.887	0.002
								Anthracene	0.016	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.313	0.001
								Fluorene	0.185	0.000
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.070	0.000
								Pyrene	0.012	0.000
								Total HAP		0.024

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Coal Tar Pitch	500	960	176.08	0.0723	1.45	0.240	23,100,000	VOC	100.000	0.554
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Scrubber E					Biphenyl	0.000	0.000
	Control Efficiency:		80 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	27.463	0.152
								Ethylbenzene	0.000	0.000
								Naphthalene	0.000	0.000
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	0.000	0.000
								Acenaphthylene	26.414	0.146
								Anthracene	6.198	0.034
								Benzo(a)anthracene	2.034	0.011
								Benzo(b)fluoranthene	1.987	0.011
								Benzo(k)fluoranthene	0.138	0.001
								Benzo(g,h,i)perylene	0.114	0.001
								Benzo(a)pyrene	0.425	0.002
								Chrysene	0.582	0.003
								Dibenzo(a,h)anthracene	0.067	0.000
								Fluoranthene	20.211	0.112
								Fluorene	0.000	0.000
								Indeno(1,2,3-cd)pyrene	0.012	0.000
								Phenanthrene	7.128	0.040
								Pyrene	5.227	0.029
								Total HAP		0.543
Type A/B Pitch	500	960	196.21	0.0403	1.45	0.149	38,500,000	VOC	100.000	0.574
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Scrubber E					Biphenyl	0.000	0.000
	Control Efficiency:		80 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.000	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	0.000	0.000
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	0.000	0.000
								Acenaphthylene	0.000	0.000
								Anthracene	6.657	0.038
								Benzo(a)anthracene	3.864	0.022
								Benzo(b)fluoranthene	1.601	0.009
								Benzo(k)fluoranthene	0.222	0.001
								Benzo(g,h,i)perylene	0.190	0.001
								Benzo(a)pyrene	0.653	0.004
								Chrysene	0.988	0.006
								Dibenzo(a,h)anthracene	0.021	0.000
								Fluoranthene	43.413	0.249
								Fluorene	0.000	0.000
								Indeno(1,2,3-cd)pyrene	0.093	0.001
								Phenanthrene	27.888	0.160
								Pyrene	11.563	0.066
								Total HAP		0.557

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Petro Pitch	500	960	162.59	0.1261	1.45	0.386	16,500,000	VOC	100.000	0.637
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Scrubber E					Biphenyl	0.000	0.000
	Control Efficiency:		80 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.000	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	0.000	0.000
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	61.587	0.392
								Acenaphthylene	0.000	0.000
								Anthracene	5.146	0.033
								Benzo(a)anthracene	0.299	0.002
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.003	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.031	0.000
								Chrysene	0.105	0.001
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	3.709	0.024
								Fluorene	12.030	0.077
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	14.682	0.094
								Pyrene	2.352	0.015
								Total HAP		0.637
Decanted Oil Pitch	500	960	162.59	0.1261	1.45	0.386	16,500,000	VOC	100.000	0.637
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Scrubber E					Biphenyl	0.000	0.000
	Control Efficiency:		80 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.000	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	0.000	0.000
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	61.587	0.392
								Acenaphthylene	0.000	0.000
								Anthracene	5.146	0.033
								Benzo(a)anthracene	0.299	0.002
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.003	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.031	0.000
								Chrysene	0.105	0.001
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	3.709	0.024
								Fluorene	12.030	0.077
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	14.682	0.094
								Pyrene	2.352	0.015
								Total HAP		0.637

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Pavement Sealer Base	450	910	149.68	0.8194	1.45	2.435	11,160,000	VOC	100.000	0.272
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Flare or TO					Biphenyl	4.691	0.013
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	5.578	0.015
								Ethylbenzene	0.000	0.000
								Naphthalene	14.809	0.040
								Phenol	0.000	0.000
								Quinoline	4.962	0.013
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	13.897	0.038
								Acenaphthylene	0.000	0.000
								Anthracene	2.050	0.006
								Benzo(a)anthracene	0.112	0.000
								Benzo(b)fluoranthene	0.029	0.000
								Benzo(k)fluoranthene	0.003	0.000
								Benzo(g,h,i)perylene	0.002	0.000
								Benzo(a)pyrene	0.009	0.000
								Chrysene	0.021	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	3.636	0.010
								Fluorene	7.609	0.021
								Indeno(1,2,3-cd)pyrene	0.001	0.000
								Phenanthrene	8.807	0.024
								Pyrene	0.651	0.002
								Total HAP		0.182
Modified Pavement Sealer Base	450	910	151.43	0.6098	1.45	1.833	15,942,857	VOC	100.000	0.292
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Flare or TO					Biphenyl	3.242	0.009
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	5.836	0.017
								Ethylbenzene	0.000	0.000
								Naphthalene	11.807	0.035
								Phenol	0.000	0.000
								Quinoline	5.028	0.015
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	13.967	0.041
								Acenaphthylene	0.000	0.000
								Anthracene	2.428	0.007
								Benzo(a)anthracene	0.134	0.000
								Benzo(b)fluoranthene	0.035	0.000
								Benzo(k)fluoranthene	0.003	0.000
								Benzo(g,h,i)perylene	0.002	0.000
								Benzo(a)pyrene	0.011	0.000
								Chrysene	0.024	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	4.594	0.013
								Fluorene	8.412	0.025
								Indeno(1,2,3-cd)pyrene	0.001	0.000
								Phenanthrene	10.105	0.030
								Pyrene	0.797	0.002
								Total HAP		0.194

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Refined Tar	450	910	143.42	2.6183	1.45	7.455	15,942,857	VOC	100.000	1.189
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Flare or TO					Biphenyl	5.370	0.064
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	3.488	0.041
								Ethylbenzene	0.000	0.000
								Naphthalene	17.603	0.209
								Phenol	0.000	0.000
								Quinoline	6.152	0.073
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	10.484	0.125
								Acenaphthylene	0.181	0.002
								Anthracene	0.616	0.007
								Benzo(a)anthracene	0.028	0.000
								Benzo(b)fluoranthene	0.007	0.000
								Benzo(k)fluoranthene	0.001	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.002	0.000
								Chrysene	0.005	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	1.115	0.013
								Fluorene	3.702	0.044
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	2.795	0.033
								Pyrene	0.184	0.002
								Total HAP		0.615
Unwashed Solvent	70	530	113.57	0.0297	1.45	0.115	5,256,000	VOC	100.000	0.302
	Loading Vehicle:		Barge, Truck or Railcar					Benzene	2.235	0.007
	Control:		None					Biphenyl	0.000	0.000
	Control Efficiency:		0 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	2.949	0.009
								Dibenzofuran	0.000	0.000
								Ethylbenzene	1.110	0.003
								Naphthalene	0.191	0.001
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	5.750	0.017
								Toluene	0.000	0.000
								m-Xylene	5.565	0.017
								o-Xylene	2.571	0.008
								p-Xylene	1.469	0.004
								Acenaphthene	0.000	0.000
								Acenaphthylene	0.000	0.000
								Anthracene	0.000	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.000	0.000
								Fluorene	0.000	0.000
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.000	0.000
								Pyrene	0.000	0.000
								Total HAP		0.066

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Crude Methyl Naphthalene	70	530	137.46	0.0008	1.45	0.004	2,628,000	VOC	100.000	0.005
	Loading Vehicle:		Barge, Truck or Railcar					Benzene	0.000	0.000
	Control:		None					Biphenyl	1.927	0.000
	Control Efficiency:		0 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.167	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	20.640	0.001
								Phenol	0.000	0.000
								Quinoline	15.700	0.001
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	3.633	0.000
								Acenaphthylene	0.000	0.000
								Anthracene	0.001	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.000	0.000
								Fluorene	0.381	0.000
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.003	0.000
								Pyrene	0.000	0.000
								Total HAP		0.002
Naphthalene Still Residue	180	640	139.03	0.0241	1.45	0.094	21,024,000	VOC	100.000	0.988
	Loading Vehicle:		Barge, Truck or Railcar					Benzene	0.000	0.000
	Control:		None					Biphenyl	2.836	0.028
	Control Efficiency:		0 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	1.418	0.014
								Ethylbenzene	0.000	0.000
								Naphthalene	33.316	0.329
								Phenol	0.000	0.000
								Quinoline	5.847	0.058
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	9.977	0.099
								Acenaphthylene	1.772	0.018
								Anthracene	0.065	0.001
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.069	0.001
								Fluorene	3.577	0.035
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.287	0.003
								Pyrene	0.002	0.000
								Total HAP		0.585

Table 6-4. 2010 Potential Emissions Inventory, Liquid Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calculations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions ton/yr
Naphthalene	230	690	128.20	0.4664	1.45	1.566	23,652,000	VOC	100.000	0.370
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Flare or TO					Biphenyl	0.000	0.000
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.000	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	100.000	0.370
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	0.000	0.000
								Acenaphthylene	0.000	0.000
								Anthracene	0.000	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.000	0.000
								Fluorene	0.000	0.000
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.000	0.000
								Pyrene	0.000	0.000
								Total HAP		0.370
Refined Tar, Petroleum Based	250	710	1.05	0.0015	1.45	0.000	124,800	VOC	100.000	0.000
	Loading Vehicle:		Truck or Railcar					Benzene	0.000	0.000
	Control:		Flare or TO					Biphenyl	0.000	0.000
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.000	0.000
								Ethylbenzene	0.000	0.000
								RT, pet based	0.000	0.000
								Phenol	0.000	0.000
								Quinoline	0.000	0.000
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	0.000	0.000
								Acenaphthylene	0.000	0.000
								Anthracene	0.000	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.000	0.000
								Fluorene	0.000	0.000
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.000	0.000
								Pyrene	0.000	0.000
								Total HAP		0.000

Calculational Procedure
Emissions factor calculated using the procedures of AP-42, Section 5.2, *Transportation and Marketing of Petroleum Liquids, 7/08.* If loading into either barges, trucks or railcars, the highest saturation factor of 1.45 was used for highest emissions.

CREOSOTE PROCESSING UNIT

Table 7-1. Assumptions for the 2010 Potential Emissions Inventory, Creosote Processing
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

General Assumptions

Creosote is made in either Tanks 221, 222, 223, 224. They are all the same size.

Tank Diameter =	16	ft	
Tank Height =	36	ft	
Tank Volume =	7,238	cf, or	54,146 gal

Controls	Flare, Thermal Oxidizer	For the Blend Tanks
Efficiency	98 %	

Assumptions for P2 and P2/Correction Oil Creosote Production

Displacement Losses

Maximum Creosote Production 20,000,000 gal/yr, per N. Weinstein 1/17/07 Meeting

P2 Creosote

A. P2 Creosote Composition:

% Crude Distillate =	70	%, by volume
% NSR =	30	%, by volume

B. Raw Material Volumes and Temperatures

Annual Volume			Loading Temperature
Crude Distillate	14,000,000	gal/yr	200 F
NSR Volume	6,000,000	gal/yr	200 F
Total	20,000,000	gal/yr	

P2/Correction Oil Creosote

A. P2 Creosote/ Distillate Composition

% P2 Creosote:	70	%, by volume
% Petro/Decanted Distillate	30	%, by volume

B. Raw Material Volumes and Temperatures

Annual Volume			Loading Temperature
Crude Distillate	9,800,000	gal/yr	200 F
NSR Volume	4,200,000	gal/yr	200 F
Petro/Decanted Distillate	6,000,000	gal/yr	200 F
Total	20,000,000	gal/yr	

Heating Losses ***No heating expected - if heating, considered in high temperature displacement calcs.***

Assumptions for the Storage/Transfer of Already-Made P2 and P2/Correction Oil Creosote

Want to store already made creosote in the blend tanks and may transfer for loading. All tanks are the same capacity

	P2 Creosote		OR	**P2/Correction Oil Creosote**	
Total Throughput:	20,000,000	gal/yr		20,000,000	gal/yr
Storage Temperature:	200	F		200	F

Assumptions for the Loading of Creosote

Controls:	Flare, Thermal Oxidizer	
Efficiency	98	%
Loading Vehicle	Truck or Rail	

	P2 Creosote		OR	**P2/Correction Oil Creosote**	
Total Throughput:	20,000,000	gal/yr		20,000,000	gal/yr
Loading Temperature:	200	F		200	F

Table 7-2. 2010 Potential Emissions Inventory, Creosote Processing, Summary of Potential Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

	Potential Emissions (tons/yr)									
	Raw Material	Transfer/Storage of Creosote				Creosote Poduct Loading				
Pollutant	Charging Displacement	P2 Creosote	P2/ Petro Distillate Creosote	P2/ Decanted Oil Distillate Creosote	Maximum	P2 Creosote	P2/Petro Distillate Creosote	P2/ Decanted Oil Distillate Creosote	Maximum	Total
VOC	0.037	0.031	0.044	0.025	0.044	0.036	0.050	0.028	0.050	0.131
Benzene	0.008	0.000	0.009	0.000	0.009	0.000	0.010	0.000	0.010	0.026
Biphenyl	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.001
m-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	0.015	0.017	0.019	0.012	0.019	0.019	0.022	0.014	0.022	0.056
Phenol	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001
Quinoline	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.003
Styrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
m-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	0.001	0.002	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.006
Acenaphthylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluorene	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.002
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL HAPS	0.029	0.022	0.032	0.016	0.032	0.025	0.037	0.018	0.037	0.098
TOTAL POM	0.019	0.021	0.023	0.015	0.023	0.025	0.027	0.018	0.027	0.068

Table 7-3.

2010 Potential Emissions Inventory, Creosote Processing, Raw Material Charging, Displacement
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

E = V/RT x ∑(Pi)(MWi) (from 63.1365(c)(2))

E = Mass of constituent emitted
V = Volume of gas displaced from the vessel
R = Ideal gas law constant = 10.731 psia-cf/ mol-R
T = Temperature of the vessel vapor space (absolute), assumed to be loading temperature
Pi = Partial pressure of the individual constituent
MWi = Molecular weight of the individual constituent

Input Data

P2 Creosote

Crude Distillate Data
Quantity Loaded = 14,000,000 gal/yr, or 1,871,533 cf/yr
Loading Temperature = 200 F, or 660 R
Naphthalene Still Residue Data
Quantity Loaded = 6,000,000 gal/yr, or 802,085 cf/yr
Loading Temperature = 200 F, or 660 R
Controls: Flare, Thermal Oxidizer
Efficiency: 98 %

P2/Correction Oil Creosote

Crude Distillate Data
Quantity Loaded = 9,800,000 gal/yr, or 1,310,073 cf/yr
Loading Temperature = 200 F, or 660 R
Naphthalene Still Residue Data
Quantity Loaded = 4,200,000 gal/yr, or 561,460 cf/yr
Loading Temperature = 200 F, or 660 R
Petro/Decant Distillate Data
Quantity Loaded = 6,000,000 gal/yr, or 802,085 cf/yr
Loading Temperature = 200 F, or 660 R
Controls: Flare, Thermal Oxidizer
Efficiency: 98 %

Emission Calculations

	P2 Creosote								
	Crude Distillate Charging				NSR Charging				Total
Constituent	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	E (tons/yr)
VOC	129.21	4.62E-02	5.9739	0.016	139.38	4.21E-02	5.8729	0.007	0.022
Benzene	78.10	0.00E+00	0.0000	0.000	78.10	0.00E+00	0.0000	0.000	0.000
Biphenyl	154.20	1.63E-04	0.0252	0.000	154.20	1.15E-03	0.1775	0.000	0.000
m-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	0.000
o-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	0.000
p-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	0.000
Dibenzofuran	168.20	1.74E-04	0.0293	0.000	168.20	5.61E-04	0.0943	0.000	0.000
Naphthalene	128.20	3.36E-02	4.3054	0.011	128.20	1.46E-02	1.8770	0.002	0.014
Phenol	94.10	0.00E+00	0.0000	0.000	94.10	0.00E+00	0.0000	0.000	0.000
Quinoline	129.20	4.48E-04	0.0579	0.000	129.20	2.62E-03	0.3390	0.000	0.001
Acenaphthene	154.20	1.85E-03	0.2852	0.001	154.20	3.86E-03	0.5956	0.001	0.001
Acenaphthylene	152.20	0.00E+00	0.0000	0.000	152.20	6.95E-04	0.1058	0.000	0.000
Anthracene	178.20	3.27E-05	0.0058	0.000	178.20	2.56E-05	0.0046	0.000	0.000
Benzo(a)anthracene	228.30	1.99E-07	0.0000	0.000	228.30	0.00E+00	0.0000	0.000	0.000
Benzo(b)fluoranthene	252.30	4.08E-08	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	0.000
Benzo(k)fluoranthene	252.30	6.05E-10	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	0.000
Benzo(g,h,i)perylene	276.30	6.58E-11	0.0000	0.000	276.30	0.00E+00	0.0000	0.000	0.000
Benzo(a)pyrene	252.30	3.01E-09	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	0.000
Chrysene	228.30	8.47E-09	0.0000	0.000	228.30	0.00E+00	0.0000	0.000	0.000
Dibenzo(a,h)anthracene	278.40	1.01E-11	0.0000	0.000	278.40	0.00E+00	0.0000	0.000	0.000
Fluoranthene	202.30	8.33E-05	0.0169	0.000	202.30	2.24E-05	0.0045	0.000	0.000
Fluorene	166.20	5.68E-04	0.0944	0.000	166.20	1.32E-03	0.2202	0.000	0.000
Indeno(1,2,3-cd)pyrene	276.30	4.86E-11	0.0000	0.000	276.30	0.00E+00	0.0000	0.000	0.000
Phenanthrene	178.20	1.45E-04	0.0258	0.000	178.20	1.14E-04	0.0204	0.000	0.000
Pyrene	202.30	2.54E-06	0.0005	0.000	202.30	6.04E-07	0.0001	0.000	0.000
TOTAL HAP				0.013				0.004	0.017
TOTAL POM				0.013				0.004	0.017

	P2/ Correction Oil Creosote																	
	Crude Distillate Charging				NSR Charging				Correction Oil									
									Petro Distillate				Decanted Oil Distillate					
Constituent	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) psia-lb/mol)	E (tons/yr)	MWi (lb/mol)	Pi (psia)	Pi)(MWi) ia-lb/mol)	E (tons/yr)	MAX E (tons/yr)	Total E (tons/yr)	OVERALL E Max (tons/yr)
VOC	129.21	4.62E-02	5.9739	0.011	139.38	4.21E-02	5.8729	0.005	100.70	1.90E-01	19.1510	0.022	177.91	1.59E-02	2.8220	0.003	0.022	0.037	0.037
Benzene	78.10	0.00E+00	0.0000	0.000	78.10	0.00E+00	0.0000	0.000	78.10	8.79E-02	6.8627	0.008	78.10	0.00E+00	0.0000	0.000	0.008	0.008	0.008
Biphenyl	154.20	1.63E-04	0.0252	0.000	154.20	1.15E-03	0.1775	0.000	154.20	8.03E-04	0.1239	0.000	154.20	3.17E-04	0.0488	0.000	0.000	0.000	0.000
m-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	108.10	8.79E-04	0.0951	0.000	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
o-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	108.10	1.43E-03	0.1542	0.000	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
p-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	108.10	7.29E-04	0.0788	0.000	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Dibenzofuran	168.20	1.74E-04	0.0293	0.000	168.20	5.61E-04	0.0943	0.000	168.20	8.34E-05	0.0140	0.000	168.20	3.11E-05	0.0052	0.000	0.000	0.000	0.000
Naphthalene	128.20	3.36E-02	4.3054	0.008	128.20	1.46E-02	1.8770	0.001	128.20	3.94E-02	5.0508	0.006	128.20	8.98E-04	0.1151	0.000	0.006	0.015	0.015
Phenol	94.10	0.00E+00	0.0000	0.000	94.10	0.00E+00	0.0000	0.000	94.10	1.70E-03	0.1597	0.000	94.10	3.37E-04	0.0317	0.000	0.000	0.000	0.000
Quinoline	129.20	4.48E-04	0.0579	0.000	129.20	2.62E-03	0.3390	0.000	129.20	9.52E-04	0.1230	0.000	129.20	1.04E-04	0.0135	0.000	0.000	0.001	0.001
Acenaphthene	154.20	1.85E-03	0.2852	0.001	154.20	3.86E-03	0.5956	0.000	154.20	8.12E-04	0.1252	0.000	154.20	5.90E-05	0.0091	0.000	0.000	0.001	0.001
Acenaphthylene	152.20	0.00E+00	0.0000	0.000	152.20	6.95E-04	0.1058	0.000	152.20	9.56E-04	0.1454	0.000	152.20	1.64E-04	0.0250	0.000	0.000	0.000	0.000
Anthracene	178.20	3.27E-05	0.0058	0.000	178.20	2.56E-05	0.0046	0.000	178.20	2.12E-05	0.0038	0.000	178.20	2.61E-06	0.0005	0.000	0.000	0.000	0.000
Benzo(a)anthracene	228.30	1.99E-07	0.0000	0.000	228.30	0.00E+00	0.0000	0.000	228.30	6.37E-08	0.0000	0.000	228.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	252.30	4.08E-08	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	252.30	6.05E-10	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	276.30	6.58E-11	0.0000	0.000	276.30	0.00E+00	0.0000	0.000		0.00E+00	0.0000	0.000		0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	252.30	3.01E-09	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Chrysene	228.30	8.47E-09	0.0000	0.000	228.30	0.00E+00	0.0000	0.000	228.30	1.47E-09	0.0000	0.000	228.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	278.40	1.01E-11	0.0000	0.000	278.40	0.00E+00	0.0000	0.000	278.40	0.00E+00	0.0000	0.000	278.40	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Fluoranthene	202.30	8.33E-05	0.0169	0.000	202.30	2.24E-05	0.0045	0.000	202.30	1.91E-05	0.0039	0.000	202.30	4.36E-05	0.0088	0.000	0.000	0.000	0.000
Fluorene	166.20	5.68E-04	0.0944	0.000	166.20	1.32E-03	0.2202	0.000	166.20	3.17E-04	0.0526	0.000	166.20	3.15E-05	0.0052	0.000	0.000	0.000	0.000
Indeno(1,2,3-cd)pyrene	276.30	4.86E-11	0.0000	0.000	276.30	0.00E+00	0.0000	0.000	276.30	0.00E+00	0.0000	0.000	276.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Phenanthrene	178.20	1.45E-04	0.0258	0.000	178.20	1.14E-04	0.0204	0.000	178.20	7.27E-05	0.0130	0.000	178.20	1.11E-05	0.0020	0.000	0.000	0.000	0.000
Pyrene	202.30	2.54E-06	0.0005	0.000	202.30	6.04E-07	0.0001	0.000	202.30	1.36E-06	0.0003	0.000	202.30	1.64E-06	0.0003	0.000	0.000	0.000	0.000
TOTAL HAP				0.009				0.003				0.017				0.000	0.017	0.029	0.029
TOTAL POM				0.009				0.003				0.006				0.000	0.006	0.018	0.019

Table 7-4.

2010 Potential Emissions Inventory, Creosote Processing, Transfer and Storage of Already-Made Creosote into Creosote Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 9/97

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
221, 222, 223, or 224	P2 Creosote	Flare, Thermal Oxidizer	98	20,000,000	365	200	16.0	36.0	18.0	54,146	369.4	Y		0.89	1,203	659.44	130.80 at T_{LA}	0.0499 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.0653 at T_{LX}	0.0390 at T_{LN}	0.0262	3,653	18.17	659.00	0.0009	0.024	14.4	0.954	1.000

Turnover Factor Set to 1.0 to allow for storage in multiple tanks. If stored in 1 tank only, turnover factor is less than 1, decreasing emissions.
Standing losses multipled by 4 to allow for storage in any of the 4 tanks at the same time.

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
27.74	3,109.09	3,136.83	VOC	100.00	0.55	62.18	62.74
			Benzene				
			Biphenyl	1.515	0.01	0.94	0.95
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.819	0.00	0.51	0.51
			Ethylbenzene				
			Naphthalene	53.782	0.30	33.44	33.74
			Phenol	1.356	0.01	0.84	0.85
			Quinoline	3.261	0.02	2.03	2.05
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	6.026	0.03	3.75	3.78
			Acenaphthylene	0.247	0.00	0.15	0.16
			Anthracene	0.066	0.00	0.04	0.04
			Benzo(a)anthracene	0.001	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.260	0.00	0.16	0.16
			Fluorene	1.949	0.01	1.21	1.22
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.358	0.00	0.22	0.22
			Pyrene	0.010	0.00	0.01	0.01

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft³)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
221, 222, 223, or 224	P2/Petro Distillate Creosote	Flare, Thermal Oxidizer	98	20,000,000	365	200	16.0	36.0	18.0	54,146	369.4	Y		0.89	1,203	659.44	115.10 at T_{LA}	0.0790 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.1004 at T_{LX}	0.1004 at T_{LN}		3,653	18.17	659.00	0.0013	0.022	14.4	0.929	1.000

Turnover Factor Set to 1.0 to allow for storage in multiple tanks. If stored in 1 tank only, turnover factor is less than 1, decreasing emissions.
Standing losses multipled by 4 to allow for storage in any of the 4 tanks at the same time.

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
34.76	4,327.20	4,361.95	VOC	100.00	0.70	86.54	87.24
			Benzene	19.530	0.14	16.90	17.04
			Biphenyl	1.143	0.01	0.99	1.00
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.473	0.00	0.41	0.41
			Ethylbenzene				
			Naphthalene	43.411	0.30	37.57	37.87
			Phenol	1.116	0.01	0.97	0.97
			Quinoline	2.076	0.01	1.80	1.81
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	3.552	0.02	3.07	3.10
			Acenaphthylene	0.560	0.00	0.48	0.49
			Anthracene	0.046	0.00	0.04	0.04
			Benzo(a)anthracene	0.000	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.149	0.00	0.13	0.13
			Fluorene	1.164	0.01	1.01	1.02
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.227	0.00	0.20	0.20
			Pyrene	0.006	0.00	0.01	0.01

Table 7-4. 2010 Potential Emissions Inventory, Creosote Processing, Transfer and Storage of Already-Made Creosote into Creosote Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Note: Emissions were estimated using methodology outlined in AP-42, Section 7.1, Organic Liquid Storage Tanks, 9/97

Tank ID	Contents	Control Device	% Control	Throughput (gal)	No. Days in Service	Temp °F	D (ft)	Hs (ft)	H_L (ft)	V (gal)	Turn overs	Heat (Y/N)	DP_B (psia)	a	I	T_{LA} (R)	Mv (lb/mol)	Pva (psia)	Taa (R)	Tax (R)	Tan (R)	DT_A (R)	Tsa (R)	Tsx (R)	Tsn (R)	DTs (R)	T_{LX} (R)	T_{LN} (R)	P_{LX} (psia)	P_{LN} (psia)	DP_V (psia)	Vv (ft^3)	H_{VO} (ft)	T_B (R)	Wv lb/ft³	K_E	DT_v (R)	K_S	Turnover Factor
221, 222, 223, or 224	P2/Decant Oil Distillate Creosote	Flare, Thermal Oxidizer	98	20,000,000	365	200	16.0	36.0	18.0	54,146	369.4	Y		0.89	1,203	659.44	137.70 at T_{LA}	0.0371 at T_{LA}	510.25	519.8	500.7	19.1	660	670	650	20	670	650	0.0488 at T_{LX}	0.0289 at T_{LN}	0.0199	3,653	18.17	659.00	0.0007	0.023	14.4	0.966	1.000

Turnover Factor Set to 1.0 to allow for storage in multiple tanks. If stored in 1 tank only, turnover factor is less than 1, decreasing emissions.
Standing losses multipled by 4 to allow for storage in any of the 4 tanks at the same time.

Uncontrolled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)		% wgt vapors at T_{LA}	Controlled VOC Emissions L_S (lb/yr)	L_W (lb/yr)	Total (lb/yr)
21.56	2,432.44	2,454.00	VOC	100.00	0.43	48.65	49.08
			Benzene				
			Biphenyl	1.517	0.01	0.74	0.74
			m-Cresol				
			o-Cresol				
			p-Cresol				
			Cumene				
			Dibenzofuran	0.761	0.00	0.37	0.37
			Ethylbenzene				
			Naphthalene	48.582	0.21	23.63	23.84
			Phenol	1.256	0.01	0.61	0.62
			Quinoline	2.973	0.01	1.45	1.46
			Styrene				
			Toluene				
			m-Xylene				
			o-Xylene				
			p-Xylene				
			Acenaphthene	5.426	0.02	2.64	2.66
			Acenaphthylene	0.360	0.00	0.18	0.18
			Anthracene	0.061	0.00	0.03	0.03
			Benzo(a)anthracene	0.001	0.00	0.00	0.00
			Benzo(b)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(k)fluoranthene	0.000	0.00	0.00	0.00
			Benzo(g,h,i)perylene	0.000	0.00	0.00	0.00
			Benzo(a)pyrene	0.000	0.00	0.00	0.00
			Chrysene	0.000	0.00	0.00	0.00
			Dibenzo(a,h)anthracene	0.000	0.00	0.00	0.00
			Fluoranthene	0.284	0.00	0.14	0.14
			Fluorene	1.759	0.01	0.86	0.86
			Indeno(1,2,3-cd)pyrene	0.000	0.00	0.00	0.00
			Phenanthrene	0.331	0.00	0.16	0.16
			Pyrene	0.011	0.00	0.01	0.01

Table 7-5. 2010 Potential Emissions Inventory, Creosote Processing, Creosote Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calcualations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions tons/yr
P2 Creosote	200	660	130.81	0.0507	1.45	0.181	20,000,000	VOC	100.000	0.036
	Loading Vehicle:		Truck or Rail					Benzene	0.000	0.000
	Control:		Flare, Thermal Oxidizer					Biphenyl	1.519	0.001
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.823	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	53.765	0.019
								Phenol	1.357	0.000
								Quinoline	3.262	0.001
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	6.033	0.002
								Acenaphthylene	0.248	0.000
								Anthracene	0.066	0.000
								Benzo(a)anthracene	0.001	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.261	0.000
								Fluorene	1.953	0.001
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.360	0.000
								Pyrene	0.010	0.000
								Total HAP		0.025
P2/Petro Distillate Creosote	200	660	115.16	0.0800	1.45	0.252	20,000,000	VOC	100.000	0.050
	Loading Vehicle:		Truck or Rail					Benzene	19.449	0.010
	Control:		Flare, Thermal Oxidizer					Biphenyl	1.147	0.001
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.476	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	43.443	0.022
								Phenol	1.118	0.001
								Quinoline	2.079	0.001
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	3.560	0.002
								Acenaphthylene	0.561	0.000
								Anthracene	0.046	0.000
								Benzo(a)anthracene	0.000	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.149	0.000
								Fluorene	1.167	0.001
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.229	0.000
								Pyrene	0.006	0.000
								Total HAP		0.037

Table 7-5. 2010 Potential Emissions Inventory, Creosote Processing, Creosote Product Loading
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Input Data and Emissions Calcualations

Commodity	Temperature (°F)	Temperature (°R)	Vapor MW (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor lb/Mgal	Potential Throughput (gal/yr)	Constituent	% weight in vapors	Potential Emissions tons/yr
P2/Petro Distillate Creosote	200	660	137.72	0.0377	1.45	0.142	20,000,000	VOC	100.000	0.028
	Loading Vehicle:		Truck or Rail					Benzene	0.000	0.000
	Control:		Flare, Thermal Oxidizer					Biphenyl	1.520	0.000
	Control Efficiency:		98 %					m-Cresol	0.000	0.000
								o-Cresol	0.000	0.000
								p-Cresol	0.000	0.000
								Cumene	0.000	0.000
								Dibenzofuran	0.764	0.000
								Ethylbenzene	0.000	0.000
								Naphthalene	48.550	0.014
								Phenol	1.257	0.000
								Quinoline	2.973	0.001
								Styrene	0.000	0.000
								Toluene	0.000	0.000
								m-Xylene	0.000	0.000
								o-Xylene	0.000	0.000
								p-Xylene	0.000	0.000
								Acenaphthene	5.431	0.002
								Acenaphthylene	0.361	0.000
								Anthracene	0.062	0.000
								Benzo(a)anthracene	0.001	0.000
								Benzo(b)fluoranthene	0.000	0.000
								Benzo(k)fluoranthene	0.000	0.000
								Benzo(g,h,i)perylene	0.000	0.000
								Benzo(a)pyrene	0.000	0.000
								Chrysene	0.000	0.000
								Dibenzo(a,h)anthracene	0.000	0.000
								Fluoranthene	0.285	0.000
								Fluorene	1.762	0.001
								Indeno(1,2,3-cd)pyrene	0.000	0.000
								Phenanthrene	0.333	0.000
								Pyrene	0.011	0.000
								Total HAP		0.018

MELT POT

Table 8-1. Assumptions for the 2010 Potential Emissions Inventory, Melt Pot
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Liquid Filling

Maximum Liquid Throughput		1,000,000	gal/yr,	133,681	cf/yr	
Pump Rate to Vessel		200	gal/min,	12,000	gal/hr,	1,604 cf/hr
Material	Temperature					
CCOT	95	C	203	F	663	R
RCO	95	C	203	F	663	R
P2 Creosote	95	C	203	F	663	R
Coal Tar Pitch	204.4	C	400	F	860	R
Controls	Flare, Thermal Oxidizer					
Efficiency	98	%				

Solid Filling

Maximum Throughput	200	tons/hr		
Maximum Throughput	1,000,000	gallons/yr,	5,000	tons/yr
Assume Average Density	10.0	lb/gal		
Controls:	None			

Heating

V = Volume of free space in vessel

Tank Diamter =	11	ft	Assume tank 1/2 full. Therefore, V =		1,045 cf/cycle
Tank Length =	22	ft			
Assume it takes	4	hours to heat a vessel			
Total throughout =	1,000,000	gal/yr, or	133,681	cf/yr	
				127.88	cycles/year
R = Ideal Gas Law =	10.731	psi-cf/lb-mole-R			
T1 = Initital Temperature = (all material)	68	F, or	528	R	
T2 = Final Temperature = (all material but pitch)	203	F, or	663	R	
T2 = Final Temperature = (pitch)	400	F, or	860	R	

Table 8-2. 2010 Potential Emissions Inventory, Melt Pot, Summary of Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

	Potential Emissions (tons/yr) Uncontrolled			
Pollutant	Liquid Filling	Solid Filling	Heating Loss	Total
PM		0.0127		0.0127
PM-10		0.0060		0.0060
PM-2.5		0.0019		0.0019
VOC	0.0085		0.0013	0.0098
Benzene	0.0029	0.0000	0.0004	0.0034
Biphenyl	0.0000	0.0002	0.0000	0.0002
m-Cresol	0.0000	0.0001	0.0000	0.0001
o-Cresol	0.0000	0.0000	0.0000	0.0001
p-Cresol	0.0000	0.0001	0.0000	0.0001
Cumene	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	0.0001	0.0005	0.0000	0.0006
Ethylbenzene	0.0001	0.0000	0.0000	0.0001
Naphthalene	0.0036	0.0071	0.0005	0.0111
Phenol	0.0001	0.0001	0.0000	0.0003
Quinoline	0.0000	0.0001	0.0000	0.0002
Styrene	0.0002	0.0000	0.0000	0.0003
Toluene	0.0007	0.0000	0.0001	0.0008
m-Xylene	0.0003	0.0000	0.0000	0.0003
o-Xylene	0.0001	0.0000	0.0000	0.0001
p-Xylene	0.0003	0.0000	0.0000	0.0003
Acenaphthene	0.0001	0.0009	0.0000	0.0010
Acenaphthylene	0.0001	0.0003	0.0000	0.0004
Anthracene	0.0000	0.0005	0.0000	0.0005
Benzo(a)anthracene	0.0000	0.0002	0.0000	0.0002
Benzo(b)fluoranthene	0.0000	0.0003	0.0000	0.0003
Benzo(k)fluoranthene	0.0000	0.0001	0.0000	0.0001
Benzo(g,h,i)perylene	0.0000	0.0001	0.0000	0.0001
Benzo(a)pyrene	0.0000	0.0002	0.0000	0.0002
Chrysene	0.0000	0.0003	0.0000	0.0003
Dibenzo(a,h)anthracene	0.0000	0.0002	0.0000	0.0002
Fluoranthene	0.0001	0.0010	0.0000	0.0011
Fluorene	0.0000	0.0006	0.0000	0.0006
Indeno(1,2,3-cd)pyrene	0.0000	0.0001	0.0000	0.0001
Phenanthrene	0.0000	0.0017	0.0000	0.0017
Pyrene	0.0000	0.0009	0.0000	0.0009
TOTAL HAP	0.0062	0.0093	0.0009	0.0164
TOTAL POM	0.0036	0.0090	0.0005	0.0132

Table 8-3. 2010 Potential Emissions Inventory, Melt Pot, Liquid Filling
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

E = (V/RT)(Pi)(MWi) - Ideal Gas Law
- E = uncontrolled rate when filling liquid material
- V = Volume of gas displaced from the vessel
- R = Ideal gas law constant 10.731
- T = Temperature of the vessel vapor space (absolute)
- Pi = Partial pressure of the individual constituent
- MW = Molecular weight of the individual constiuent

Input Data

Maximum Throughput	133,681 cf/yr			
Pump Rate to Vessel	1,604 cf/hr			
Temperature:	Crude Tar	RCO	Creosote	Pitch
Deg R	663	663	663	860
Controls:	Flare, Thermal Oxidizer			
Efficiency	98 %			

Emission Calculations

	Crude Tar				RCO				P2 Creosote				Coal Tar Pitch				Maximum	
	MWi	Pi	E		MWi	Pi	E		MWi	Pi	E		MWi	Pi	E		E	
Pollutant	(lb/mol)	(psia)	(lb/hr)	(tons/yr)	(lb/mol)	(psia)	(lb/hr)	(tons/yr)	(lb/mol)	(psia)	(lb/hr)	(tons/yr)	(lb/mol)	(psia)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
VOC	94.583	0.3839	0.1638	0.0068	110.983	0.4086	0.2045	0.0085	130.871	0.0547	0.0323	0.0013	171.923	0.0130	0.0078	0.0003	0.2045	0.0085
Benzene	78.10	2.001E-01	0.0705	0.0029	78.10	8.663E-02	0.0305	0.0013	78.10	0.000E+00	0.0000	0.0000	78.10	0.000E+00	0.0000	0.0000	0.0705	0.0029
Biphenyl	154.20	3.774E-04	0.0003	0.0000	154.20	4.035E-04	0.0003	0.0000	154.20	7.147E-04	0.0005	0.0000	154.20	0.000E+00	0.0000	0.0000	0.0005	0.0000
m-Cresol	108.10	1.758E-03	0.0009	0.0000	108.10	5.982E-04	0.0003	0.0000	108.10	0.000E+00	0.0000	0.0000	108.10	0.000E+00	0.0000	0.0000	0.0009	0.0000
o-Cresol	108.10	1.423E-03	0.0007	0.0000	108.10	0.000E+00	0.0000	0.0000	108.10	0.000E+00	0.0000	0.0000	108.10	0.000E+00	0.0000	0.0000	0.0007	0.0000
p-Cresol	108.10	1.830E-03	0.0009	0.0000	108.10	4.980E-04	0.0002	0.0000	108.10	0.000E+00	0.0000	0.0000	108.10	0.000E+00	0.0000	0.0000	0.0009	0.0000
Cumene	120.20	0.000E+00	0.0000	0.0000	120.20	0.000E+00	0.0000	0.0000	120.20	0.000E+00	0.0000	0.0000	120.20	0.000E+00	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	168.20	2.166E-04	0.0002	0.0000	168.20	1.206E-04	0.0001	0.0000	168.20	3.580E-04	0.0003	0.0000	168.20	3.582E-03	0.0021	0.0001	0.0021	0.0001
Ethylbenzene	106.20	0.000E+00	0.0000	0.0000	106.20	5.359E-03	0.0026	0.0001	106.20	0.000E+00	0.0000	0.0000	106.20	0.000E+00	0.0000	0.0000	0.0026	0.0001
Naphthalene	128.20	4.566E-02	0.0264	0.0011	128.20	1.476E-01	0.0854	0.0036	128.20	2.997E-02	0.0173	0.0007	128.20	0.000E+00	0.0000	0.0000	0.0854	0.0036
Phenol	94.10	7.575E-03	0.0032	0.0001	94.10	1.357E-03	0.0006	0.0000	94.10	1.038E-03	0.0004	0.0000	94.10	0.000E+00	0.0000	0.0000	0.0032	0.0001
Quinoline	129.20	1.053E-03	0.0006	0.0000	129.20	1.075E-03	0.0006	0.0000	129.20	1.812E-03	0.0011	0.0000	129.20	0.000E+00	0.0000	0.0000	0.0011	0.0000
Styrene	104.20	5.594E-03	0.0026	0.0001	104.20	1.142E-02	0.0054	0.0002	104.20	0.000E+00	0.0000	0.0000	104.20	0.000E+00	0.0000	0.0000	0.0054	0.0002
Toluene	92.40	4.010E-02	0.0167	0.0007	92.40	2.729E-02	0.0114	0.0005	92.40	0.000E+00	0.0000	0.0000	92.40	0.000E+00	0.0000	0.0000	0.0167	0.0007
m-Xylene	106.20	1.368E-02	0.0065	0.0003	106.20	9.306E-03	0.0045	0.0002	106.20	0.000E+00	0.0000	0.0000	106.20	0.000E+00	0.0000	0.0000	0.0065	0.0003
o-Xylene	106.20	5.720E-03	0.0027	0.0001	106.20	3.892E-03	0.0019	0.0001	106.20	0.000E+00	0.0000	0.0000	106.20	0.000E+00	0.0000	0.0000	0.0027	0.0001
p-Xylene	106.20	1.410E-02	0.0068	0.0003	106.20	9.596E-03	0.0046	0.0002	106.20	0.000E+00	0.0000	0.0000	106.20	0.000E+00	0.0000	0.0000	0.0068	0.0003
Acenaphthene	154.20	1.310E-03	0.0009	0.0000	154.20	8.912E-04	0.0006	0.0000	154.20	2.820E-03	0.0020	0.0001	154.20	0.000E+00	0.0000	0.0000	0.0020	0.0001
Acenaphthylene	152.20	1.017E-03	0.0007	0.0000	152.20	3.913E-04	0.0003	0.0000	152.20	1.173E-04	0.0001	0.0000	152.20	5.031E-03	0.0027	0.0001	0.0027	0.0001
Anthracene	178.20	4.037E-05	0.0000	0.0000	178.20	5.939E-06	0.0000	0.0000	178.20	2.748E-05	0.0000	0.0000	178.20	6.684E-04	0.0004	0.0000	0.0004	0.0000
Benzo(a)anthracene	228.30	1.813E-07	0.0000	0.0000	228.30	0.000E+00	0.0000	0.0000	228.30	1.921E-07	0.0000	0.0000	228.30	1.099E-04	0.0001	0.0000	0.0001	0.0000
Benzo(b)fluoranthene	252.30	1.559E-07	0.0000	0.0000	252.30	0.000E+00	0.0000	0.0000	252.30	4.542E-08	0.0000	0.0000	252.30	1.030E-04	0.0001	0.0000	0.0001	0.0000
Benzo(k)fluoranthene	252.30	3.482E-10	0.0000	0.0000	252.30	0.000E+00	0.0000	0.0000	252.30	1.806E-10	0.0000	0.0000	252.30	3.633E-06	0.0000	0.0000	0.0000	0.0000
Benzo(g,h,i)perylene	276.30	8.351E-11	0.0000	0.0000	276.30	0.000E+00	0.0000	0.0000	276.30	3.760E-11	0.0000	0.0000	276.30	2.268E-06	0.0000	0.0000	0.0000	0.0000
Benzo(a)pyrene	252.30	4.688E-09	0.0000	0.0000	252.30	0.000E+00	0.0000	0.0000	252.30	1.939E-09	0.0000	0.0000	252.30	1.401E-05	0.0000	0.0000	0.0000	0.0000
Chrysene	228.30	5.859E-09	0.0000	0.0000	228.30	0.000E+00	0.0000	0.0000	228.30	7.807E-09	0.0000	0.0000	228.30	1.911E-05	0.0000	0.0000	0.0000	0.0000
Dibenzo(a,h)anthracene	278.40	1.091E-11	0.0000	0.0000	278.40	0.000E+00	0.0000	0.0000	278.40	8.951E-12	0.0000	0.0000	278.40	1.314E-06	0.0000	0.0000	0.0000	0.0000
Fluoranthene	202.30	4.872E-05	0.0000	0.0000	202.30	6.800E-06	0.0000	0.0000	202.30	9.427E-05	0.0001	0.0000	202.30	2.296E-03	0.0016	0.0001	0.0016	0.0001
Fluorene	166.20	5.240E-04	0.0004	0.0000	166.20	2.674E-04	0.0002	0.0000	166.20	8.506E-04	0.0006	0.0000	166.20	0.000E+00	0.0000	0.0000	0.0006	0.0000
Indeno(1,2,3-cd)pyrene	276.30	8.531E-11	0.0000	0.0000	276.30	0.000E+00	0.0000	0.0000	276.30	3.837E-11	0.0000	0.0000	276.30	2.551E-07	0.0000	0.0000	0.0000	0.0000
Phenanthrene	178.20	8.894E-05	0.0001	0.0000	178.20	2.617E-05	0.0000	0.0000	178.20	1.493E-04	0.0001	0.0000	178.20	7.466E-04	0.0005	0.0000	0.0005	0.0000
Pyrene	202.30	1.686E-06	0.0000	0.0000	202.30	1.850E-07	0.0000	0.0000	202.30	3.652E-06	0.0000	0.0000	202.30	3.632E-04	0.0003	0.0000	0.0003	0.0000
TOTAL HAP			0.1411	0.0059			0.1493	0.0062			0.0225	0.0009			0.0077	0.0003	0.1493	0.0062
TOTAL POM			0.0296	0.0012			0.0875	0.0036			0.0221	0.0009			0.0077	0.0003	0.0875	0.0036

Table 8-4. 2010 Potential Emissions Inventory, Melt Pot, Solid Filling
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

Emission factors derived using AP-42, Section 13.2.4 *"Aggregate Handling and Storage Piles"*, 11/06.

$E = k\,(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$

E = Emission factor (lb/ton)

k = particle size multiplier	PM	0.74	
	PM-10	0.35	
	PM-2.5	0.11	
U = mean wind speed, (mph)		9	mph
M = material moisture content (%)		2	%

Input Data

Maximum Throughput	200	tons/hr
Maximum Throughput	5,000	tons/yr

Emission Calculations

				Speciated HAP Emissions													
	Particulate Emission Factor	Particulate Potential Emissions		Crude Tar Potential Emissions			RCO Potential Emissions			Creosote Potential Emissions			Pitch Potential Emissions			Maximum Emissions	
Constiuent	(lb/ton)	(lb/hr)	(tons/yr)	% by wgt.	(lb/hr)	(tons/yr)	% by wgt.	(lb/hr)	(tons/yr)	% by wgt.	(lb/hr)	(tons/yr)	% by wgt.	(lb/hr)	(tons/yr)	(lb/hr)	(ton/yr)
PM	0.00508	1.0169	0.0127	-			-			-			-				
PM-10	0.00240	0.4810	0.0060	-			-			-			-				
PM2.5	0.00076	0.1512	0.0019	-			-			-			-				
Benzene				0.33	0.0034	0.0000	0.21	0.0021	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0034	0.0000
Biphenyl				0.70	0.0071	0.0001	1.10	0.0112	0.0001	1.40	0.0142	0.0002	0.00	0.0000	0.0000	0.0142	0.0002
m-Cresol				0.40	0.0041	0.0001	0.20	0.0020	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0041	0.0001
o-Cresol				0.20	0.0020	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0020	0.0000
p-Cresol				0.50	0.0051	0.0001	0.20	0.0020	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0051	0.0001
Cumene				0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0000	0.0000
Dibenzofuran				2.20	0.0224	0.0003	1.80	0.0183	0.0002	3.84	0.0390	0.0005	0.13	0.0013	0.0000	0.0390	0.0005
Ethylbenzene				0.00	0.0000	0.0000	0.10	0.0010	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0010	0.0000
Naphthalene				11.70	0.1190	0.0015	55.60	0.5654	0.0071	8.11	0.0825	0.0010	0.00	0.0000	0.0000	0.5654	0.0071
Phenol				0.76	0.0077	0.0001	0.20	0.0020	0.0000	0.11	0.0011	0.0000	0.00	0.0000	0.0000	0.0077	0.0001
Quinoline				0.60	0.0061	0.0001	0.90	0.0092	0.0001	1.09	0.0111	0.0001	0.00	0.0000	0.0000	0.0111	0.0001
Styrene				0.10	0.0010	0.0000	0.30	0.0031	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0031	0.0000
Toluene				0.20	0.0020	0.0000	0.20	0.0020	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0020	0.0000
m-Xylene				0.20	0.0020	0.0000	0.20	0.0020	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0020	0.0000
o-Xylene				0.10	0.0010	0.0000	0.10	0.0010	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0010	0.0000
p-Xylene				0.20	0.0020	0.0000	0.20	0.0020	0.0000	0.00	0.0000	0.0000	0.00	0.0000	0.0000	0.0020	0.0000
Acenaphthene				3.00	0.0305	0.0004	3.00	0.0305	0.0004	6.82	0.0694	0.0009	0.00	0.0000	0.0000	0.0694	0.0009
Acenaphthylene				2.30	0.0234	0.0003	1.30	0.0132	0.0002	0.28	0.0028	0.0000	0.09	0.0009	0.0000	0.0234	0.0003
Anthracene				3.70	0.0376	0.0005	0.80	0.0081	0.0001	2.66	0.0270	0.0003	0.15	0.0015	0.0000	0.0376	0.0005
Benzo(a)anthracene				1.60	0.0163	0.0002	0.00	0.0000	0.0000	1.79	0.0182	0.0002	0.67	0.0068	0.0001	0.0182	0.0002
Benzo(b)fluoranthene				2.60	0.0264	0.0003	0.00	0.0000	0.0000	0.80	0.0081	0.0001	1.40	0.0142	0.0002	0.0264	0.0003
Benzo(k)fluoranthene				0.42	0.0043	0.0001	0.00	0.0000	0.0000	0.23	0.0023	0.0000	0.52	0.0053	0.0001	0.0053	0.0001
Benzo(g,h,i)perylene				0.61	0.0062	0.0001	0.00	0.0000	0.0000	0.29	0.0029	0.0000	1.14	0.0116	0.0001	0.0116	0.0001
Benzo(a)pyrene				1.90	0.0193	0.0002	0.00	0.0000	0.0000	0.83	0.0084	0.0001	1.27	0.0129	0.0002	0.0193	0.0002
Chrysene				1.40	0.0142	0.0002	0.00	0.0000	0.0000	1.97	0.0200	0.0003	0.76	0.0077	0.0001	0.0200	0.0003
Dibenzo(a,h)anthracene				0.15	0.0015	0.0000	0.00	0.0000	0.0000	0.13	0.0013	0.0000	1.21	0.0123	0.0002	0.0123	0.0002
Fluoranthene				3.90	0.0397	0.0005	0.80	0.0081	0.0001	7.97	0.0810	0.0010	0.75	0.0076	0.0001	0.0810	0.0010
Fluorene				2.80	0.0285	0.0004	2.10	0.0214	0.0003	4.80	0.0488	0.0006	0.00	0.0000	0.0000	0.0488	0.0006
Indeno(1,2,3-cd)pyrene				0.80	0.0081	0.0001	0.00	0.0000	0.0000	0.38	0.0039	0.0000	0.21	0.0021	0.0000	0.0081	0.0001
Phenanthrene				7.40	0.0752	0.0009	3.20	0.0325	0.0004	13.12	0.1334	0.0017	0.14	0.0014	0.0000	0.1334	0.0017
Pyrene				3.10	0.0315	0.0004	0.50	0.0051	0.0001	7.09	0.0721	0.0009	0.67	0.0068	0.0001	0.0721	0.0009
Total HAP					0.5478	0.0068		0.7424	0.0093		0.6478	0.0081		0.0926	0.0012	0.7424	0.0093
Total POM					0.5174	0.0065		0.7230	0.0090		0.6467	0.0081		0.0926	0.0012	0.7230	0.0090

Table 8-5. 2010 Potential Emissions Inventory, Melt Pot, Heating Material from Solid to Liquid
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

$E = (P_{iT1}/Pa_1 + P_{iT2}/Pa_2)/2 \times Delta(n) \times MWi$

E = Mass of emissions emitted from heating
P_{iT1} = Partial pressure of constituent in aqueous solution at initial temperature
P_{iT2} = Partial pressure of constiuent in aqueous solution at final temperature
Pa_1 = Initial noncondensable gas pressure in the vessel
Pa_2 = Final noncondensable gas pressure in the vessel
Delta(n) = Number of moles of noncondensable gas displaced
MWi = Molecular weight of constituent

$Delta(n) = V/R[(P_{a1}/T_1) - (P_{a2}/T_2)]$

V = Volume of free space in vessel
R = Ideal Gas Law = 10.731 psi-cf/lb-mole-R
T1 = Initital Temperature
T2 = Final Temperature

$Pa_1 = 14.7 - \sum P_{iT1}$
$Pa_2 = 14.7 - \sum P_{iT2}$

Input Data

V = Volume of free space in vessel	1,045 cf/cycle
Cycles per Year:	127.88 cycles/yr
T1 = Initital Temperature = (for all)	528 R
T2 = Final Temperature = (all but pitch)	663 R
T2 = Final Temperature = (pitch) =	860 R
Time to heat the Vessel	4 hrs/cycle
Controls:	Flare, Thermal Oxidizer
Efficiency:	98 %

Emission Calculations

	Crude Tar						RCO						P2 Creosote						Pitch						Maximum	
Constituent	MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/cycle)	E (lb/hr)	(tons/yr)	MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/cycle)	E (lb/hr)	(lb/yr)	MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/cycle)	E (lb/hr)	(lb/yr)	MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/cycle)	E (lb/hr)	(lb/yr)	E (lb/hr)	(ton/yr)
		Pa_1 =	14.6825					Pa_1 =	14.6876					Pa_1 =	14.6992					Pa_1 =	14.7000					
		Pa_2 =	14.3161					Pa_2 =	14.2914					Pa_2 =	14.6453					Pa_2 =	14.6870					
		Delta(n) =	0.6054					Delta(n) =	0.6100					Delta(n) =	0.5601					Delta(n) =	1.0485					
VOC	94.583	0.0175	0.3839	0.0160	0.0040	0.0010	110.983	0.0124	0.4086	0.0199	0.0050	0.0013	130.871	0.0008	0.0547	0.0028	0.0007	0.0002	171.923	8.40E-07	0.0130	0.0016	0.0004	0.0001	0.0050	0.0013
Benzene	78.10	1.25E-02	2.00E-01	0.0070	0.0018	0.0004	78.10	5.43E-03	8.66E-02	0.0031	0.0008	0.0002	78.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	78.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0018	0.0004
Biphenyl	154.20	2.30E-06	3.77E-04	0.0000	0.0000	0.0000	154.20	2.46E-06	4.04E-04	0.0000	0.0000	0.0000	154.20	4.36E-06	7.15E-04	0.0000	0.0000	0.0000	154.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
m-Cresol	108.10	1.59E-05	1.76E-03	0.0001	0.0000	0.0000	108.10	5.40E-06	5.98E-04	0.0000	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
o-Cresol	108.10	1.44E-05	1.42E-03	0.0001	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
p-Cresol	108.10	1.33E-05	1.83E-03	0.0001	0.0000	0.0000	108.10	3.62E-06	4.98E-04	0.0000	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
Cumene	120.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	120.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	120.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	120.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	168.20	8.00E-07	2.17E-04	0.0000	0.0000	0.0000	168.20	4.45E-07	1.21E-04	0.0000	0.0000	0.0000	168.20	1.32E-06	3.58E-04	0.0000	0.0000	0.0000	168.20	8.77E-08	3.58E-03	0.0004	0.0001	0.0000	0.0001	0.0000
Ethylbenzene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	106.20	1.87E-04	5.36E-03	0.0003	0.0001	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0001	0.0000
Naphthalene	128.20	6.56E-04	4.57E-02	0.0025	0.0006	0.0002	128.20	2.12E-03	1.48E-01	0.0082	0.0020	0.0005	128.20	4.30E-04	3.00E-02	0.0015	0.0004	0.0001	128.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0020	0.0005
Phenol	94.10	7.24E-05	7.58E-03	0.0003	0.0001	0.0000	94.10	1.30E-05	1.36E-03	0.0001	0.0000	0.0000	94.10	9.93E-06	1.04E-03	0.0000	0.0000	0.0000	94.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0001	0.0000
Quinoline	129.20	1.20E-05	1.05E-03	0.0001	0.0000	0.0000	129.20	1.22E-05	1.08E-03	0.0001	0.0000	0.0000	129.20	2.06E-05	1.81E-03	0.0001	0.0000	0.0000	129.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
Styrene	104.20	1.70E-04	5.59E-03	0.0003	0.0001	0.0000	104.20	3.47E-04	1.14E-02	0.0005	0.0001	0.0000	104.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	104.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0001	0.0000
Toluene	92.40	1.94E-03	4.01E-02	0.0016	0.0004	0.0001	92.40	1.32E-03	2.73E-02	0.0011	0.0003	0.0001	92.40	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	92.40	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0004	0.0001
m-Xylene	106.20	4.58E-04	1.37E-02	0.0006	0.0002	0.0000	106.20	3.12E-04	9.31E-03	0.0004	0.0001	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0002	0.0000
o-Xylene	106.20	1.81E-04	5.72E-03	0.0003	0.0001	0.0000	106.20	1.23E-04	3.89E-03	0.0002	0.0000	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0001	0.0000
p-Xylene	106.20	4.84E-04	1.41E-02	0.0007	0.0002	0.0000	106.20	3.30E-04	9.60E-03	0.0004	0.0001	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0002	0.0000
Acenaphthene	154.20	1.17E-05	1.31E-03	0.0001	0.0000	0.0000	154.20	7.99E-06	8.91E-04	0.0001	0.0000	0.0000	154.20	2.53E-05	2.82E-03	0.0002	0.0000	0.0000	154.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
Acenaphthylene	152.20	9.13E-06	1.02E-03	0.0001	0.0000	0.0000	152.20	3.51E-06	3.91E-04	0.0000	0.0000	0.0000	152.20	1.05E-06	1.17E-04	0.0000	0.0000	0.0000	152.20	6.62E-07	5.03E-03	0.0005	0.0001	0.0000	0.0001	0.0000
Anthracene	178.20	9.77E-08	4.04E-05	0.0000	0.0000	0.0000	178.20	1.44E-08	5.94E-06	0.0000	0.0000	0.0000	178.20	6.65E-08	2.75E-05	0.0000	0.0000	0.0000	178.20	7.35E-09	6.68E-04	0.0001	0.0000	0.0000	0.0000	0.0000
Benzo(a)anthracene	228.30	1.07E-10	1.81E-07	0.0000	0.0000	0.0000	228.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	228.30	1.13E-10	1.92E-07	0.0000	0.0000	0.0000	228.30	8.30E-11	1.10E-04	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(b)fluoranthene	252.30	1.11E-10	1.56E-07	0.0000	0.0000	0.0000	252.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	252.30	3.22E-11	4.54E-08	0.0000	0.0000	0.0000	252.30	1.10E-10	1.03E-04	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(k)fluoranthene	252.30	2.87E-14	3.48E-10	0.0000	0.0000	0.0000	252.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	252.30	1.49E-14	1.81E-10	0.0000	0.0000	0.0000	252.30	6.59E-14	3.63E-06	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(g,h,i)perylene	276.30	3.75E-15	8.35E-11	0.0000	0.0000	0.0000	276.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	276.30	1.69E-15	3.76E-11	0.0000	0.0000	0.0000	276.30	1.30E-14	2.27E-06	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(a)pyrene	252.30	7.84E-13	4.69E-09	0.0000	0.0000	0.0000	252.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	252.30	3.25E-13	1.94E-09	0.0000	0.0000	0.0000	252.30	9.73E-13	1.40E-05	0.0000	0.0000	0.0000	0.0000	0.0000
Chrysene	228.30	7.05E-13	5.86E-09	0.0000	0.0000	0.0000	228.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	228.30	9.39E-13	7.81E-09	0.0000	0.0000	0.0000	228.30	7.10E-13	1.91E-05	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenzo(a,h)anthracene	278.40	4.74E-16	1.09E-11	0.0000	0.0000	0.0000	278.40	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	278.40	3.89E-16	8.95E-12	0.0000	0.0000	0.0000	278.40	7.10E-15	1.31E-06	0.0000	0.0000	0.0000	0.0000	0.0000
Fluoranthene	202.30	2.09E-07	4.87E-05	0.0000	0.0000	0.0000	202.30	2.91E-08	6.80E-06	0.0000	0.0000	0.0000	202.30	4.04E-07	9.43E-05	0.0000	0.0000	0.0000	202.30	7.44E-08	2.30E-03	0.0003	0.0001	0.0000	0.0001	0.0000
Fluorene	166.20	3.66E-06	5.24E-04	0.0000	0.0000	0.0000	166.20	1.87E-06	2.67E-04	0.0000	0.0000	0.0000	166.20	5.94E-06	8.51E-04	0.0001	0.0000	0.0000	166.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000
Indeno(1,2,3-cd)pyrene	276.30	5.02E-15	8.53E-11	0.0000	0.0000	0.0000	276.30	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	276.30	2.26E-15	3.84E-11	0.0000	0.0000	0.0000	276.30	2.45E-15	2.55E-07	0.0000	0.0000	0.0000	0.0000	0.0000
Phenanthrene	178.20	1.96E-07	8.89E-05	0.0000	0.0000	0.0000	178.20	5.78E-08	2.62E-05	0.0000	0.0000	0.0000	178.20	3.30E-07	1.49E-04	0.0000	0.0000	0.0000	178.20	6.89E-09	7.47E-04	0.0001	0.0000	0.0000	0.0000	0.0000
Pyrene	202.30	1.51E-09	1.69E-06	0.0000	0.0000	0.0000	202.30	1.65E-10	1.85E-07	0.0000	0.0000	0.0000	202.30	3.26E-09	3.65E-06	0.0000	0.0000	0.0000	202.30	6.04E-10	3.63E-04	0.0001	0.0000	0.0000	0.0000	0.0000
TOTAL HAP					0.0035	0.0009					0.0036	0.0009					0.0005	0.0001					0.0004	0.0001	0.0036	0.0009
TOTAL POM					0.0007	0.0002					0.0021	0.0005					0.0005	0.0001					0.0004	0.0001	0.0021	0.0005

HEAT UP LOSSES

Table 9-1. Assumptions for the 2010 Potential Emissions Inventory,
Heat-up Losses from Incoming Material Barges and Tankcars
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

CCOT Barge Heating

Barge Capacity =		500,000	gallons	
Percent Material in Vessel =		75	%	
Volume of Free Space in Vessel =		125,000	gallons, or	16,710.11 cf/vessel
Time it takes to heat a vessel =		24	hrs/vessel	
Maximum CCOT Received by Barge =		2,000,000	gal/yr, ESTIMATE	
Number of barges heated per year =		5	vessels/yr	
Initial Temperature =	50 F, or	510	R	
Final Temperature =	180 F, or	640	R	
Controls	None			

CCOT Tankcar Heating

Tankcar capacity =		20,000	gallons	
Percent Material in Vessel =		75	%	
Volume of Free Space in Vessel =		5,000	gallons, or	668.40 cf/vessel
Time it takes to heat a vessel =		1	hr/vessel	
Number tankcars heated per week =		1	vessels/week	
Number tankcars heated per year =		52	vessels/year, OR	1,040,000 gal/yr
Initial Temperature =	50 F, or	510	R	
Final Temperature =	180 F, or	640	R	
Controls	None			

RCO Barge Heating

Barge Capacity =		500,000	gallons	
Percent Material in Vessel =		75	%	
Volume of Free Space in Vessel =		125,000	gallons, or	16,710.11 cf/vessel
Time it takes to heat a vessel =		24	hrs/vessel	
Maximum RCO Received by Barge =		45,000,000	gal/yr, per a 9/18/01 email from H. Huschak	
Number of barges heated per year =		120	vessels/yr	
Initial Temperature =	50 F, or	510	R	
Final Temperature =	160 F, or	620	R	
Controls	None			

RCO Tankcar Heating

Tankcar capacity =		20,000	gallons	
Percent Material in Vessel =		75	%	
Volume of Free Space in Vessel =		5,000	gallons, or	668.40 cf/vessel
Time it takes to heat a vessel =		1	hr/vessel	
Number tankcars heated per month =		30	vessels/month, OR	600,000 gal/yr
Number tankcars heated per year =		360	vessels/year	
Initial Temperature =	50 F, or	510	R	
Final Temperature =	160 F, or	620	R	
Controls	Flare, Thermal Oxidizer			
Efficiency	98 %			

Table 9-2. 2010 Potential Emissions Inventory, Heat-up Losses from Incoming Raw Material Barges and Tankcars
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emission Approach

Reference - *"Control of Volatile Organic Compound Emissions from Batch Processes - Alternative Control Techniques Information Document"*, February 1994, USEPA

$E = (P_{iT1}/Pa_1 + P_{iT2}/Pa_2)/2 \times Delta(n) \times MWi$

where
- E = Mass of emissions emitted from heating
- P_{iT1} = Partial pressure of constituent in aqueous solution at initial temperature
- P_{iT2} = Partial pressure of constituent in aqueous solution at final temperature
- Pa_1 = Initial noncondensable gas pressure in the vessel = $Pa_1 = 14.7 - \sum P_{iT1}$
- Pa_2 = Final noncondensable gas pressure in the vessel = $Pa_2 = 14.7 - \sum P_{iT2}$
- MWi = Molecular weight of constituent
- Delta(n) = Number of moles of noncondensable gas displaced

$Delta(n) = V/R[(P_{a1}/T_1) - (P_{a2}/T_2)]$

- V = Volume of free space in vessel
- R = Ideal Gas Law = 10.731 psi-cf/lb-mole-R
- T1 = Initital Temperature
- T2 = Final Temperature

Input Data

Material	Controls	Efficiency	Time to Heat Vessel (hr/vessel)	Maximum Vessels to be Heated (vessels/yr)	T_1 (R)	T_2 (R)	V (cf/vessel)
Crude Tar - Barge	None	0	24.0	5	510	640	16,710
Crude Tar - Tankcar	None	0	1.0	52	510	640	668
Crude RCO - Barge	None	0	24.0	120	510	620	16,710
Crude RCO - Tankcar	Flare, Thermal Oxidizer	98	1.0	360	510	620	668

Calculations

Pollutant	Crude Tar - Barge MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/vessel)	E (lb/hr)	(ton/yr)	Crude Tar - Tankcar MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/vessel)	E (lb/hr)	(ton/yr)
		Pa_1 =	14.6895					Pa_1 =	14.6895			
		Pa_2 =	14.4558					Pa_2 =	14.4558			
		Delta(n) =	9.6792					Delta(n) =	0.3872			
VOC	92.995	0.0105	0.2442	7.9245	0.3302	0.0198	92.995	0.0105	0.2442	0.3170	0.3170	0.0082
Benzene	78.10	0.0078	0.1355	3.7436	0.1560	0.0094	78.10	0.0078	0.1355	0.1497	0.1497	0.0039
Biphenyl	154.20	0.0000	0.0002	0.0096	0.0004	0.0000	154.20	0.0000	0.0002	0.0004	0.0004	0.0000
m-Cresol	108.10	0.0000	0.0009	0.0331	0.0014	0.0001	108.10	0.0000	0.0009	0.0013	0.0013	0.0000
o-Cresol	108.10	0.0000	0.0007	0.0272	0.0011	0.0001	108.10	0.0000	0.0007	0.0011	0.0011	0.0000
p-Cresol	108.10	0.0000	0.0009	0.0334	0.0014	0.0001	108.10	0.0000	0.0009	0.0013	0.0013	0.0000
Cumene	120.20	0.0000	0.0000	0.0000	0.0000	0.0000	120.20	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	168.20	0.0000	0.0001	0.0056	0.0002	0.0000	168.20	0.0000	0.0001	0.0002	0.0002	0.0000
Ethylbenzene	106.20	0.0000	0.0000	0.0000	0.0000	0.0000	106.20	0.0000	0.0000	0.0000	0.0000	0.0000
Naphthalene	128.20	0.0003	0.0252	1.0927	0.0455	0.0027	128.20	0.0003	0.0252	0.0437	0.0437	0.0011
Phenol	94.10	0.0000	0.0039	0.1252	0.0052	0.0003	94.10	0.0000	0.0039	0.0050	0.0050	0.0001
Quinoline	129.20	0.0000	0.0006	0.0245	0.0010	0.0001	129.20	0.0000	0.0006	0.0010	0.0010	0.0000
Styrene	104.20	0.0001	0.0034	0.1226	0.0051	0.0003	104.20	0.0001	0.0034	0.0049	0.0049	0.0001
Toluene	92.40	0.0012	0.0262	0.8457	0.0352	0.0021	92.40	0.0012	0.0262	0.0338	0.0338	0.0009
m-Xylene	106.20	0.0003	0.0085	0.3106	0.0129	0.0008	106.20	0.0003	0.0085	0.0124	0.0124	0.0003
o-Xylene	106.20	0.0001	0.0035	0.1287	0.0054	0.0003	106.20	0.0001	0.0035	0.0051	0.0051	0.0001
p-Xylene	106.20	0.0003	0.0088	0.3216	0.0134	0.0008	106.20	0.0003	0.0088	0.0129	0.0129	0.0003
Acenaphthene	154.20	0.0000	0.0007	0.0351	0.0015	0.0001	154.20	0.0000	0.0007	0.0014	0.0014	0.0000
Acenaphthylene	152.20	0.0000	0.0005	0.0269	0.0011	0.0001	152.20	0.0000	0.0005	0.0011	0.0011	0.0000
Anthracene	178.20	0.0000	0.0000	0.0010	0.0000	0.0000	178.20	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(a)anthracene	228.30	0.0000	0.0000	0.0000	0.0000	0.0000	228.30	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(b)fluoranthene	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	252.30	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(k)fluoranthene	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	252.30	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(g,h,i)perylene	276.30	0.0000	0.0000	0.0000	0.0000	0.0000	276.30	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(a)pyrene	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	252.30	0.0000	0.0000	0.0000	0.0000	0.0000
Chrysene	228.30	0.0000	0.0000	0.0000	0.0000	0.0000	228.30	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenzo(a,h)anthracene	278.40	0.0000	0.0000	0.0000	0.0000	0.0000	278.40	0.0000	0.0000	0.0000	0.0000	0.0000
Fluoranthene	202.30	0.0000	0.0000	0.0015	0.0001	0.0000	202.30	0.0000	0.0000	0.0001	0.0001	0.0000
Fluorene	166.20	0.0000	0.0003	0.0146	0.0006	0.0000	166.20	0.0000	0.0003	0.0006	0.0006	0.0000
Indeno(1,2,3-cd)pyrene	276.30	0.0000	0.0000	0.0000	0.0000	0.0000	276.30	0.0000	0.0000	0.0000	0.0000	0.0000
Phenanthrene	178.20	0.0000	0.0000	0.0023	0.0001	0.0000	178.20	0.0000	0.0000	0.0001	0.0001	0.0000
Pyrene	202.30	0.0000	0.0000	0.0000	0.0000	0.0000	202.30	0.0000	0.0000	0.0000	0.0000	0.0000
TOTAL HAP					0.2877	0.0173					0.2762	0.0072
TOTAL POM					0.0506	0.0030					0.0486	0.0013

Pollutant	Crude RCO - Barge MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/vessel)	E (lb/hr)	(ton/yr)	Crude RCO - Tankcar MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	(lbs/vessel)	E (lb/hr)	(ton/yr)	Potential Emissions (ton/yr)
		Pa_1 =	14.6930					Pa_1 =	14.6930				
		Pa_2 =	14.5476					Pa_2 =	14.5476				
		Delta(n) =	8.3246					Delta(n) =	0.3330				
VOC	107.650	0.0070	0.1524	4.9086	0.2045	0.2945	107.650	0.0070	0.1524	0.0039	0.0039	0.0007	0.3233
Benzene	78.10	0.0034	0.0409	0.9875	0.0411	0.0592	78.10	0.0034	0.0409	0.0008	0.0008	0.0001	0.0726
Biphenyl	154.20	0.0000	0.0001	0.0045	0.0002	0.0003	154.20	0.0000	0.0001	0.0000	0.0000	0.0000	0.0003
m-Cresol	108.10	0.0000	0.0002	0.0052	0.0002	0.0003	108.10	0.0000	0.0002	0.0000	0.0000	0.0000	0.0004
o-Cresol	108.10	0.0000	0.0000	0.0000	0.0000	0.0000	108.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
p-Cresol	108.10	0.0000	0.0001	0.0041	0.0002	0.0002	108.10	0.0000	0.0001	0.0000	0.0000	0.0000	0.0004
Cumene	120.20	0.0000	0.0000	0.0000	0.0000	0.0000	120.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	168.20	0.0000	0.0000	0.0013	0.0001	0.0001	168.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
Ethylbenzene	106.20	0.0001	0.0022	0.0687	0.0029	0.0041	106.20	0.0001	0.0022	0.0001	0.0001	0.0000	0.0041
Naphthalene	128.20	0.0010	0.0467	1.7503	0.0729	0.1050	128.20	0.0010	0.0467	0.0014	0.0014	0.0003	0.1091
Phenol	94.10	0.0000	0.0004	0.0105	0.0004	0.0006	94.10	0.0000	0.0004	0.0000	0.0000	0.0000	0.0011
Quinoline	129.20	0.0000	0.0003	0.0120	0.0005	0.0007	129.20	0.0000	0.0003	0.0000	0.0000	0.0000	0.0008
Styrene	104.20	0.0002	0.0044	0.1376	0.0057	0.0083	104.20	0.0002	0.0044	0.0001	0.0001	0.0000	0.0087
Toluene	92.40	0.0008	0.0120	0.3379	0.0141	0.0203	92.40	0.0008	0.0120	0.0003	0.0003	0.0000	0.0233
m-Xylene	106.20	0.0002	0.0037	0.1178	0.0049	0.0071	106.20	0.0002	0.0037	0.0001	0.0001	0.0000	0.0082
o-Xylene	106.20	0.0001	0.0015	0.0484	0.0020	0.0029	106.20	0.0001	0.0015	0.0000	0.0000	0.0000	0.0034
p-Xylene	106.20	0.0002	0.0038	0.1224	0.0051	0.0073	106.20	0.0002	0.0038	0.0001	0.0001	0.0000	0.0085
Acenaphthene	154.20	0.0000	0.0002	0.0111	0.0005	0.0007	154.20	0.0000	0.0002	0.0000	0.0000	0.0000	0.0008
Acenaphthylene	152.20	0.0000	0.0001	0.0048	0.0002	0.0003	152.20	0.0000	0.0001	0.0000	0.0000	0.0000	0.0004
Anthracene	178.20	0.0000	0.0000	0.0001	0.0000	0.0000	178.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(a)anthracene	228.30	0.0000	0.0000	0.0000	0.0000	0.0000	228.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(b)fluoranthene	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(k)fluoranthene	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(g,h,i)perylene	276.30	0.0000	0.0000	0.0000	0.0000	0.0000	276.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Benzo(a)pyrene	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	252.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Chrysene	228.30	0.0000	0.0000	0.0000	0.0000	0.0000	228.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dibenzo(a,h)anthracene	278.40	0.0000	0.0000	0.0000	0.0000	0.0000	278.40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fluoranthene	202.30	0.0000	0.0000	0.0001	0.0000	0.0000	202.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fluorene	166.20	0.0000	0.0001	0.0033	0.0001	0.0002	166.20	0.0000	0.0001	0.0000	0.0000	0.0000	0.0003
Indeno(1,2,3-cd)pyrene	276.30	0.0000	0.0000	0.0000	0.0000	0.0000	276.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Phenanthrene	178.20	0.0000	0.0000	0.0003	0.0000	0.0000	178.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pyrene	202.30	0.0000	0.0000	0.0000	0.0000	0.0000	202.30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TOTAL HAP					0.1512	0.2177					0.0029	0.0005	0.2426
TOTAL POM					0.0745	0.1073					0.0014	0.0003	0.1118

WASTEWATER TREATMENT PLANT

Table 10-1. Assumptions for the 2010 Potential Emissions Inventory, Wastewater Treatment Plant
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Compound	Process Water Concentrations[1] Test 1 (µg/L)	Test 2 (µg/L)	Test 3 (µg/L)	Maximum (µg/L)	Maximum (ppm)	Storm Water Concentrations[1] Test 1 (µg/L)	Test 2 (µg/L)	Test 3 (µg/L)	Maximum (µg/L)	Maximum (ppm)	Deben. Drain Concentration[2] (ppm)	Aeration Tank Inlet Concentration[3,4] (ppm)
Acenaphthene	5,100	4,900	6,300	6,300	6.30	0	0	0	0	0.00		2.52
Acenaphthylene	530	500	640	640	0.64	0	0	0	0	0.00		0.26
Anthracene	2,000	1,800	2,400	2,400	2.40	0	0	0	0	0.00		0.96
Benzene	5,700	6,600	5,400	6,600	6.60	1,400	1,600	1,600	1,600	1.60	1,824	5.26
Benzo(a)anthracene [5]	470	460	570	570	0.57	0	0	0	0	0.00		0.23
Carbozole	1,000	1,000	1,200	1,200	1.20	0	0	0	0	0.00		0.48
Chrysene [5]	0	0	500	500	0.50	0	0	0	0	0.00		0.20
2-Methylphenol (o-Cresols)	4,700	5,000	4,800	5,000	5.00	5,100	5,000	4,900	5,100	5.10		5.06
4-Methylphenol (p-Cresols)	9,900	11,000	10,000	11,000	11.00	11,000	11,000	11,000	11,000	11.00		11.00
Dibenzofuran	3,300	3,200	4,100	4,100	4.10	0	0	0	0	0.00		1.64
2,4-Dimethylphenol	1,300	1,300	1,300	1,300	1.30	1,500	1,400	1,400	1,500	1.50		1.42
Ethylbenzene	870	1,000	810	1,000	1.00	130	71	77	130	0.13		0.48
Fluoranthene	2,600	2,500	3,200	3,200	3.20	0	0	0	0	0.00		1.28
Fluorene	3,900	3,700	4,800	4,800	4.80	0	0	0	0	0.00		1.92
2-Methylnaphthalene	6,300	6,400	8,100	8,100	8.10	1,500	1,400	1,500	1,500	1.50		4.14
Naphthalene	52,000	48,000	59,000	59,000	59.00	20,000	19,000	19,000	20,000	20.00		35.60
Phenanthrene	6,800	6,400	8,000	8,000	8.00	0	0	0	0	0.00		3.20
Phenol	16,000	24,000	24,000	24,000	24.00	19,000	20,000	19,000	20,000	20.00		21.60
Pyrene	1,600	1,500	2,000	2,000	2.00	0	0	0	0	0.00		0.80
Styrene	3,200	3,100	0	3,200	3.20	0	280	300	300	0.30		1.46
Toluene	5,100	5,400	4,200	5,400	5.40	830	880	980	980	0.98		2.75
Xylenes (total)	7,000	7,700	5,500	7,700	7.70	940	770	870	940	0.94		3.64

[1] Concentration based on 1996 NVS Laboratory Data

[2] Solubility of benzene at 95 C.

[3] The emissions from the API and DAF Separator are used as the as the process air in the aeration basins, therefore, emissions not calculated. To account for the additional emissions from the process air from the API and DAF, the original concentrations were used at the aeration basins.

[4] Aeration basin influent concentration based on 40% process water (into API), 60% stormwater (into DAF). An additional 0.274 gpm of deben drain water (into API) flowing into the system is used for benzene calculations, but because no further data is provided for other constituents, this flowrate is ignored for all other compounds except benzene.

Potential Flow Into DAF and Aeration Basin **300.00** gal/min
0.018927 m^3/sec
18.927 l/sec

Sample Calcs for Aeration Tank Inlet Concentration

Benzene

$$\frac{(40\%\ \text{process water} * 300\ \text{gpm} * 6.6\ \text{ppm} + 60\%\ \text{stormwater} * 300\ \text{gpm} * 1.6\ \text{ppm} + 0.274\ \text{gpm} * 1{,}824\ \text{ppm})}{(300 + 0.274)\ \text{gpm}} = 5.27\ \text{ppm}$$

Acenaphthene (and all others)

$$\frac{(40\%\ \text{process water} * 300\ \text{gpm} * 6.3\ \text{ppm} + 60\%\ \text{stormwater} * 300\ \text{gpm} * 0.0\ \text{ppm})}{300\ \text{gpm}} = 2.52\ \text{ppm}$$

Aeration Tank Inputs

A 6' blade disperses the air sparged into the systemthrough a ring. Baffles distribute the oxygen to the biomass.(Drawings: Chester TCEDWG 3978-07, Koppers DWG LFO-0250)

*Wastewater Temperature = 85°F (29.4 °C) (Observed Jill Merrill 12/97)
*Tank Dimensions = (S. Lish, 10/1996)
Circular Tank Diameter = 92'
Tank Depth = 24'

Water 9 Input
Equivalent Diameter--Length & Width = 0.887 x Diameter

$$\frac{92'}{} \left| \frac{1'}{3.2808\ \text{m}} \right| \frac{0.887}{} \qquad 24.87\text{m}$$

Depth = 24'=7.4m Use 6.5 m to account for headspace

*Fraction Surface Adjitated/Fraction Surface Quiescent
Observed by J. Merrill 12/97 to be less than 10 % possibly as low as 2%.
To maintain a conservative estimate assume 5% agitated and 95% quiescent.

*Overall Biorate mg/g bio-hr assumed to equal EPA (Water 9) default of 19

*Influent Air Flow
Three 1500 CFM blowers are available to inject air into the tank. Two are operated at any one time

$$\frac{2\ \text{blowers}}{} \left| \frac{1500\ \text{ft3}}{\text{min}} \right| \frac{1\text{min}}{60\text{s}} \left| \frac{1\text{m3}}{35.3145\ \text{ft3}} \right. \qquad 1.42\ \frac{\text{m}^3}{\text{s}}$$

*Activated Sludge Biomass
Biomass Concentration = 8820 g/m3 or 8.82 g/l (S.Lish 10/96)

Clarifier Tank Inputs

*Wastewater Temperature = 25°C (Observed Jill Merrill 12/97)

*Clarifier Dimensions = (S. Lish, 10/1996)
Circular Tank Diameter = 65' = 19.8 meter
Tank Depth = 16' = 4.87 m
Use 4 meter depth to account for headspace

*Clarifier Solids Removal Efficiency
Use 0.7 EPA (Water 9) default value

*Waterfall drop height (cm)
Waterfall distance set to 0. (Jill Merrill 12/97)

*Clarifier Weir/Circumference
Set to 0 (Jill Merrill 12/97)

Table 10-2. 2010 Potential Emissions Inventory, Wastewater Treatment Plant
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Compound	WATER 9 Output - Emissions Total Wastewater Emissions (lb/day)	Potential Emissions (lb/yr)	(tons/yr)
VOC's		3,819.5	1.910
Benzene	0.86115	314.3	0.157
o-Cresol (2-Methylphenol)	0.00031	0.1	0.000
p-Cresol (4-Methylphenol)	0.00031	0.1	0.000
Dibenzofuran	0.01627	5.9	0.003
Ethylbenzene	0.06292	23.0	0.011
Naphthalene	3.08692	1,126.7	0.563
Phenol	0.00144	0.5	0.000
Styrene	1.53685	561.0	0.280
Toluene	0.28360	103.5	0.052
Xylenes (total)	0.02640	9.6	0.005
Acenaphthene (POM)	0.17651	64.4	0.032
Acenaphthylene (POM)	0.00376	1.4	0.001
Anthracene (POM)	0.66346	242.2	0.121
Carbozole	1.72073	628.1	0.314
2,4-Dimethylphenol	0.03624	13.2	0.007
Fluoranthene (PAC) (POM)	1.56511	571.3	0.286
Fluorene (POM)	0.02176	7.9	0.004
2-Methylnaphthalene	0.02188	8.0	0.004
Phenanthrene (POM)	0.37740	137.8	0.069
Pyrene (POM)	0.00000	0.0	0.000
Benzo(a)anthracene (POM)(PAC)	0.00106	0.4	0.000
Chrysene (POM)(PAC)	0.00035	0.1	0.000
Total HAP	8.68558	3,170.2	1.585
Total POM	5.91260	2,158.1	1.079

SLOP AND PITCH CONVEYOR AND RECYLCING

Table 11-1. Assumptions for the 2010 Potential Emissions Inventory, Slop Conveyor and Recycling
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Slop from tank bottoms will be recycled to Tanks 406/407. A conveyor will be used to transfer the solid material to the tanks. The material will be then heated and loaded with PSB.

Maximum Throughput	50	tons/hr	
Maximum Material Recycled:	1,000,000	gallons/yr,	5,000 tons/yr
Assume Average Density of:	10.0	lb/gal	

Emission points:

* Two drop points of solid slop material (composition assumed to be PSB): one onto the conveyor and one into the tank.
* Heatup of slop from 68.0 F to 270.0 F
* Product Loading of Additional Slop — Controls: Flare, Thermal Oxidizer; Efficiency: 98 %

Solid Pitch will be recycled to Pitch Tanks. A conveyor will be used to transfer the solid material to the tanks.

Maximum Throughput	50	tons/hr	
Maximum Material Recycled:	100,000	gallons/yr,	500 tons/yr
Assume Average Density of:	10.0	lb/gal	

Emission points:

* Two drop points of solid pitch material (composition taken as max of Coal Tar Pitch, Type A Pitch, and Petro Pitch): one onto the conveyor and one into the tank.
* Product Loading of Additional Pitch — Loading Temp: 500 F; Controls: Scrubber E; Efficiency: 80 %

No heatup of pitch calculated. Pitch will be loaded into tanks containing hot pitch. A cooling effect will take place. These emissions are assumed negligible.

Table 11-2.

2010 Potential Emissions Inventory, Slop and Pitch Conveyor and Recycling, Summary
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

	Potential Emissions								
	Slop Recycling				Pitch Recycling				
Constitient	Solid Material Handling (tons/yr)	Heating Losses (tons/yr)	Additional PSB Product Loading (tons/yr)	TOTAL (tons/yr)	Solid Material Handling (tons/yr)	Displacement Losses (tons/yr)	Additional Pitch Product Loading (tons/yr)	TOTAL (tons/yr)	TOTAL (tons/yr)
PM	0.025			0.025	0.003			0.003	0.028
PM-10	0.012			0.012	0.001			0.001	0.013
PM2.5	0.004			0.004	0.000			0.000	0.004
VOC		0.000	0.001	0.001		0.003	0.004	0.007	0.008
Benzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biphenyl	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenol	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quinoline	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Styrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
m-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.004	0.004
Acenaphthylene	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001
Anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Benzo(a)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.002
Fluorene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.002
Pyrene	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001
TOTAL HAP	0.006	0.000	0.001	0.007	0.000	0.003	0.004	0.007	0.013
TOTAL POM	0.006	0.000	0.001	0.007	0.000	0.003	0.006	0.009	0.015

Table 11-3. 2010 Potential Emissions Inventory, Slop and Pitch Conveyor and Recycling, Conveyor Drop Points and Solid Filling
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Slop Recycling

Maximum Throughput	50	tons/hr	
Maximum Throughput	1,000,000	gallons/yr,	5,000 tons/yr
Assume Average Density of:	10	lb/gal	

Constiuent	Emission Factor (lb/ton)[1]	Weight Percent in Slop[2]	Potential Emissions[3] (lb/hr)	(lbs/yr)	(tons/yr)
PM	0.00508	-	0.5084	50.8436	0.025
PM-10	0.00240	-	0.2405	24.0476	0.012
PM2.5	0.00076	-	0.0756	7.5578	0.004
Benzene		0.00	0.0000	0.0000	0.000
Biphenyl		0.20	0.0010	0.1017	0.000
m-Cresol		0.00	0.0000	0.0000	0.000
o-Cresol		0.00	0.0000	0.0000	0.000
p-Cresol		0.00	0.0000	0.0000	0.000
Cumene		0.00	0.0000	0.0000	0.000
Dibenzofuran		0.70	0.0036	0.3559	0.000
Ethylbenzene		0.00	0.0000	0.0000	0.000
Naphthalene		0.26	0.0013	0.1322	0.000
Phenol		0.00	0.0000	0.0000	0.000
Quinoline		0.15	0.0008	0.0763	0.000
Styrene		0.00	0.0000	0.0000	0.000
Toluene		0.00	0.0000	0.0000	0.000
m-Xylene		0.00	0.0000	0.0000	0.000
o-Xylene		0.00	0.0000	0.0000	0.000
p-Xylene		0.00	0.0000	0.0000	0.000
Acenaphthene		1.10	0.0056	0.5593	0.000
Acenaphthylene		0.00	0.0000	0.0000	0.000
Anthracene		1.40	0.0071	0.7118	0.000
Benzo(a)anthracene		1.28	0.0065	0.6508	0.000
Benzo(b)fluoranthene		0.70	0.0036	0.3559	0.000
Benzo(k)fluoranthene		0.53	0.0027	0.2695	0.000
Benzo(g,h,i)perylene		0.78	0.0040	0.3966	0.000
Benzo(a)pyrene		1.15	0.0058	0.5847	0.000
Chrysene		1.20	0.0061	0.6101	0.000
Dibenzo(a,h)anthracene		0.20	0.0010	0.1017	0.000
Fluoranthene		3.50	0.0178	1.7795	0.001
Fluorene		1.00	0.0051	0.5084	0.000
Indeno(1,2,3-cd)pyrene		0.81	0.0041	0.4118	0.000
Phenanthrene		4.95	0.0252	2.5168	0.001
Pyrene		2.73	0.0139	1.3880	0.001
TOTAL HAP			**0.11511**	**11.51098**	**0.006**

[1] Emission Factors taken from AP-42, Section 13.2.4 *"Aggregate Handling and Storage Piles"*, 11/06

$$E = k\,(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$$

E = Emission factor (lb/ton)

k = particle size multiplier	PM	0.74	
	PM-10	0.35	
	PM-2.5	0.11	
U = mean wind speed, (mph)		9	mph
M = material moisture content (%)		2	%

[2] Slop is assumed to have the same composition as pavement sealer base.

[3] There are two drop points of solid material, one onto the conveyor and one into the tank. Therefore, the particulate emissions were multipled by 2

Pitch Recycling

Maximum Throughput	50	tons/hr	
Maximum Throughput	100,000	gallons/yr,	500 tons/yr
Assume Average Density of:	10	lb/gal	

		Coal Tar Pitch				Type A Pitch				Petro Pitch				Max Pitch Potential Emissions
Constiuent	Emission Factor (lb/ton)[1]	Weight Percent in Pitch	Potential Emissions[3] (lb/hr)	(lbs/yr)	(tons/yr)	Weight Percent in Pitch	Potential Emissions[3] (lb/hr)	(lbs/yr)	(tons/yr)	Weight Percent in Pitch	Potential Emissions[3] (lb/hr)	(lbs/yr)	(tons/yr)	(tons/yr)
PM	0.00508	-	0.5084	5.0844	0.003	-	0.5084	5.0844	0.003	-	0.5084	5.0844	0.003	0.003
PM-10	0.00240	-	0.2405	2.4048	0.001	-	0.2405	2.4048	0.001	-	0.2405	2.4048	0.001	0.001
PM2.5	0.00076	-	0.0756	0.7558	0.000	-	0.0756	0.7558	0.000	-	0.0756	0.7558	0.000	0.000
Benzene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Biphenyl		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
m-Cresol		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
o-Cresol		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
p-Cresol		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Cumene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Dibenzofuran		0.13	0.0007	0.0066	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Ethylbenzene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Naphthalene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Phenol		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Quinoline		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Styrene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Toluene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
m-Xylene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
o-Xylene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
p-Xylene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Acenaphthene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.32	0.0016	0.0163	0.000	0.000
Acenaphthylene		0.09	0.0005	0.0046	0.000	0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.000
Anthracene		0.15	0.0008	0.0076	0.000	0.10	0.0005	0.0051	0.000	0.19	0.0010	0.0097	0.000	0.000
Benzo(a)anthracene		0.67	0.0034	0.0341	0.000	0.79	0.0040	0.0402	0.000	0.15	0.0008	0.0076	0.000	0.000
Benzo(b)fluoranthene		1.40	0.0071	0.0712	0.000	0.70	0.0036	0.0356	0.000	0.00	0.0000	0.0000	0.000	0.000
Benzo(k)fluoranthene		0.52	0.0026	0.0264	0.000	0.52	0.0026	0.0264	0.000	0.02	0.0001	0.0010	0.000	0.000
Benzo(g,h,i)perylene		1.14	0.0058	0.0580	0.000	1.18	0.0060	0.0600	0.000	0.00	0.0000	0.0000	0.000	0.000
Benzo(a)pyrene		1.27	0.0065	0.0646	0.000	1.21	0.0062	0.0615	0.000	0.14	0.0007	0.0071	0.000	0.000
Chrysene		0.76	0.0039	0.0386	0.000	0.80	0.0041	0.0407	0.000	0.21	0.0011	0.0107	0.000	0.000
Dibenzo(a,h)anthracene		1.21	0.0062	0.0615	0.000	0.24	0.0012	0.0122	0.000	0.00	0.0000	0.0000	0.000	0.000
Fluoranthene		0.75	0.0038	0.0381	0.000	1.00	0.0051	0.0508	0.000	0.21	0.0011	0.0107	0.000	0.000
Fluorene		0.00	0.0000	0.0000	0.000	0.00	0.0000	0.0000	0.000	0.10	0.0005	0.0051	0.000	0.000
Indeno(1,2,3-cd)pyrene		0.21	0.0011	0.0107	0.000	1.03	0.0052	0.0524	0.000	0.00	0.0000	0.0000	0.000	0.000
Phenanthrene		0.14	0.0007	0.0071	0.000	0.34	0.0017	0.0173	0.000	0.44	0.0022	0.0224	0.000	0.000
Pyrene		0.67	0.0034	0.0341	0.000	0.92	0.0047	0.0468	0.000	0.46	0.0023	0.0234	0.000	0.000
TOTAL HAP			**0.04632**	**0.46318**	**0.000**		**0.04489**	**0.44895**	**0.000**		**0.01139**	**0.11389**	**0.000**	0.000

Table 11-4. 2010 Potential Emissions Inventory, Slop and Pitch Conveyor and Recycling, Heat-up of Slop
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emission Approach and Input Data

$E = (P_{iT1}/Pa_1 + P_{iT2}/Pa_2)/2 \times Delta(n) \times MWi$

E = Mass of emissions emitted from heating
P_{iT1} = Partial pressure of constituent in aqueous solution at initial temperature
P_{iT2} = Partial pressure of constiuent in aqueous solution at final temperature
Pa_1 = Initial noncondensable gas pressure in the vessel
Pa_2 = Final noncondensable gas pressure in the vessel
Delta(n) = Number of moles of noncondensable gas displaced
MWi = Molecular weight of constituent

$Delta(n) = V/R[(P_{a1}/T_1) - (P_{a2}/T_2)]$

V = Volume of free space in vessel
Tank Diamter = 12 ft
Tank Length = 27 ft
Assume tank 1/2 full. Therefore, V = 1,527 cf/cycle
Assume it takes 4 hours to heat a vessel
Total throughout = 1,000,000 gal/yr, or 133,681 cf/yr
87.56 cycles/year
R = Ideal Gas Law = 10.731 psi-cf/lb-mole-R
T1 = Initital Temperature = 68 F, or 528 R
T2 = Final Temperature = 270 F, or 730 R

$Pa_1 = 14.7 - \sum P_{iT1}$ Controls: Flare, Thermal Oxidizer
$Pa_2 = 14.7 - \sum P_{iT2}$ Efficiency: 98 %

Calculations

Constituent	MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	Slop (lbs/cycle)	E (lb/hr)	(lb/yr)	(ton/yr)
		Pa_1 =	14.6999				
		Pa_2 =	14.6713				
		Delta(n) =	1.1017				
VOC	144.49	0.0001	0.0287	0.0031	0.0008	0.2729	0.0001
Benzene	78.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Biphenyl	154.20	1.02E-06	1.04E-03	0.0001	0.0000	0.0106	0.0000
m-Cresol	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
o-Cresol	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
p-Cresol	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Cumene	120.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	168.20	3.94E-07	7.96E-04	0.0001	0.0000	0.0088	0.0000
Ethylbenzene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Naphthalene	128.20	2.25E-05	7.20E-03	0.0007	0.0002	0.0609	0.0000
Phenol	94.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Quinoline	129.20	4.63E-06	2.03E-03	0.0002	0.0000	0.0173	0.0000
Styrene	104.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Toluene	92.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
m-Xylene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
o-Xylene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
p-Xylene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Acenaphthene	154.20	6.66E-06	4.03E-03	0.0005	0.0001	0.0410	0.0000
Acenaphthylene	152.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Anthracene	178.20	5.72E-08	2.05E-04	0.0000	0.0000	0.0024	0.0000
Benzo(a)anthracene	228.30	1.32E-10	3.24E-06	0.0000	0.0000	0.0000	0.0000
Benzo(b)fluoranthene	252.30	4.60E-11	8.76E-07	0.0000	0.0000	0.0000	0.0000
Benzo(k)fluoranthene	252.30	5.60E-14	1.99E-08	0.0000	0.0000	0.0000	0.0000
Benzo(g,h,i)perylene	276.30	7.41E-15	6.00E-09	0.0000	0.0000	0.0000	0.0000
Benzo(a)pyrene	252.30	7.35E-13	9.95E-08	0.0000	0.0000	0.0000	0.0000
Chrysene	228.20	9.35E-13	1.98E-07	0.0000	0.0000	0.0000	0.0000
Dibenzo(a,h)anthracene	278.40	9.78E-16	8.27E-10	0.0000	0.0000	0.0000	0.0000
Fluoranthene	202.30	2.90E-07	4.79E-04	0.0001	0.0000	0.0064	0.0000
Fluorene	166.20	2.02E-06	1.72E-03	0.0002	0.0001	0.0188	0.0000
Indeno(1,2,3-cd)pyrene	276.30	7.87E-15	4.41E-09	0.0000	0.0000	0.0000	0.0000
Phenanthrene	178.20	2.03E-07	8.27E-04	0.0001	0.0000	0.0097	0.0000
Pyrene	202.30	2.05E-09	2.85E-05	0.0000	0.0000	0.0004	0.0000
TOTAL HAP					0.0005	0.1762	0.0001

Note: Pitch Recycling has no "Heating Emissions" because it is considered a cooling operation

Table 11-5.

2010 Potential Emissions Inventory, Slop and Pitch Conveyor and Recycling, Addition of Solid Pitch to Heated Pitch Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

$E = V/RT \times \sum(Pi)(MWi)$ (from 63.1365(c)(2))

E = Mass of constituent emitted
V = Volume of gas displaced from the vessel
R = Ideal gas law constant = 10.731 psia-cf/ mol-R
T = Temperature of the vessel vapor space (absolute), assumed to be loading temperature
Pi = Partial pressure of the individual constituent
MWi = Molecular weight of the individual constituent

Input Data

Pitch Data
Quantity Loaded = 100,000 gal/yr, or 13,368 cf/yr
Loading Temperature = 500 F, or 960 R
Controls: Scrubber E
Efficiency: 80 %

	Coal Tar Pitch				Type A Pitch				Petro/Decanted Oil Pitch				
Constituent	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (tons/yr)	E Max (tons/yr)
VOC	176.08	7.23E-02	12.7271	0.002	196.21	4.03E-02	7.9112	0.001	162.59	1.26E-01	20.4995	0.003	0.003
Benzene	78.10	0.00E+00	0.0000	0.000	78.10	0.00E+00	0.0000	0.000	78.10	0.00E+00	0.0000	0.000	0.000
Biphenyl	154.20	0.00E+00	0.0000	0.000	154.20	0.00E+00	0.0000	0.000	154.20	0.00E+00	0.0000	0.000	0.000
m-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	0.000
o-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	0.000
p-Cresol	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	108.10	0.00E+00	0.0000	0.000	0.000
Dibenzofuran	168.20	2.08E-02	3.4952	0.000	168.20	0.00E+00	0.0000	0.000	168.20	0.00E+00	0.0000	0.000	0.000
Naphthalene	128.20	0.00E+00	0.0000	0.000	128.20	0.00E+00	0.0000	0.000	128.20	0.00E+00	0.0000	0.000	0.000
Phenol	94.10	0.00E+00	0.0000	0.000	94.10	0.00E+00	0.0000	0.000	94.10	0.00E+00	0.0000	0.000	0.000
Quinoline	129.20	0.00E+00	0.0000	0.000	129.20	0.00E+00	0.0000	0.000	129.20	0.00E+00	0.0000	0.000	0.000
Acenaphthene	154.20	0.00E+00	0.0000	0.000	154.20	0.00E+00	0.0000	0.000	154.20	8.19E-02	12.6251	0.002	0.002
Acenaphthylene	152.20	2.21E-02	3.3618	0.000	152.20	0.00E+00	0.0000	0.000	152.20	0.00E+00	0.0000	0.000	0.000
Anthracene	178.20	4.43E-03	0.7889	0.000	178.20	2.96E-03	0.5267	0.000	178.20	5.92E-03	1.0549	0.000	0.000
Benzo(a)anthracene	228.30	1.13E-03	0.2589	0.000	228.30	1.34E-03	0.3057	0.000	228.30	2.68E-04	0.0612	0.000	0.000
Benzo(b)fluoranthene	252.30	1.00E-03	0.2529	0.000	252.30	5.02E-04	0.1267	0.000	252.30	0.00E+00	0.0000	0.000	0.000
Benzo(k)fluoranthene	252.30	6.95E-05	0.0175	0.000	252.30	6.96E-05	0.0176	0.000	252.30	2.82E-06	0.0007	0.000	0.000
Benzo(g,h,i)perylene	276.30	5.25E-05	0.0145	0.000	276.30	5.44E-05	0.0150	0.000		0.00E+00	0.0000	0.000	0.000
Benzo(a)pyrene	252.30	2.15E-04	0.0541	0.000	252.30	2.05E-04	0.0517	0.000	252.30	2.50E-05	0.0063	0.000	0.000
Chrysene	228.30	3.25E-04	0.0741	0.000	228.30	3.42E-04	0.0781	0.000	228.30	9.47E-05	0.0216	0.000	0.000
Dibenzo(a,h)anthracene	278.40	3.07E-05	0.0086	0.000	278.40	6.11E-06	0.0017	0.000	278.40	0.00E+00	0.0000	0.000	0.000
Fluoranthene	202.30	1.27E-02	2.5722	0.000	202.30	1.70E-02	3.4344	0.000	202.30	3.76E-03	0.7603	0.000	0.000
Fluorene	166.20	0.00E+00	0.0000	0.000	166.20	0.00E+00	0.0000	0.000	166.20	1.48E-02	2.4661	0.000	0.000
Indeno(1,2,3-cd)pyrene	276.30	5.42E-06	0.0015	0.000	276.30	2.66E-05	0.0074	0.000	276.30	0.00E+00	0.0000	0.000	0.000
Phenanthrene	178.20	5.09E-03	0.9072	0.000	178.20	1.24E-02	2.2062	0.000	178.20	1.69E-02	3.0098	0.000	0.000
Pyrene	202.30	3.29E-03	0.6653	0.000	202.30	4.52E-03	0.9148	0.000	202.30	2.38E-03	0.4822	0.000	0.000
TOTAL HAP				0.002				0.001				0.003	0.003
TOTAL POM				0.002				0.001				0.003	0.003

Table 11-6. 2010 Potential Emissions Inventory, Slop and Pitch Conveyor and Recycling, Product Loading of Slop and Pitch
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Commodity	Temperature (°F)	(°R)	Loading Vehicle	Molecular Weight (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor[1] lb/Mgal	Potential Throughput (gal/hr)	(gal/yr)	Constituent	% weight in vapors	Potential Emissions (lb/hr)	ton/yr
Slop/PSB Additional	270	730	Truck or Railcar	144.49	0.0287	1.45	0.103	30,000	1,000,000	VOC	100.000	0.062	0.001
Control:	Flare, Thermal Oxidizer									Benzene	0.00	0.000	0.000
	98 %									Biphenyl	3.87	0.002	0.000
										m-Cresol	0.00	0.000	0.000
										o-Cresol	0.00	0.000	0.000
										p-Cresol	0.00	0.000	0.000
										Cumene	0.00	0.000	0.000
										Dibenzofuran	3.23	0.002	0.000
										Ethylbenzene	0.00	0.000	0.000
										Naphthalene	22.27	0.014	0.000
										Phenol	0.00	0.000	0.000
										Quinoline	6.33	0.004	0.000
										Styrene	0.00	0.000	0.000
										Toluene	0.00	0.000	0.000
										m-Xylene	0.00	0.000	0.000
										o-Xylene	0.00	0.000	0.000
										p-Xylene	0.00	0.000	0.000
										Acenaphthene	15.01	0.009	0.000
										Acenaphthylene	0.00	0.000	0.000
										Anthracene	0.88	0.001	0.000
										Benzo(a)anthracene	0.02	0.000	0.000
										Benzo(b)fluoranthene	0.01	0.000	0.000
										Benzo(k)fluoranthene	0.00	0.000	0.000
										Benzo(g,h,i)perylene	0.00	0.000	0.000
										Benzo(a)pyrene	0.00	0.000	0.000
										Chrysene	0.00	0.000	0.000
										Dibenzo(a,h)anthracene	0.00	0.000	0.000
										Fluoranthene	2.34	0.001	0.000
										Fluorene	6.90	0.004	0.000
										Indeno(1,2,3-cd)pyrene	0.00	0.000	0.000
										Phenanthrene	3.55	0.002	0.000
										Pyrene	0.14	0.000	0.000
										Total HAP		0.040	0.001
Coal Tar Pitch Additional	500	960	Truck or Railcar	176.08	0.0723	1.45	0.240	30,000	100,000	VOC	100.000	1.440	0.002
Control:	Scrubber E									Benzene	0.00	0.000	0.000
	80 %									Biphenyl	0.00	0.000	0.000
										m-Cresol	0.00	0.000	0.000
										o-Cresol	0.00	0.000	0.000
										p-Cresol	0.00	0.000	0.000
										Cumene	0.00	0.000	0.000
										Dibenzofuran	27.46	0.395	0.001
										Ethylbenzene	0.00	0.000	0.000
										Naphthalene	0.00	0.000	0.000
										Phenol	0.00	0.000	0.000
										Quinoline	0.00	0.000	0.000
										Styrene	0.00	0.000	0.000
										Toluene	0.00	0.000	0.000
										m-Xylene	0.00	0.000	0.000
										o-Xylene	0.00	0.000	0.000
										p-Xylene	0.00	0.000	0.000
										Acenaphthene	0.00	0.000	0.000
										Acenaphthylene	26.41	0.380	0.001
										Anthracene	6.20	0.089	0.000
										Benzo(a)anthracene	2.03	0.029	0.000
										Benzo(b)fluoranthene	1.99	0.029	0.000
										Benzo(k)fluoranthene	0.14	0.002	0.000
										Benzo(g,h,i)perylene	0.11	0.002	0.000
										Benzo(a)pyrene	0.43	0.006	0.000
										Chrysene	0.58	0.008	0.000
										Dibenzo(a,h)anthracene	0.07	0.001	0.000
										Fluoranthene	20.21	0.291	0.000
										Fluorene	0.00	0.000	0.000
										Indeno(1,2,3-cd)pyrene	0.01	0.000	0.000
										Phenanthrene	7.13	0.103	0.000
										Pyrene	5.23	0.075	0.000
										Total HAP		1.411	0.002

Table 11-6.

2010 Potential Emissions Inventory, Slop and Pitch Conveyor and Recycling, Product Loading of Slop and Pitch
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Commodity	Temperature (°F)	(°R)	Loading Vehicle	Molecular Weight (lb/lb-mole)	Vapor Pressure (psia)	Saturation Factor	Emission Factor[1] lb/Mgal	Potential Throughput (gal/hr)	(gal/yr)	Constituent	% weight in vapors	Potential Emissions (lb/hr)	ton/yr
Type A Pitch Additional	500	960	Truck or Railcar	196.21	0.0403	1.45	0.149	30,000	100,000	VOC	100.000	0.894	0.001
Control:	Scrubber E									Benzene	0.00	0.000	0.000
	80 %									Biphenyl	0.00	0.000	0.000
										m-Cresol	0.00	0.000	0.000
										o-Cresol	0.00	0.000	0.000
										p-Cresol	0.00	0.000	0.000
										Cumene	0.00	0.000	0.000
										Dibenzofuran	0.00	0.000	0.000
										Ethylbenzene	0.00	0.000	0.000
										Naphthalene	0.00	0.000	0.000
										Phenol	0.00	0.000	0.000
										Quinoline	0.00	0.000	0.000
										Styrene	0.00	0.000	0.000
										Toluene	0.00	0.000	0.000
										m-Xylene	0.00	0.000	0.000
										o-Xylene	0.00	0.000	0.000
										p-Xylene	0.00	0.000	0.000
										Acenaphthene	0.00	0.000	0.000
										Acenaphthylene	0.00	0.000	0.000
										Anthracene	6.66	0.060	0.000
										Benzo(a)anthracene	3.86	0.035	0.000
										Benzo(b)fluoranthene	1.60	0.014	0.000
										Benzo(k)fluoranthene	0.22	0.002	0.000
										Benzo(g,h,i)perylene	0.19	0.002	0.000
										Benzo(a)pyrene	0.65	0.006	0.000
										Chrysene	0.99	0.009	0.000
										Dibenzo(a,h)anthracene	0.02	0.000	0.000
										Fluoranthene	43.41	0.388	0.001
										Fluorene	0.00	0.000	0.000
										Indeno(1,2,3-cd)pyrene	0.09	0.001	0.000
										Phenanthrene	27.89	0.249	0.000
										Pyrene	11.56	0.103	0.000
										Total HAP		0.869	0.001
Petro Pitch Additional	500	960	Truck or Railcar	162.59	0.1261	1.45	0.386	30,000	100,000	VOC	100.000	2.316	0.004
Control:	Scrubber E									Benzene	0.00	0.000	0.000
	80 %									Biphenyl	0.00	0.000	0.000
										m-Cresol	0.00	0.000	0.000
										o-Cresol	0.00	0.000	0.000
										p-Cresol	0.00	0.000	0.000
										Cumene	0.00	0.000	0.000
										Dibenzofuran	0.00	0.000	0.000
										Ethylbenzene	0.00	0.000	0.000
										Naphthalene	0.00	0.000	0.000
										Phenol	0.00	0.000	0.000
										Quinoline	0.00	0.000	0.000
										Styrene	0.00	0.000	0.000
										Toluene	0.00	0.000	0.000
										m-Xylene	0.00	0.000	0.000
										o-Xylene	0.00	0.000	0.000
										p-Xylene	0.00	0.000	0.000
										Acenaphthene	61.59	1.426	0.002
										Acenaphthylene	0.00	0.000	0.000
										Anthracene	5.15	0.119	0.000
										Benzo(a)anthracene	0.30	0.007	0.000
										Benzo(b)fluoranthene	0.00	0.000	0.000
										Benzo(k)fluoranthene	0.00	0.000	0.000
										Benzo(g,h,i)perylene	0.00	0.000	0.000
										Benzo(a)pyrene	0.03	0.001	0.000
										Chrysene	0.11	0.002	0.000
										Dibenzo(a,h)anthracene	0.00	0.000	0.000
										Fluoranthene	3.71	0.086	0.000
										Fluorene	12.03	0.279	0.000
										Indeno(1,2,3-cd)pyrene	0.00	0.000	0.000
										Phenanthrene	14.68	0.340	0.001
										Pyrene	2.35	0.054	0.000
										Total HAP		2.315	0.004

RAILCAR RECYCLING OPERATION

Table 12-1. Assumptions for the 2010 Potential Emissions Inventory, Railcar Residue Recycling Operation
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginai

General

Number of Roll-off Boxes to be Recycled:		52	boxes/yr
Maximum Number Boxes Recycled in 1 day		1	box/day
Roll-off Box Dimensions			
Length	22	ft	
Width	8	ft	
Height	6	ft	
Volume	1056	cf	
Amount of residue in tank	60	% full	
	634	cf	
	4,740	gal	

Residue composition supplied by Koppers Inc. (see sheet called Liquid Analysis)

Diluent Addition

Residue comes into plant as solid material. Diluent added first prior to heatup/agitiation.

Diluent:	NSR		
Temp:	200	F	
Amount added:	20	% total volume of roll-off box	
	211.2	cf/box	
	1579.9	gal/box	
Pump Rate	100	gpm, estimate	
Time to Add:	15.80	min/box	

Heat-up

Volume of headspace:	211	cf/roll-off box	
Assume it takes	4	hours to heat a vessel	Estimate
Initial Temperature:	68	F	
Final Temperature:	200	F	

Vapor constitiuent calculated assuming residue/dluent mixture in the ratio provided below.

Transfer to Tanks

Assume displacement losses only; standing losses negligilble.

Amount recylced material transferred to tanks:

			Ratio of Residue/Diluent Mixture
Residue	4,740	gal/box	75 %
Diluent	1579.9	gal/box	25 %
Total	6319.5	gal/box	
	844.8	cf/box	

Residue/Diluent Temperature:	200	F
Pump Rate	100	gpm, estimate
Time to Add:	63.20	min/box

Input data supplied by Mark Cilley, phone call 7/23/09, except where noted

Table 12-2. Permit Determination, Railcar Recycling Operation, Summary of Potential Emissions
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

	Potential Emissions											
	Diluent Addition			Heatup Losses			Transfer to Tanks			Total		
Constitient	(lb/hr)	(lb/day)	(tons/yr)	(lb/hr)	(lb/day)	(tons/yr)	(lb/hr)	(lb/day)	(tons/yr)	(lb/hr)	(lb/day)	(tons/yr)
VOC	0.665	0.175	0.005	0.002	0.009	0.0002	0.255	0.269	0.007	0.922	0.452	0.012
Benzene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Biphenyl	0.020	0.005	0.000	0.000	0.000	0.0000	0.006	0.007	0.000	0.027	0.012	0.000
m-Cresol	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
o-Cresol	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
p-Cresol	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Cumene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzofuran	0.011	0.003	0.000	0.000	0.000	0.0000	0.004	0.004	0.000	0.014	0.007	0.000
Ethylbenzene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Naphthalene	0.213	0.056	0.001	0.001	0.003	0.0001	0.094	0.099	0.003	0.307	0.158	0.004
Phenol	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Quinoline	0.038	0.010	0.000	0.000	0.000	0.0000	0.014	0.014	0.000	0.052	0.025	0.001
Styrene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
m-Xylene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
o-Xylene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
p-Xylene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Acenaphthene	0.067	0.018	0.000	0.000	0.001	0.0000	0.026	0.027	0.001	0.093	0.046	0.001
Acenaphthylene	0.012	0.003	0.000	0.000	0.000	0.0000	0.004	0.004	0.000	0.016	0.008	0.000
Anthracene	0.001	0.000	0.000	0.000	0.000	0.0000	0.001	0.001	0.000	0.001	0.001	0.000
Benzo(a)anthracene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Chrysene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Fluoranthene	0.001	0.000	0.000	0.000	0.000	0.0000	0.002	0.002	0.000	0.002	0.002	0.000
Fluorene	0.025	0.007	0.000	0.000	0.000	0.0000	0.008	0.009	0.000	0.033	0.016	0.000
Indeno(1,2,3-cd)pyrene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Phenanthrene	0.002	0.001	0.000	0.000	0.000	0.0000	0.003	0.004	0.000	0.006	0.004	0.000
Pyrene	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL HAP	0.389	0.000	0.003	0.001	0.006	0.0001	0.162	0.000	0.004	0.553	0.006	0.007
TOTAL POM	0.389	0.000	0.003	0.001	0.006	0.0001	0.162	0.000	0.004	0.553	0.006	0.007

Table 12-3. 2010 Potential Emissions Inventory, Railcar Residue Recycling Operation
Diluent Addition
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

E = V/RT x ∑(Pi)(MWi) (from 63.1365(c)(2))

E = Mass of constituent emitted
V = Volume of gas displaced from the vessel
R = Ideal gas law constant = 10.731 psi-cf/lb-mole-R
T = Temperature of the vessel vapor space (absolute)
Pi = Partial pressure of the individual constituent
MWi = Molecular weight of the individual constituent

Input Data

Number of Roll-off Boxes	52	box/yr
	1	box/day
Quantity of NSR Added	211	cf/box
Addition Temperature	200	F, or
	660	R
Addition Time	15.80	min/box

Emission Calculations

Constituent	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (lb/box)	E (lb/hr)	E (lbs/day)	E (ton/yr)
VOC	139.38	4.21E-02	5.8729	0.175	0.665	0.175	0.005
Benzene	78.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Biphenyl	154.20	1.15E-03	0.1775	0.005	0.020	0.005	0.000
m-Cresol	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
o-Cresol	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
p-Cresol	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Cumene	120.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Dibenzofuran	168.20	5.61E-04	0.0943	0.003	0.011	0.003	0.000
Ethylbenzene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Naphthalene	128.20	1.46E-02	1.8770	0.056	0.213	0.056	0.001
Phenol	94.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Quinoline	129.20	2.62E-03	0.3390	0.010	0.038	0.010	0.000
Styrene	104.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Toluene	92.40	0.00E+00	0.0000	0.000	0.000	0.000	0.000
m-Xylene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
o-Xylene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
p-Xylene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Acenaphthene	154.20	3.86E-03	0.5956	0.018	0.067	0.018	0.000
Acenaphthylene	152.20	6.95E-04	0.1058	0.003	0.012	0.003	0.000
Anthracene	178.20	2.56E-05	0.0046	0.000	0.001	0.000	0.000
Benzo(a)anthracene	228.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	276.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	252.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Chrysene	228.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	278.40	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Fluoranthene	202.30	2.24E-05	0.0045	0.000	0.001	0.000	0.000
Fluorene	166.20	1.32E-03	0.2202	0.007	0.025	0.007	0.000
Indeno(1,2,3-cd)pyrene	276.30	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Phenanthrene	178.20	1.14E-04	0.0204	0.001	0.002	0.001	0.000
Pyrene	202.30	6.04E-07	0.0001	0.000	0.000	0.000	0.000
TOTAL HAP				0.103	0.389		0.003
TOTAL POM				0.103	0.389		0.003

Table 12-4. 2010 Potential Emissions Inventory, Railcar Residue Recycling Operation, Heatup of Residue
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

$E = (P_{iT1}/Pa_1 + P_{iT2}/Pa_2)/2 \times Delta(n) \times MWi$

E = Mass of emissions emitted from heating
P_{iT1} = Partial pressure of constituent in aqueous solution at initial temperature
P_{iT2} = Partial pressure of constiuent in aqueous solution at final temperature
Pa_1 = Initial noncondensable gas pressure in the vessel
Pa_2 = Final noncondensable gas pressure in the vessel
Delta(n) = Number of moles of noncondensable gas displaced
MWi = Molecular weight of constituent

$Delta(n) = V/R[(P_{a1}/T_1) - (P_{a2}/T_2)]$

V = Volume of free space in vessel
T1 = Initital Temperature
T2 = Final Temperature
R = Ideal Gas Law = 10.731 psi-cf/lb-mole-R
$Pa_1 = 14.7 - \sum P_{iT1}$
$Pa_2 = 14.7 - \sum P_{iT2}$

Input Data

Number of roll-off boxes =	52	box/yr	
	1	box/day	
Hours to heat =	4	hours	
V = Volume of free space in vessel =	211	cf/box	
T1 = Initital Temperature =	68	F, or	528 R
T2 = Final Temperature =	200	F, or	660 R

Emissions Calculations

Constituent	MWi (lb/mol)	P_{iT1} (psia)	P_{iT2} (psia)	E (lbs/box)	E (lb/hr)	E (lb/day)	E (ton/yr)
		Pa_1 =	14.6998				
		Pa_2 =	14.6838				
		Delta(n) =	0.1101				
VOC	139.12	0.0002	0.0162	0.0085	0.0021	0.0085	0.0002
Benzene	78.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Biphenyl	154.20	2.43E-06	3.64E-04	0.0002	0.0001	0.0002	0.0000
m-Cresol	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
o-Cresol	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
p-Cresol	108.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Cumene	120.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Dibenzofuran	168.20	8.06E-07	1.98E-04	0.0001	0.0000	0.0001	0.0000
Ethylbenzene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Naphthalene	128.20	1.00E-04	6.46E-03	0.0032	0.0008	0.0032	0.0001
Phenol	94.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Quinoline	129.20	1.16E-05	9.38E-04	0.0005	0.0001	0.0005	0.0000
Styrene	104.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Toluene	92.10	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
m-Xylene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
o-Xylene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
p-Xylene	106.20	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Acenaphthene	154.20	4.02E-07	1.46E-03	0.0008	0.0002	0.0008	0.0000
Acenaphthylene	152.20	3.38E-06	2.35E-04	0.0001	0.0000	0.0001	0.0000
Anthracene	178.20	6.96E-16	3.81E-05	0.0000	0.0000	0.0000	0.0000
Benzo(a)anthracene	228.30	4.08E-07	9.05E-08	0.0000	0.0000	0.0000	0.0000
Benzo(b)fluoranthene	252.30	2.94E-09	1.30E-08	0.0000	0.0000	0.0000	0.0000
Benzo(k)fluoranthene	252.30	0.00E+00	3.80E-10	0.0000	0.0000	0.0000	0.0000
Benzo(ghi)perylene	276.30	0.00E+00	1.27E-11	0.0000	0.0000	0.0000	0.0000
Benzo(a)pyrene	252.30	0.00E+00	9.11E-10	0.0000	0.0000	0.0000	0.0000
Chrysene	228.20	0.00E+00	3.64E-09	0.0000	0.0000	0.0000	0.0000
Dibenzo(ah)anthracene	278.40	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000
Fluoranthene	202.30	0.00E+00	8.52E-05	0.0001	0.0000	0.0001	0.0000
Fluorene	166.20	0.00E+00	4.43E-04	0.0003	0.0001	0.0003	0.0000
Indeno(123cd)pyrene	276.30	0.00E+00	9.94E-12	0.0000	0.0000	0.0000	0.0000
Phenanthrene	178.20	0.00E+00	1.66E-04	0.0001	0.0000	0.0001	0.0000
Pyrene	202.30	0.00E+00	2.90E-06	0.0000	0.0000	0.0001	0.0000
TOTAL HAP				0.005	0.001	0.006	0.000
TOTAL POM				0.005	0.001	0.006	0.000

Table 12-5. 2010 Potential Emissions Inventory, Railcar Residue Recycling Operation
Transfer of Residue/Diluent Mixture to Tanks
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Emissions Approach

E = V/RT x ∑(Pi)(MWi) (from 63.1365(c)(2))

E = Mass of constituent emitted
V = Volume of gas displaced from the vessel
R = Ideal gas law constant = 10.731 psi-cf/lb-mole-R
T = Temperature of the vessel vapor space (absolute)
Pi = Partial pressure of the individual constituent
MWi = Molecular weight of the individual constituent

Input Data

Number of Roll-off Boxes	52	box/yr
	1	box/day
Quantity Transferred to Tanks	845	cf/box
Addition Temperature	200	F, or
	660	R
Addition Time	63.20	min/box

Emission Calculations

Constituent	MWi (lb/mol)	Pi (psia)	(Pi)(MWi) (psia-lb/mol)	E (lb/box)	E (lb/hr)	E (lb/day)	E (ton/yr)
VOC	**139.12**	**1.62E-02**	2.2527	0.269	0.255	0.269	0.007
Benzene	78.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Biphenyl	154.20	3.64E-04	0.0561	0.007	0.006	0.007	0.000
m-Cresol	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
o-Cresol	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
p-Cresol	108.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Cumene	120.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Dibenzofuran	168.20	1.98E-04	0.0332	0.004	0.004	0.004	0.000
Ethylbenzene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Naphthalene	128.20	6.46E-03	0.8284	0.099	0.094	0.099	0.003
Phenol	94.10	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Quinoline	129.20	9.38E-04	0.1212	0.014	0.014	0.014	0.000
Styrene	104.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Toluene	92.40	0.00E+00	0.0000	0.000	0.000	0.000	0.000
m-Xylene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
o-Xylene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
p-Xylene	106.20	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Acenaphthene	154.20	1.46E-03	0.2257	0.027	0.026	0.027	0.001
Acenaphthylene	152.20	2.35E-04	0.0358	0.004	0.004	0.004	0.000
Anthracene	178.20	3.81E-05	0.0068	0.001	0.001	0.001	0.000
Benzo(a)anthracene	228.30	9.05E-08	0.0000	0.000	0.000	0.000	0.000
Benzo(b)fluoranthene	252.30	1.30E-08	0.0000	0.000	0.000	0.000	0.000
Benzo(k)fluoranthene	252.30	3.80E-10	0.0000	0.000	0.000	0.000	0.000
Benzo(g,h,i)perylene	276.30	1.27E-11	0.0000	0.000	0.000	0.000	0.000
Benzo(a)pyrene	252.30	9.11E-10	0.0000	0.000	0.000	0.000	0.000
Chrysene	228.30	3.64E-09	0.0000	0.000	0.000	0.000	0.000
Dibenzo(a,h)anthracene	278.40	0.00E+00	0.0000	0.000	0.000	0.000	0.000
Fluoranthene	202.30	8.52E-05	0.0172	0.002	0.002	0.002	0.000
Fluorene	166.20	4.43E-04	0.0736	0.009	0.008	0.009	0.000
Indeno(1,2,3-cd)pyrene	276.30	9.94E-12	0.0000	0.000	0.000	0.000	0.000
Phenanthrene	178.20	1.66E-04	0.0296	0.004	0.003	0.004	0.000
Pyrene	202.30	2.90E-06	0.0006	0.000	0.000	0.000	0.000
TOTAL HAP				0.170	0.162		0.004
TOTAL POM				0.170	0.162		0.004

MISCELLANIOUS SOURCES

Table 13-1. Assumptions for the 2010 Potential Emissions Inventory, Miscellaneous Sources
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

Tankcar Cleaning

Annual Quantity of Tankcars Cleaned: 48 tankcars/yr, from Title V application

Paved Roadways

Distance Round Trip (into/out of plant): 1.0 mile

Potential Vehicle Miles Traveled

Truck Capacity: 7,000 gal

Material		Potential Receipt/Loadout	Potential Trucks/yr	Potential VMT/yr
Petro Tar	Receipt	30,000,000 gal/yr	4,286 truck/yr	4,286 VMT
Crude Tar	Load-out	3,000,000 gal/yr	429 truck/yr	429 VMT
Pitch	Load-out	55,000,000 gal/yr	7,857 truck/yr	7,857 VMT
PSB	Load-out	15,942,857 gal/yr	2,278 truck/yr	2,278 VMT
Solvent	Load-out	5,256,000 gal/yr	751 truck/yr	751 VMT
NSR	Load-out	21,024,000 gal/yr	3,003 truck/yr	3,003 VMT
Naphthalene	Load-out	23,652,000 gal/yr	3,379 truck/yr	3,379 VMT
Creosote	Load-out	20,000,000 gal/yr	2,857 truck/yr	2,857 VMT
			24,839 truck/yr	24,839 VMT

Table 13-2. 2010 Potential Emissions Inventory, Tankcar Cleaning
Koppers, Inc., Follansbee Tar Plant, Follansbee, West Virginia.

Calculation Procedure

VOC Emission Factor (Creosote) **5.1808** lb/car

AP-42, Section 4.8, *Tank and Drum Cleaning,* 2/80

Input Data

Quantity of Tankcars Cleaned 48 tankcars/yr, from Title V application

Emission Calculations

Pollutant	% by wgt P2 Creosote	Potential Emissions (tons/yr)
VOC	100	0.124
Benzene	0.00	0.000
Biphenyl	1.40	0.002
m-Cresol	0.00	0.000
o-Cresol	0.00	0.000
p-Cresol	0.00	0.000
Cumene	0.00	0.000
Dibenzofuran	3.84	0.005
Ethylbenzene	0.00	0.000
Naphthalene	8.11	0.010
Phenol	0.11	0.000
Quinoline	1.09	0.001
Styrene	0.00	0.000
Toluene	0.00	0.000
m-Xylene	0.00	0.000
o-Xylene	0.00	0.000
p-Xylene	0.00	0.000
Acenaphthene	6.82	0.008
Acenaphthylene	0.28	0.000
Anthracene	2.66	0.003
Benzo(a)anthracene	1.79	0.002
Benzo(b)fluoranthene	0.80	0.001
Benzo(k)fluoranthene	0.23	0.000
Benzo(g,h,i)perylene	0.29	0.000
Benzo(a)pyrene	0.83	0.001
Chrysene	1.97	0.002
Dibenzo(a,h)anthracene	0.13	0.000
Fluoranthene	7.97	0.010
Fluorene	4.80	0.006
Indeno(1,2,3-cd)pyrene	0.38	0.000
Phenanthrene	13.12	0.016
Pyrene	7.09	0.009
Total HAP		0.079
Total POM		0.079

Table 13-3.

2010 Potential Emissions Inventory, Paved Roadways
Koppers Inc., Follansbee Tar Plant, Follansbee, West Virginia

TSP

Paved Road	EMISSIONS ESTIMATION PARAMETERS					EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED ANNUAL EMISSIONS (TONS/YR)
	k	sL	W	C	P					
Incoming/Outbound Trucks	0.082	9.7	7.0	0.00047	150	0.73	24,839	9.07		9.07

PM10

Paved Road	EMISSIONS ESTIMATION PARAMETERS					EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED ANNUAL EMISSIONS (TONS/YR)
	k	sL	W	C	P					
Incoming/Outbound Trucks	0.016	9.7	7.0	0.00047	150	0.14	24,839	1.74		1.74

PM2.5

Paved Road	EMISSIONS ESTIMATION PARAMETERS					EMISSION RATE (lb/VMT)	VEHICLE MILES TRAVELED PER YEAR	UNCONTROLLED ANNUAL EMISSIONS (TONS/YR)	CONTROL EFFICIENCY (%)	CONTROLLED ANNUAL EMISSIONS (TONS/YR)
	k	sL	W	C	P					
Incoming/Outbound Trucks	0.0024	9.7	7.0	0.00036	150	0.02	24,839	0.25		0.25

A. Emission factors are derived using the equations and constants contained in AP-42, Section 13.2.1, 11/06, as follows:

$E = [k*(sL/2)^{0.65}(W/3)^{1.5} - C](1-P/4N)$

Where:

E = Emission factor (lb/VMT)
k = particle size multiplier
sL = road surface silt loading
W = mean vehicle weight, tons
C = Emission Factor for 1980's vehicle fleet exhaust, brake wear, and tire wear.
P = Number of wet days with at least 0.254 (0.01 in) of precipitation during the averaging period
N = Number of days in averaging period = 365 days