

**Rolling 12 Month
Emissions & Throughput Summary**

Loading VOCs & Throughput

510054

Ethanol sold as part of a gas recipe are included in the gasoline totals since loading gasoline limits typically include the ethanol portion of the recipe. Emissions are calculated correctly, stack test for gasoline & AP-42 Ch 5.2 for ethanol, and summarized for the gasoline section of the report. Denatured Ethanol is broken out separately only if it's sold by itself.

				Totals	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01	
Truck Loading	VCS 1 CARBON	Denatured Ethanol	Stack Lbs	1.51	.04	.01	.12	.22	.21	.34	.30	.27	-	-	-	-	
			Fugitive Lbs	19.34	.60	.14	1.53	2.77	2.71	4.29	3.82	3.47	-	-	-	-	-
		Total Lbs	20.85	.64	.16	1.65	2.98	2.92	4.63	4.12	3.75	-	-	-	-	-	-
		US Tons	.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gallons.	1,114,161	50,363	10,903	104,012	168,062	152,001	231,890	204,930	192,000	-	-	-	-	-	-	
	Distillate	Stack Lbs	7.98	.42	.59	.60	.72	.76	.82	.81	.73	.75	.64	.61	.53	.53	
		Fugitive Lbs	102.90	6.42	7.58	7.67	9.13	9.64	10.43	10.37	9.37	9.58	8.20	7.79	6.71		
		Total Lbs	110.87	6.84	8.17	8.28	9.85	10.40	11.24	11.18	10.11	10.33	8.84	8.40	7.24		
		US Tons	.06	-	-	-	-	.01	.01	.01	.01	.01	-	-	-	-	
	Gallons.	245,721,914	19,033,476	20,487,457	18,831,420	20,463,147	20,105,725	20,952,024	20,685,130	19,254,176	21,660,217	20,991,906	22,669,102	20,588,134			
	Gasoline	Stack Lbs	1,669.62	67.57	110.23	139.87	158.14	148.99	170.97	173.87	142.04	136.39	125.84	145.20	150.51		
		Fugitive Lbs	21,249.14	1,025.80	1,391.48	1,765.58	1,996.31	1,880.79	2,158.26	2,194.92	1,793.03	1,721.72	1,588.51	1,832.86	1,899.88		
		Total Lbs	22,918.76	1,093.37	1,501.72	1,905.45	2,154.45	2,029.78	2,329.22	2,368.80	1,935.07	1,858.11	1,714.34	1,978.06	2,050.39		
		US Tons	11.46	.55	.75	.95	1.08	1.01	1.16	1.18	.97	.93	.86	.99	1.03		
	Gallons.	212,700,160	10,255,284	13,933,155	17,708,922	19,940,204	18,788,311	21,544,085	21,894,845	17,916,379	17,239,887	15,947,914	18,418,382	19,112,792			
	Control:	Stack Lbs	1,679.10	68.03	110.84	140.59	159.07	149.96	172.12	174.98	143.04	137.14	126.48	145.81	151.04		
		Fugitive Lbs	21,371.38	1,032.82	1,399.20	1,774.79	2,008.21	1,893.14	2,172.97	2,209.11	1,805.88	1,731.30	1,596.71	1,840.65	1,906.59		
		Total VOC Lbs	23,050.48	1,100.85	1,510.04	1,915.38	2,167.29	2,043.10	2,345.09	2,384.10	1,948.92	1,868.44	1,723.19	1,986.46	2,057.63		
		US Tons	11.53	.55	.76	.96	1.08	1.02	1.17	1.19	.97	.93	.86	.99	1.03		
	Gallons	459,536,235	29,339,123	34,431,515	36,644,354	40,571,413	39,046,037	42,727,999	42,784,905	37,362,555	38,900,104	36,939,820	41,087,484	39,700,926			
Transport Mode:	Stack Lbs	1,679.10	68.03	110.84	140.59	159.07	149.96	172.12	174.98	143.04	137.14	126.48	145.81	151.04			
	Fugitive Lbs	21,371.38	1,032.82	1,399.20	1,774.79	2,008.21	1,893.14	2,172.97	2,209.11	1,805.88	1,731.30	1,596.71	1,840.65	1,906.59			
	Total VOC Lbs	23,050.48	1,100.85	1,510.04	1,915.38	2,167.29	2,043.10	2,345.09	2,384.10	1,948.92	1,868.44	1,723.19	1,986.46	2,057.63			
	US Tons	11.53	.55	.76	.96	1.08	1.02	1.17	1.19	.97	.93	.86	.99	1.03			
Gallons	459,536,235	29,339,123	34,431,515	36,644,354	40,571,413	39,046,037	42,727,999	42,784,905	37,362,555	38,900,104	36,939,820	41,087,484	39,700,926				
Loading:	Stack Lbs	1,679.10	68.03	110.84	140.59	159.07	149.96	172.12	174.98	143.04	137.14	126.48	145.81	151.04			
	Fugitive Lbs	21,371.38	1,032.82	1,399.20	1,774.79	2,008.21	1,893.14	2,172.97	2,209.11	1,805.88	1,731.30	1,596.71	1,840.65	1,906.59			
	Total VOC Lbs	23,050.48	1,100.85	1,510.04	1,915.38	2,167.29	2,043.10	2,345.09	2,384.10	1,948.92	1,868.44	1,723.19	1,986.46	2,057.63			
	US Tons	11.53	.55	.76	.96	1.08	1.02	1.17	1.19	.97	.93	.86	.99	1.03			
Gallons	459,536,235	29,339,123	34,431,515	36,644,354	40,571,413	39,046,037	42,727,999	42,784,905	37,362,555	38,900,104	36,939,820	41,087,484	39,700,926				

Tank VOCs & Throughput - by Tank Type

		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Cone/Flat Roof/Geodome no pan	VOC Lbs	9,397.77	619.73	771.12	754.60	932.99	819.62	884.99	913.23	724.44	807.71	721.52	669.69	778.13
	US Tons	4.70	0.31	0.39	0.38	0.47	0.41	0.44	0.46	0.36	0.40	0.36	0.33	0.39
	Gallons.	165,839,269	14,525,402	14,359,851	12,570,136	16,319,375	12,196,543	14,491,323	13,323,433	11,068,225	12,906,174	15,811,281	15,192,802	13,074,724
Horizontal Aboveground	VOC Lbs	456.08	29.01	44.97	42.65	43.81	39.74	42.69	42.04	36.89	35.08	32.67	32.71	33.82
	US Tons	0.23	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	Gallons.	60,942	3,276	6,972	5,166	5,418	4,998	5,040	5,250	4,788	5,040	4,956	5,082	4,956
Internal Floater - Cone/Flat Roof	VOC Lbs	16,482.05	1,499.95	1,752.25	1,441.93	1,123.21	937.36	986.17	985.58	1,237.58	1,515.24	1,708.28	1,662.86	1,631.64
	US Tons	8.24	0.75	0.88	0.72	0.56	0.47	0.49	0.49	0.62	0.76	0.85	0.83	0.82
	Gallons.	85,887,204	5,016,817	6,146,505	7,513,092	7,825,822	7,081,089	7,954,064	7,587,354	6,785,951	6,880,838	6,617,981	7,675,480	8,802,211
Internal Floater - Geodome	VOC Lbs	16,412.75	1,506.22	1,757.17	1,437.86	1,107.02	920.34	966.11	966.45	1,230.48	1,517.88	1,711.41	1,664.35	1,627.46
	US Tons	8.21	0.75	0.88	0.72	0.55	0.46	0.48	0.48	0.62	0.76	0.86	0.83	0.81
	Gallons.	253,762,274	16,721,046	19,771,599	21,850,709	21,956,648	20,672,408	21,860,266	22,595,884	22,990,387	23,941,129	20,516,723	21,113,632	19,771,843
Total	VOC Lbs	42,748.65	3,654.91	4,325.51	3,677.04	3,207.03	2,717.06	2,879.96	2,907.30	3,229.39	3,875.91	4,173.88	4,029.61	4,071.05
	VOC US Tons	21.37	1.83	2.16	1.84	1.60	1.36	1.44	1.45	1.61	1.94	2.09	2.01	2.04
	Gallons	505,549,689	36,266,541	40,284,927	41,939,103	46,107,263	39,955,038	44,310,693	43,511,921	40,849,351	43,733,181	42,950,941	43,986,996	41,653,734

Tank VOCs & Throughput - by Product Stored

		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Denatured Ethanol	VOC Lbs	668.39	43.32	51.81	55.02	59.79	60.06	64.01	63.90	59.55	57.24	51.43	50.50	51.76
	US Tons	0.33	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	Gallons.	21,104,886	901,665	1,282,593	1,747,021	1,875,582	1,938,649	2,198,690	2,167,467	1,839,220	1,596,392	1,504,015	1,714,594	2,338,998
Diesel Additive	VOC Lbs	3.43	0.24	0.30	0.30	0.31	0.31	0.33	0.32	0.28	0.28	0.25	0.26	0.25
	US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gallons.	27,720	2,100	2,436	2,142	2,226	2,352	2,352	2,352	2,142	2,520	2,310	2,478	2,310
Distillate	VOC Lbs	7,520.50	509.62	608.94	612.83	744.32	633.33	727.38	691.48	575.11	623.10	639.70	603.57	551.12
	US Tons	3.76	0.25	0.30	0.31	0.37	0.32	0.36	0.35	0.29	0.31	0.32	0.30	0.28
	Gallons.	265,233,046	23,661,191	23,543,427	20,402,213	22,716,915	20,522,848	23,423,844	20,606,862	19,393,460	22,958,022	23,186,550	23,596,074	21,221,640
Gas Additive	VOC Lbs	452.65	28.77	44.67	42.35	43.50	39.43	42.36	41.72	36.61	34.80	32.42	32.45	33.57
	US Tons	0.23	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	Gallons.	33,222	1,176	4,536	3,024	3,192	2,646	2,688	2,898	2,646	2,520	2,646	2,604	2,646
Gasoline	VOC Lbs	34,103.68	3,072.96	3,619.79	2,966.54	2,359.11	1,983.93	2,045.88	2,109.88	2,557.84	3,160.49	3,450.08	3,342.83	3,434.35
	US Tons	17.05	1.54	1.81	1.48	1.18	0.99	1.02	1.05	1.28	1.58	1.73	1.67	1.72
	Gallons.	219,150,815	11,700,409	15,451,935	19,784,703	21,509,348	17,488,543	18,683,119	20,732,342	19,611,883	19,173,727	18,255,420	18,671,246	18,088,140

Ft. Lauderdale; FI - Eisenhower

02/01/2013 to 01/31/2014

Rolling 12 Month Emissions & Throughput Summary

Marathon Petroleum Company
Terminal, Transport & Rail
opsEnvironmental

		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Total	VOC Lbs	42,748.65	3,654.91	4,325.51	3,677.04	3,207.03	2,717.06	2,879.96	2,907.30	3,229.39	3,875.91	4,173.88	4,029.61	4,071.05
	VOC US Tons	21.37	1.83	2.16	1.84	1.60	1.36	1.44	1.45	1.61	1.94	2.09	2.01	2.04
	Gallons	505,549,689	36,266,541	40,284,927	41,939,103	46,107,263	39,955,038	44,310,693	43,511,921	40,849,351	43,733,181	42,950,941	43,986,996	41,653,734

Tank VOCs & Throughput Detail - by Tank

			Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01	
10-14 Tank - Covered/Internal Floating	Gasoline	Standing Lbs	4,135.21	382.62	446.71	362.65	276.65	227.87	239.21	239.24	307.88	381.93	434.92	422.24	413.29	
		Working Lbs	61.13	3.42	3.55	5.67	5.55	5.18	5.66	6.72	4.33	4.29	4.01	6.45	6.30	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	4,196.34	386.04	450.26	368.32	282.20	233.05	244.87	245.96	312.21	386.22	438.93	428.69	419.59	
		Total VOC/8760 Gallons.	0.48	0.04	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.05
20-13 Tank - Covered/Internal Floating	Denatured Ethanol	Standing Lbs	588.80	39.92	46.97	48.43	52.72	52.75	55.72	55.72	52.62	51.22	45.76	44.03	42.94	
		Working Lbs	79.59	3.40	4.84	6.59	7.07	7.31	8.29	8.18	6.93	6.02	5.67	6.47	8.82	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	668.39	43.32	51.81	55.02	59.79	60.06	64.01	63.90	59.55	57.24	51.43	50.50	51.76	
		Total VOC/8760 Gallons.	0.08	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
35-1 Tank - Cone / Flat / Dome-No Pan	Distillate	Standing Lbs	302.75	22.37	26.70	28.79	28.83	26.72	29.25	27.90	24.08	23.09	21.02	21.49	22.51	
		Working Lbs	1,573.40	131.80	143.39	125.88	138.12	136.83	157.89	101.84	105.47	144.29	138.50	129.59	119.80	
		Additional Lbs	492.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	
		Total VOC Lbs	2,368.15	195.17	211.09	195.67	207.95	204.55	228.14	170.74	170.55	208.38	200.52	192.08	183.31	
		Total VOC/8760 Gallons.	0.27	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
35-3 Tank - Cone / Flat / Dome-No Pan	Distillate	Standing Lbs	297.34	21.97	26.23	28.28	28.32	26.24	28.73	27.41	23.64	22.67	20.64	21.10	22.11	
		Working Lbs	1,421.74	-	109.43	140.72	155.33	149.01	120.16	147.32	134.90	115.60	112.18	132.24	104.85	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Total VOC Lbs	1,719.08	21.97	135.66	169.00	183.65	175.25	148.89	174.73	158.54	138.27	132.82	153.34	126.96	
		Total VOC/8760 Gallons.	0.20	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
35-4 Tank - Covered/Internal Floating	Distillate	Standing Lbs	24.71	1.71	2.00	2.03	2.19	2.18	2.30	2.30	2.18	2.14	1.94	1.89	1.85	
		Working Lbs	87.26	6.83	7.38	6.78	6.79	6.54	7.67	6.13	7.26	7.96	7.65	7.89	8.38	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Total VOC Lbs	111.97	8.54	9.38	8.81	8.98	8.72	9.97	8.43	9.44	10.10	9.59	9.78	10.23	
		Total VOC/8760 Gallons.	0.01	0	0	0	0	0	0	0	0	0	0	0	0	
		28,973,403	2,267,771	2,449,291	2,250,228	2,254,620	2,171,360	2,547,223	2,034,778	2,412,604	2,642,939	2,541,554	2,619,445	2,781,590		

Ft. Lauderdale; FI - Eisenhower

02/01/2013 to 01/31/2014

Rolling 12 Month Emissions & Throughput Summary

Marathon Petroleum Company
Terminal, Transport & Rail
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			Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01	
35-5 Tank - Cone / Flat / Dome-No Pan	Distillate	Standing Lbs	289.77	21.41	25.56	27.55	27.60	25.58	28.00	26.71	23.04	22.10	20.11	20.56	21.55	
		Working Lbs	1,274.56	91.75	131.22	98.80	130.87	88.90	154.85	118.38	107.97	85.36	121.65	109.16	109.16	35.65
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	1,564.33	113.16	156.78	126.35	158.47	114.48	182.85	145.09	131.01	107.46	141.76	129.72	129.72	57.20
		Total VOC/8760	0.18	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.01
		Gallons.	36,030,268	2,876,220	3,908,976	2,797,138	3,559,133	2,346,414	4,000,475	3,057,838	2,927,912	2,373,228	3,603,877	3,433,234	3,433,234	1,145,823
35-7 Tank - Covered/Internal Floating	Gasoline	Standing Lbs	11,447.28	1,059.19	1,236.59	1,003.91	765.85	630.77	662.21	662.29	852.27	1,057.28	1,203.96	1,168.86	1,144.10	
		Working Lbs	58.07	2.86	4.21	5.87	6.39	4.76	5.11	5.00	4.11	4.40	4.37	5.03	5.96	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	11,505.35	1,062.05	1,240.80	1,009.78	772.24	635.53	667.32	667.29	856.38	1,061.68	1,208.33	1,173.89	1,173.89	1,150.06
		Total VOC/8760	1.31	0.12	0.14	0.12	0.09	0.07	0.08	0.08	0.08	0.10	0.12	0.14	0.13	0.13
		Gallons.	23,157,902	1,139,429	1,680,235	2,342,329	2,547,124	1,898,539	2,036,043	1,993,784	1,637,519	1,754,340	1,743,245	2,007,545	2,007,545	2,377,770
35-9 Tank - Cone / Flat / Dome-No Pan	Distillate	Standing Lbs	287.20	21.22	25.33	27.31	27.35	25.35	27.75	26.47	22.84	21.90	19.94	20.38	21.36	
		Working Lbs	1,233.05	127.22	48.45	66.85	143.22	84.25	108.25	147.87	62.76	112.57	118.56	79.01	134.04	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	1,520.25	148.44	73.78	94.16	170.57	109.60	136.00	174.34	85.60	134.47	138.50	99.39	99.39	155.40
		Total VOC/8760	0.17	0.02	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02
		Gallons.	36,370,125	4,818,709	1,443,365	1,892,654	3,894,771	2,223,603	2,796,716	3,819,495	1,660,596	3,129,550	3,512,418	2,485,062	2,485,062	4,693,186
40-10 Tank - Domed Floating Roof	Distillate	Standing Lbs	13.02	0.90	1.05	1.07	1.15	1.15	1.22	1.22	1.14	1.13	1.03	0.99	0.97	
		Working Lbs	84.44	7.05	12.49	6.28	5.59	4.79	7.43	8.58	6.32	7.66	5.07	7.10	6.08	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	97.46	7.95	13.54	7.35	6.74	5.94	8.65	9.80	7.46	8.79	6.10	8.09	8.09	7.05
		Total VOC/8760	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0
		Gallons.	28,252,726	2,359,948	4,177,371	2,100,777	1,871,392	1,600,983	2,487,039	2,870,275	2,114,080	2,564,284	1,695,120	2,376,878	2,376,878	2,034,579
42-8 Tank - Domed Floating Roof	Distillate	Standing Lbs	12.98	0.90	1.05	1.07	1.15	1.15	1.21	1.21	1.14	1.12	1.02	0.99	0.97	
		Working Lbs	126.28	13.49	7.66	10.42	6.81	13.64	11.67	7.14	11.37	14.51	9.39	10.18	10.00	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	139.26	14.39	8.71	11.49	7.96	14.79	12.88	8.35	12.51	15.63	10.41	11.17	11.17	10.97
		Total VOC/8760	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0
		Gallons.	42,245,773	4,512,228	2,564,012	3,484,978	2,278,794	4,562,068	3,903,173	2,388,624	3,804,473	4,854,663	3,139,981	3,407,075	3,407,075	3,345,704
66-11 Tank - Domed Floating Roof	Gasoline	Standing Lbs	2,278.97	210.87	246.19	199.87	152.46	125.58	131.83	131.85	169.67	210.49	239.69	232.70	227.77	
		Working Lbs	115.14	5.12	7.33	9.91	7.99	10.58	12.36	13.76	8.61	8.95	8.66	10.64	11.23	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	2,394.11	215.99	253.52	209.78	160.45	136.16	144.19	145.61	178.28	219.44	248.35	243.34	243.34	239.00
		Total VOC/8760	0.27	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
		Gallons.	61,057,518	2,714,395	3,889,158	5,256,091	4,238,419	5,609,095	6,552,898	7,297,872	4,567,466	4,745,450	4,594,259	5,640,629	5,640,629	5,951,786

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Rolling 12 Month Emissions & Throughput Summary

Marathon Petroleum Company
Terminal, Transport & Rail
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			Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01	
66-12 Tank - Domed Floating Roof	Gasoline	Standing Lbs	11,292.31	1,044.84	1,219.85	990.33	755.48	622.24	653.24	653.32	840.73	1,042.97	1,187.66	1,153.04	1,128.61	
		Working Lbs	113.27	8.79	7.53	10.64	14.13	9.63	6.12	9.34	11.80	13.41	12.65	3.70	5.53	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	11,405.58	1,053.63	1,227.38	1,000.97	769.61	631.87	659.36	662.66	852.53	1,056.38	1,200.31	1,156.74	1,134.14	
		Total VOC/8760 Gallons.	1.30	0.12	0.14	0.11	0.09	0.07	0.08	0.08	0.08	0.10	0.12	0.14	0.13	0.13
96-6 Tank - Domed Floating Roof	Gasoline	Standing Lbs	2,269.78	210.02	245.19	199.06	151.85	125.07	131.30	131.31	168.99	209.64	238.73	231.76	226.86	
		Working Lbs	106.56	4.24	8.83	9.21	10.41	6.51	9.73	8.72	10.71	8.00	7.51	13.25	9.44	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	2,376.34	214.26	254.02	208.27	162.26	131.58	141.03	140.03	179.70	217.64	246.24	245.01	236.30	
		Total VOC/8760 Gallons.	0.27	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
AA-3-1 Tank - Horiz Above Grnd	Gas Additive	Standing Lbs	95.95	7.07	8.41	9.06	9.13	8.47	9.23	8.83	7.68	7.38	6.70	6.84	7.15	
		Working Lbs	43.31	-	2.07	6.17	5.64	3.94	3.07	3.54	4.24	3.64	4.43	3.31	3.26	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	139.26	7.07	10.48	15.23	14.77	12.41	12.30	12.37	11.92	11.02	11.13	10.15	10.41	
		Total VOC/8760 Gallons.	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0
AA-8-2 Tank - Horiz Above Grnd	Gas Additive	Standing Lbs	243.09	17.99	21.37	22.96	23.09	21.41	23.30	22.28	19.40	18.68	17.00	17.40	18.21	
		Working Lbs	70.30	3.71	12.82	4.16	5.64	5.61	6.76	7.07	5.29	5.10	4.29	4.90	4.95	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	313.39	21.70	34.19	27.12	28.73	27.02	30.06	29.35	24.69	23.78	21.29	22.30	23.16	
		Total VOC/8760 Gallons.	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0
AA-8-3 Tank - Horiz Above Grnd	Diesel Additive	Standing Lbs	2.23	0.16	0.20	0.21	0.21	0.20	0.22	0.21	0.18	0.17	0.15	0.16	0.16	
		Working Lbs	1.20	0.08	0.10	0.09	0.10	0.11	0.11	0.11	0.10	0.11	0.10	0.10	0.09	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	3.43	0.24	0.30	0.30	0.31	0.31	0.33	0.32	0.28	0.28	0.25	0.26	0.25	
		Total VOC/8760 Gallons.	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
T-2 Tank - Cone / Flat / Dome-No Pan	Gasoline	Standing Lbs	1,330.21	96.50	115.32	124.72	126.82	118.59	129.51	124.04	107.86	102.80	92.54	93.81	97.70	
		Working Lbs	895.75	44.49	78.49	44.70	85.53	97.15	59.60	124.29	70.88	116.33	15.38	1.35	157.56	
		Additional Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total VOC Lbs	2,225.96	140.99	193.81	169.42	212.35	215.74	189.11	248.33	178.74	219.13	107.92	95.16	255.26	
		Total VOC/8760 Gallons.	0.25	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.01	0.01	0.03
			78,125	4,158	7,098	3,906	7,266	8,106	4,914	10,248	5,922	10,038	1,386	126	14,957	

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Emissions & Throughput Summary**

Marathon Petroleum Company
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		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Total	Standing Lbs	34,911.60	3,159.66	3,694.72	3,077.30	2,430.85	2,041.32	2,154.23	2,142.31	2,625.34	3,176.71	3,552.81	3,458.24	3,398.11
	Working Lbs	7,345.05	454.25	589.79	558.74	735.18	634.74	684.73	723.99	563.05	658.20	580.07	530.37	631.94
	Additional Lbs	492.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00	41.00
	Total VOC Lbs	42,748.65	3,654.91	4,325.51	3,677.04	3,207.03	2,717.06	2,879.96	2,907.30	3,229.39	3,875.91	4,173.88	4,029.61	4,071.05
	VOC Lbs / 8760	4.88	0.42	0.49	0.42	0.37	0.31	0.33	0.33	0.37	0.44	0.48	0.46	0.46
Gallons		505,549,689	36,266,541	40,284,927	41,939,103	46,107,263	39,955,038	44,310,693	43,511,921	40,849,351	43,733,181	42,950,941	43,986,996	41,653,734

Water Systems VOCs & Throughput

Note (1) Total Throughput Gallons isn't shown because the same gallon could be processed in multiple places, like the OWS and the WAT tank.

		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Oil Water Separator	VOC Lbs	1,179.75	30.00	-	65.00	287.50	90.00	270.00	96.00	106.25	55.00	120.00	60.00	-
	US Tons	0.59	0.02	-	0.03	0.14	0.05	0.14	0.05	0.05	0.03	0.06	0.03	-
	Gallons.	235,950	6,000	-	13,000	57,500	18,000	54,000	19,200	21,250	11,000	24,000	12,000	-
WA-20-1	VOC Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gallons.	223,950	6,000	-	13,000	57,500	18,000	54,000	19,200	21,250	11,000	24,000	-	-
WA-20-2	VOC Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gallons.	12,000	-	-	-	-	-	-	-	-	-	-	12,000	-
Total	VOC Lbs	1,179.75	30.00	-	65.00	287.50	90.00	270.00	96.00	106.25	55.00	120.00	60.00	-
	US Tons	0.59	0.02	-	0.03	0.14	0.05	0.14	0.05	0.05	0.03	0.06	0.03	-
	Note (1)													

Internal Combustion Engine VOCs & By Products of Combustion & Fuel Use

Engine Pollutants - Lbs		Total Lbs	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Backup Generator	VOC Lbs	6.12	0.59	0.31	0.31	0.31	2.48	0.31	0.31	0.30	0.30	0.30	0.31	0.31
	CO Lbs	16.15	1.55	0.81	0.81	0.81	6.55	0.81	0.81	0.79	0.79	0.79	0.81	0.81
475 hp	NOx Lbs	74.98	7.18	3.77	3.77	3.77	30.43	3.77	3.77	3.65	3.65	3.65	3.77	3.77
	Aldehyde Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
Distillate no. 2 fueled	SOx Lbs	4.93	0.47	0.25	0.25	0.25	2.00	0.25	0.25	0.24	0.24	0.24	0.25	0.25
	PM Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
0.500 MW	PM 2.5 Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	PM 10 Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	CO2 Lbs	2,788.26	267.06	140.32	140.32	140.32	1,131.60	140.32	140.32	135.79	135.79	135.79	140.32	140.32
	CH4 Lbs	0.11	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	N2O Lbs	0.02	-	-	-	-	0.01	-	-	-	-	-	-	-
	CO2e Lbs	2,788.40	267.07	140.33	140.33	140.33	1,131.66	140.33	140.33	135.80	135.80	135.80	140.33	140.33
	Diesel Gals	123.20	11.80	6.20	6.20	6.20	50.00	6.20	6.20	6.00	6.00	6.00	6.20	6.20
	Gasoline Gals	-	-	-	-	-	-	-	-	-	-	-	-	-
	Hrs Run.	24.50	2.00	2.00	2.00	2.00	2.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	Total	VOC Lbs	6.12	0.59	0.31	0.31	0.31	2.48	0.31	0.31	0.30	0.30	0.30	0.31
	CO Lbs	16.15	1.55	0.81	0.81	0.81	6.55	0.81	0.81	0.79	0.79	0.79	0.81	0.81
	NOx Lbs	74.98	7.18	3.77	3.77	3.77	30.43	3.77	3.77	3.65	3.65	3.65	3.77	3.77
	Aldehyde Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOx Lbs	4.93	0.47	0.25	0.25	0.25	2.00	0.25	0.25	0.24	0.24	0.24	0.25	0.25
	PM Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	PM 2.5 Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	PM 10 Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	CO2 Lbs	2,788.26	267.06	140.32	140.32	140.32	1,131.60	140.32	140.32	135.79	135.79	135.79	140.32	140.32
	CH4 Lbs	0.11	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	N2O Lbs	0.02	-	-	-	-	0.01	-	-	-	-	-	-	-
	CO2e Lbs	2,788.40	267.07	140.33	140.33	140.33	1,131.66	140.33	140.33	135.80	135.80	135.80	140.33	140.33
	Diesel Gals	123.20	11.80	6.20	6.20	6.20	50.00	6.20	6.20	6.00	6.00	6.00	6.20	6.20
	Gasoline Gals	-	-	-	-	-	-	-	-	-	-	-	-	-
	Hrs Run.	24.50	2.00	2.00	2.00	2.00	2.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Facility Fugitive VOCs - excludes trucks, includes valves, couplings, fittings, etc.

		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Terminal Fugitives	VOC Lbs	2,587.47	198.49	219.76	212.67	219.76	212.67	219.76	219.76	212.67	219.76	212.67	219.76	219.76
	VOC US Tons.	1.29	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Total	VOC LBS	2,587.47	198.49	219.76	212.67	219.76	212.67	219.76	219.76	212.67	219.76	212.67	219.76	219.76
	VOC U.S. Tons	1.29	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

Facility Wide - VOCs only

Facility VOC Lbs		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Loading		23,050.48	1,100.85	1,510.04	1,915.38	2,167.29	2,043.10	2,345.09	2,384.10	1,948.92	1,868.44	1,723.19	1,986.46	2,057.63
Tanks		42,748.65	3,654.91	4,325.51	3,677.04	3,207.03	2,717.06	2,879.96	2,907.30	3,229.39	3,875.91	4,173.88	4,029.61	4,071.05
Water Systems		1,179.75	30.00	-	65.00	287.50	90.00	270.00	96.00	106.25	55.00	120.00	60.00	-
Internal Combustion		6.12	0.59	0.31	0.31	0.31	2.48	0.31	0.31	0.30	0.30	0.30	0.31	0.31
Terminal Fugitives		2,587.47	198.49	219.76	212.67	219.76	212.67	219.76	219.76	212.67	219.76	212.67	219.76	219.76
Total	VOC Lbs	69,572.47	4,984.84	6,055.62	5,870.39	5,881.88	5,065.31	5,715.12	5,607.46	5,497.53	6,019.40	6,230.03	6,296.13	6,348.75

Facility VOC US Tons		Total Tons	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Loading		11.53	0.55	0.76	0.96	1.08	1.02	1.17	1.19	0.97	0.93	0.86	0.99	1.03
Tanks		21.37	1.83	2.16	1.84	1.60	1.36	1.44	1.45	1.61	1.94	2.09	2.01	2.04
Water Systems		0.59	0.02	-	0.03	0.14	0.05	0.14	0.05	0.05	0.03	0.06	0.03	-
Internal Combustion		-	-	-	-	-	-	-	-	-	-	-	-	-
Terminal Fugitives		1.29	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Total	VOC U.S. Tons	34.79	2.49	3.03	2.94	2.94	2.53	2.86	2.80	2.75	3.01	3.12	3.15	3.17

**Rolling 12 Month
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Facility Wide Pollutants - excluding VOCs

		Total Lbs	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Facility Total	CO Lbs	16.152	1.55	0.81	0.81	0.81	6.55	0.81	0.81	0.79	0.79	0.79	0.81	0.81
	NOx Lbs	74.977	7.18	3.77	3.77	3.77	30.43	3.77	3.77	3.65	3.65	3.65	3.77	3.77
	Aldehyde Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	SO2 Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOx Lbs	4.93	0.47	0.25	0.25	0.25	2.00	0.25	0.25	0.24	0.24	0.24	0.25	0.25
	PM Lbs	5.270	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	PM2.5 Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	PM10 Lbs	5.27	0.50	0.27	0.27	0.27	2.14	0.27	0.27	0.26	0.26	0.26	0.27	0.27
	CO2 Lbs	2,788.262	267.06	140.32	140.32	140.32	1,131.60	140.32	140.32	135.79	135.79	135.79	140.32	140.32
	CH4 Lbs	0.112	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	N2O Lbs	0.022	-	-	-	-	0.01	-	-	-	-	-	-	-
	CO2e Lbs	2,788.398	267.07	140.33	140.33	140.33	1,131.66	140.33	140.33	135.80	135.80	135.80	140.33	140.33

		Total	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Facility Total	CO US Tons	0.01	-	-	-	-	-	-	-	-	-	-	-	-
	NOx US Tons	0.04	-	-	-	-	0.02	-	-	-	-	-	-	-
	Aldehyde US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	SO2 US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	SOx US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	PM US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	PM 2.5 US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	PM 10 US Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2 Metric Tons	1.26	0.12	0.06	0.06	0.06	0.51	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	CH4 Metric Tons.	-	-	-	-	-	-	-	-	-	-	-	-	-
	N2O Metric Tons	-	-	-	-	-	-	-	-	-	-	-	-	-
	CO2e Metric Tons	1.26	0.12	0.06	0.06	0.06	0.51	0.06	0.06	0.06	0.06	0.06	0.06	0.06

Facility Wide Hazardous Air Pollutants

Source Product		Total LBS	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
From Distillates	Benzene Lbs	1.53	0.10	0.12	0.12	0.15	0.13	0.15	0.14	0.12	0.13	0.13	0.12	0.11
	Ethylbenzene Lbs	3.06	0.21	0.25	0.25	0.30	0.26	0.30	0.28	0.23	0.25	0.26	0.25	0.22
	Hexane Lbs	0.76	0.05	0.06	0.06	0.08	0.06	0.07	0.07	0.06	0.06	0.06	0.06	0.06
	Toluene Lbs	19.87	1.34	1.61	1.62	1.96	1.68	1.92	1.83	1.52	1.65	1.69	1.59	1.45
	Trimethylpentane (2,2,4) Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	Xylene Lbs	52.72	3.57	4.26	4.29	5.21	4.46	5.10	4.85	4.04	4.37	4.48	4.23	3.86
	Naphthalene Lbs	19.48	1.32	1.58	1.59	1.92	1.65	1.89	1.79	1.49	1.62	1.66	1.56	1.43
	Total HAP Lbs.	97.42	6.60	7.88	7.93	9.62	8.24	9.43	8.97	7.47	8.08	8.28	7.81	7.13
From Gasolines	Benzene Lbs	548.67	39.73	48.34	46.53	45.33	38.95	43.86	43.21	43.39	47.74	49.59	50.53	51.48
	Ethylbenzene Lbs	60.96	4.41	5.37	5.17	5.04	4.33	4.87	4.80	4.82	5.30	5.51	5.61	5.72
	Hexane Lbs	975.41	70.64	85.94	82.72	80.59	69.24	77.97	76.82	77.13	84.87	88.17	89.83	91.51
	Toluene Lbs	792.52	57.39	69.83	67.21	65.48	56.25	63.35	62.42	62.67	68.95	71.64	72.98	74.35
	Trimethylpentane (2,2,4) Lbs	487.71	35.32	42.97	41.36	40.29	34.62	38.98	38.41	38.57	42.43	44.08	44.91	45.76
	Xylene Lbs	304.82	22.07	26.86	25.85	25.18	21.64	24.36	24.01	24.10	26.52	27.55	28.07	28.60
	Naphthalene Lbs	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total HAP Lbs.	3,170.08	229.57	279.31	268.83	261.92	225.02	253.39	249.66	250.68	275.82	286.54	291.93	297.41
Totals	Benzene	550.20	39.84	48.47	46.65	45.48	39.07	44.00	43.35	43.50	47.86	49.72	50.65	51.59
	Ethylbenzene	64.02	4.62	5.62	5.42	5.34	4.59	5.17	5.08	5.06	5.56	5.77	5.86	5.94
	Hexane	976.17	70.69	86.00	82.78	80.67	69.30	78.04	76.89	77.19	84.93	88.23	89.89	91.57
	Toluene	812.39	58.74	71.43	68.82	67.44	57.93	65.27	64.24	64.19	70.60	73.32	74.58	75.81
	Trimethylpentane(2,2,4)	487.71	35.32	42.97	41.36	40.29	34.62	38.98	38.41	38.57	42.43	44.08	44.91	45.76
	Xylene	357.54	25.64	31.12	30.14	30.39	26.10	29.47	28.86	28.15	30.90	32.03	32.30	32.45
	Naphthalene	19.48	1.32	1.58	1.59	1.92	1.65	1.89	1.79	1.49	1.62	1.66	1.56	1.43
	Total HAP Lbs	3,267.51	236.17	287.19	276.75	271.54	233.26	262.82	258.63	258.15	283.90	294.82	299.74	304.54

Total - HAP Tons		Total TONS	2013 / 02	2013 / 03	2013 / 04	2013 / 05	2013 / 06	2013 / 07	2013 / 08	2013 / 09	2013 / 10	2013 / 11	2013 / 12	2014 / 01
Totals	Benzene	0.274	0.020	0.024	0.023	0.023	0.019	0.022	0.022	0.022	0.024	0.025	0.025	0.026
	Ethylbenzene	0.032	0.002	0.003	0.003	0.003	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	Hexane	0.488	0.035	0.043	0.041	0.040	0.035	0.039	0.038	0.039	0.042	0.044	0.045	0.046
	Toluene	0.406	0.029	0.036	0.034	0.034	0.029	0.033	0.032	0.032	0.035	0.037	0.037	0.038
	Trimethylpentane(2,2,4)	0.244	0.018	0.021	0.021	0.020	0.017	0.019	0.019	0.019	0.021	0.022	0.022	0.023
	Xylene	0.179	0.013	0.016	0.015	0.015	0.013	0.015	0.014	0.014	0.015	0.016	0.016	0.016
	Naphthalene	0.010	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	Total HAP Tons	1.634	0.118	0.144	0.138	0.136	0.117	0.131	0.129	0.129	0.142	0.147	0.150	0.152

NOTES FOR FACTORS & CALCULATIONS:

- » **VOCs from controlled loading of Gasoline (truck / barge / rail)** uses the stack test mg/L in effect during loading. $[\text{ControlEfficiency_mg/L} * 3.7854 * 2.2046 / 1000 * \text{Thruput-Gas} / 1000]$
- » **VOCs from uncontrolled loading of Gasoline & all truck and rail loading of Distillate, Ethanol, Other Organics** uses AP-42, Ch 5, Jun 2008, Pg 5.2-4 reduced by capture & control efficiency on Pg 5.2-6: $[(12.46 * \text{Vap.Mol.Wt} * \text{SaturationFactor} * \text{TVP} / \text{BulkLiquidTemp}^{\circ}\text{R}) * (\text{Thruput} / 1000) * ((100 - \text{ControlEff}\%) / 100) * (\text{CaptureEff}\% / 100)]$ where where Capture_Eff% relates to the truck fugitive rate. 8 mg/l = 99.21%, 9 mg/l = 99.11%(being phased out), 13 mg/l = 98.72%. Derived from $((1 - (\text{mg/l} / 1014)) / 100)$, where 1014 is the density of 1 litre of saturated gasoline vapors from EPA-453/R-94-002b U.S. EPA RTP, NC Nov 1994 "Gasoline Distribution Industry (Stage I) - Background Information for Promulgated Standards", Pg A-4. **Uncontrolled barge loading** uses the factors from AP-42, Ch 5.2, Jun 2008, tables 5.2-2 and 5.2-6.
- » **Temperatures and windspeeds** in tank calculations are from the TANKS4 Meteorological tables, using the 30 Year U. S. Monthly Climate Normals 1961-1990, National Climatic Data Center, Asheville, NC.
- » **Truck Fugitives from loading Gasoline** uses fixed rate determined by permit or MACT status. The formula is: $[\text{FugitiveRate mg/L} * 3.785 / 453.600 * \text{Thruput-Gas} / 1000]$ where the Fugitive Rate is 8 mg/l for MACT facilities and those where the trailers must pass a 1" pressure decay test, 13 mg/l for all other facilities where the trailers must pass a 3" pressure decay test. Some states and permits call for 9 mg/l (rather than 13) based on a study from Radian Corp but the API does not recognize the value.
- » **Truck Fugitives from loading Distillate, Ethanol, and Other Organics** uses AP-42, Ch 5, Jun 2008, Pg 5.2-4 reduced by the capture efficiency. $[(12.46 * \text{Mol.Wt} * \text{SaturationFactor} * \text{TVP} / \text{BulkLiquidTemp}^{\circ}\text{R}) * (\text{Thruput-NonGas} / 1000) * ((100 - \text{CaptureEff}\%) / 100)]$ where Capture_Eff% relates to the truck fugitive rate. 8 mg/l = 99.21%, 9 mg/l = 99.11%(being phased out), 13 mg/l = 98.72%. Derived from $((1 - (\text{mg/l} / 1014)) / 100)$ where 1014 is the density of 1 litre of saturated gasoline vapors from EPA-453/R-94-002b U.S. EPA RTP, NC Nov 1994 "Gasoline Distribution Industry (Stage I) - Background Information for Promulgated Standards", Pg A-4.
- » **By-products of combustion from Combustors, Boilers, Heaters, and Engines.** Reference AP-42 Ch 1.3 Fuel Oil Combustion, May 2010; AP-42 Ch 1.4 Natural Gas Combustion, July 1998; 40 CFR 98 Mandatory Reporting of GHGs; Final Rule, where applicable.
- » **Tank Emissions** are calculated using AP-42 Chapter 7.1, Nov. 2006
- » **Oil / Water Separator emissions:** $[(\text{Factor in lb/Gal} * \text{Thruput-Water} / 1000)]$ Factors from AP-42, Ch 5, Jan 1995, Pg 5.1-13, Tbl 5.1-2, Fugitive Emission Factors for Petroleum Refineries. Oil / Water Separators.
- » **WAT tank emission factors:** The petroleum is stripped out in the OWS and the contact water is in equilibrium by the time it hits the WAT tanks. This is based on sampling where approximately 50 ppm hydrocarbon was found. (So low that there would be no emissions if left alone.)
 - >> WAT tanks if not sparged use 0 lb/1,000 gal thrupt. (equilibrium)
 - >> WAT tanks if sparged and vented to the atmosphere, use 0.42 lb VOC / 1,000 gal water thrupt. (Sparging removes the remaining hydrocarbons) (50 ppm = (50 lb/1,000,000 lb water) * (8.3454 lbs water * 1000 gal)).
 - >> WAT tanks if sparged and vented to VRU use 0.021 lb VOC / 1,000 gal water (95% collection efficiency of the remaining hydrocarbons is assumed).

NOTES FOR FACTORS & CALCULATIONS - Continued

Speciation Notes:

POLLUTANT	Vapor Weight Percent		
	Ethanol *	Gasolines	Distillates
BENZENE	0.0450%	0.9000 %	0.0200%
ETHYLBENZENE	0.0050%	0.1000%	0.0400%
HEXANE	0.0800%	1.6000%	0.0100%
TOLUENE	0.0650%	1.3000%	0.2600%
TRIMETHYLPENTANE(2,2,4)	0.0400%	0.8000%	0.0000%
XYLENE	0.0250%	0.5000%	0.6900%
NAPHTHALENE	0.0000%	0.0000%	0.2550%

* Ethanol assumed to be denatured with 5% gasoline.

» Gasoline speciation data taken from Gasoline Distribution Industry (Stage 1) - Background Information for Proposed Standards for the MACT regulation Table C-5 (EPA-435/R-94-002a)

» Distillate speciation data taken from Karin Ritter (American Petroleum Institute) memo to the Gasoline Distribution MACT Workgroup dated Feb. 8, 1995 containing speciation data submitted by various API member companies.

» Asphalt speciation data - As industry accepted HAPs speciation is unavailable, MPC has chosen to reflect HAPs from Asphalt VOCs as the same as for distillates.