

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 21101

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
E-01-1544	Cracking Furnaces BA-101/102 Common Stack	CO	16.8	73.58
		NOx	230.38	1009.08
		PM10	1.26	5.52
		SO2	0.44	1.90
		VOC	0.58	2.56
E-01A-1544	Economizer (5)	CO	110	481.72
		NOx	1512.58	6625.10
		PM10	8.26	36.10
		SO2	2.72	11.94
		VOC	3.84	16.92
E-02-1544	Cracking Furnaces BA-103/104 Common Stack	CO	16.8	73.58
		NOx	230.38	1009.08
		PM10	1.26	5.52
		SO2	0.44	1.90
		VOC	0.58	2.56
E-02A-1544	Cracking Furnace BA-114	CO	9.68	42.4
		NOx	21.78	95.4
		PM10	1.08	4.76
		SO2	0.37	1.63
		VOC	0.51	2.22
E-03-1544	Cracking Furnaces BA-105/106 Common Stack	CO	16.8	73.58
		NOx	230.38	1009.08
		PM10	1.26	5.52
		SO2	0.44	1.90
		VOC	0.58	2.56
E-03A-1544	Cracking Furnace BA-115	CO	9.68	42.4
		NOx	21.78	95.4
		PM10	1.08	4.76
		SO2	0.37	1.63

		VOC	0.51	2.22
E-04-1544	Cracking Furnaces BA-107/108 Common Stack	CO	16.8	73.58
		NOx	230.38	1009.08
		PM10	1.26	5.52
		SO2	0.44	1.90
		VOC	0.58	2.56

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
E-04A-1544	Cracking Furnace BA-116	CO	9.68	42.4
		NOx	21.78	95.4
		PM10	1.08	4.76
		SO2	0.37	1.63
		VOC	0.51	2.22
E-05-1544	Cracking Furnaces BA-109/110 Common Stack	CO	16.8	73.58
		NOx	230.38	1009.08
		PM10	1.26	5.52
		SO2	0.44	1.90
		VOC	0.58	2.56
E-06-1544	Cracking Furnaces BA-111/112 Common Stack	CO	16.8	73.58
		NOx	230.38	1009.08
		PM10	1.26	5.52
		SO2	0.44	1.90
		VOC	0.58	2.56
E-06A-1544	Decoke Drum	CO	114.0	43.43
		PM10	13.67	1.60
E-05A-1544	Cracking Furnace BA-117	CO	9.68	42.4
		NOx	21.78	95.4
		PM10	1.08	4.76
		SO2	0.37	1.63
		VOC	0.51	2.22
E-07-1544	Steam Superheater BA-113 (158 MMBtu/hr heat input)	CO	9.50	41.50
		NOx	130.30	570.70
		PM10	0.70	3.10
		SO2	0.14	0.60
		VOC	0.30	1.50
E-08-1544	Heater BA-301 (17.1 MMBtu/hr heat input)	CO	0.90	3.94
		NOx	3.59	15.72
		PM10	0.08	0.34
		SO2	0.04	0.09
		VOC	0.08	0.31

E-09-1544	Heater BA-401 (17.6 MMBtu/hr heat input)	CO	0.92	4.03
		NOx	3.69	16.16
		PM10	0.08	0.35
		SO2	0.04	0.09
		VOC	0.07	0.31

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			#/hr	TPY
E-23-FLARE	Process Flare (continuous)	CO	2.53	11.1
		NOx	0.35	1.5
		VOC	5.4	23.7
T-FB-203	Wash Oil Tank	VOC	1.9	0.38
E-137-CT	Cooling Tower (4)	VOC	5.72	25.05
F-1544	Process Fugitives (4)	BD	0.66	2.88
		C2H4	58.77	257.41
		C3H6	5.88	25.77
		C3H8	2.21	9.65
		C6H6	2.21	9.65
		VOC	4.49	19.65

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) BD - butadiene
CO - carbon monoxide
C2H4 - ethylene
C3H8 - propane
C3H6 - propylene
C6H6 - benzene
NOx - total oxides of nitrogen
PM10 - particulate matter less than 10 microns in diameter
SO2 - sulfur dioxide
VOC - volatile organic compounds as defined in General Rule 101.1
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Total emissions from any combination of emission points numbers (EPN's) E-01-1544, E-02-1544, E-03-1544, E-04-1544, E-05-1544, E-06-1544, E-07-1544, and E-01A-1544 shall not exceed the following:

	<u>pounds per hour</u>	<u>TPY</u>
CO	110	481.72
NOx	1512.58	6625.1
PM10	8.26	36.10
SO2	2.72	11.94
VOC	3.84	16.92

- * Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day____Days/week____Weeks/year____or Hrs/year 8,760

Dated _____