

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 19123

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 *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
EYCRKR1417	Cracker Nos. 14 through 17	PM/PM ₁₀		3.8
	15.4			
	Combustion Emissions	CO	32.6	134
	with Cracker Nos. 1 through 7	SO ₂		0.30
	1.24			
	as backups	NO _x	40.4	166
		VOC	2.72	11.2
EYCRK1417D	Cracker Nos. 14 through 17	PM		1.4
	0.08			
	Decoking Emissions	PM ₁₀	0.8	0.04
	with Cracker Nos. 1 through 7	CO		80.2
	4.4			
	as backups			
EY001CT	East Cooling Tower	VOC	42.8	54.79
EY001LR	Railcar Loading	Ethylene	25.18	3.15
EY002LR	Truck Loading/Unloading	Ethylene	25.78	5.39
EY003LR	Truck Loading	VOC	0.17	0.34
EY005FL	Olefins Flare	CO	5.19	6.76
		SO ₂	0.01	0.02
		NO _x	0.72	0.93
		VOC	10.3	12.7
EY006CT	South Cooling Tower	VOC	42.8	55.66

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
EY018ST	Cracker No. 13 Combustion Emissions	PM/PM ₁₀	1.57	6.87
		CO	17.1	75.1
		SO ₂	0.13	0.55
		NO _x	31.4	137
		VOC	1.13	4.94
EY021ST	Heater D1.602	PM/PM ₁₀	0.04	0.17
		CO	0.42	1.83
		SO ₂	<0.01	0.013
		NO _x	0.50	2.19
		VOC	0.03	0.12
EY023ST	Cracker Nos. 8 through 12 8.02	PM/PM ₁₀		1.95
	Combustion Emissions	CO	21.32	87.9
		SO ₂	0.15	0.63
		NO _x	33.8	139
		VOC	1.4	5.8
EY029FE	Olefins Fugitives (4)	VOC	2.13	9.32
EY030CT	North Cooling Tower	VOC	45.0	59.34
EY041ST	Cracker Nos. 8 through 12 0.57	PM		4.54
	Decoking Emissions	PM ₁₀	2.48	0.32
		CO	33.4	4.36
EY051TK	Flush Oil Tank	VOC	0.71	0.51
EY052TK	Methanol Tank	Methanol	3.20	0.061
EY055ST	Cracker No. 13 Decoke Decoking Emissions	PM	2.8	0.08
		PM ₁₀	1.53	0.04
		CO	20.6	0.57
EY057ST	Heater D1.601	PM/PM ₁₀	0.04	0.17

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3) lb/hr		TPY
		CO	0.42	1.83
		SO ₂	<0.01	0.013
		NO _x	0.5	2.2
		VOC	0.03	0.12
EY101AN	Analyzer Vent	VOC	0.14	0.6
EY300AN	Analyzer Vent	VOC	0.21	0.93
EY400AN	Analyzer Vent	VOC	0.12	0.51
EY500AN	Analyzer Vent	VOC	0.05	0.23
EY700AN	Analyzer Vent	VOC	0.05	0.20
EY701AN	Analyzer Vent	VOC	0.04	0.16
EY900AN	Analyzer Vent	VOC	0.12	0.51
EY901FE	Olefins Fugitives (4)	VOC	13.24	57.92
		Chlorine	0.06	0.26
EYMSAN	Analyzer Vent	VOC	<0.01	<0.01
EYNEWAN	Analyzer Vent	VOC	<0.01	<0.01
LL11138VN	Seal Vessel	Mineral Oil	<0.01	<0.01
LL11210VN	Thermal Stabilizer Stg	Hexane	8.09	0.08
LL11302VN	Silo	PM/PM ₁₀	0.46	0.20
LL11412VN	Dust Collector	PM/PM ₁₀	0.55	1.10
		VOC	15.90	58.00

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
LL11502VN	Dust Collector	PM/PM ₁₀	1.11	2.01
LL11509VN	Unloading Receiver	PM/PM ₁₀	0.16	0.09
LL11702VN	Drain Vessel	Hexane	1.22	0.08
LL11801CT	LLDPE Cooling Tower	VOC	0.84	1.06
LL11801ST	Heater	PM/PM ₁₀	0.27	1.16
		CO	2.9	12.7
		SO ₂	0.02	0.09
		NO _x	2.12	9.3
		VOC	0.2	0.84
LL11801TK	Storage Tank	Hexane	0.42	0.73
LL11801VN	Storage Tank	Multitherm	<0.01	<0.01
LL11802FL	LLDPE Plant Flare	CO	13.86	23.45
		SO ₂	<0.01	0.025
		NO _x	1.62	11.62
		VOC	24.0	78.56
		HCl	10.41	3.77
LL11802TK	Storage Tank	Hexane	0.38	0.69
LL11802VN	Storage Tank	Multitherm	<0.01	<0.01
LL11803TK	Storage Tank	VOC	5.97	0.24
LL11804TK	Storage Tank	Octene	0.16	0.12
LL11806VN	Cleaning Tank	VOC	<0.01	<0.01
LL11807TK	Storage Tank	VOC	0.23	0.36

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
LL11810TK	Storage Tank	VOC	0.18	0.33
LL1001FE	LLDPE Process Fugitives (4) 6.41	VOC		1.44
		Ammonia	0.02	0.11
LLSUMPVN	Wastewater Sump	VOC	0.01	0.05
LLWLOADVN	Heavy Ends Loading	VOC	1.00	0.08
ST101FL	Styrene Plant Flare (5)	CO	1.95	1.87
		SO ₂	<0.01	0.03
		NO _x	0.27	0.26
		VOC	5.49	2.70
		Sulfur Compounds	<0.01	<0.01
UP001LR	Railcar Loading/Unloading 1.72	VOC		2.04
UP002LR	Truck Loading/Unloading	VOC	1.02	2.69
UP010FE	Loading/Storage Fugitives (4) 2.07	VOC		0.47
UP011FE	Flare Fugitives (4)	Ethylene	0.014	0.061
UP030LR	Aromatic Conc. Loading	VOC	8.63	1.59
		Sulfur Compounds	<0.01	<0.01

(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.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
(3)	VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1			
	NO _x - total oxides of nitrogen			
	SO ₂ - sulfur dioxide			
	PM - particulate matter, suspended in the atmosphere, including PM ₁₀ .			
	PM ₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.			
	CO - carbon monoxide			
	HCl - hydrogen chloride			
(4)	Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.			
(5)	Flare emissions shown are those related to Permit No. 19123 facilities only. The flare is operating under TNRCC Air Quality Permit No. 5611.			

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

_____Hrs/day _____Days/week _____Weeks/year or _____
8,760 Hrs/year

Dated_____