

## 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>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
EY001LR	Railcar Loading	Ethylene	0.17	0.034
EY002LR	Truck Loading	Ethylene	0.17	0.068
EY003LR	Truck Unloading	VOC	0.17	0.34
EY005FL	Olefins Plant Flare	CO	5.19	6.76
		SO <sub>2</sub>	<0.01	0.019
		NO <sub>x</sub>	0.72	0.93
		VOC	10.3	12.7
EY006FE	South Cooling Tower	VOC	7.73	11.3
EY018ST	Cracker 13	PM/PM <sub>10</sub>	1.05	4.58
		CO	8.36	36.6
		SO <sub>2</sub>	0.13	0.55
		NO <sub>x</sub>	31.4	137
		VOC	0.30	1.29
EY021ST	602 Heater	PM/PM <sub>10</sub>	0.061	0.27
		CO	0.11	0.47
		SO <sub>2</sub>	<0.01	0.013
		NO <sub>x</sub>	0.51	2.23
		VOC	0.027	0.12
EY023ST	Crackers 8-12	PM/PM <sub>10</sub>	3.56	14.7
		CO	9.10	37.5
		SO <sub>2</sub>	0.16	0.64
		NO <sub>x</sub>	36.4	150
		VOC	0.72	2.98
EY029FE	Process Fugitives (4)	VOC	2.13	9.32

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
EY030FE	North Cooling Tower	VOC	4.87	7.11
EY041ST	Cracker 8-12 Decoke Cyclone 0.32	PM <sub>10</sub>		2.48
		PM	4.54	0.57
		CO	30.4	4.20
EY051TK	Flush Oil Tank	VOC	0.71	0.51
EY052TK	Methanol Tank	Methanol	3.20	0.061
EY053ST	Crackers 14-15	PM/PM <sub>10</sub>	1.13	4.67
		CO	10.1	41.5
		SO <sub>2</sub>	0.15	0.62
		NO <sub>x</sub>	20.2	83.0
		VOC	0.36	1.47
EY054ST	Crackers 16-17	PM/PM <sub>10</sub>	1.13	4.67
		CO	10.1	41.5
		SO <sub>2</sub>	0.15	0.62
		NO <sub>x</sub>	20.2	83.0
		VOC	0.36	1.47
EY055ST	Cracker 13 Decoke Cyclone 0.042	PM <sub>10</sub>		1.53
		PM	2.80	0.077
		CO	20.6	0.57
EY056ST	Cracker 14-17 Decoke Cyclone	PM <sub>10</sub>	0.39	0.044
		PM	0.72	0.080
		CO	40.1	4.40
EY057ST	601 Heater	PM/PM <sub>10</sub>	0.061	0.27
		CO	0.11	0.47
		SO <sub>2</sub>	<0.01	0.013
		NO <sub>x</sub>	0.51	2.23
		VOC	0.027	0.12

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Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
EY901FE	Process Fugitives (4)	VOC	13.1	57.4
		Chlorine	0.06	0.26
LL1302AVN	Feeder	PM	0.23	0.10
LL1302BVN	Feeder	PM	0.23	0.10
LL11405VN	Dust Collector	PM	0.51	0.95
LL11406VN	Pellet Storage	PM	0.034	0.15
		VOC	15.9	58.0
LL11502VN	Dust Collector	PM	1.11	2.01
LL11509VN	Unloading Receiver	PM	0.16	0.086
LL11801ST	Heater	PM/PM <sub>10</sub>	0.49	2.12
		CO	2.16	9.46
		SO <sub>2</sub>	0.021	0.093
		NO <sub>x</sub>	2.12	9.30
		VOC	0.10	0.43
LL11801TK	Storage Tank	Hexane	0.38	0.74
LL11801VN	LLDPE Cooling Tower	VOC	0.76	0.95
LL11802TK	Storage Tank	Hexane	0.35	0.61
LL11802VN	Flush Oil Tank	VOC	<0.01	<0.01
LL11802FL	LLDPE Plant Flare	CO	13.9	23.5
		SO <sub>2</sub>	<0.01	0.025
		NO <sub>x</sub>	1.62	11.6
		VOC	24.0	78.6

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Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
		HCl	10.4	3.77
LL11803TK	Storage Tank	VOC	5.96	0.15
LL11804TK	Storage Tank	Octene	0.10	0.12
LL11806VN	Cleaning Tank	VOC	<0.01	<0.01
LL11807TK	Storage Tank	VOC	0.23	0.47
LL1001FE	Process Fugitives (4)	VOC	1.30	5.70
		Ammonia	0.25	1.09
LLSUMPVN	Wastewater Sump	VOC	0.010	0.045
LLWLOADVN	Heavy Ends Loading	VOC	1.00	0.079
ST101FL	Styrene Plant Flare (5)	CO	1.95	1.87
		SO <sub>2</sub>	<0.01	0.025
		NO <sub>x</sub>	0.27	0.26
		VOC	5.49	2.70
		EtSH	<0.01	<0.01
UP001LR	Railcar Loading	VOC	2.04	1.72
UP002LR	Truck Loading	VOC	1.02	2.69
UP030LR	Aromatic Conc. Loading	VOC	8.63	1.59
UP010FE	Utilities Fugitives (4)	VOC	0.47	2.07
		EtSH	<0.01	<0.01
UP011FE	Flare Fugitives (4)	Ethylene	0.014	0.061

(1) Emission point identification - either specific equipment designation

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Emission *	Source	Air Contaminant	Emission Rates
Point No. (1)	Name (2)	Name (3)lb/hr	TPY

or emission point number from plot plan.

(2) Specific point source name. For fugitive sources use area name or fugitive source name.

(3) PM<sub>10</sub> - particulate matter less than 10 microns

PM - particulate matter

CO - carbon monoxide

SO<sub>2</sub> - sulfur dioxide

NO<sub>x</sub> - total oxides of nitrogen

VOC - volatile organic compounds as defined in General Rule 101.1

HCl - hydrogen chloride

EtSH - ethyl mercaptan

(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/year 8,760

Dated \_\_\_\_\_