EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 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 Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
EYCRKR1417	Cracker Nos. 14 through 17 (6) Combustion Emissions with Cracker Nos. 1 through 7 as backups	PM/PM_{10}	3.80	15.40
		CO	32.60	134.00
		SO_2	0.30	1.24
		NO_x	40.40	166.00
		VOC	2.72	11.20
EYCRK1417D	Cracker Nos. 14 through 17 Decoking Emissions with Cracker Nos. 1 through 7 as backups	PM	1.40	0.08
		PM_{10}	0.80	0.04
		CO	80.20	4.40
EY001CT	East Cooling Tower	VOC	42.80	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	10.30	12.70
EY006CT	South Cooling Tower	VOC	42.80	55.66

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
EY018ST	Cracker No. 13 Combustion Emissions	PM/PM_{10}	1.57	6.87
		CO	17.10	75.10
		SO_2	0.13	0.55
		NO_x	31.40	137.00
		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	0.01
		NO_x	0.50	2.19
		VOC	0.03	0.12
EY023ST	Cracker Nos. 8 through 12 Combustion Emissions	PM/PM_{10}	1.95	8.02
		CO	21.32	87.90
		SO_2	0.15	0.63
		NO_x	33.80	139.00
		VOC	1.40	5.80
EY029FE	Olefins Fugitives (4)	VOC	2.13	9.32
EY030CT	North Cooling Tower	VOC	45.00	59.34
EY041ST	Cracker Nos. 8 through 12 Decoking Emissions	PM	4.54	0.57
		PM_{10}	2.48	0.32
		CO	33.40	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	2.80	0.08
		PM_{10}	1.53	0.04
		CO	20.60	0.57
EY057ST	Heater D1.601	PM/PM_{10}	0.04	0.17

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		CO	0.42	1.83
		SO_2	0.01	0.01
		NO_x	0.50	2.20
		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
LL11302AVN	Silo	PM/PM_{10}	0.17	0.08
LL11302BVN	Silo	PM/PM_{10}	0.17	0.08
LL1PELTVN	Product Loading	VOC	9.72	16.40
PERTOST	Regenerative Thermal Oxidizer	PM/PM_{10}	0.09	0.10

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
	(from LLDPE Plant only) (7)	SO_2	0.18	0.20
		NO_x	0.88	1.35
		CO	8.65	14.73
		VOC	2.72	9.28
LL11502VN	RC Loading Dust Collector	PM/PM_{10}	1.50	6.40
LL11509VN	Unloading Receiver	PM/PM_{10}	0.16	0.09
LL11702VN	Drain Vessel	Hexane	1.22	0.08
LL11801CT	LLDPE Cooling Tower	VOC	1.35	2.63
LL11801ST	Heater	PM/PM_{10}	0.27	1.16
		CO	2.90	12.70
		SO_2	0.02	0.09
		NO_x	2.12	9.30
		VOC	0.20	0.84
LL112TK	Wet Solvent Storage Tank	Hexane	0.42	0.77
LL11801VN	Storage Tank	Multitherm	0.01	0.01
LL11802FL	LLDPE Plant Flare	CO	24.90	17.70
		SO_2	0.05	0.23
		NO_x	12.50	8.87
		VOC	90.60	34.80
		HCl	21.00	7.35
LL11802TK	Dry Solvent Storage Tank	Hexane	0.38	0.96
LL11802VN	Storage Tank	Multitherm	0.01	0.01
LL11803TK	Dry Octene Storage Tank (8)	VOC	9.03	0.24
LL11804TK	Wet Octene Storage Tank (8)	VOC	0.14	0.11

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
LL11806VN	Cleaning Tank	VOC	0.01	0.01
LL11807TK	Storage Tank	VOC	0.23	0.36
LL11810TK	Storage Tank	VOC	0.18	0.33
LL1001FE	LLDPE Process Fugitives (4)	VOC	1.44	6.41
		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	VOC	2.04	1.72
UP002LR	Truck Loading/Unloading	VOC	1.02	2.69
UP010FE	Loading/Storage Fugitives (4)	VOC	0.47	2.07
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 a plot plan.
(2) Specific point source names. For fugitive sources use area name or fugitive source name.
(3) 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 PM greater than 10 microns is emitted.
CO - carbon monoxide

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

SO_2 - sulfur dioxide
NO_x - total oxides of nitrogen
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
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 Number 19123 facilities only. The flare is operating under TCEQ Air Quality Permit Number 5611.

(6) The EPN EYCRKR1417 is an emissions cap for EPNs EY053ST and EY054ST.

(7) Regenerative Thermal Oxidizer (RTO) - these allowables represent the emissions contribution from LLDPE only and are presently authorized by Standard Permit Number 73742. The RTO is also permitted under Permit Number7824A.

(8) The VOC can be up to 100% 1-octene.

* 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

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated January 19, 2007