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**
EYPRCSFL	Process Flare - Air Assist (5)	VOC	100.00	—
		Sulfur compounds (as H_2S)	0.01	—
		SO_2	0.32	—
		NO_x	13.90	—
		CO	27.80	—
EY005RFL	Steam Assist Flare (5)	VOC	100.00	—
		Sulfur compounds (as H_2S)	0.01	—
		SO_2	0.31	—
		NO_x	4.85	—
		CO	35.00	—
ST101RFL	Styrene Flare (5)	VOC	100.00	—
		Sulfur compounds (as H_2S)	0.01	—
		SO_2	0.31	—
		NO_x	4.85	—
		CO	35.00	—
Total EYPRCSFL, EY005RFL, and ST101RFL	Process Flare - Air Assist, Steam Assist Flare and Styrene Flare (5)	VOC	—	90.02
		Sulfur compounds (as H_2S)	—	0.03
		SO_2	—	0.29
		NO_x	—	18.52
		CO	—	75.17

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
EYSTOWELFE	Storage Well Fugitives (4)	VOC	0.03	0.15
EY001CT	E. Cooling Tower	VOC	2.81	6.58
EY006CT	South Cooling Tower	VOC	3.00	7.01
EY001LR	Railcar Loading	VOC	0.02	0.01
EY002LR	Truck Loading/Unloading	VOC	0.02	0.01
EY003LR	Truck Unloading	VOC	0.01	0.01
EY021ST	Heater D1.602	PM/PM_{10}	0.04	0.17
		VOC	0.03	0.12
		SO_2	0.01	0.01
		NO_x	0.66	2.90
		CO	0.42	1.83
EY023ST	Pyrolysis Furnaces 8-12 Combustion (260 MMBtu/hr each)	PM/PM_{10}	1.95	8.03
		VOC	1.40	5.78
		SO_2	0.15	0.63
		NO_x	32.80	135.00
		CO	28.60	118.00
EY018ST	Pyrolysis Furnace 13 Combustion (209 MMBtu/hr)	PM/PM_{10}	1.57	6.87
		VOC	1.13	4.94
		SO_2	0.13	0.55
		NO_x	31.40	137.00
		CO	17.10	75.10
EY053ST	Pyrolysis Furnaces 14-15 Combustion (126 MMBtu/hr each)	PM/PM_{10}	1.13	4.67
		VOC	1.36	5.60
		SO_2	0.15	0.61
		NO_x	20.20	83.00
		CO	16.30	66.90

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
EY054ST	Pyrolysis Furnaces 16-17 Combustion (126 MMBtu/hr each)	PM/PM_{10}	1.13	4.67
		VOC	1.36	5.60
		SO_2	0.15	0.61
		NO_x	20.20	83.00
		CO	16.30	66.90
EY041ST	Pyrolysis Furnaces 8-12 Decoking	PM	3.90	0.26
		PM_{10}	0.21	0.01
		CO	204.30	13.49
EY055ST	Pyrolysis Furnace 13 Decoking	PM	2.10	0.13
		PM_{10}	0.11	0.07
		CO	110.00	6.60
EY056ST	Pyrolysis Furnaces 14-17 Decoking	PM	3.93	0.32
		PM_{10}	0.21	0.02
		CO	206.70	16.52
EY029FE	Olefins Fugitives (4)	VOC	17.75	18.75
		CO	0.01	0.01
EY030CT	North Cooling Tower	VOC	3.00	7.01
EY051TK	Flush Oil Tank	VOC	0.17	0.03
EY052TK	Methanol Tank	VOC	3.20	0.08
EY059FL	Ethylene Loading/ Unloading Flare	VOC	0.79	0.19
		SO_2	0.01	0.01
		NO_x	0.23	0.08
		CO	0.46	0.15
		Sulfur compounds (as H_2S)	0.01	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
EY060FE	Remote Ethylene Unloading Losses	VOC	1.30	5.69
EY901FE	Olefins Fugitives (4)	VOC	33.20	138.20
		CO	0.01	0.01
LLCPSSUMP	Closed Process Sewer	VOC	0.85	1.59
LLOPSSUMP	Open Process Sewer Sump	VOC	1.86	1.63
LL1PELTVN	Product Packaging	VOC	9.72	16.40
LLSAMPLFE	Sampling Container	VOC	0.01	0.01
LLSILOFE	Silo Washing	VOC	0.23	0.05
LLSUMPVN	Pellet Water Sewer Sump	VOC	0.01	0.02
LLWLOADVN	Railcar and Truck Loading Losses	VOC	0.66	0.02
LL1001FE	LLDPE Fugitives (4)	VOC	5.51	19.86
		Ammonia	0.92	0.29
LL11138VN	Seal Vessel	VOC	0.01	0.01
LL11301VN	Additives Feeder Vent	PM/PM_{10}	0.31	1.30
LL11306VN	Pellet Water Surge Tank	VOC	0.01	0.01
LL11502VN	Railcar Polyethylene Product Loading Losses	PM/PM_{10}	1.50	6.40

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
LL11509VN	Unloading Receiver	PM/PM_{10}	0.11	0.09
LL11513VN	Reclaim Hopper Vent	PM/PM_{10}	0.03	0.13
LL11516VN	Streamer Removal Sys	PM/PM_{10}	0.09	0.37
LL11702VN	Drain Vessel	VOC	1.17	0.20
LL11801CT	Cooling Tower	VOC	1.50	2.90
LL11801ST	Hot Oil Heater	PM/PM_{10}	0.30	1.31
		VOC	0.22	0.95
		SO_2	0.02	0.10
		NO_x	2.40	10.50
		CO	3.28	14.40
LL11801TK	Wet Solvent tank	VOC	0.40	0.77
LL11801VN	Hot Oil Vessels	VOC	36.7	0.78
LL11802FL	LLDPE Flare	VOC	90.60	34.80
		SO_2	0.05	0.23
		NO_x	12.50	8.87
		CO	24.90	17.70
		HCl	21.00	7.35
		Sulfur compounds (as H2S)	0.01	0.01
LL11802TK	Dry Solvent Tank	VOC	0.28	0.96
LL11803TK	Dry Octene Tank	VOC	0.07	0.13
LL11804TK	Wet Octene Tank	VOC	0.14	0.13

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
LL11808VN	Sulfuric Acid Vessel	Sulfuric Acid	0.01	0.01
LL11810TK	Octene Purge Tank	VOC	0.08	0.16
ST301FE	Utilities Fugitives (4)	VOC	0.46	2.00
		CO	0.01	0.01
UPMAPCOFE	Metering Station Fugitives (4)	VOC	0.10	0.45
UPMIDKIFFE	Midkiff Injection Pump Fugitives (4)	VOC	0.03	0.12
UP001LR	Vinyl Acetate Railcar Loading/ Unloading	VOC	0.04	0.01
UP002LR	Vinyl Acetate Truck Loading	VOC	0.06	0.02
UP010FE	Utilities, Storage and Loading Area Fugitives (4)	VOC	4.00	16.11
UP011FE	Flare Fugitives (4)	VOC	0.96	2.97
UP030LR	Aromatic Concentrate Uncollected Loading Losses	VOC	7.29	1.52
		Sulfur Compounds	0.01	0.01
UP033TK	TK-33 Tank	VOC	0.71	0.09
UP034TK	TK-34 Tank	VOC	0.71	0.09
UP035TK	TK-35 Tank	VOC	0.71	0.09

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(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
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) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
(5) The Process Flare - Air Assist (EPN EYPRCSFL) is the primary flare for the Olefin Unit, but the Steam Assist Flare (EPN EY005RFL) and Styrene Flare (EPN ST101RFL) may each serve as backup.

* Emission rates are based on and the facilities are based on a continuous operating schedule.

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

Dated August 26, 2008

Permits by Rule (PBRs) Consolidated by Reference

Permit Number 19123

Note: The following were originally and are still authorized under PBRs as noted, and have been consolidated by reference into this permit.
BACT review has not been conducted on these.

FIN	EPN	Source Name/Description	Date	Authorization	Air Contaminant Name (3)	Emission Rates	
						lb/hr	TPY
UPLRFUEL	UPFUEL	West Vehicle Refueling	pre-1971	§106.412	VOC	5.92	0.46
UPD50004	UP50004TK	Tank D50004, Gasoline	Jan-94	§106.412	VOC	74.00	1.99
UPD50005	UP50005TK	Tank D50005, Diesel	Jan-94	§106.412	VOC	0.26	0.01
UPFUG	UPKOCHFE	KOCH Metering Station Fugitives	Dec-98	§106.355	VOC	0.54	2.34
UPMETERING	UPKOCHVN	KOCH Metering Station Proving	Dec-98	§106.355	VOC	285.20	0.57
UPMETERING	UPMAPCOVN	MAPCO Metering Station Proving	Dec-98	§106.355	VOC	522.32	1.05
UPLAGOON	UPCL2FE	Chlorinator	May-99	§106.532	Chlorine	1.04	0.75
EYTKSUMP	EYTKSUMP	Rainwater Sump Tank	Feb-00	§106.472, §106.478	VOC	25.02	0.59
EYTKRW10	EY110TK	Rainwater Tank 110	Mar-00	§106.472, §106.478	VOC	0.40	0.40
EYTKRW9	EY109TK	Rainwater Tank 109	Mar-00	§106.472, §106.478	VOC	0.40	0.40
UPD50611	UP001GW	D50611 Ground Water Tank	Aug-00	§106.533 (X-45503)	VOC	0.01	0.01
0EYANALYZR	EYLFTSTNAN	Gas Chromatography Analyzer	Aug-04	§106.261/262 (X-73097)	VOC	0.01	0.03

Date August 26, 2008