EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 56389

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**
HTCRU001-S	Atmospheric and Vacuum Tower Heaters (HTCRU001/HTCRU002)	CO	53.12	232.66
		VOC	3.48	15.23
		NO_x	38.70	169.50
		PM/PM_{10}	4.81	21.05
		SO_2	20.60	90.40
		NH_3	2.90	12.50
HTCRU004	Crude Tower Heater (50 MM Btu/hr)	CO	4.10	18.00
		VOC	0.30	1.20
		NO_x	3.00	13.10
		PM/PM_{10}	0.40	1.60
		SO_2	1.60	7.00
HTREF001	Diesel Hydrotreater Charge Heater No. 1 (22.7 MM Btu/hr)	CO	1.90	8.20
		VOC	0.10	0.50
		NO_x	1.40	6.00
		PM/PM_{10}	0.20	0.70
		SO_2	0.70	3.20
HTREF002	Diesel Hydrotreater Stripper Heater No. 2 (20.4 MM Btu/hr)	CO	1.70	7.40
		VOC	0.10	0.50
		NO_x	1.20	5.40
		PM/PM_{10}	0.20	0.70
		SO_2	0.70	2.90
HTALK001	Alky Heater No. 1 (80 MM Btu/hr)	CO	6.60	28.90
		VOC	0.40	1.90
		NO_x	4.80	21.00
		PM/PM_{10}	0.60	2.60
		SO_2	2.60	11.20

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
HTALK002	Alky Heater No. 2 (80 MM Btu/hr)	CO	6.60	28.90
		VOC	0.40	1.90
		NO_x	4.80	21.00
		PM/PM_{10}	0.60	2.60
		SO_2	2.60	11.20
HTCKR001	Coker Heater No. 1 (95 MM Btu/hr)	CO	7.80	34.30
		VOC	0.50	2.20
		NO_x	5.70	25.00
		PM/PM_{10}	0.70	3.10
		SO_2	3.00	13.30
ENDHT001	DHT Compressor Engine A	CO	0.60	1.30
		VOC	0.30	1.50
		NO_x	3.40	6.60
		PM/PM_{10}	0.01	0.01
		SO_2	0.01	0.01
ENDHT002	DHT Compressor Engine B	CO	1.00	1.30
		VOC	0.30	1.50
		NO_x	2.70	7.70
		PM/PM_{10}	0.01	0.01
		SO_2	0.01	0.01
FLRFNEAST FLRFNWEST	East and West Flares	CO	161.39	53.82
		VOC	239.81	79.98
		Benzene	7.29	2.43
		NO_x	31.68	10.57
		SO_2	11.86	3.99
		H_2S	0.13	0.04
FLRFNEAST FLRFNWEST	East and West Flares Pilots	CO	0.30	1.30
		VOC	0.01	0.02
		NO_x	0.06	0.26
		SO_2	0.01	0.01
		H_2S	0.01	0.01
FUBLR002	Boilerhouse No. 2 Fugitives	VOC (4)	0.60	2.50

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
FUBLR003	Boilerhouse No. 3 Fugitives	VOC (4)	0.50	2.00
FUCRU001	Crude Unit Fugitives	VOC (4)	11.14	48.87
FUCRUSO2	Crude Heater SCR Fugitives	NH_3 (4)	0.40	1.60
FUREF002	Diesel Hydrotreater Fugitives	VOC (4)	5.71	24.85
FUALK001	Alky No. 1 Fugitives	VOC (4) HF (4)	3.81 0.07	16.52 0.30
FUALK002	Alky No. 2 Fugitives	VOC (4) HF (4)	4.00 0.07	17.60 0.30
FUALKDEF	Propane Defluorinator Fugitives	VOC (4)	3.08	13.48
FUCKR001	Coker Unit Fugitives	VOC (4)	7.50	33.00
FUCRY001	LPG Recovery Plant No. 2 Fugitives	VOC (4)	3.23	14.16
FULTO001	Light Oil Unit Fugitives	VOC (4)	4.05	17.67
FUDOK001	Dock Fugitives	VOC (4)	0.60	2.70
FUDPU001	UDEX Fugitives	VOC (4)	5.20	22.70
FUMTB001	Oxygenation Additive Unit Fugitives	VOC (4)	5.33	23.33
FUTRR001	LPG Loading Rack Fugitives	VOC (4)	0.43	1.87
FUTKFBLD	Blender Tank Farm Fugitives	VOC (4)	7.12	30.97
FUTKFDOK	Dock Tank Farm Fugitives	VOC (4)	7.31	32.25
FUTKFP01	No. 1 Pumper Tank Farm Fugitives	VOC (4)	6.83	13.53

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**
FUTKFP02	No. 2 Pumper Tank Farm Fugitives	VOC (4)	4.30	18.71
FUPRK001	Piperack Fugitives and OSBL Drains	VOC (4)	4.94	21.66
FUTKFRB	Red Bluff Tank Farm Fugitives	VOC (4)	4.80	20.80
FUCKR002	Coke Handling Fugitives	PM/PM_{10} (4)	0.40	0.70
FUCTWCPX	Complex Cooling Tower	VOC (5)	26.00	12.00
FUCTWALK	Alky Cooling Tower	VOC (5)	9.60	4.40
FUCTWMTB	MTBE (UDEX) Cooling Tower	VOC (5)	4.80	2.20
TKTKF009	Tank 9	VOC	1.76	0.70
TKTKF051	Tank 51	VOC	3.61	0.78
TKTKF065	Tank 65	VOC	0.42	1.84
TKTKF085	Tank 85	VOC	2.16	0.19
TKTKF097	Tank 97	VOC	3.31	1.52
TKTKF118	Tank 118	VOC	1.75	0.70
TKTKF301	Tank 301	VOC	1.29	2.27
TKTKF309	Tank 309	VOC	1.70	0.20
TKTKF310	Tank 310	VOC	1.70	0.20
TKTKF328	Tank 328	VOC	0.50	0.77
TKTKF331	Tank 331	VOC	2.90	2.10
TKTKF343	Tank 343	VOC	1.63	2.29

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**
TKTKF349	Tank 349	VOC	1.10	1.10
TKTKF350	Tank 350	VOC	1.10	0.90
TKTKF400	Tank 400	VOC	0.93	1.22
TKTKF807	Tank 807	VOC	5.30	2.00
TKTKF813	Tank 813	VOC (initial) (6)	4.10	1.70
		VOC (final) (6)	4.00	1.60
TKTKF815	Tank 815	VOC	3.98	3.63
TKTKF816	Tank 816	VOC	4.23	6.01
TKTKF817	Tank 817	VOC	3.71	4.05
TKTKF822	Tank 822	VOC	2.95	2.26
TKTKF825	Tank 825	VOC	2.86	4.12
TKTKF830	Tank 830	VOC	6.23	1.95
TKTKF831	Tank 831	VOC	6.23	1.97
FEWWS	Wastewater System (7) (8) Initial	VOC	22.32	42.38
		Acetone	0.01	0.01
		NH_3	2.13	1.51
		H_2S	3.35	1.54
	Wastewater System (7) (9) Final	VOC	20.89	39.96
		Acetone	0.01	0.01
		NH_3	2.01	1.44
		H_2S	2.72	1.44

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 an area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - particulate matter equal to or less than 10 microns in diameter
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
H_2S - hydrogen sulfide
NH_3 - ammonia
HF - hafnium
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition and the cooling water circulation flow rates represented in the permit application.
(6) Tank No. 813 must be painted white the next time it is completely repainted which must occur no later than March 1, 2017, the initial emission limitation applies before it is painted white and the final emission limitation applies after it is painted white.
(7) The Wastewater System includes all sources of wastewater at the refinery through the wastewater pipe leaving the site to the off-site wastewater treatment facility.
(8) Pre emission control value before enclosing two sumps.
(9) Post emission control after enclosing two sumps.

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

24 Hrs/day 7 Days/week 52 Weeks/year

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

Dated June 20, 2011