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**
HTBLR011	Boiler No. 11 (210 MM Btu/hr)	CO	17.3	75.7
		VOC	1.1	5.0
		NO_x (initial) (5)	23.1	101.2
		NO_x (final) (5)	12.6	55.2
		PM/PM_{10}	1.6	6.9
		SO_2	6.7	29.4
HTBLR003	Boiler No. 3 (120 MM Btu/hr)	CO	9.9	43.3
		VOC	0.6	2.8
		NO_x (initial) (5)	13.7	60.0
		NO_x (final) (5)	7.2	31.5
		PM/PM_{10}	0.9	3.9
		SO_2	3.8	16.8
HTCRU001	Atmospheric Tower Heater (450 MM Btu/hr)	CO	37.1	162.3
		VOC	2.4	10.6
		NO_x (initial) (5)	51.3	224.7
		NO_x (final) (5)	27.0	118.3
		PM/PM_{10}	3.4	14.7
		SO_2 (initial) (5)	712.6	735.7
		SO_2 (final) (5)	14.4	63.1
HTCRU002	Vacuum Tower Heater (195 MM Btu/hr)	CO	16.1	70.3
		VOC	1.1	4.6
		NO_x (initial) (5)	16.8	73.5
		NO_x (final) (5)	11.7	51.2
		PM/PM_{10}	1.5	6.4
		SO_2	6.2	27.3

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**
HTCRU003	Crude Tower Heater (50 MM Btu/hr)	CO	4.1	18.0
		VOC	0.3	1.2
		NO_x (initial) (5)	4.9	21.5
		NO_x (final) (5)	3.0	13.1
		PM/PM_{10}	0.4	1.6
		SO_2	1.6	7.0
HTREF001	Diesel Hydrotreater Charge Heater No. 1 (22.7 MM Btu/hr)	CO	1.9	8.2
		VOC	0.1	0.5
		NO_x (initial) (5)	2.2	9.7
		NO_x (final) (5)	1.4	6.0
		PM/PM_{10}	0.2	0.7
		SO_2	0.7	3.2
HTREF002	Diesel Hydrotreater Stripper Heater No. 2 (20.4 MM Btu/hr)	CO	1.7	7.4
		VOC	0.1	0.5
		NO_x (initial) (5)	2.0	8.8
		NO_x (final) (5)	1.2	5.4
		PM/PM_{10}	0.2	0.7
		SO_2	0.7	2.9
HTALK001	Alky Heater No. 1 (80 MM Btu/hr)	CO	6.6	28.9
		VOC	0.4	1.9
		NO_x (initial) (5)	7.8	34.3
		NO_x (final) (5)	4.8	21.0
		PM/PM_{10}	0.6	2.6
		SO_2	2.6	11.2
HTALK002	Alky Heater No. 2 (80 MM Btu/hr)	CO	6.6	28.9
		VOC	0.4	1.9
		NO_x (initial) (5)	7.8	34.3
		NO_x (final) (5)	4.8	21.0
		PM/PM_{10}	0.6	2.6
		SO_2	2.6	11.2

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**
HTCKR001	Coker Heater No. 1 (95 MM Btu/hr)	CO	7.8	34.3
		VOC	0.5	2.2
		NO_x (initial) (5)	16.2	70.7
		NO_x (final) (5)	5.7	25.0
		PM/PM_{10}	0.7	3.1
		SO_2	3.0	13.3
ENDHT001	DHT Compressor Engine A	CO	0.6	1.3
		VOC	0.3	1.5
		NO_x	3.4	6.6
		PM/PM_{10}	0.01	0.01
		SO_2	0.01	0.01
ENDHT002	DHT Compressor Engine B	CO	1.0	1.3
		VOC	0.3	1.5
		NO_x	2.7	7.7
		PM/PM_{10}	0.01	0.01
		SO_2	0.01	0.01
FLRFNEAST	East Flare (7)	CO	19.9	2.6
		VOC	39.8	5.3
		Ethylene	0.4	0.05
		Propylene	11.8	1.6
		NO_x	3.9	0.5
		SO_2	1.1	0.1
		H_2S	0.01	0.01
FLRFNWEST	West Flare (8)	CO	27.7	5.1
		VOC	16.7	3.1
		Ethylene	0.5	0.6
		Propylene	0.8	0.1
		NO_x	5.4	1.0
		SO_2	1.7	0.4
		H_2S	0.02	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**
FUBLR002	Boilerhouse No. 2 Fugitives	VOC (4) (initial) (5)	0.6	2.7
		VOC (4) (final) (5)	0.6	2.5
FUBLR003	Boilerhouse No. 3 Fugitives	VOC (4) (initial) (5)	0.5	2.2
		VOC (4) (final) (5)	0.5	2.0
FUCRU001	Crude Unit Fugitives	VOC (4) (initial) (5)	14.8	64.7
		VOC (4) (final) (5)	11.1	48.7
FUREF002	Diesel Hydrotreater Fugitives	VOC (4) (initial) (5)	8.4	36.8
		VOC (4) (final) (5)	5.7	24.8
FUALK001	Alky No. 1 Fugitives	VOC (4) (initial) (5)	5.2	22.9
		VOC (4) (final) (5)	3.8	16.5
		HF (4)	0.07	0.3
FUALK002	Alky No. 2 Fugitives	VOC (4) (initial) (5)	5.6	24.6
		VOC (4) (final) (5)	4.0	17.6
		HF (4) 0.07	0.3	
FUCKR001	Coker Unit Fugitives	VOC (4) (initial) (5)	9.9	43.1
		VOC (4) (final) (5)	7.5	33.0
FULTO001	Light Oil Unit Fugitives	VOC (4) (initial) (5)	5.5	24.2
		VOC (4) (final) (5)	3.9	17.0
FUDOK001	Dock Fugitives	VOC (4) (initial) (5)	0.8	3.5
		VOC (4) (final) (5)	0.6	2.7
FUDPU001	UDEX Fugitives	VOC (4) (initial) (5)	6.5	28.3
		VOC (4) (final) (5)	5.2	22.7
FUTKFBLD	Blender Tank Farm Fugitives	VOC (4) (initial) (5)	12.7	55.5
		VOC (4) (final) (5)	7.1	30.9

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**
FUTKFDOK	Dock Tank Farm Fugitives	VOC (4) (initial) (5)	15.3	67.2
		VOC (4) (final) (5)	7.3	32.2
FUTKFP01	No. 1 Pumper Tank Farm Fugitives	VOC (4) (initial) (5)	11.7	23.1
		VOC (4) (final) (5)	6.8	13.4
FUTKFP02	No. 2 Pumper Tank Farm Fugitives	VOC (4) (initial) (5)	8.6	37.5
		VOC (4) (final) (5)	4.3	18.7
FUPRK001	Piperack Fugitives and OSBL Drains	VOC (4) (initial) (5)	5.2	22.6
		VOC (4) (final) (5)	4.9	21.5
FUTKFRB	Red Bluff Tank Farm Fugitives	VOC (4) (initial) (5)	9.0	39.3
		VOC (4) (final) (5)	4.8	20.8
FUCKR002	Coke Handling Fugitives	PM/PM_{10} (4)	0.4	0.7
FUCTWCPX	Complex Cooling Tower	VOC (initial) (5)(10)	26.0	102.5
		VOC (final) (5)(10)	26.0	12.0
FUCTWALK	Alky Cooling Tower	VOC (initial) (5)(10)	9.6	37.8
		VOC (final) (5)(10)	9.6	4.4
FUCTWMTB	MTBE (UDEX) Cooling Tower	VOC (initial) (5)(10)	4.8	19.1
		VOC (final) (5)(10)	4.8	2.2
VTCKR001	Coker Vent (K-D-9)	VOC (initial) (5)	14.2	7.8
		VOC (final) (5)	0.0	0.0
		H_2S (initial) (5)	6.5	3.5
		H_2S (final) (5)	0.0	0.0
TKTKF66	Tank 66	VOC (initial) (5)	0.02	0.02
		VOC (final) (5)	0.0	0.0
TKTKF79	Tank 79	VOC (initial) (5)	18.0	0.7
		VOC (final) (5)	11.3	0.6

TKTKF80	Tank 80	VOC (initial) (5)	18.0	0.7
		VOC (final) (5)	11.3	0.5
TKTKF98	Tank 98	VOC (initial) (5)	18.0	1.3
		VOC (final) (5)	11.3	0.8
TKTKF118	Tank 118	VOC	20.4	0.7
TKTKF205	Tank 205	VOC (initial) (5)	180.0	53.5
		VOC (final) (5)	0.0	0.0
TKTKF309	Tank 309	VOC	0.1	0.2
TKTKF310	Tank 310	VOC	0.1	0.2
TKTKF317	Tank 317	VOC (initial) (5)	24.0	14.4
		VOC (final) (5)	15.0	9.5
TKTKF326	Tank 326	VOC (initial) (5)	90.0	7.5
		VOC (final) (5)	56.3	4.8
TKTKF327	Tank 327	VOC (initial) (5)	90.0	7.4
		VOC (final) (5)	56.3	4.8
TKTKF331	Tank 331	VOC	2.9	2.1
TKTKF348	Tank 348	VOC (initial) (5)	90.0	7.6
		VOC (final) (5)	0.0	0.0
TKTKF349	Tank 349	VOC	1.1	1.1
TKTKF350	Tank 350	VOC	1.1	0.9
TKTKF351	Tank 351	VOC (initial) (5)	44.7	3.6
		VOC (final) (5)	0.0	0.0

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**
TKTKF807	Tank 807	VOC	5.3	2.0
TKTKF813	Tank 813	VOC (initial) (6)	4.1	1.7
		VOC (final) (6)	4.0	1.6
FEWWS	Wastewater System (9)	VOC	80.2	190.3
		NH_3 0.1	0.2	
		H_2S 0.1	0.2	

(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 § 101.1 (30 TAC § 101.1)
HRVOC - Highly reactive volatile organic compounds as defined in 30 TAC § 115.10.
Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
IOC-U - inorganic compounds (unspeciated)
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
HCl - hydrogen chloride
HF - hydrogen fluoride
HBr - hydrogen bromide
HI - hydrogen iodide
NaOH - sodium hydroxide
NH_3 - ammonia

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

(5) Except for Boiler Nos. 3 and 11, initial permit limitation (initial) applies before March 1, 2008, and final permit limitation (final) applies on and after March 1, 2008. For Boiler Nos. 3 and 11, initial permit limitation (initial) applies before March 8, 2008, and final permit limitation (final) applies on and after March 8, 2008.

(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 East Flare, EPN FLRFNEAST, is a partially permitted source, the emissions noted in this maximum allowable table authorize normal operation waste flows, that does not include start-up, shutdown, maintenance or upsets, with control through the East Flare from previously grandfathered sources only. Standard Permit Number 38901 authorized the pilot gas emissions. The flare monitoring requirements of this permit can be used to determine compliance with both the proper operation of the flare and the emission limits of this permit, but any new authorizations will effect the use of the monitoring for emission limit evaluation purposes.

(8) The West Flare, EPN FLRFNWEST, is a partially permitted source, the emissions noted in this maximum allowable table authorize normal operation waste flows, that does not include start-up, shutdown, maintenance or upsets, with control through the West Flare from previously grandfathered sources only. Permit Number 20246 allows normal emissions associated with Fuel Gas Drum, and Standard Permit Number 42375, and Permit by Rule Number 42719 allow normal emissions associated with the Sulfur Recovery Unit (NaSH) Caustic Scrubber. The flare monitoring requirements of this permit can be used to determine compliance with the proper operation of the flare. The emission rates monitored are associated with all the permits and any new authorizations granted involving the flare.

(9) 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, except for the wastewater generated by the sour water stripper in the Fluid Catalytic Cracking unit (FCCU) as authorized in Permit Number 20246, emitted through the CPI Separator, EPN FUWWSCPI. The emissions are conservatively established and should be replaced in a permit action as required by Special Condition No. 23, with rates consistent with compliant operation.

(10) 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.

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

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

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

Dated February 29, 2008