Emission Sources - Maximum Allowable Emission Rates

Permit Number 2501A

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, sources, and related activities. 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	
			lbs/hour	TPY (4)
22AVENT	BHT Catalyst Regeneration	VOC	5.00	0.06
22FA225	Alky Unit Bauxite Tower Washing	VOC	1.00	0.03
21FUG	MTBE Unit Fugitives (5)	VOC	2.60	11.39
22FUG	Alky Unit Fugitives (5)	VOC	10.20	44.63
22AFUG	BHT Fugitives (5)	VOC	1.30	5.87
42FUG	FCC Cat Gas Unit Fugitives (5)	VOC	0.70	2.98
42AFUG	FCC Unit Fugitives (5)	VOC	1.70	7.62
42BFUG	FCC Cat Con Unit Fugitives (5)	VOC	4.20	18.31
42CFUG	FCC Depentanizer Unit Fugitives (5)	VOC	0.80	3.68
43FUG	FCC Merox Unit Fugitives (5)	VOC	2.30	10.21
43AFUG	FCC Propylene Unit Fugitives (5)	VOC	1.00	4.20
81CWT1	Cooling Tower No. 1	VOC	1.30	5.52
22CWT3	Cooling Tower No. 3	VOC	0.40	1.84
42CWT10	Cooling Tower No. 10	VOC	1.70	7.36
22FB731	Storage Tank 22FB731 (6)	VOC	7.60	0.55
22FB748	Storage Tank 22FB748 (6)	VOC	6.40	0.84
22FB747	Storage Tank 22FB747	VOC	0.10	0.01
90FB213	Storage Tank 90FB213	VOC	0.20	0.19
91FB905	Storage Tank 91FB905	VOC	0.20	0.31
91FB916	Storage Tank 91FB916	VOC	0.80	2.40
90FB223	Storage Tank 90FB223	VOC	3.10	8.74
90FB510	Storage Tank 90FB510 (interim)	VOC	0.50	0.49
90FB510	Storage Tank 90FB510 (final)	VOC	0.40	0.35

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90FB218	Storage Tank 90FB218	VOC	1.10	---
90FB219	Storage Tank 90FB219	VOC	1.10	---
90FB218, 90FB219	Storage Tank Cap	VOC	---	3.34
91FB402	Storage Tank 91FB402	VOC	1.10	2.63
90FB508	Storage Tank 90FB508	VOC	3.60	0.03
		Benzene	0.30	0.81
90FB217	Storage Tank 90FB217	VOC	4.10	5.08
90FB220	Storage Tank 90FB220	VOC	0.80	0.23
42FB2802	Storage Tank 42FB2802	VOC	0.10	0.01
30FL1, 30FL2, 30FL5	Derrick Flare, IsoMax Flare, and FCC Flare (7)	NO_X	3.70	16.30
		CO	26.80	117.40
		VOC	74.80	327.60
		SO_2	21.20	92.70
		H_2S	0.20	0.90
91DA702	Thermal Oxidizer	NO_X	5.30	0.80
		CO	2.70	0.40
		VOC	16.90	0.80
42CB2001	FCC Unit Stack (8)	NO_X	270.00	528.00
		CO	269.00	198.00
		VOC	13.00	37.00
		SO_2	2150.00	3894.00
		PM	93.00	240.00
		NH_3	8.00	22.00

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(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Tanks 22FB731 and 22FB748 shall not be filled simultaneously.
(7) Each flare may be used in continuous service and intermittent service (start-up, shutdown, maintenance, or emergency related emissions) as described in the permit renewal application. The emissions described in the permit renewal application are for the entire refinery. Emission rates given above are continuous service emissions. If start-up, shutdown, and maintenance emissions are added to continuous service emissions, the aggregate emission rates are: 12.0 lb/hr and 19.3 TPY for NO_x, 86.5 lb/hr and 139.5 TPY for CO, 255 lb/hr and 393.3 TPY for VOC, 1,402 lb/hr and 115.6 TPY for SO_2, and 14.2 lb/hr and 1.2 TPY for H_2S.
(8) NO_x shall be calculated as nitrogen dioxide. VOC shall be calculated as propane. Filterable particulate shall not exceed 50 lb/hr, 162 TPY.

Date: February 17, 2015