Emission Sources, Emissions Caps, and Individual Maximum Allowable Emission Rates

Flexible Permit Numbers 16989 and PSDTX794

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)
Aromatics and Olefins Plant, Aromatics Unit (AU)		
Flare		
AUFLARE-1	AU Flare	CO, NO_x, SO_2, VOC, Benzene, Toluene
Process Fugitive Areas		
AUFUGS	AU Fugitives (5)	VOC, Benzene, Toluene
Tanks		
AUT33979	Tank 33979	VOC
AUT4881	Tank 4881	VOC
AUT4882	Tank 4882	VOC
AUT4883	Tank 4883	VOC
AUT4884	Tank 4884	VOC, Benzene
AUT4930	Tank 4930	VOC
Aromatics and Olefins Plant, Cyclohexane Unit (CHXU)		
Process Fugitive Areas		
CHXUFUGS	Cyclohexane Unit Fugitives (5)	VOC, Benzene
Aromatics and Olefins Plant, Light Olefins Unit (LOU)		
Cooling Tower		
LOUCOOLTWR	LOU Cooling Tower	VOC, Benzene, Toluene, PM, PM_{10}, $PM_{2.5}$
Flare		
LOUFLARE	LOU Elevated Flare	CO, NO_x, SO_2, VOC, Benzene, Toluene
Process Fugitive Areas		
LOUFUGS	LOU Fugitives (5)	VOC, Benzene, Toluene
Combustion Sources		
LOUBOILER1	Cracking Furnace A	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)
LOUBOILER2	Cracking Furnace B	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER3	Cracking Furnace C	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER4	Cracking Furnace D	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER5	Cracking Furnace E	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER6	Cracking Furnace F	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER7	Cracking Furnace G	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER8	Ethane Cracking Furnace	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILER9	Superheater A	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILR10	Superheater B	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUBOILR11	Cracking Furnace H	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
LOUHEATER1	GHU Regeneration Heater	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC
Loading		
LOUPFOLR	LOU Loading Rack	VOC, Benzene, Toluene
Miscellaneous Sources		
ABRSVCLEAN	Abrasive Blasting Area	PM, PM_{10}, $PM_{2.5}$
AOMPANTFUG	Plant Painting Operations	VOC
LOUAPIVO	API Regenerative Thermal Oxidizer (RTO)	CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, Benzene, Toluene
LOUVENTDD1	LOU Decoking Drum No. 1	CO, PM, PM_{10}, $PM_{2.5}$
LOUVENTDD2	LOU Decoking Drum No. 2	CO, PM, PM_{10}, $PM_{2.5}$
LOUCARBON1	API Carbon Adsorption System	VOC, Benzene
AOARVS	Analyzer, Atmospheric Reference Valve	VOC, Benzene, Toluene
Tanks		
10T-113	Tank 113	VOC
10T-114	Tank 114	VOC
LOUT1596	Tank 1596	VOC, Benzene, Toluene
LOUT1597	Tank 1597	VOC, Benzene, Toluene

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)		
LOUT33752	Tank 33752	VOC, Benzene		
LOUT33753	Tank 33753	VOC, Benzene		
LOUT33755	Tank 33755	VOC, Benzene, Toluene		
LOUT33756	Tank 33756	VOC, Benzene, Toluene		
LOUT33758	Tank 33758	VOC, Benzene, Toluene		
LOUT33759	Tank 33759	VOC, Benzene		
LOUT33760	Tank 33760	VOC, Benzene, Toluene		
Aromatics and Olefins Plant, Miscellaneous Sources				
Miscellaneous Chemical Storage Tanks (6)		VOC		
Diesel Internal Combustion Engines (6)		CO, NO_x, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC		
EMISSION CAPS		**Air Contaminant Name (3)**	**Emission Rates**	
			lbs/hour	**TPY (4)**
		CO	394.34	912.43
		NO_x	352.16	866.35
		PM	31.50	90.45
		PM_{10}	31.41	90.04
		$PM_{2.5}$	31.12	88.78
		SO_2	185.49	197.47
		VOC	242.4	452.6
		Benzene (9)	16.77	41.66
		Toluene (9)	8.92	8.39

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
Planned Maintenance, Startup and Shutdown (MSS) Emission Limits				
MSSLOUFLARE	LOU FLARE	VOC (7)	585.90	49.20
		VOC (8)	3012.99	4.94
		Benzene (9)	299.30	2.24
		NO_x (7)	58.83	5.27
		NO_x (8)	1251.90	7.16
		CO (7)	117.45	36.04
		CO (8)	2499.26	14.30
MSSAUSFLARE	AU FLARE	VOC (7)	414.74	0.92
		VOC (8)	0.01	0.01
		Benzene (9)	109.14	0.31
		NO_x (7)	75.69	0.11
		NO_x (8)	26.52	0.08
		CO (7)	151.10	0.22
		CO (8)	52.95	0.16
MSSRTO	Thermal Oxidizer	VOC	0.73	0.07
		Benzene (9)	0.73	0.07
		NO_x	2.22	0.27
		CO	1.48	0.18
		PM	0.02	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
		SO_2	0.03	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSSFUG	Fugitive Emissions (5)	VOC	77.75	4.14
		Benzene (9)	0.90	0.08
		NO_x	45.19	6.31
		CO	83.09	7.26
		PM	90.34	1.14
		PM_{10}	81.34	1.10
		$PM_{2.5}$	81.34	1.10
		SO_2	2.77	0.42

(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
$PM_{2.5}$ - total 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) Miscellaneous sources are identified and listed in Appendix B to Attachment D Emission Caps Compliance Plan of the permit.
(7) Planned Maintenance, Startup, and Shutdown (MSS) Emissions as described in the permit Special Condition numbers 36 through 52 and Attachments A, B, and C.
(8) LOU Startup emissions may occur for 73 hours annually.
(9) Total VOC allowable emissions include benzene and toluene.

Date: January 17, 2023