

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 100787 and PSDTX 1314M1

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)
OC4H310	PDH-1HeaterH-310	NOx	13.80	
		CO	8.95	
		SO2	3.27	
		PM	1.15	
		PM10	1.15	
		PM2.5	1.15	
		VOC (6)	1.56	
		Ethylene	0.63	
		Propylene	0.35	
OC4H320	PDH-1 Heater H-320	NOx	13.80	
		CO	8.95	
		SO2	3.27	
		PM	1.15	
		PM10	1.15	
		PM2.5	1.15	
		VOC (6)	1.56	
		Ethylene	0.63	
		Propylene	0.35	

Emission Sources - Maximum Allowable Emission Rates

OC4H330	PDH-1 Heater H-330	NOx	13.80	
		CO	8.95	
		SO2	3.27	
		PM	1.15	
		PM10	1.15	
		PM2.5	1.15	
		VOC (6)	1.56	
		Ethylene	0.63	
		Propylene	0.35	
OC4H340	PDH-1 Heater H-340	NOx	13.80	
		CO	8.95	
		SO2	3.27	
		PM	1.15	
		PM10	1.15	
		PM2.5	1.15	
		VOC (6)	1.56	
		Ethylene	0.63	
		Propylene	0.35	
OC4MEH310	Low Firing Mode (MSS)	CO (7)	45.74	
OC4MEH320	Low Firing Mode (MSS)	CO (7)	45.74	
OC4MEH330	Low Firing Mode (MSS)	CO (7)	45.74	
OC4MEH340	Low Firing Mode (MSS)	CO (7)	45.74	

Emission Sources - Maximum Allowable Emission Rates

OC4H310 OC4H320 OC4H330 OC4H340	PDH-1 Heater H-310 PDH-1 Heater H-320 PDH-1 Heater H-330 PDH-1 Heater H-340	NOx		152.21
		CO		118.40
		SO2		1.73
		PM		15.22
		PM10		15.22
		PM2.5		15.22
		VOC (6)		20.64
		Ethylene		8.32
		Propylene		4.66
OC4F9551	Multi-Point Ground Flare FX-955 (Routine)	CO	24.88	
		NOx	3.63	
		VOC (6)	25.80	
		Ethylene	0.12	
		Propylene	8.36	
		SO2	0.38	
OC4F9552	Multi-Point Ground Flare FX-955 (MSS) (8)	CO	1415.64	
		NOx	709.10	
		VOC (6)	1280.27	
		Ethylene	90.08	
		Propylene	435.21	
		SO2	40.00	
OC4F956	Merox Elevated Flare FS-956	CO	1.04	
		NOx	0.12	
		VOC (6)	0.01	
		SO2	0.03	

Emission Sources - Maximum Allowable Emission Rates

OC4F956	Merox Elevated Flare FS-956 (MSS)	CO	31.42	
		NOx	3.66	
		VOC (6)	0.16	
		Ethylene	0.05	
		Propylene	0.06	
		SO2	0.11	
OC4F957	Low Pressure Flare FS-957	CO	0.68	
		NOx	0.13	
		VOC (6)	0.21	
		Ethylene	0.01	
		Propylene	0.15	
		SO2	0.03	
OC4F9551 OC4F956 OC4F957 OC4F9552	Flare Annual Source Cap	CO	-	85.10
		NOx	-	23.38
		VOC (6)	-	40.21
		Ethylene	-	0.36
		Propylene	-	14.39
		SO2	-	0.91
OC4CT900	Cooling Tower CT-900	VOC (6)	1.88	8.22
		Ethylene	0.06	0.25
		Propylene	1.86	8.14
		PM	0.50	2.20
		PM10	0.27	1.19
		PM2.5	0.27	1.19
OC4FU2	PDH-1 Fugitives	VOC (6)	2.61	11.26
		Ethylene	0.04	0.16
		Propylene	0.77	3.35
		HCl	0.01	0.05
		CL2	0.06	0.27

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OC4SV485	CCR Vent Scrubber T-485	CO	1.82	7.95
		NOx	0.15	0.65
		HCl	0.12	0.52
		SO2	0.21	0.91
		Cl2	0.23	0.99
OC4DL460	Catalyst Fines Drum Loading, D-460	PM	1.82	0.17
OC4O470	Catalyst Addition Drum Hopper, D-470	PM	1.82	0.17
OC4ST122	Storage Tank V-122 Vent	VOC (6)	0.03	0.01
OC4ST905	HCl Storage Tank V-905	HCl	0.01	0.01
OC4GE860	Backup Generator DG-860	CO	0.40	0.02
		NOx	3.27	0.16
		SO2	0.01	0.01
		PM	0.09	0.01
		PM10	0.09	0.01
		PM2.5	0.09	0.01
		VOC	0.11	0.01
OC4MED470	Catalyst Replacement (MSS)	PM	44.19	9.54
OC4MEFP310	H-310 Fuel Purge (MSS)	VOC	0.01	0.01
OC4MEFP320	H-320 Fuel Purge (MSS)	VOC	0.01	0.01
OC4MEFP330	H-330 Fuel Purge (MSS)	VOC	0.01	0.01
OC4MEFP340	H-340 Fuel Purge (MSS)	VOC	0.01	0.01
OC4MEFU2	Equipment Opening Fugitives (MSS)	VOC	723.02	0.99
	Attachment A Activities (MSS)	VOC	4.71	0.39

(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

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NO _x	- total oxides of nitrogen
SO ₂	- sulfur dioxide
H ₂ S	- hydrogen sulfide
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
HCl	- hydrogen chloride
Cl ₂	- chlorine

- (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) VOC includes speciated ethylene and propylene emissions.
- (7) Annual emission rates for the low firing mode (MSS) are included in the routine heater emission cap of 118.40 tpy CO.
- (8) Startup and Shutdown activities for the Multipoint Ground Flare do not occur simultaneously, therefore, the hourly emission rate is based on the maximum emissions from the Startup and Shutdown scenarios. The annual emissions are the sum of the Startup and Shutdown scenario emissions.

Date: July 10, 2015