

Emission Sources - Maximum Allowable Emission Rates

Permit Number 118901 and PSDTX1408M1

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)
T-2000	Tank T-2000 (7)	VOC	13.83	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2001	Tank T-2001 (7)	VOC	13.83	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2002	Tank T-2002 (7)	VOC	24.53	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2100	Tank T-2100 (7)	VOC	13.83	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2101	Tank T-2101 (7)	VOC	13.83	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2102	Tank T-2102 (7)	VOC	13.83	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2209	Tank T-2209 (7)	VOC	14.18	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2210	Tank T-2210 (7)	VOC	11.79	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-

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T-2211	Tank T-2211 (7)	VOC	11.79	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2212	Tank T-2212 (7)	VOC	11.79	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2300	Tank T-2300 (7)	VOC	9.03	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2301	Tank T-2301 (7)	VOC	9.73	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2302	Tank T-2302 (7)	VOC	13.20	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2303	Tank T-2303 (7)	VOC	13.20	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2304	Tank T-2304 (7)	VOC	12.16	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-33400	Tank T-33400 (7)	VOC	13.57	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-33500	Tank T-33500 (7)	VOC	13.57	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2305	Tank T-2305 (7)	VOC	9.95	-
		H ₂ S	< 0.01	-

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		H ₂ S (6)	0.01	-
T-2306	Tank T-2306 (7)	VOC	9.95	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2307	Tank T-2307 (7)	VOC	9.95	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2600	Tank T-2600 (7)	VOC	12.16	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2601	Tank T-2601 (7)	VOC	12.16	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2602	Tank T-2602 (7)	VOC	12.16	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2700	Tank T-2700 (7)	VOC	15.68	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2701	Tank T-2701 (7)	VOC	15.68	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2702	Tank T-2702 (7)	VOC	15.68	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2703	Tank T-2703 (7)	VOC	15.68	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2800	Tank T-2800 (7)	VOC	13.58	-

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		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2801	Tank T-2801 (7)	VOC	13.58	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
T-2802	Tank T-2802 (7)	VOC	13.58	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.01	-
TKCAP	TANK CAP	VOC	-	130.60
		H ₂ S	-	0.04
FXHO1	Hot Oil Tank 1	VOC	<0.01	<0.01
T-COMB-1	VCU Temporary Combustion Unit 1 (8)	VOC	2.00	-
		NO _x	3.00	-
		CO	4.00	-
		H ₂ S	0.02	-
		H ₂ S (6)	0.07	-
		SO ₂	2.82	-
		SO ₂ (6)	12.61	-
		PM	0.15	-
		PM ₁₀	0.15	-
		PM _{2.5}	0.15	-
T-COMB-2	VCU Temporary Combustion Unit 2 (8)	VOC	2.00	-
		NO _x	3.00	-
		CO	4.00	-
		H ₂ S	0.02	-
		H ₂ S (6)	0.07	-
		SO ₂	2.82	-
		SO ₂ (6)	12.61	-
		PM	0.15	-

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T-COMB-3	VCU Temporary Combustion Unit 3 (8)	PM ₁₀	0.15	-
		PM _{2.5}	0.15	-
		VOC	2.00	-
		NO _x	3.00	-
		CO	4.00	-
		H ₂ S	0.02	-
		H ₂ S (6)	0.07	-
		SO ₂	2.82	-
		SO ₂ (6)	12.61	-
		PM	0.15	-
		PM ₁₀	0.15	-
		PM _{2.5}	0.15	-
		VOC	2.00	-
		NO _x	3.00	-
T-COMB-4	VCU Temporary Combustion Unit 4 (8)	CO	4.00	-
		H ₂ S	0.02	-
		H ₂ S (6)	0.07	-
		SO ₂	2.82	-
		SO ₂ (6)	12.61	-
		PM	0.15	-
		PM ₁₀	0.15	-
		PM _{2.5}	0.15	-
		VOC	2.00	-
		NO _x	3.00	-

Emission Sources - Maximum Allowable Emission Rates

T-COMB-5	VCU Temporary Combustion Unit 5 (8)	VOC	2.00	-
		NO _x	3.00	-
		CO	4.00	-
		H ₂ S	0.02	-
		H ₂ S (6)	0.07	-
		SO ₂	2.82	-
		SO ₂ (6)	12.61	-
		PM	0.15	-
		PM ₁₀	0.15	-
		PM _{2.5}	0.15	-
T-COMB CAP	VCU Temporary Combustion Unit Cap (8)	VOC	-	3.93
		NO _x	-	32.15
		CO	-	42.86
		H ₂ S	-	0.01
		SO ₂	-	2.87
		PM	-	1.60
		PM ₁₀	-	1.60
		PM _{2.5}	-	1.60
RTLANDFUG	Routine Tank Landings	VOC	223.33	2.43
		H ₂ S	< 0.01	< 0.01
RAILFUG	Railcar Loading Fugitives	VOC	21.15	-
		H ₂ S	< 0.01	-
DOCKFUG	Dock Loading Fugitives	VOC	132.19	-
		H ₂ S	< 0.01	-
		H ₂ S (6)	0.05	-
RAILFUG & DOCKFUG	Loading Emissions Cap	VOC	-	51.11
		H ₂ S	-	0.01
TRKFLR	Controlled Rail Loading Backup VCU	VOC	1.68	-
		NO _x	4.80	-

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		CO	12.01	-
		SO ₂	2.37	-
		H ₂ S	0.01	-
		PM	0.13	-
		PM ₁₀	0.13	-
		PM _{2.5}	0.13	-
MVCU-1	Controlled Marine Loading VCU No. 1 (9)	VOC	14.40	-
		NO _x	14.40	-
		CO	7.20	-
		H ₂ S	0.11	-
		SO ₂	20.33	-
		PM	1.07	-
		PM ₁₀	1.07	-
		PM _{2.5}	1.07	-
MVCU-2	Controlled Marine Loading VCU No. 2 (9)	VOC	14.40	-
		NO _x	14.40	-
		CO	7.20	-
		H ₂ S	0.11	-
		H ₂ S (6)	0.48	-
		SO ₂	20.33	-
		SO ₂ (6)	90.80	-
		PM	1.07	-
		PM ₁₀	1.07	-
		PM _{2.5}	1.07	-

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MVCU-3	Controlled Marine Loading VCU No. 3 (9)	VOC	14.40	-
		NO _x	14.40	-
		CO	7.20	-
		H ₂ S	0.11	-
		H ₂ S (6)	0.48	-
		SO ₂	20.33	-
		SO ₂ (6)	90.80	-
		PM	1.07	-
		PM ₁₀	1.07	-
		PM _{2.5}	1.07	-
MVCU-4	Controlled Marine Loading VCU No. 4 (9)	VOC	14.40	-
		NO _x	14.40	-
		CO	7.20	-
		H ₂ S	0.11	-
		SO ₂	20.33	-
		PM	1.07	-
		PM ₁₀	1.07	-
		PM _{2.5}	1.07	-
MVCU-5	Controlled Marine Loading VCU No. 5 (9)	VOC	14.40	-
		NO _x	14.40	-
		CO	7.20	-
		H ₂ S	0.11	-
		SO ₂	20.33	-
		PM	1.07	-
		PM ₁₀	1.07	-
		PM _{2.5}	1.07	-
RAILVCU	Controlled Railcar Loading VCU (9)	VOC	14.40	-
		NO _x	21.60	-
		CO	7.20	-

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		H ₂ S	0.11	-
		SO ₂	20.33	-
		PM	1.07	-
		PM ₁₀	1.07	-
		PM _{2.5}	1.07	-
MVCU-1, MVCU-2, MVCU-3, MVCU-4, MVCU-5, & RAILVCU	Controlled Loading Annual Emissions Cap	VOC	-	82.72
		NO _x	-	109.57
		CO	-	98.62
		H ₂ S	-	0.31
		SO ₂	-	59.14
		PM	-	7.35
		PM ₁₀	-	7.35
		PM _{2.5}	-	7.35
1-A	Boiler 1 (10)	VOC	0.50	-
		NO _x	2.31	-
		CO	3.41	-
		SO ₂	0.05	-
		PM	0.69	-
		PM ₁₀	0.69	-
		PM _{2.5}	0.69	-
1-B	Boiler 2 (10)	VOC	0.50	-
		NO _x	2.31	-
		CO	3.41	-
		SO ₂	0.05	-
		PM	0.69	-
		PM ₁₀	0.69	-
		PM _{2.5}	0.69	-

Emission Sources - Maximum Allowable Emission Rates

1-C	Boiler 3 (10)	VOC	0.50	-
		NO _x	2.31	-
		CO	3.41	-
		SO ₂	0.05	-
		PM	0.69	-
		PM ₁₀	0.69	-
		PM _{2.5}	0.69	-
BOILERCAP	Boiler 1A to 1C Emission Caps (10)	VOC	-	4.93
		NO _x	-	10.06
		CO	-	33.79
		SO ₂	-	0.54
		PM	-	6.81
		PM ₁₀	-	6.81
		PM _{2.5}	-	6.81
HTR1	Hot Oil Heater	VOC	0.22	0.94
		NO _x	1.40	6.13
		CO	1.48	6.48
		SO ₂	0.02	0.10
		PM	0.30	1.31
		PM ₁₀	0.30	1.31
		PM _{2.5}	0.30	1.31
2A	Small Boiler	VOC	0.07	0.30
		NO _x	0.32	0.61
		CO	0.47	2.04
		SO ₂	0.01	0.03
		PM	0.09	0.41
		PM ₁₀	0.09	0.41
		PM _{2.5}	0.09	0.41

Emission Sources - Maximum Allowable Emission Rates

FWP1	Fire Water Pump 1	VOC	2.02	0.10
		NO _x	2.02	0.10
		CO	2.04	0.10
		SO ₂	0.63	0.03
		PM	0.10	0.01
		PM ₁₀	0.10	0.01
		PM _{2.5}	0.10	0.01
FWP2	Fire Water Pump 2	VOC	2.02	0.10
		NO _x	2.02	0.10
		CO	2.04	0.10
		SO ₂	0.63	0.03
		PM	0.10	0.01
		PM ₁₀	0.10	0.01
		PM _{2.5}	0.10	0.01
FWP3	Fire Water Pump 3	VOC	2.02	0.10
		NO _x	2.02	0.10
		CO	2.04	0.10
		SO ₂	0.63	0.03
		PM	0.10	0.01
		PM ₁₀	0.10	0.01
		PM _{2.5}	0.10	0.01
FWP4	Fire Water Pump 4	VOC	2.02	0.10
		NO _x	2.02	0.10
		CO	2.04	0.10
		SO ₂	0.63	0.03
		PM	0.10	0.01
		PM ₁₀	0.10	0.01
		PM _{2.5}	0.10	0.01
FUG	Fugitives (5)	VOC	9.99	43.76

Emission Sources - Maximum Allowable Emission Rates

		H ₂ S	0.01	0.02
		H ₂ S (6)	0.04	-
MSS-U	MSS Emissions Cap – Uncontrolled	VOC	602.78	5.99
		H ₂ S	0.62	< 0.01
		H ₂ S (6)	2.56	-
MSS-C	MSS Emissions Cap Controlled	VOC	2.79	0.84
		NO _x	3.00	13.87
		CO	4.00	18.50
		H ₂ S	0.02	< 0.01
		H ₂ S (6)	0.07	-
		SO ₂	2.82	1.48
		SO ₂ (6)	12.61	-
		PM	0.15	0.69
		PM ₁₀	0.15	0.69
		PM _{2.5}	0.15	0.69

- (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
- SO₂ - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
- PM₁₀ - 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) Emission rate authorization limited to Alternative Operating Crude Oil Scenario per Permit 118901 conditions.
- (7) All tanks are subject to annual emission rate limits identified in EPN TANKCAP.
- (8) All temporary combustion units are subject to annual emission rate limits identified in T-COMB CAP.
- (9) All marine loading and railcar vapor combustion units are subject to annual emission rate limits identified in EPN "MVCU-1, MVCU-2, MVCU-3, MVCU-4, MVCU-5, RAILVCU & TRKFLLR".
- (10) Boilers 1A through 1-C are subject to annual emission rate limits identified in EPN BOILERCAP.

Date: _____

Permit Number GHGPSDTX108M1

Emission Sources - Maximum Allowable Emission Rates

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized 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 authorized by this permit. Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates
			TPY (4)
1-A, 1-B, 1-C	Boiler 1A to 1C Cap	CO ₂ (5)	113,619
		CH ₄ (5)	2.14
		N ₂ O (5)	0.21
		CO ₂ e	113,737
2A	Small Boiler	CO ₂ (5)	6,456
		CH ₄ (5)	0.12
		N ₂ O (5)	0.01
		CO ₂ e	6,462
HTR1	Hot Oil Heater 1	CO ₂ (5)	20,494
		CH ₄ (5)	0.39
		N ₂ O (5)	0.04
		CO ₂ e	20,515
MVCU-1, MVCU-2, MVCU-3, MVCU-4, MVCU-5, RAILVCU, & TRKFLR	Controlled Loading VCU Cap	CO ₂ (5)	146,674
		CH ₄ (5)	5.82
		N ₂ O (5)	1.13
		CO ₂ e	147,156
T-COMB CAP	Temporary Portable Combustion Units	CO ₂ (5)	30,180
		CH ₄ (5)	1.42
		N ₂ O (5)	0.28
		CO ₂ e	30,300

FWP1	Fire Water Pump 1	CO ₂ (5)	1,958
		CH ₄ (5)	0.08
		N ₂ O (5)	0.02
		CO _{2e}	1,964
FWP2	Fire Water Pump 2	CO ₂ (5)	1,958
		CH ₄ (5)	0.08
		N ₂ O (5)	0.02
		CO _{2e}	1,964
FWP3	Fire Water Pump 3	CO ₂ (5)	1,958
		CH ₄ (5)	0.08
		N ₂ O (5)	0.02
		CO _{2e}	1,964
FWP4	Fire Water Pump 4	CO ₂ (5)	1,958
		CH ₄ (5)	0.08
		N ₂ O (5)	0.02
		CO _{2e}	1,964
FUG	Piping Fugitive Components	CH ₄ (5)	5.03
		CO _{2e}	126
MSS-C	MSS Emissions Cap - Controlled	CO ₂ (5)	12,857
		CH ₄ (5)	0.60
		N ₂ O (5)	0.12
		CO _{2e}	12,907

- (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) CO₂ - carbon dioxide
N₂O - nitrous oxide
CH₄ - methane
CO_{2e} - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015)
CO₂ (1), N₂O (298), CH₄(25)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.
- (5) Emission rate is given for informational purposes only and does not constitute enforceable limit.

Date: