

Emission Sources — Maximum Allowable Emission Rates

Permit Number 5171

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)
VCU-1	Marine Loading Vapor Combustor No. 1	VOC	6.68	
		Benzene	0.07	
		CO	22.04	
		NOx	11.04	
		SO2	0.05	
		PM	0.60	
		PM10	0.60	
		PM2.5	0.60	
VCU-2	Marine Loading Vapor Combustor No. 2	VOC	6.68	
		Benzene	0.07	
		CO	22.04	
		NOx	11.04	
		SO2	0.05	
		PM	0.60	
		PM10	0.60	
		PM2.5	0.60	
VCU-3A	Marine Loading Vapor Combustor No. 3A	VOC	6.68	

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.07	
		CO	22.04	
		NOx	11.04	
		SO2	0.05	
		PM	0.60	
		PM10	0.60	
		PM2.5	0.60	
VCU-3B	Marine Loading Vapor Combustor No. 3B	VOC	6.68	
		Benzene	0.07	
		CO	22.04	
		NOx	11.04	
		SO2	0.05	
		PM	0.60	
		PM10	0.60	
		PM2.5	0.60	
Marine VCUs	Marine Loading VCU Nos. 1, 2, 3A & 3B Annual Emission Caps	VOC		6.47
		Benzene		0.07
		CO		23.21
		NOx		11.63
		SO2		0.05
		PM		0.63
		PM10		0.63
		PM2.5		0.63
BARGE-1	Barge Dock No. 1 Uncontrolled / Uncollected Loading Losses	VOC	12.15	

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.12	
BARGE-2	Barge Dock No. 2 Uncontrolled / Uncollected Loading Losses	VOC	12.15	
		Benzene	0.12	
BARGE-3	Barge Dock No. 3 Uncontrolled / Uncollected Loading Losses	VOC	12.15	
		Benzene	0.12	
BARGE-4	Barge Dock No. 4 Uncontrolled / Uncollected Loading Losses	VOC	12.15	
		Benzene	0.12	
SHIP-1	Ship Dock No. 1 Uncontrolled / Uncollected Loading Losses	VOC	12.15	
		Benzene	0.12	
ALL DOCKS	All Docks, BARGE-1, 2, 3 & 4 and SHIP- 1, Annual Uncontrolled / Uncollected Loading Losses	VOC	19.44	6.76
		Benzene	0.19	0.07
SUMP-1	Wastewater Sumps	VOC	9.24	9.41
TK-ATMDEGAS	Uncontrolled Tank Degassing (8)	VOC	103.35	---
TK-DEGAS	Controlled Tank Degassing (7)(9)	CO	6.64	7.02
		NOx	3.33	3.52
		SO2	0.01	0.01
		VOC	120.58	
TKVCU-1	Vapor Combustion Unit No. 1	CO	84.90	
		NOx	42.53	
		SO2	0.15	
		VOC	12.78	
TKVCU-2	Vapor Combustion Unit No. 2	CO	84.90	
		NOx	42.53	
		SO2	0.15	

Emission Sources - Maximum Allowable Emission Rates

		VOC	12.78	
TKVCU	Nos. 1 and 2 Annual Emission Cap	CO		59.97
		NOx		30.03
		SO2		0.07
		VOC		27.36
TKVCU-3	Vapor Combustion Unit No. 3	CO	16.34	
		NOx	8.18	
		SO2	0.01	
		VOC	4.01	
TKVCU-4	Vapor Combustion Unit No. 4	CO	16.34	
		NOx	8.18	
		SO2	0.01	
		VOC	4.01	
TKVCU	Nos. 3 and 4 Annual Emission Cap	CO		9.31
		NOx		4.66
		SO2		0.01
		VOC		2.66
LAND T150-79	Tank 150-79 Roof Landings Activities (11)	CO	12.20	0.48
		NOx	6.11	0.24
		VOC	42.64	2.07
T5-11	Tank 5-11	VOC	13.66	
T5-12	Tank 5-12	VOC	1.51	
T5-15	Tank 5-15	VOC	13.66	
T5-16	Tank 5-16	VOC	13.66	

Emission Sources - Maximum Allowable Emission Rates

T10-1	Tank 10-1	VOC	1.75	
T10-2	Tank 10-2	VOC	13.66	
T10-4	Tank 10-4	VOC	1.29	
T10-6	Tank 10-6	VOC	1.75	
T10-7	Tank 10-7	VOC	1.38	
T10-8	Tank 10-8	VOC	1.75	
T10-9	Tank 10-9	VOC	1.75	
T10-10	Tank 10-10	VOC	1.75	
T10-11	Tank 10-11	VOC	1.75	
T12-1	Tank 12-1	VOC	1.38	
T12-2	Tank 12-2	VOC	1.38	
T15-1	Tank 15-1	VOC	2.80	
T17-1	Tank 17-1	VOC	0.14	
T17-2	Tank 17-2	VOC	0.14	
T27-1	Tank 27-1	VOC	2.51	
T27-2	Tank 27-2	VOC	2.51	
T27-3	Tank 27-3	VOC	1.81	
T27-4	Tank 27-4	VOC	1.81	
T30-1	Tank 30-1	VOC	0.14	
T30-2	Tank 30-2	VOC	0.14	
T30-3	Tank 30-3	VOC	1.46	
T55-2	Tank 55-2	VOC	13.75	
T55-3	Tank 55-3	VOC	13.75	
T55-4	Tank 55-4	VOC	3.40	

Emission Sources - Maximum Allowable Emission Rates

T55-5	Tank 55-5	VOC	1.62	
T75-1	Tank 75-1	VOC	1.69	
T130-1	Tank 130-1	VOC	4.91	
T130-2	Tank 130-2	VOC	10.39	
T130-3	Tank 130-3	VOC	10.39	
T130-4	Tank 130-4	VOC	7.93	
T130-5	Tank 130-5	VOC	10.39	
T130-6	Tank 130-6	VOC	4.60	
T130-7	Tank 130-7	VOC	4.60	
T130-9	Tank 130-9	VOC	10.39	
T130-10	Tank 130-10	VOC	10.39	
T130-11	Tank 130-11	VOC	4.60	
T130-12	Tank 130-12	VOC	10.39	
T130-13	Tank 130-13	VOC	3.59	
T130-14	Tank 130-14	VOC	31.63	
T130-15	Tank 130-15	VOC	3.59	
T150-1	Tank 150-1	VOC	10.57	
T150-2	Tank 150-2	VOC	4.78	
T150-3	Tank 150-3	VOC	10.57	
T150-4	Tank 150-4	VOC	10.57	
T150-5	Tank 150-5	VOC	10.57	
T150-6	Tank 150-6	VOC	10.57	
T150-7	Tank 150-7	VOC	10.57	
T150-8	Tank 150-8	VOC	3.70	

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T150-9	Tank 150-9	VOC	10.57	
T150-10	Tank 150-10	VOC	10.57	
T150-11	Tank 150-11	VOC	10.57	
T150-12	Tank 150-12	VOC	10.47	
T150-13	Tank 150-13	VOC	3.70	
T150-14	Tank 150-14	VOC	3.69	
T150-15	Tank 150-15	VOC	10.47	
T150-16	Tank 150-16	VOC	3.70	
T150-17	Tank 150-17	VOC	3.69	
T150-18	Tank 150-18	VOC	3.69	
T150-19	Tank 150-19	VOC	3.69	
T150-20	Tank 150-20	VOC	3.69	
T150-21	Tank 150-21	VOC	4.88	
T150-22	Tank 150-22	VOC	4.88	
T150-23	Tank 150-23	VOC	4.88	
T150-24	Tank 150-24	VOC	4.88	
T150-25	Tank 150-25	VOC	4.88	
T150-26	Tank 150-26	VOC	4.88	
T150-27	Tank 150-27	VOC	4.88	
T150-28	Tank 150-28	VOC	4.88	
T150-29	Tank 150-29	VOC	4.99	
T150-30	Tank 150-30	VOC	4.99	
T150-31	Tank 150-31	VOC	4.99	
T150-32	Tank 150-32	VOC	4.99	

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T150-33	Tank 150-33	VOC	4.99	
T150-34	Tank 150-34	VOC	4.99	
T150-35	Tank 150-35	VOC	4.99	
T150-36	Tank 150-36	VOC	4.99	
T150-37	Tank 150-37	VOC	4.99	
T150-38	Tank 150-38	VOC	4.99	
T150-39	Tank 150-39	VOC	4.99	
T150-40	Tank 150-40	VOC	4.99	
T150-41	Tank 150-41	VOC	4.99	
T150-42	Tank 150-42	VOC	4.99	
T150-43	Tank 150-43	VOC	4.99	
T150-44	Tank 150-44	VOC	31.52	
T150-45	Tank 150-45	VOC	31.52	
T150-46	Tank 150-46	VOC	31.52	
T150-47	Tank 150-47	VOC	6.05	
T150-48	Tank 150-48	VOC	6.05	
T150-49	Tank 150-49	VOC	4.58	
T150-50	Tank 150-50	VOC	4.58	
T150-51	Tank 150-51	VOC	3.71	
T150-52	Tank 150-52	VOC	3.71	
T150-53	Tank 150-53	VOC	4.58	
T150-54	Tank 150-54	VOC	4.58	
T150-55	Tank 150-55	VOC	4.58	
T150-56	Tank 150-56	VOC	4.58	

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T150-57	Tank 150-57	VOC	4.58	
T150-58	Tank 150-58	VOC	4.58	
T150-59	Tank 150-59	VOC	4.71	
T150-60	Tank 150-60	VOC	4.71	
T150-61	Tank 150-61	VOC	4.71	
T150-62	Tank 150-62	VOC	4.71	
T150-63	Tank 150-63	VOC	4.71	
T150-64	Tank 150-64	VOC	4.71	
T150-65	Tank 150-65	VOC	4.71	
T150-66	Tank 150-66	VOC	4.71	
T150-67	Tank 150-67	VOC	4.71	
T150-68	Tank 150-68	VOC	4.71	
T150-69	Tank 150-69	VOC	4.71	
T150-70	Tank 150-70	VOC	4.71	
T150-71	Tank 150-71	VOC	4.71	
T150-72	Tank 150-72	VOC	4.71	
T150-73	Tank 150-73	VOC	4.71	
T150-74	Tank 150-74	VOC	4.69	
T150-75	Tank 150-75	VOC	4.69	
T150-76	Tank 150-76	VOC	4.69	
T150-77	Tank 150-77	VOC	4.69	
T150-78	Tank 150-78	VOC	4.69	
T150-79	Tank 150-79	VOC	3.67	
T170-1	Tank 170-1	VOC	31.67	

Emission Sources - Maximum Allowable Emission Rates

T170-2	Tank 170-2	VOC	31.67	
T170-3	Tank 170-3	VOC	31.67	
T170-4	Tank 170-4	VOC	31.67	
T170-5	Tank 170-5	VOC	10.52	
T170-6	Tank 170-6	VOC	10.52	
T170-7	Tank 170-7	VOC	10.52	
T200-1	Tank 200-1	VOC	10.43	
T200-2	Tank 200-2	VOC	10.43	
T200-3	Tank 200-3	VOC	10.43	
T250-1	Tank 250-1	VOC	10.40	
T250-2	Tank 250-2	VOC	10.40	
T300-1	Tank 300-1	VOC	10.42	
T300-2	Tank 300-2	VOC	31.89	
T300-3	Tank 300-3	VOC	10.37	
Landed Roof Refill Cap	Any 10 Tanks (6)	VOC	5564.43	
Annual Emissions Caps	All Tanks (7)	VOC		710.00
	Tank Maintenance Sub-Cap (10)	VOC		66.95
T167-1	Tank T167-1 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-2	Tank T167-2 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-3	Tank T167-3 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-4	Tank T167-4 (12)	VOC	4.12	7.11

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.04	0.07
T167-5	Tank T167-5 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-6	Tank T167-6 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-7	Tank T167-7 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-8	Tank T167-8 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-9	Tank T167-9 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-10	Tank T167-10 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-11	Tank T167-11 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T167-12	Tank T167-12 (12)	VOC	4.12	7.11
		Benzene	0.04	0.07
T15-2	Tank T15-2 (12)	VOC	2.98	1.52
		Benzene	0.03	0.02
TKCAP	Annual Tank Emission Cap (12)	VOC		28.94
		Benzene		0.30
TKLAND	Uncontrolled Routine Tank Roof Landings (12)	VOC	6.81	3.25
		Benzene	0.07	0.03
TKVCU-5A	Tank Vapor Combustion Unit 5A (12)	VOC	12.18	

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.12	
		NOx	11.25	
		CO	15.00	
		SO2	0.04	
		PM	0.56	
		PM10	0.56	
		PM2.5	0.56	
TKVCU-5B	Tank Vapor Combustion Unit 5B (12)	VOC	12.18	
		Benzene	0.12	
		NOx	11.25	
		CO	15.00	
		SO2	0.04	
		PM	0.56	
		PM10	0.56	
		PM2.5	0.56	
TKVCU-5A & 5B	Tank Vapor Combustion Units 5A and 5B Annual Cap (12)	VOC		2.86
		Benzene		0.03
		NOx		4.95
		CO		6.59
		SO2		0.02
		PM		0.25
		PM10		0.25
		PM2.5		0.25
MSSATM	Uncontrolled MSS Activities (12)	VOC	82.84	2.29

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.84	0.02
MSSCONT	MSS Activities directed thru Controls (12)	VOC	13.84	0.13
		Benzene	0.14	<0.01
		NOx	12.69	0.60
		CO	17.87	0.95
		SO2	0.05	<0.01
		PM	0.64	0.03
		PM10	0.64	0.03
		PM2.5	0.64	0.03
FUG+FUG M	Entire Process Fugitives (5)	VOC	9.16	40.11
		Benzene	0.46	2.01
TRUCKLOAD-1	Tank Truck Loading Rack (5)	VOC	1.51	2.22

- (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) Hourly emissions cap covers simultaneous refilling of tanks pursuant to Special Condition No. 24 and emissions from tank roof landings attributable to routine product changes and planned maintenance, startup, and shutdown (MSS) activities as represented in Special Condition No. 17.
- (7) Annual emissions cap for tanks covers routine emissions, emissions from tank roof landings, controlled tank degassing, and uncontrolled tank degassing attributable to routine product changes and planned MSS activities as represented in Special Condition No. 17.
- (8) The uncontrolled degassing emission limit covers emissions from uncontrolled tank degassing attributable to routine product changes and planned MSS activities as represented in Special Condition No. 17.

Emission Sources - Maximum Allowable Emission Rates

- (9) Controlled degassing emission limits covers emissions from controlled tank degassing attributable to routine product changes and planned MSS activities as represented in Special Condition No. 17.
- (10) Tank maintenance sub-cap covers emissions from tank roof landings, controlled tank degassing, and uncontrolled tank degassing attributable to planned MSS activities as represented in Special Condition No. 17.A and 17.C.
- (11) Tank No. 150-79 roof landing, refilling, degassing, and venting emissions. Roof landing, refilling, and degassing emissions are routed to a portable vapor combustion unit.
- (12) Tank Farm Expansion Project 218236 includes these 13 tanks with routine annual emission capped under EPN TKCAP, with the tanks uncontrolled roof landings when storing heavy liquid capped under EPN TKLAND and the inventory control/convenience tank roof landings when storing the light liquid/gasoline products directing the all the vapors under the landed roof to the new tank vapor combustion units, EPNs TKVCU-5A and TKVCU-5B, with a combined annual emission limit EPN TKVCU-5A & 5B. MSS Clearing Activities associated with these tanks and the piping to and from these tanks are addressed in EPNs MSSATM and MSSCONT, for the emissions directly to the atmosphere and through control devices respectively. Note MSS floating roof tank landing loss, degassing and refill to control may be directed to EPNs TKVCU-5A and TKVCU-5B or a temporary portable device, but the emissions are accounted under EPN MSSCONT.

Date: December 23, 2015