Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 142261 and N254

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)
TK-1601	IFR Storage Tank 1601 (Phase 1)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1602	IFR Storage Tank 1602 (Phase 1)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1603	IFR Storage Tank 1603 (Phase 1)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1604	IFR Storage Tank 1604 (Phase 1)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1605	IFR Storage Tank 1605 (Phase 1)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-803	IFR Storage Tank 803 (Phase 1)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-808	IFR Storage Tank 808 (Phase 1)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-809	IFR Storage Tank 809 (Phase 1)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-601	IFR Storage Tank 601 (Phase 1)	VOC	26.34	(6)
		H_2S	0.06	(6)
TK-201	IFR Storage Tank 201 (Phase 1)	VOC	3.48	(6)
		H_2S	0.01	(6)
TK-202	IFR Storage Tank 202 (Phase 1)	VOC	3.48	(6)
		H_2S	0.01	(6)
TK-1606	IFR Storage Tank 1606 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1607	IFR Storage Tank 1607 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1608	IFR Storage Tank 1608 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1609	IFR Storage Tank 1609 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)

Emission Sources – Maximum Allowable Emission Rates

TK-1610	IFR Storage Tank 1610 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1611	IFR Storage Tank 1611 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1612	IFR Storage Tank 1612 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1613	IFR Storage Tank 1613 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1614	IFR Storage Tank 1614 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1615	IFR Storage Tank 1615 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1616	IFR Storage Tank 1616 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1617	IFR Storage Tank 1617 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1618	IFR Storage Tank 1618 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1619	IFR Storage Tank 1619 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1620	IFR Storage Tank 1620 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1621	IFR Storage Tank 1621 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1622	IFR Storage Tank 1622 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1623	IFR Storage Tank 1623 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1624	IFR Storage Tank 1624 (Phase 2)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-402	IFR Storage Tank 402 (Phase 2)	VOC	26.34	(6)
		H_2S	0.06	(6)
TK-403	IFR Storage Tank 403 (Phase 2)	VOC	14.42	(6)

Emission Sources – Maximum Allowable Emission Rates

		H_2S	0.03	(6)
TK-203	IFR Storage Tank 203 (Phase 2)	VOC	3.48	(6)
		H_2S	0.01	(6)
TK-204	IFR Storage Tank 204 (Phase 2)	VOC	3.48	(6)
		H_2S	0.01	(6)
TK-802	IFR Storage Tank 802 (Phase 2)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-101	IFR Storage Tank 101 (Phase 2)	VOC	4.73	(6)
		H_2S	0.01	(6)
TK-102	IFR Storage Tank 102 (Phase 2)	VOC	4.73	(6)
		H_2S	0.01	(6)
TK-1625	IFR Storage Tank 1625 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1626	IFR Storage Tank 1626 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1627	IFR Storage Tank 1627 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1628	IFR Storage Tank 1628 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1629	IFR Storage Tank 1629 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1630	IFR Storage Tank 1630 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1631	IFR Storage Tank 1631 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1632	IFR Storage Tank 1632 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1633	IFR Storage Tank 1633 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1634	IFR Storage Tank 1634 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1635	IFR Storage Tank 1635 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)

Emission Sources – Maximum Allowable Emission Rates

TK-1636	IFR Storage Tank 1636 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1637	IFR Storage Tank 1637 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1638	IFR Storage Tank 1638 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1639	IFR Storage Tank 1639 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1640	IFR Storage Tank 1640 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1641	IFR Storage Tank 1641 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1642	IFR Storage Tank 1642 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1643	IFR Storage Tank 1643 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1644	IFR Storage Tank 1644 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1645	IFR Storage Tank 1645 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1646	IFR Storage Tank 1646 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1647	IFR Storage Tank 1647 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1648	IFR Storage Tank 1648 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1649	IFR Storage Tank 1649 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1650	IFR Storage Tank 1650 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1651	IFR Storage Tank 1651 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1652	IFR Storage Tank 1652 (Future Phase)	VOC	16.02	(6)

Emission Sources – Maximum Allowable Emission Rates

		H_2S	0.03	(6)
TK-1653	IFR Storage Tank 1653 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1654	IFR Storage Tank 1654 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1655	IFR Storage Tank 1655 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1656	IFR Storage Tank 1656 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-1657	IFR Storage Tank 1657 (Future Phase)	VOC	16.02	(6)
		H_2S	0.03	(6)
TK-801	IFR Storage Tank 801 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-804	IFR Storage Tank 804 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-805	IFR Storage Tank 805 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-806	IFR Storage Tank 806 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-807	IFR Storage Tank 807 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-810	IFR Storage Tank 810 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-811	IFR Storage Tank 811 (Future Phase)	VOC	12.52	(6)
		H_2S	0.03	(6)
TK-602	IFR Storage Tank 602 (Future Phase)	VOC	14.42	(6)
		H_2S	0.03	(6)
TK-603	IFR Storage Tank 603 (Future Phase)	VOC	14.42	(6)
		H_2S	0.03	(6)
TK-404	IFR Storage Tank 404 (Future Phase)	VOC	14.42	(6)
		H_2S	0.03	(6)
TK-205	IFR Storage Tank 205 (Future Phase)	VOC	3.48	(6)
		H_2S	0.01	(6)

Emission Sources – Maximum Allowable Emission Rates

TK-206	IFR Storage Tank 206 (Future Phase)	VOC	3.48	(6)
		H_2S	0.01	(6)
TK-207	IFR Storage Tank 207 (Future Phase)	VOC	3.48	(6)
		H_2S	0.01	(6)
TK-208	IFR Storage Tank 208 (Future Phase)	VOC	3.48	(6)
		H_2S	0.01	(6)
IFRCAP (6)	IFR Storage Tank Annual Cap (Phase 1)	VOC	-	15.11
		H_2S	-	0.03
	IFR Storage Tank Annual Cap (Phases 1 & 2)	VOC	-	43.64
		H_2S	-	0.07
	IFR Storage Tank Annual Cap (All Phases)	VOC	-	106.25
		H_2S	-	0.17
ADD-1	Additive Storage Tank (Phase 2)	VOC	0.92	(7)
ADD-2	Additive Storage Tank (Phase 2)	VOC	0.35	(7)
ADD-3	Additive Storage Tank (Phase 2)	VOC	8.30	(7)
ADD-4	Additive Storage Tank (Phase 2)	VOC	0.14	(7)
ADD-5	Additive Storage Tank (Phase 2)	VOC	7.42	(7)
ADD-6	Additive Storage Tank (Phase 2)	VOC	1.13	(7)
ADD-7	Additive Storage Tank (Phase 2)	VOC	22.13	(7)
ADD-8	Additive Storage Tank (Phase 2)	VOC	0.06	(7)
ADD-9	Additive Storage Tank (Phase 2)	VOC	0.02	(7)
ADD-10	Additive Storage Tank (Phase 2)	VOC	1.36	(7)
ADD-11	Additive Storage Tank (Phase 2)	VOC	0.14	(7)
ADD-12	Additive Storage Tank (Future Phase)	VOC	1.13	(7)
ADD-13	Additive Storage Tank (Future Phase)	VOC	1.13	(7)

Emission Sources – Maximum Allowable Emission Rates

ADDCAP (7)	Additive Storage Tank Annual Cap (Phase 2)	VOC	-	0.18
	Additive Storage Tank Annual Cap (All Phases)	VOC	-	0.19
TK-51	Biodiesel Storage Tank (Phase 2)	VOC	4.19	0.35
TK-151	Biodiesel Storage Tank (Future Phase)	VOC	4.19	1.03
TK-152	Biodiesel Storage Tank (Future Phase)	VOC	4.19	1.03
MLVRU-1 MLVRU-2	Marine Loading VRUs 1 & 2 (Ship Dock 1) (Phase 1)	VOC	10.51	(8)
		H_2S	0.02	(8)
MLVRU-3 MLVRU-4	Marine Loading VRUs 3 & 4 (Ship Dock 2 & Barge Dock 1) (Phase 2)	VOC	10.51	(8)
		H_2S	0.02	(8)
MLVRU-5 MLVRU-6	Marine Loading VRUs 5 & 6 (Ship Dock 3) (Future Phase)	VOC	10.51	(8)
		H_2S	0.02	(8)
MLVRU-7 MLVRU-8	Marine Loading VRUs 7 & 8 (Ship Dock 4) (Future Phase)	VOC	10.51	(8)
		H_2S	0.02	(8)
MLVRUCAP (8)	Marine Loading VRU Annual Cap (Phase 1)	VOC	-	9.59
		H_2S	-	0.02
	Marine Loading VRU Annual Cap (Phases 1 & 2)	VOC	-	21.29
		H_2S	-	0.04
	Marine Loading VRU Annual Cap (All Phases)	VOC	-	40.48
		H_2S	-	0.08
MLOAD	Marine Loading Fugitives (Phase 1)	VOC	18.32	3.38
		H_2S	<0.01	<0.01
	Marine Loading Fugitives (Phases 1 & 2)	VOC	36.64	6.76
		H_2S	0.01	0.01
	Marine Loading Fugitives (All Phases)	VOC	73.28	13.52
		H_2S	0.02	0.02
TLVRU	Tank Truck Loading VRU (Phase 2)	VOC	0.40	1.28
	Tank Truck Loading VRU (All Phases)	VOC	1.00	3.20

Emission Sources – Maximum Allowable Emission Rates

TUNLOAD	Tank Truck Unloading Fugitives (Phase 1)	VOC	2.68	7.91
	Tank Truck Unloading Fugitives (Phases 1 & 2)	VOC	3.00	8.61
	Tank Truck Unloading Fugitives (All Phases)	VOC	5.67	16.52
FUG	Process Fugitives (5) (Phase 1)	VOC	0.31	1.36
		H_2S	<0.01	<0.01
	Process Fugitives (5) (Phases 1 & 2)	VOC	0.79	3.47
		H_2S	<0.01	0.01
	Process Fugitives (5) (All Phases)	VOC	1.59	6.98
		H_2S	<0.01	0.02
ENG-1	Fire Water Pump Engine 1 (Phase 1)	VOC	3.78	0.19
		NO_x	3.78	0.19
		CO	3.32	0.17
		PM	0.20	0.01
		PM_{10}	0.20	0.01
		$PM_{2.5}$	0.20	0.01
		SO_2	0.01	<0.01
ENG-2	Fire Water Pump Engine 2 (Phase 1)	VOC	3.78	0.19
		NO_x	3.78	0.19
		CO	3.32	0.17
		PM	0.20	0.01
		PM_{10}	0.20	0.01
		$PM_{2.5}$	0.20	0.01
		SO_2	0.01	<0.01
ENG-3	Fire Water Pump Engine 3 (Phase 2)	VOC	5.26	0.26
		NO_x	5.26	0.26
		CO	4.62	0.23
		PM	0.28	0.01
		PM_{10}	0.28	0.01
		$PM_{2.5}$	0.28	0.01
		SO_2	0.01	<0.01

Emission Sources – Maximum Allowable Emission Rates

SUMP	Sumps (Phase 1)	VOC	2.45	0.30
	Sumps (Phase 1 & 2)	VOC	7.34	0.89
	Sumps (All Phases)	VOC	9.78	1.18
TKVCU-1	Tank VCU (10) (Phase 1)	VOC	39.77	(9)
		NO_x	25.89	(9)
		CO	111.02	(9)
		PM	0.16	(9)
		PM_{10}	0.16	(9)
		$PM_{2.5}$	0.16	(9)
		SO_2	0.15	(9)
		H_2S	0.07	(9)
TKVCU-2	Tank VCU (10) (Phase 2)	VOC	39.77	(9)
		NO_x	25.89	(9)
		CO	111.02	(9)
		PM	0.16	(9)
		PM_{10}	0.16	(9)
		$PM_{2.5}$	0.16	(9)
		SO_2	0.15	(9)
		H_2S	0.07	(9)
TKVCU-3	Tank VCU (10) (Future Phase)	VOC	39.77	(9)
		NO_x	25.89	(9)
		CO	111.02	(9)
		PM	0.16	(9)
		PM_{10}	0.16	(9)
		$PM_{2.5}$	0.16	(9)
		SO_2	0.15	(9)
		H_2S	0.07	(9)

Emission Sources – Maximum Allowable Emission Rates

TKVCU-4	Tank VCU (10) (Future Phase)	VOC	39.77	(9)
		NO_x	25.89	(9)
		CO	111.02	(9)
		PM	0.16	(9)
		PM_{10}	0.16	(9)
		$PM_{2.5}$	0.16	(9)
		SO_2	0.15	(9)
		H_2S	0.07	(9)
TKVCUCAP (9)	Tank VCU Annual Cap (10) (Phase 1)	VOC	-	1.85
		NO_x	-	2.28
		CO	-	5.93
		PM	-	0.09
		PM_{10}	-	0.09
		$PM_{2.5}$	-	0.09
		SO_2	-	0.01
		H_2S	-	<0.01
	Tank VCU Annual Cap (10) (Phases 1 & 2)	VOC	-	6.86
		NO_x	-	8.47
		CO	-	22.00
		PM	-	0.34
		PM_{10}	-	0.34
		$PM_{2.5}$	-	0.34
		SO_2	-	0.05
		H_2S	-	0.01
	Tank VCU Annual Cap (10) (All Phases)	VOC	-	17.57
		NO_x	-	22.14
		CO	-	56.66
		PM	-	0.91
		PM_{10}	-	0.91
		$PM_{2.5}$	-	0.91
		SO_2	-	0.13

Emission Sources – Maximum Allowable Emission Rates

PORTVCU	Portable VCU (11)	H_2S	-	0.03
		VOC	2.35	0.18
		NO_x	1.33	0.13
		CO	2.61	0.22
		PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
		SO_2	0.01	<0.01
TKVENT	Portable VCU (11)	H_2S	<0.01	<0.01
		VOC	2.35	0.37
		NO_x	1.33	0.26
		CO	2.61	0.44
		PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
		SO_2	0.01	<0.01
	Tank MSS Fugitives (12)	H_2S	<0.01	<0.01
		VOC	52.76	0.90
	Tank MSS Fugitives (12)	H_2S	<0.01	<0.01
		VOC	52.76	1.02
	Tank MSS Fugitives (12)	H_2S	<0.01	<0.01
		VOC	52.76	1.04
		H_2S	<0.01	<0.01

Emission Sources – Maximum Allowable Emission Rates

PORTCTRL	Portable Flare (13)	VOC	541.76	0.27
		NO_x	73.49	0.04
		CO	146.72	0.07
	Portable Flare (13)	VOC	541.76	0.54
		NO_x	73.49	0.08
		CO	146.72	0.14
	Portable Flare (13)	VOC	541.76	0.66
		NO_x	73.49	0.09
		CO	146.72	0.18
VACLOAD	Vacuum Truck Loading (14) (Phase 1)	VOC	0.93	0.03
		H_2S	<0.01	<0.01
	Vacuum Truck Loading (14)	VOC	1.87	0.06
		H_2S	<0.01	<0.01
	Vacuum Truck Loading (14)	VOC	2.31	0.12
		H_2S	<0.01	<0.01
FHC MSS	Process Emissions from MSS (15)	VOC	5.36	0.21
		H_2S	0.01	<0.01
	Process Equipment MSS (15) (Phases 1 & 2)	VOC	5.36	0.42
		H_2S	0.01	<0.01
	Process Equipment MSS (15)	VOC	5.36	0.85
		H_2S	0.01	<0.01

(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
H_2S - hydrogen sulfide
(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) Total routine annual emissions for IFR storage tanks are limited to the rates represented under EPN IFRCAP.
(7) Total routine annual emissions for additive tanks are limited to the rates represented under EPN ADDCAP.
(8) Total annual emissions for marine loading VRU's are limited to the rates represented under EPN MLVRUCAP.
(9) Total annual emissions for tank VCU's are limited to the rates represented under EPN TKVCUCAP.
(10) Includes controlled tank roof landing emissions (standing idle, degassing, and refilling) from routine and maintenance tank roof landings.
(11) Includes controlled tank roof landing emissions (standing idle, degassing, cleaning, and refilling) from maintenance tank roof landings and emissions from loading of vacuum trucks and vacuum boxes.
(12) Includes uncontrolled tank roof landing emissions (standing idle, degassing, post-control venting, and refilling) from routine and maintenance tank roof landings. Also includes post-control venting emissions from pressure tanks.
(13) Includes controlled degassing emissions from pressure tanks.
(14) Includes emissions from loading of vacuum trucks and vacuum boxes.
(15) Includes emissions from draining and venting process equipment during MSS activities.

Date: February 20, 2018