Permit Numbers 5631 and N054

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	Emission Rates	
NO. (1)	(3)		lbs/hour	TPY (4)
27-14	IFR Tank 27-14 (7)	VOC	13.46	2.37
		BZ	3.61	0.75
27-15	IFR Tank 27-15 (7)	voc	13.49	3.14
		BZ	3.66	0.90
80-4	IFR Tank 80-4 (7)	voc	8.16	6.12
		BZ	2.43	1.71
80-7	IFR Tank 80-7 (7)	voc	9.30	5.18
		BZ	2.59	1.56
		H ₂ S	0.03	0.07
80-10	IFR Tank 80-10 (7)	voc	8.48	4.14
		BZ	2.34	1.31
		H ₂ S	0.03	0.08
80-12	IFR Tank 80-12 (7)	voc	8.34	2.82
		BZ	2.25	0.99
		H ₂ S	0.02	0.05
80-43	IFR Tank 80-43 (7)	voc	8.24	4.02
		BZ	2.33	1.28
80-44	IFR Tank 80-44 (7)	voc	8.24	4.02
		BZ	2.33	1.28
80-45	IFR Tank 80-45 (7)	voc	8.22	3.48
		BZ	2.30	1.17

80-46	IFR Tank 80-46 (7)	voc	8.24	4.02
		BZ	2.33	1.28
100-47	IFR Tank 100-47 (7)	VOC	7.58	5.76
		BZ	2.25	1.70
100-48	IFR Tank 100-48 (7)	VOC	7.58	5.76
		BZ	2.25	1.70
100-49	IFR Tank 100-49 (7)	VOC	7.56	5.12
		BZ	2.21	1.58
100-54	IFR Tank 100-54 (7)	VOC	7.54	4.43
		BZ	2.17	1.43
		H ₂ S	0.01	0.05
100-55	IFR Tank 100-55 (7)	VOC	7.58	5.91
		BZ	2.26	1.74
		H ₂ S	0.03	0.07
150-9	IFR Tank 150-9 (7)	VOC	6.58	4.83
		BZ	1.87	1.64
		H ₂ S	0.01	0.11
150-40	IFR Tank 150-40 (7)	VOC	6.30	6.27
		BZ	1.95	1.94
150-41	IFR Tank 150-41 (7)	VOC	6.30	6.27
		BZ	1.95	1.94
150-42	IFR Tank 150-42 (7)	VOC	6.25	4.55
		BZ	1.84	1.58
200-8	IFR Tank 200-8 (7)	VOC	6.10	8.75
		BZ	1.88	2.54

		H ₂ S	0.06	0.16
200-11	IFR Tank 200-11 (7)	VOC	6.47	12.59
		BZ	2.12	3.33
		H ₂ S	0.06	0.16
200-51	IFR Tank 200-51 (7)	VOC	5.46	5.19
		BZ	1.66	1.80
		H ₂ S	0.03	0.09
200-53	IFR Tank 200-53 (7)	VOC	5.49	6.30
		BZ	1.73	2.04
		H ₂ S	0.03	0.09
250-50	IFR Tank 250-50 (7)	VOC	5.16	7.86
		BZ	1.72	2.48
		H ₂ S	0.05	0.12
250-52	IFR Tank 250-52 (7)	VOC	5.20	9.14
		BZ	1.80	2.73
		H ₂ S	0.05	0.12
260-5	IFR Tank 260-5 (7)	VOC	6.99	6.50
		BZ	1.81	2.82
		H ₂ S	0.04	0.11
260-6	IFR Tank 260-6 (7)	VOC	6.83	5.70
		BZ	1.73	2.55
		H ₂ S	0.05	0.13
300-1	IFR Tank 300-1 (7)	VOC	8.59	6.92
		BZ	1.72	2.97
		H₂S	0.05	0.14
300-2	IFR Tank 300-2 (7)	VOC	8.81	6.51

		BZ	1.72	2.87
		H ₂ S	0.05	0.13
300-3	IFR Tank 300-3 (7)	VOC	8.95	7.43
		BZ	1.80	3.15
		H ₂ S	0.06	0.16
300-4	IFR 300-4 Tank (7)	VOC	8.90	7.32
		BZ	1.79	3.12
		H ₂ S	0.06	0.16
300-21	IFR Tank 300-21 (7)	VOC	8.59	6.92
		BZ	1.72	2.97
		H ₂ S	0.09	0.23
300-22	IFR Tank 300-22 (7)	voc	8.70	7.66
		BZ	1.78	3.20
		H ₂ S	0.05	0.14
TH-501	IFR Tank TH-501 (7)	VOC	10.34	2.75
		BZ	2.83	0.71
TH-502	IFR Tank TH-502 (7)	VOC	10.32	2.15
		BZ	2.79	0.59
IFR Hourly an	d Annual Tank Compliance Caps	VOC	278.34(8)	177.60 (10)
		BZ	34.53(9)	8.64 (11)
MSS Operation	ons			1
MSS-1	IFR and FR Hourly and Annual Maintenance, Start-up, Shutdown	VOC	243.12	24.59(13)
	(MSS) Compliance Caps	BZ	59.82(12)	6.91(14)
		H ₂ S (17)	127.97(18)	4.68 (19)
PORTVC	Portable Vapor Combustors	VOC	180.74	(13)
	Thermal Oxidizer	BZ	29.30	(14)

	1		1	
		NO _x	1.80	4.99
		СО	23.16	9.96
		РМ	0.68	0.93 (16)
		PM ₁₀	0.68	0.93 (16)
		PM _{2.5}	0.68	0.93 (16)
		SO ₂	46.65	15.00 (16)
		H ₂ S	0.12	(17)
Domed External	Floating Roof (DEFR) Tanks			I
390-6001	DEFR Tank 390-6001 (16)	VOC	7.88	
		BZ	0.09	
		H ₂ S	0.32	
390-6002	DEFR Tank 390-6002 (15)	VOC	7.88	
		BZ	0.09	
		H ₂ S	0.32	
390-6003	DEFR Tank 390-6003 (15)	VOC	7.88	
		BZ	0.09	
		H ₂ S	0.32	
390-6004	DEFR Tank 390-6004 (15)	voc	7.88	
		BZ	0.09	
		H ₂ S	0.32	
390-6001, 390-	DEFR Annual CAPs (15)	voc		18.97
6002, 390-6003, 390-6004		BZ		0.19
		H ₂ S		0.31
	1			

VCT-1	Vapor Combustor (VC) for product change of service roof landings and	VOC	3.13	0.96
VCT-2	MSS Activities of DEFR Tanks (15)	BZ	0.04	<0.01
VCT-3		NO _x	6.88	1.73
		СО	12.51	3.85
		PM	0.47	0.14
		PM ₁₀	0.47	0.14
		PM _{2.5}	0.47	0.14
		H ₂ S	0.08	<0.01
		SO ₂	152.51	3.20
TKS-MSS	DEFR Tank MSS – Forced	voc	8.15	0.54
	Ventilation, Sludge Removal/Vacuum, Truck Venting	BZ	0.10	<0.01
	(15)	H ₂ S	0.28	<0.01
Fugitives		- I		
FUG 100	100 Manifold Fugitives (5)	VOC	1.19	5.15
		BZ	0.17	0.71
		H ₂ S	0.05	0.18
FUG 300	300 Manifold Fugitives (5)	VOC	0.22	0.90
		BZ	0.18	0.72
		H ₂ S	0.01	0.03
FUG 500	500 Manifold Fugitives (5)	voc	0.25	1.08
		BZ	0.17	0.71
FUG 900	900 Manifold Fugitives (5) (15)	VOC	0.44	1.90
		BZ	<0.01	0.02
		H ₂ S	0.02	0.03
FUG 800	800 Manifold Fugitives (5)	VOC	0.20	0.84
		BZ	0.17	0.71

FUG 700	700 Manifold Fugitives (5)	VOC	0.77	3.37
		BZ	0.17	0.71
Annual Fugitives Compliance Caps		voc	-	11.34
		BZ	-	1.00
Loading Opera	tions and Fugitives		<u>'</u>	1
TR-1	Truck Loading Rack 1/2	VOC	1.05	1.06
		BZ	0.25	0.21
		H ₂ S	0.04	0.03
MVC-1A / MVC- 1B / MVC-1C	MVC Inerted Ship Loading (15)	VOC	4.84	4.29
IB/WVC-IC		BZ	0.14	0.04
		NO _x	15.75	9.91
		СО	24.23	9.91
		PM	0.90	0.59
		PM ₁₀	0.90	0.59
		PM _{2.5}	0.90	0.59
		H ₂ S	0.08	<0.01
		SO ₂	147.86	3.78
MVC-2	Marine Vapor Combustor (MVC) Inerted Ship and Barge Loading (15)	VOC	2.26	
	merica Ship and Barge Loading (13)	BZ	0.03	
		NO _x	8.99	
		СО	16.35	
		PM	0.52	
		PM ₁₀	0.52	
		PM _{2.5}	0.52	
		H ₂ S	0.05	
		SO ₂	101.33	

MVC-3A	MVC Inerted Ship and Barge	VOC	2.26	
	Loading (15)	BZ	0.03	
		NO _x	8.99	
		СО	16.35	
		PM	0.52	
		PM ₁₀	0.52	
		PM _{2.5}	0.52	
		H ₂ S	0.05	
		SO ₂	101.33	
MVC-3B	MVC Inerted Ship and Barge Loading (15)	VOC	2.26	
	Loading (13)	BZ	0.03	
		NO _x	8.99	
		СО	16.35	
		РМ	0.52	
		PM ₁₀	0.52	
		PM _{2.5}	0.52	
		H ₂ S	0.05	
		SO ₂	101.33	
MVC-4A	MVC Inerted Ship and Barge Loading (15)	VOC	2.28	
	Loading (13)	BZ	0.03	
		NO _x	8.12	
		СО	14.76	
		PM	0.55	
		PM ₁₀	0.55	
		PM _{2.5}	0.55	
		H ₂ S	0.05	

		SO ₂	101.33	
MVC-4B	MVC Inerted Ship and Barge Loading (15)	VOC	2.28	
	Loading (13)	BZ	0.03	
		NO _x	8.12	
		СО	14.76	
		PM	0.55	
		PM ₁₀	0.55	
		PM _{2.5}	0.13 0.11 40.17 30.95	
		H ₂ S	0.05	
		SO ₂	101.33	
MVC-2, MVC-3A, MVC-3B, MVC-	MVCs Inerted Ship and Barge Loading hourly and annual CAPs (15)	VOC	10.21	12.27
4A, & MVC-4B		BZ	0.13	0.11
		NO _x	40.17	30.95
		СО	73.04	68.77
		PM	2.48	2.56
		PM ₁₀	2.48	2.56
		PM _{2.5}	2.48	2.56
		H ₂ S	0.05	0.02
		SO ₂	101.33	37.63
LDFUG1A	Ship Dock 1A Uncaptured Fugitives	voc	5.19	5.58
		BZ	0.07	0.06
		H ₂ S	0.09	<0.01
FUG MVC	MVC Fugitive Area (5)	voc	0.02	0.07
		BZ	<0.01	<0.01
SD-6, SD-7	Ship Dock 6, Ship Dock 7	VOC	0.08	0.03

ATM M-LOAD	Uncontrolled Marine loading of products with VP < 0.5 psia	VOC	13.49	4.88
RCR-1	Railcar Rack 1	voc	1.01	4.41
		H ₂ S	0.05	0.15
FUG 200	200 Manifold Fugitives (5)	voc	0.80	3.41
		BZ	0.08	0.28
		H ₂ S	0.04	0.12
FUG 400	400 Manifold Fugitives (5)	VOC	0.99	4.31
		BZ	0.07	0.26
		H ₂ S	0.05	0.15
KILGORE	Kilgore Equipment Fugitives (5)	VOC	0.02	0.06
		BZ	0.01	0.01
		H ₂ S	<0.01	<0.01
PR FUG	PR FUG Equipment Fugitive Area (5)	VOC	0.15	0.62
		BZ	0.02	0.06
		H ₂ S	0.01	0.02
FUG SD-1	Ship Dock 1 Fugitive Area (5)	VOC	0.11	0.47
		BZ	0.01	0.05
		H ₂ S	0.01	0.02
FUG SD-1A	Ship Dock 1A Fugitive Area (5)	VOC	0.03	0.14
		BZ	<0.01	<0.01
		H ₂ S	<0.01	<0.01
FUG SD-4/5	Ship Dock 4/5 Fugitive Area (5)	voc	0.11	0.47
		BZ	0.01	0.05
		H ₂ S	0.01	0.02
FUG SD-6/7	Ship Dock 6/7 Fugitive Area (5)	voc	0.11	0.44
		BZ	0.01	0.03

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		H ₂ S	0.01	0.02
FUG SD-8/9	Ship Dock 8/9 Fugitive Area (5)	VOC	0.11	0.44
		BZ	0.01	0.04
		H ₂ S	0.01	0.02
FUG BD-D	Barge Dock D Fugitive Area (5)	VOC	0.11	0.47
		BZ	0.01	0.05
		H ₂ S	0.01	0.02
FUG RCR-1	Railcar Rack Equipment Fugitives (5)	VOC	0.07	0.26
		H ₂ S	<0.01	0.01
FUG TR-1/2	Truck Rack Equipment Fugitives (5)	VOC	0.06	0.21
		BZ	0.02	0.02
		H ₂ S	<0.01	<0.01
FUG LOAD	Inerted Ship and Barge Loading Fugitives (15)	VOC	13.13	11.33
		BZ	0.18	0.11
		H ₂ S	0.53	0.18
Individual Tanl	(S			1
80-62	IFR Tank 80-62	VOC	8.57	3.32
		H ₂ S	0.01	0.02
80-64	IFR Tank 80-64	VOC	8.57	3.33
		H ₂ S	0.01	0.02
100-60	IFR Tank 100-60	VOC	8.07	4.80
		H ₂ S	0.02	0.04
100-61	IFR Tank 100-61	VOC	8.07	4.80
		H ₂ S	0.02	0.04
100-63	IFR Tank 100-63	VOC	8.07	4.80
		H ₂ S	0.02	0.04

175-59	IFR Tank 175-59	voc	7.73	2.54
		H ₂ S	0.02	0.03
200-20	IFR Tank 200-20	VOC	9.66	4.06
		H ₂ S	0.02	0.05
200-56	IFR Tank 200-56 (6)	VOC	7.05	3.21
		H ₂ S	0.09	0.03
200-57	IFR Tank 200-57 (6)	VOC	7.05	3.21
		H ₂ S	0.09	0.03
200-58	IFR Tank 200-58 (6)	VOC	7.05	3.21
		H ₂ S	0.09	0.03
390-23	IFR Tank 390-23 (6)	VOC	7.74	4.38
		H ₂ S	0.01	0.04
390-24	IFR Tank 390-24	VOC	7.74	4.38
		H ₂ S	0.02	0.04
390-25	IFR Tank 390-25	VOC	7.78	5.60
		H ₂ S	0.03	0.08
390-26	IFR Tank 390-26	VOC	7.95	6.06
		H ₂ S	0.03	0.08
390-27	IFR Tank 390-27	VOC	8.92	10.72
		H ₂ S	0.03	0.08
390-30	IFR Tank 390-30	VOC	8.23	5.25
		H ₂ S	0.02	0.02
390-31	IFR Tank 390-31	VOC	7.74	4.54
		H ₂ S	0.03	0.06
390-32	IFR Tank 390-32	VOC	8.23	5.25
		H ₂ S	0.02	0.02

390-33	IFR Tank 390-33	voc	7.74	4.54
		H ₂ S	0.03	0.06
390-34	IFR Tank 390-34	voc	8.23	4.90
		H₂S	0.02	0.02

- (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

BZ - benzene

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

PM - total particulate matter, suspended in the atmosphere, including PM_{10} 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

 $\begin{array}{ccc} \text{CO} & & \text{- carbon monoxide} \\ \text{H}_2 \text{S} & & \text{- hydrogen sulfide} \end{array}$

- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (6) Emission rates were calculated based on the permit by rule requirements at the time of submittal to Texas Commission on Environmental Quality (TCEQ); i.e., only VOC emissions are quantified. Estimated rates of benzene emissions from these sources would be based on the 'Emissions of Crude Oil and Refinery Petroleum Fractions Containing Less Than 10 percent Benzene,' defined in Table 478 of 30 TAC § 106.478.
- (7) The Hourly and Annual Tank Caps apply to the total emissions from the combined operations of these tanks.
- (8) Hourly Tank VOC Cap [VOC Cap (lb/hr)] Applicable only to the hourly VOC emissions from routine operations of the permitted sources indicated in (7). This cap includes the BZ cap (lb/hr) defined in (9) but does not authorize emissions of this constituent greater than its specified cap.
- (9) <u>Hourly Tank Benzene Cap [BZ Cap (lb/hr)]</u> A subcap of the VOC Cap (lb/hr). Applicable only to the hourly benzene emissions from the routine operations of the permitted sources indicated in (7).
- (10) Annual Tank VOC Cap [VOC Cap (TPY)] Applicable only to the annual VOC emissions from (a) the routine operations of the permitted sources indicated in (7) and (b), the MSS operations authorized by the MSS VOC Cap (TPY). The VOC Cap (TPY) includes the BZ Cap (TPY) defined in (11) but does not authorize emissions of this constituent greater than its specified cap.
- (11) <u>Annual Tank Benzene Cap [BZ cap (TPY)]</u> A subcap of the VOC Cap (TPY). Applicable only to the annual benzene emissions from (a) the routine operations of the permitted sources indicated by (7), and (b) the MSS operations included in the MSS BZ Cap (TPY).

- (12) Hourly MSS BZ Cap [MSS BZ Cap (lb/hr)] A subcap of the MSS VOC Cap (lb/hr), separate from the BZ Cap (lb/hr) defined in (9). Applicable only to the total benzene emissions from (a) those activities listed in Attachments A, B, and C of the permit special conditions, (b) the standing idle, re-filling, and de-gassing periods of the roof landing operations conducted for any combination of IFR vessels authorized by this permit. This cap's maximum value (59.82 lb/hr) is based on the worst-case emission scenario for benzene.
- (13) Annual MSS VOC Cap [MSS VOC Cap (TPY)] A subcap of the VOC Cap (TPY), applicable only to the annual VOC emissions from the authorized MSS operations, including (a) those activities listed in Attachments A, B, and C of the permit special conditions, (b) those associated with tank roof landings of the permitted sources, and (c) the VCs used to control these emissions.
- (14) Annual MSS BZ Cap [MSS BZ Cap (TPY)] A subcap (not contained in the MSS VOC Cap (TPY)) of the BZ cap (TPY) defined in (11). Applicable only to the annual benzene emissions from (a) those activities listed in Attachments A, B, and C of the permit special conditions, (b) the standing idle, re-filling and de-gassing periods of the roof landing operations conducted for any combination of IFR vessels authorized by this permit, and (c) the VCs used to control these emissions.
- (15) Benzene emissions are also included in the VOC rates for this EPN.
- (16) Annual emissions of SO_2 , PM, PM₁₀, and PM_{2.5} are based on multiple PORTVCs operating at a combined total of 7,800 hrs/yr
- (17) Annual H₂S emissions from EPN PORTVC are included under EPN MSS-1
- (18) Hourly MSS H2S Cap [MSS H2S Cap (lb/hr)] applicable only to the total H2S emissions in the current permit from activities listed in Attachments A, B, and C of the permit special conditions. This cap's maximum value for crude oil/condensate is based on the maximum VOC emissions determined by the equation in Special Condition No. 28 with use of 0.80 as the value of the specified factor (note: the value of the factor in Special Condition No. 28, i.e., 0.75, is applicable only to re-fill emissions). Also, refer to MAERT footnote (12).
- (19) Annual MSS H₂S Cap [MSS H₂S Cap (TPY)] applicable only to the annual H₂S emissions from the authorized MSS operations in the current permit, including activities listed in Attachments A, B, and C of the permit special conditions.

Dated: February 16, 2022