

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 8404, PSDTX1062M1, and PSDTX1534

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)
VDCU1	Delayed Coking Unit 1 Vent	VOC	55.00	34.38
		PM	1.76	1.10
		PM ₁₀	1.76	1.10
		PM _{2.5}	1.76	1.10
		SO ₂	0.02	0.01
		H ₂ S	3.63	2.27
FKCRU4	CRU 4 Cooling Tower (5)	VOC	0.04	0.16
		Benzene	0.01	0.01
		Chlorine	0.06	0.27
FKFCCU1&2	Alky Cooling Tower (5)	VOC	1.49	6.53
		Benzene	0.01	0.01
		Chlorine	0.18	0.81
FKFCCU3	FCCU 3 Cooling Tower (5)	VOC	4.41	19.32
		Benzene	0.01	0.01
		Chlorine	0.54	2.38
FK33PH	No. 33PH East Cooling Tower (5)	VOC	0.09	0.41
		Benzene	0.01	0.01
		Chlorine	0.04	0.18
FKDCU1	DCU 1 Cooling Tower (5)	VOC	0.06	0.28
		Benzene	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

		Chlorine	0.11	0.48
		PM	0.47	2.07
		PM ₁₀	0.39	1.73
		PM _{2.5}	0.01	0.01
FK33PH	No. 33PH West Cooling Tower (5)	VOC	0.02	0.10
		Benzene	0.01	0.01
		Chlorine	0.04	0.18
FKMPU4	MPU No. 4 Cooling Tower (5)	VOC	0.07	0.29
		Benzene	0.01	0.01
		Chlorine	0.11	0.50
FKHTU1&2	HTU No. 1 and 2 Cooling Tower (5)	VOC	0.03	0.14
		Benzene	0.01	0.01
		Chlorine	0.05	0.20
FKHTU3	HTU No. 3 Cooling Tower (5)	VOC	0.01	0.04
		Benzene	0.01	0.01
		Chlorine	0.02	0.07
FKMPU3	MPU No. 3 Cooling Tower (5)	VOC	0.07	0.29
		Benzene	0.01	0.01
		Chlorine	0.11	0.50
FKHTU5	HTU5 Cooling Tower (5)	VOC	0.28	1.25
		PM	0.15	0.66
		PM ₁₀	0.13	0.55
		PM _{2.5}	0.01	0.01
FKVPS1	VPS No. 1 Cooling Tower (5)	VOC	0.02	0.08
		Benzene	0.01	0.01
		Chlorine	0.03	0.14

Emission Sources - Maximum Allowable Emission Rates

FKVPS2	VPS No. 2 Cooling Tower (5)	VOC	1.09	4.78
		Benzene	0.01	0.01
		Chlorine	0.13	0.59
FKVPS4	VPS No. 4 Cooling Tower (5)	VOC	1.05	4.60
		Benzene	0.01	0.01
		Chlorine	0.13	0.57
Combustion Sources				
SFCCU3-2	FCCU No. 3 Regenerator	NO _x	149.00	256.09
		VOC	20.63	90.35
		SO ₂	299.00	208.28
		CO	415.87	1,821.49
		PM	71.17	311.71
		PM ₁₀	71.17	311.71
		PM _{2.5}	71.17	311.71
		HCN	53.30	233.47
SCRU4-1	Combined Heater Stack **	NO _x	47.47	178.23
		VOC	4.27	16.02
		SO ₂	29.47	65.84
		CO	65.16	244.63
		PM	5.90	22.13
		PM ₁₀	5.90	22.13
		PM _{2.5}	5.90	22.13
SCDHDS1	CDHDS1 Heater	NO _x	4.38	14.06
		VOC	0.39	1.26
		SO ₂	2.72	5.19
		CO	6.00	19.30

Emission Sources - Maximum Allowable Emission Rates

		PM	0.54	1.75
		PM ₁₀	0.54	1.75
		PM _{2.5}	0.54	1.75
SFCCU3-1	FCCU 3 Charge Heater	NO _x	9.91	25.31
		VOC	0.89	2.27
		SO ₂	6.15	9.35
		CO	13.60	34.74
		PM	1.23	3.14
		PM ₁₀	1.23	3.14
		PM _{2.5}	1.23	3.14
SHCU1-1	HCU No. 1 Reactor No.1 Heater	NO _x	4.20	15.77
		VOC	0.28	1.06
		SO ₂	1.96	4.37
		CO	4.32	16.23
		PM	0.39	1.47
		PM ₁₀	0.39	1.47
		PM _{2.5}	0.39	1.47
SHCU1-2	HCU No. 1 Reactor No.2 Heater	NO _x	5.32	19.97
		VOC	0.36	1.35
		SO ₂	2.48	5.53
		CO	5.48	20.56
		PM	0.50	1.86
		PM ₁₀	0.50	1.86
		PM _{2.5}	0.50	1.86
SHCU1-3	HCU No. 1 Preflash Boiler	NO _x	7.19	26.98
		VOC	0.48	1.82

Emission Sources - Maximum Allowable Emission Rates

		SO ₂	3.35	7.48
		CO	7.40	27.77
		PM	0.67	2.51
		PM ₁₀	0.67	2.51
		PM _{2.5}	0.67	2.51
SHCU1-4	HCU No. 1 Fractionator Boiler	NO _x	7.20	31.54
		VOC	0.49	2.13
		SO ₂	3.35	8.74
		CO	7.41	32.46
		PM	0.67	2.94
		PM ₁₀	0.67	2.94
		PM _{2.5}	0.67	2.94
SHTU1-1	HTU No. 1 Charge Heater	NO _x	2.45	9.20
		VOC	0.22	0.83
		SO ₂	1.52	3.40
		CO	3.36	12.62
		PM	0.30	1.14
		PM ₁₀	0.30	1.14
		PM _{2.5}	0.30	1.14
SHTU2-1	HTU No. 2 Charge Heater	NO _x	3.78	14.19
		VOC	0.34	1.28
		SO ₂	2.35	5.24
		CO	5.19	19.48
		PM	0.47	1.76
		PM ₁₀	0.47	1.76
		PM _{2.5}	0.47	1.76

Emission Sources - Maximum Allowable Emission Rates

SHTU2-2	HTU No. 2 Reboiler	NO _x	2.94	11.04
		VOC	0.26	0.99
		SO ₂	1.83	4.08
		CO	4.04	15.15
		PM	0.37	1.37
		PM ₁₀	0.37	1.37
		PM _{2.5}	0.37	1.37
SHTU3-1	HTU No. 3 Charge Heater	NO _x	4.21	15.79
		VOC	0.38	1.42
		SO ₂	2.61	5.83
		CO	5.77	21.68
		PM	0.52	1.96
		PM ₁₀	0.52	1.96
		PM _{2.5}	0.52	1.96
SHTU3-2	HTU No. 3 Reboiler	NO _x	4.23	14.48
		VOC	0.38	1.30
		SO ₂	2.62	5.35
		CO	5.80	19.87
		PM	0.53	1.80
		PM ₁₀	0.53	1.80
		PM _{2.5}	0.53	1.80
SHTU4-1	CHGE Heater 1	NO _x	3.83	9.15
		VOC	0.21	0.49
		SO ₂	1.43	2.03
		CO	3.15	7.54
		PM	0.29	0.68

Emission Sources - Maximum Allowable Emission Rates

		PM ₁₀	0.29	0.68
		PM _{2.5}	0.29	0.68
SHTU4-2	CHGE Heater 2	NO _x	3.83	9.15
		VOC	0.21	0.49
		SO ₂	1.43	2.03
		CO	3.15	7.54
		PM	0.29	0.68
		PM ₁₀	0.29	0.68
		PM _{2.5}	0.29	0.68
SHTU4-3	Reboiler Heater	NO _x	2.33	6.66
		VOC	0.16	0.45
		SO ₂	1.09	1.84
		CO	2.40	6.85
		PM	0.22	0.62
		PM ₁₀	0.22	0.62
		PM _{2.5}	0.22	0.62
SHTU4-4	Recycle Gas Heater	NO _x	8.22	28.17
		VOC	0.55	1.90
		SO ₂	3.83	7.81
		CO	8.46	29.00
		PM	0.77	2.62
		PM ₁₀	0.77	2.62
		PM _{2.5}	0.77	2.62
SHTU5	HTU5 Heater	NO _x	2.46	9.22
		VOC	0.38	1.42

Emission Sources - Maximum Allowable Emission Rates

		SO ₂	2.61	5.84
		CO	2.56	9.62
		PM	0.52	1.96
		PM ₁₀	0.52	1.96
		PM _{2.5}	0.52	1.96
SLCDU1-1	LCDU Charge Heater	NO _x	2.12	7.28
		VOC	0.19	0.65
		SO ₂	1.32	2.69
		CO	2.91	9.99
		PM	0.26	0.90
		PM ₁₀	0.26	0.90
		PM _{2.5}	0.26	0.90
SLCDU1-2	LCDU Reactor Heater	NO _x	2.59	9.72
		VOC	0.23	0.87
		SO ₂	1.61	3.59
		CO	3.55	13.35
		PM	0.32	1.21
		PM ₁₀	0.32	1.21
		PM _{2.5}	0.32	1.21
SMPU3-1	MPU Refined Oil Mix Heater	NO _x	3.31	12.61
		VOC	0.22	0.85
		SO ₂	1.54	3.49
		CO	3.41	12.99
		PM	0.31	1.17
		PM ₁₀	0.31	1.17
		PM _{2.5}	0.31	1.17

Emission Sources - Maximum Allowable Emission Rates

SMPU3-2	MPU No. 3 Extract Heater	NO _x	8.94	34.02
		VOC	0.60	2.29
		SO ₂	4.16	9.43
		CO	9.20	35.02
		PM	0.83	3.17
		PM ₁₀	0.83	3.17
		PM _{2.5}	0.83	3.17
SMPU4	MPU 4 Secondary Heater Stack	NO _x	4.24	16.57
		VOC	0.29	1.12
		SO ₂	1.97	4.59
		CO	4.36	17.06
		PM	0.39	1.54
		PM ₁₀	0.39	1.54
		PM _{2.5}	0.39	1.54
SMPU4C	MPU No 4 Extract Heater	NO _x	9.07	39.74
		VOC	0.61	2.68
		SO ₂	4.22	11.01
		CO	9.34	40.90
		PM	0.84	3.70
		PM ₁₀	0.84	3.70
		PM _{2.5}	0.84	3.70
SCDHydro/SCHDS2	CDHydro/CDHDS2 Heater	NO _x	3.67	13.05
		VOC	0.50	1.76
		SO ₂	3.42	7.23
		CO	7.56	26.87
		PM	0.68	2.43

Emission Sources - Maximum Allowable Emission Rates

		PM ₁₀	0.68	2.43
		PM _{2.5}	0.68	2.43
SHCU1-5	HCU No. 1 Prefractionator Heater	NO _x	0.93	3.50
		VOC	0.25	0.94
		SO ₂	1.74	3.88
		CO	3.84	14.43
		PM	0.35	1.31
		PM ₁₀	0.35	1.31
		PM _{2.5}	0.35	1.31
SDCU1-1	Coker Heater No.1	NO _x	17.56	65.42
		VOC	1.18	4.41
		SO ₂	8.17	18.12
		CO	18.07	67.34
		PM	1.64	6.09
		PM ₁₀	1.64	6.09
		PM _{2.5}	1.64	6.09
SDCU1-2	Coker Heater No.2	NO _x	17.56	65.42
		VOC	1.18	4.41
		SO ₂	8.17	18.12
		CO	18.07	67.34
		PM	1.64	6.09
		PM ₁₀	1.64	6.09
		PM _{2.5}	1.64	6.09
SHTU3-3	HTU No.3 Hydrogen Heater	NO _x	0.70	2.63
		VOC	0.13	0.47
		SO ₂	0.87	1.94

Emission Sources - Maximum Allowable Emission Rates

		CO	1.92	7.21
		PM	0.17	0.65
		PM ₁₀	0.17	0.65
		PM _{2.5}	0.17	0.65
SVPS2-1	VPS No.2 Common Heater Stack ***	NO _x	13.52	50.37
		VOC	1.82	6.79
		SO ₂	12.59	27.91
		CO	27.84	103.70
		PM	2.52	9.38
		PM ₁₀	2.52	9.38
		PM _{2.5}	2.52	9.38
SVPS2-2	VPS No. 2, No. 4 Atmospheric Heater	NO _x	2.80	10.51
		VOC	0.38	1.42
		SO ₂	2.61	5.82
		CO	5.76	21.64
		PM	0.52	1.96
		PM ₁₀	0.52	1.96
		PM _{2.5}	0.52	1.96
SVPS4-1	VPS No. 4, No. 3 Atmospheric Heater	NO _x	8.40	36.79
		VOC	0.75	3.31
		SO ₂	5.22	13.59
		CO	11.53	50.50
		PM	1.04	4.57
		PM ₁₀	1.04	4.57
		PM _{2.5}	1.04	4.57
SVPS4-4	VPS No. 4 Naphtha Splitter Reboiler	NO _x	3.48	15.24

Emission Sources - Maximum Allowable Emission Rates

		VOC	0.31	1.37
		SO ₂	2.16	5.63
		CO	4.78	20.92
		PM	0.43	1.89
		PM ₁₀	0.43	1.89
		PM _{2.5}	0.43	1.89
SVPS4-2	Atmospheric Heater No. 1 (7)	NO _x	10.50	---
		VOC	0.94	---
		SO ₂	6.52	---
		CO	14.41	---
		PM	1.30	---
		PM ₁₀	1.30	---
		PM _{2.5}	1.30	---
SVPS4-3	Atmospheric Heater No. 2 (7)	NO _x	10.50	---
		VOC	0.94	---
		SO ₂	6.52	---
		CO	14.41	---
		PM	1.30	---
		PM ₁₀	1.30	---
		PM _{2.5}	1.30	---
SVPS4-5	Vacuum Heater No. 1	NO _x	8.70	---
		VOC	0.78	---
		SO ₂	5.40	---
		CO	11.94	---
		PM	1.08	---
		PM ₁₀	1.08	---

Emission Sources - Maximum Allowable Emission Rates

		PM _{2.5}	1.08	---
SVPS4-6	Vacuum Heater No. 2	NO _x	8.70	---
		VOC	0.78	---
		SO ₂	5.40	---
		CO	11.94	---
		PM	1.08	---
		PM ₁₀	1.08	---
		PM _{2.5}	1.08	---
SVPS4-7	Combined Heater Stack (7) (8)	NO _x	39.36	165.80
		VOC	3.54	15.49
		SO ₂	24.44	63.68
		CO	54.02	236.62
		PM	4.89	21.41
		PM ₁₀	4.89	21.41
		PM _{2.5}	4.89	21.41
Loading Operations				
FLR39	Loading Rack No. 39	VOC	0.44	0.34
Storage Tanks				
TK1945	Storage Tank No. 1945	VOC	3.88	5.33
		Benzene	0.01	0.01
TK2040	Storage Tank No. 2040	VOC	1.82	1.87
TK2041	Tank 2041	VOC	6.58	6.64
TAL35144	Fresh Caustic	VOC	0.01	0.01
TAL35140	Fresh Sulfuric Acid Tank	H ₂ SO ₄	0.29	0.02
TAL35141	Fresh Sulfuric Acid Tank	H ₂ SO ₄	0.29	0.02
TFT12824	Storage Tank No. 12824	VOC	29.10	0.23

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.03	0.01
TML01247	Storage Tank No. 1247	VOC	5.08	8.87
		Benzene	0.01	0.01
TML01248	Storage Tank No. 1248	VOC	6.16	8.48
		Benzene	0.01	0.01
TML01250	Storage Tank No. 1250	VOC	5.63	7.33
		Benzene	0.01	0.01
TML01251	Storage Tank No. 1251	VOC	0.2	2.42
		Benzene	0.01	0.01
TML01252	Storage Tank No. 1252	VOC	6.17	7.03
		Benzene	0.01	0.01
TML01254	Storage Tank No. 1254	VOC	5.89	7.06
		Benzene	0.01	0.01
TML01490	Storage Tank No. 1490	VOC	1.33	5.31
		Benzene	0.01	0.02
TML01524	Storage Tank No. 1524	VOC	4.59	7.22
TML01525	Storage Tank No. 1525	VOC	3.28	2.49
		Benzene	0.01	0.01
TML01526	Storage Tank No. 1526	VOC	6.95	9.50
TML01663	Storage Tank No. 1663	VOC	6.94	5.27
		Benzene	0.01	0.01
TML01698	Storage Tank No. 1698	VOC	4.83	13.04
		Benzene	0.01	0.01
TML01699	Storage Tank No. 1699	VOC	4.82	10.44
		Benzene	0.01	0.01
TML01767	Storage Tank No. 1767	VOC	0.90	4.04

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.01	0.03
TML01768	Storage Tank No. 1768	VOC	0.89	3.77
		Benzene	0.01	0.03
TML01904	Storage Tank No. 1904	VOC	5.91	7.73
		Benzene	0.01	0.01
TML19272	Storage Tank No. 19272	VOC	5.52	5.76
		Benzene	0.01	0.01
TP108874	Storage Tank No. 8874	VOC	1.02	0.54
TP301697	Storage Tank No. 1697	VOC	2.13	1.55
TST01475	Storage Tank No. 1475	VOC	0.52	0.69
TST01510	Storage Tank No. 1510	VOC	1.36	4.87
		Benzene	0.01	0.02
TST01511	Storage Tank No. 1511	VOC	1.71	5.16
		Benzene	0.01	0.02
TST01552	Storage Tank No. 1552	VOC	14.24	4.71
TST01553	Storage Tank No. 1553	VOC	1.74	5.21
		Benzene	0.01	0.02
TST01600	Storage Tank No. 1600	VOC	2.55	2.42
TST01601	Storage Tank No. 1601	VOC	1.67	5.28
		Benzene	0.01	0.01
TST01671	Storage Tank No. 1671	VOC	0.81	2.55
		Benzene	0.01	0.02
TST01679	Storage Tank No. 1679	VOC	4.37	4.37
TST01712	Storage Tank No. 1712	VOC	1.75	4.04
TST01718	Storage Tank No. 1718	VOC	9.5	2.05
TST01719	Storage Tank No. 1719	VOC	9.5	2.05

Emission Sources - Maximum Allowable Emission Rates

TST01775	Storage Tank No.1775	VOC	0.99	4.14
		Benzene	0.01	0.02
TST01787	Storage Tank No. 1787	VOC	2.85	2.47
TST01885	Storage Tank No. 1885	VOC	0.80	4.03
		Benzene	0.01	0.02
TST01886	Storage Tank No. 1886	VOC	2.12	8.70
		Benzene	0.01	0.06
TST01893	Storage Tank No. 1893	VOC	5.36	6.67
TST01894	Storage Tank No. 1894	VOC	4.55	7.91
TST01895	Storage Tank No. 1895	VOC	1.17	4.04
		Benzene	0.01	0.02
TST01913	Storage Tank No. 1913	VOC	0.66	2.61
		Benzene	0.01	0.02
TST01920	Storage Tank No. 1920	VOC	1.04	3.18
		Benzene	0.01	0.01
TST01932	Storage Tank No. 1932	VOC	3.17	1.73
TST01933	Storage Tank No. 1933	VOC	3.17	1.73
TST01934	Storage Tank No. 1934	VOC	3.17	1.73
TK2140	Storage Tank 2140	VOC	0.01	0.01
TK2127	Storage Tank 2127	VOC	51.98	3.41
TST19194	Storage Tank No. 19194	VOC	1.09	4.87
		Benzene	0.01	0.03
TST21657	Storage Tank No. 21657	VOC	4.37	4.29
TST21774	Storage Tank No. 21774	VOC	4.82	5.92
TST21775	Storage Tank No. 21775	VOC	4.82	4.36
TVA01820	Storage Tank 1820	VOC	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

TVA01821	Storage Tank 1821	VOC	4.25	0.64
TNKGRP2	Tank Group (6)	VOC	190.4	161.75
		Benzene	0.18	0.29
		H ₂ SO ₄	0.59	0.03
Vents				
SCRU4-2	Regen Vent Scrubber Emissions	NO _x	0.97	4.25
		SO ₂	0.67	2.96
		PM	0.06	0.26
		PM ₁₀	0.06	0.26
		PM _{2.5}	0.06	0.26
		HCl	0.06	0.24
		Chlorine	0.01	0.05
SVVMPU3-3	MPU No. 3 Vacuum System Emissions	VOC	1.50	6.60
Fugitive Emissions				
CAS	CAS Fugitive Emissions (5)	VOC	0.07	0.30
		Benzene	<0.01	<0.01
FHTU5	HTU5 Fugitive Emissions (5)	VOC	3.50	15.32
FCOKE1	Delayed Coking Unit Coke Handling Fugitives (5)	PM	0.01	0.01
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
FALKY4	ALKY 4 Fugitive Emissions (5)	VOC	7.37	32.28
		Benzene	0.01	0.01
FASTU2	WW Collection Oil Recovery (5)	VOC	2.90	12.70
		Benzene	0.01	0.01
FBOTF	BOTF Fugitive Emissions (5)	VOC	0.28	1.22
FBSW	Bottoms, Solids, Water Tanks Farm Fugitives	VOC	0.57	2.48

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.01	0.01
FCDHDS1	CDHDS1 Fugitive Emissions (5)	VOC	1.87	8.21
		Benzene	0.02	0.10
FCDHDS2	CDHDS2 Fugitive Emissions (5)	VOC	3.15	13.80
		Benzene	0.04	0.17
FCGHT	CGHT Fugitive Emissions (5)	VOC	0.01	0.01
FCRU4	CRU No. 4 Fugitive Emissions (5)	VOC	4.70	20.60
		Benzene	0.01	0.06
FDCU1	DCU 1 Fugitive Emissions (5)	VOC	6.75	29.58
		Benzene	0.01	0.06
FFCCU3	FCCU No. 3 Fugitive Emissions (5)	VOC	6.48	28.39
		Benzene	0.01	0.01
FGR-1	Flare Gas Recovery Fugitive Emissions (5)	VOC	0.92	4.03
		Benzene	0.01	0.01
FGR-2	Flare Gas Recovery Fugitive Emissions (5)	VOC	1.07	4.67
		Benzene	0.01	0.01
FHCU1	HCU No. 1 Fugitive Emissions (5)	VOC	4.35	19.03
		Benzene	0.01	0.01
		H ₂ S	0.01	0.01
		NH ₃	0.01	0.01
FHTU1	HTU No. 1 Fugitive Emissions (5)	VOC	1.62	7.11
		Benzene	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

FHTU2	HTU No. 2 Fugitive Emissions (5)	VOC	1.39	6.08
		Benzene	0.01	0.01
		H ₂ S	0.01	0.01
FHTU3	HTU No. 3 Fugitive Emissions (5)	VOC	2.58	11.32
		Benzene	0.01	0.01
FHTU4	HTU No. 4 Fugitive Emissions (5)	VOC	4.76	20.83
		Benzene	0.01	0.01
FLCDU	LCDU Fugitive Emissions (5)	VOC	0.59	2.60
		Benzene	0.01	0.01
FLF	PAP Landfill	VOC	0.01	0.01
FLR43/44FE	Loading Rack Fugitive Emissions (5)	VOC	0.08	0.36
FMPU3	MPU No. 3 Fugitive Emissions (5)	VOC	0.69	3.02
		Benzene	0.01	0.01
FMPU4	MPU No. 4 Fugitive Emissions (5)	VOC	0.44	1.94
		Benzene	0.01	0.01
FNSGP	North Side Gas Plant Fugitive Emissions (5)	VOC	1.44	6.30
		Benzene	0.01	0.01
FPH27	Pump House No. 27 Fugitive Emissions (5)	VOC	7.68	33.67
		Benzene	0.01	0.01
FPH57	Pump House No. 57 Fugitive Emissions (5)	VOC	2.76	12.09
		Benzene	0.01	0.01
FSCTLA	Lift Station Fugitives (5)	VOC	0.08	0.33
		Benzene	0.01	0.01
FU-Rack4	Loading Rack No. 4 Fugitive Emissions (5)	VOC	0.11	0.52
		Benzene	0.01	0.01
FVPS2	VPS No. 2 Fugitive Emissions (5)	VOC	3.60	15.75

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.01	0.03
FVPS4	VPS No. 4 Fugitive Emissions (5)	VOC	5.83	25.56
		Benzene	0.01	0.05
FWAGS	Wet Acid Gas Scrubber Fugitive Emissions (5)	VOC	0.51	2.22
		Benzene	0.01	0.01
FWSGP	WSGP Fugitive Emissions (5)	VOC	0.01	0.03
FSPS3	FSPS3 Fugitive Emissions (5)	VOC	0.01	0.01
FTK2127	FTK2127 Fugitive Emissions (5)	VOC	0.43	1.86
PSAMP	Propylene Sampling in FCCU3	VOC	3.89	0.39
EFCCU3	FCCU No. 3 Flare Stack Pilots	NO _x	0.01	0.03
		CO	0.06	0.24
		SO ₂	0.01	0.01
		VOC	0.01	0.01
EHCU	HCU No. 1 Flare Stack Pilots	NO _x	0.01	0.04
		CO	0.07	0.32
		SO ₂	0.01	0.01
		VOC	0.01	0.01
EHTU	HTU No. 4 Flare Stack Pilots	NO _x	0.01	0.03
		CO	0.05	0.22
		SO ₂	0.01	0.01
		VOC	0.01	0.01
EVPS4	VPS No. 4 Flare Stack Pilots	NO _x	0.01	0.03
		CO	0.06	0.24
		SO ₂	0.01	0.01
		VOC	0.01	0.01
ECRU4	CRU No. 4 Flare Stack Pilots	NO _x	0.01	0.03
		CO	0.06	0.24

Emission Sources - Maximum Allowable Emission Rates

		SO ₂	0.01	0.01
		VOC	0.01	0.01
EDCU1	Delayed Coking Unit No. 1 Flare Stack Pilots	NO _x	0.01	0.03
		CO	0.05	0.22
		SO ₂	0.01	0.01
		VOC	0.01	0.01
EFCCU1&2	ALKY 4 Flare Stack Pilots	NO _x	0.01	0.03
		CO	0.06	0.24
		SO ₂	0.01	0.01
		VOC	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
 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
 H₂S - hydrogen sulfide
 H₂SO₄ - sulfuric acid
 HCl - hydrogen chloride
 HCN - hydrogen cyanide
 NH₃ - ammonia
 - (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) Refer to MAERT ATTACHMENT – TANK GROUP for the specific EPNs, Facility Identification Numbers, and source names included in this group.
 - (7) The burners in the atmospheric heaters (FINS VPS4ATM1HT and VPS4ATM2HT) are authorized by Standard Permit 89842.
 - (8) The atmospheric and vacuum heaters (FINS VPS4ATM1HT, VPS4ATM2HT, VPS4VAC1HT, and VPS4VAC2HT) may exhaust through this common stack.
- ** The FINS included in EPN SCRU4-1 are CRU4INTHT1, CRU4INTHT2, CRU4NHTCHT, CRU4PLATHT, and CRU4SRBL.
- *** The FINS included in EPN SVPS2-1 are VPS2ATM1HT, VPS2ATM2HT, VPS2ATM3HT, VPS2VAC1HT, and VPS2VAC2HT.

Date: February 15, 2019

Emission Sources - Maximum Allowable Emission Rates