Emission Sources - Maximum Allowable Emission Rates

Permit Number 6825A, PSDTX49M2, N65

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)
Emission Caps (6)				
		SO_2	705.4	1,503
		NO_x	859.9	1,611
		CO	1174	2,950
		PM	120.8	455.00
		Ammonia	2.66	8.99
		H_2S	4.64	11.40
		Benzene	2.77	9.39
		HF	0.33	1.64
		MTBE	12.11	27.89
		VOC	562.2	1,557
		VOC (8) (10)		1,729
Emissions not in permit emission caps:				
BH15MSS	Burner Installation (9)	NO_x	130.50	1.44
		CO	283.10	3.11

Emission Sources - Maximum Allowable Emission Rates

E-01-245	Heater 245	NO_x	1.44	6.31
		VOC	0.18	0.77
		SO_2	0.85	3.73
		SO_2 (12)	0.85	0.96
		CO	2.48	10.84
		PM	0.26	1.07
		PM_{10}	0.26	1.07
		$PM_{2.5}$	0.26	1.07
E-V54	CCR Regen Vent	HCl	0.02	0.07
		VOC	0.16	0.70
F-PIPE	F-PIPE	VOC	0.18	0.78
F-943, F-7843, F-7945, F-8748-SWS, E-26-FLARE, T-CX2-SW-2, T-CX2-CRUDE-1, T-CX2-CRUDE-2, T-CX2-NAPTH-1, T-CX2-GASOL-1, T-CX2-GASOL-2, T-2186, T-CX2-RESID-1, T-CX2-RESID-2, T-CX2-Amine-1, T-CX2-Amine-2, E-01-943, E-02-943, F-432-CT, F-446CT	COEXII VOC Normal and Non-Tank MSS Emissions Cap (5)	VOC	37.74	107.63
1913FUG	Tank 1913 Fugitives (4)	VOC	0.02	0.09
1913	Tank 1913	VOC	0.32	1.41
T-112	112	VOC	9.49	3.50
		H_2S	0.14	0.24
T-113	113	VOC	9.49	3.50
		H_2S	0.14	0.24
T-114	114	VOC	9.49	3.50
		H_2S	0.14	0.24
T-8010	Coker 843 Sludge Tank	VOC	0.04	0.18

Emission Sources - Maximum Allowable Emission Rates

T-8400	Coker 844 Sludge Tank	VOC	0.04	0.18
T-8002	547 Sulfur Tank	H_2S	0.48	0.39
T-37	Storage Tank T-37	VOC	12.18	3.89
F-136ACT	Cooling Tower 136A	PM	0.73	2.14
		PM_{10}	0.73	2.14
		$PM_{2.5}$	0.73	2.14
F-136BCT	Cooling Tower 136B	PM	0.74	2.17
		PM_{10}	0.74	2.17
		$PM_{2.5}$	0.74	2.17
F-366CT	Cooling Tower 366	PM	0.56	1.64
		PM_{10}	0.56	1.64
		$PM_{2.5}$	0.56	1.64
E-01-844	DCU 844 Coker Furnace #1	NO_x	3.45	13.75
		NO_x (MSS)	34.55	(13)
		VOC	1.24	4.94
		SO_2	5.34	3.93
		CO	16.57	32.97
		CO (MSS)	82.83	(13)
		PM	1.84	6.99
		PM_{10}	1.84	6.99
		$PM_{2.5}$	1.84	6.99
		NH_3	1.01	4.00

Emission Sources - Maximum Allowable Emission Rates

E-02-844	DCU 844 Coker Furnace #2	NO_x	3.45	13.75
		NO_x (MSS)	34.55	(13)
		VOC	1.24	4.94
		SO_2	5.34	3.93
		CO	16.57	32.97
		CO (MSS)	82.83	(13)
		PM	1.84	6.99
		PM_{10}	1.84	6.99
		$PM_{2.5}$	1.84	6.99
		NH_3	1.01	4.00
F-LOADING	SRU 547 Truck Sulfur Loading	H_2S	0.72	0.62
E-05-SCOT	SRU 547	VOC	0.45	1.96
		NO_x	6.63	29.03
		CO	36.19	63.41
		SO_2	81.46	142.72
		PM	1.23	5.41
		PM_{10}	1.23	5.41
		$PM_{2.5}$	1.23	5.41
		H_2S	0.88	3.85
CSV844	Coker Unit 844 Steam Vent	VOC	55.00	35.50
		PM	1.31	0.85
		PM_{10}	1.31	0.85
		$PM_{2.5}$	1.31	0.85
		H_2S	3.13	2.02
CSV843	Coker Unit 843 Steam Vent	VOC	55.00	61.38
		PM	2.28	1.75
		PM_{10}	2.28	1.75
		$PM_{2.5}$	2.28	1.75

Emission Sources - Maximum Allowable Emission Rates

		H_2S	5.43	4.18
F-844PM	Unit 844 coke handling (FINS F-844-1 to F-844-6)	PM	0.26	0.40
		PM_{10}	0.12	0.19
		$PM_{2.5}$	0.02	0.03
WWC	Coker 844 Wastewater Collection System	VOC	0.01	0.03
MSS (Coker Unit 844, SRU 547, E-23-Flare, E-26-Flare, T-112, T-113, T-114)	Coker 844 Project MSS (14)	VOC	542.76	5.49
		NO_x	29.03	0.51
		CO	194.71	3.27
		SO_2	299.15	8.97
		H_2S	3.18	0.19
		PM	1.48	<0.01
		PM_{10}	1.48	<0.01
		$PM_{2.5}$	1.48	<0.01
Emissions in permit emission caps:				
E-01-BH 15, E-02-BH 15, E-03-BH 15	Boilerhouse 15 Subcap, Post-mod Phase I	NO_x	78.03	247.5
		VOC	7.05	22.27
		SO_2	58.74	37.12
		CO	107.46	169.9
		PM	9.15	31.09
E-01-BH 15, E-02-BH 15, E-03-BH 15	Boilerhouse 15 Subcap Post-mod Phase II (7)	NO_x	78.03	339.0
		VOC	7.05	30.51
		SO_2	58.74	50.85
		CO	107.46	232.8
		PM	9.15	31.09
E-01-146	Heater 146-H101	NO_x	49.56	146.99
		VOC	3.34	12.18
		SO_2	11.36	18.67
		CO	48.78	67.14

Emission Sources - Maximum Allowable Emission Rates

		PM	4.34	16.83
		NO_x (12)	36.85	149.66
		VOC (12)	2.97	12.05
		SO_2 (12)	19.73	14.84
		CO (12)	37.22	75.58
		CO (MSS) (12)	87.97	(13)
		PM (12)	4.10	16.64
		PM_{10} (12)	4.10	16.64
		$PM_{2.5}$ (12)	4.10	16.64

Emission Sources - Maximum Allowable Emission Rates

E-02-146	Heater 146-H102AB	NO_x	19.88	52.36
		VOC	1.60	5.04
		SO_2	5.43	8.92
		CO	19.59	27.76
		PM	2.08	6.96
		NO_x (12)	16.12	70.61
		VOC (12)	1.40	6.14
		SO_2 (12)	9.33	7.57
		CO (12)	17.59	38.53
		CO (MSS) (12)	87.97	(13)
		PM (12)	1.94	8.49
		PM_{10} (12)	1.94	8.49
		$PM_{2.5}$ (12)	1.94	8.49
E-01-147	Heater 147-F-1100	NO_x	13.86	60.71
		VOC	2.14	9.35
		SO_2	10.59	17.39
		SO_2 (12)	10.59	7.58
		CO	32.61	68.93
		PM	2.95	12.92
		PM_{10}	2.95	12.92
		$PM_{2.5}$	2.95	12.92
E-02-147	Heater 147-F-1200	NO_x	7.80	17.28
		VOC	0.92	3.29
		SO_2	4.10	5.66
		SO_2 (12)	4.10	3.29
		CO	10.89	19.25
		PM	1.28	5.60
		PM_{10}	1.28	5.60
		$PM_{2.5}$	1.28	5.60

Emission Sources - Maximum Allowable Emission Rates

E-01-1344	Heater 1344-H1	NO_x	34.09	115.39
		VOC	3.65	14.80
		SO_2	11.95	19.64
		SO_2 (12)	11.95	18.53
		CO	40.45	82.24
		PM	5.05	20.45
		PM_{10}	5.05	20.45
		$PM_{2.5}$	5.05	20.45
E-02-1344	Heater 1344-H33	NO_x	3.82	9.06
		VOC	0.28	1.22
		SO_2	0.85	1.39
		CO	4.26	9.33
		PM	0.38	1.69
		PM_{10}	0.38	1.69
		$PM_{2.5}$	0.38	1.69
E-03-1344	Heater 1344-H2_3_32	NO_x	12.80	26.81
		VOC	0.86	2.41
		SO_2	2.89	4.75
		SO_2 (12)	2.89	3.02
		CO	10.64	13.43
		PM	1.19	3.33
		PM_{10}	1.19	3.33
		$PM_{2.5}$	1.19	3.33

Emission Sources - Maximum Allowable Emission Rates

E-01-843	Heater 843-H1	NO_x	16.00	53.40
		VOC	1.44	5.42
		SO_2	6.79	9.32
		SO_2 (12)	6.79	4.38
		CO	21.96	31.76
		PM	1.99	7.50
		PM_{10}	1.99	7.50
		$PM_{2.5}$	1.99	7.50
E-02-843	Heater 843-H2	NO_x	16.00	53.40
		VOC	1.44	5.42
		SO_2	6.79	9.32
		SO_2 (12)	6.79	4.38
		CO	21.96	31.76
		PM	1.99	7.50
		PM_{10}	1.99	7.50
		$PM_{2.5}$	1.99	7.50
E-03-843	Heater 843-H3	NO_x	16.00	53.40
		VOC	1.44	5.42
		SO_2	6.79	9.32
		SO_2 (12)	6.79	4.38
		CO	21.96	31.76
		PM	1.99	7.50
		PM_{10}	1.99	7.50
		$PM_{2.5}$	1.99	7.50

Emission Sources - Maximum Allowable Emission Rates

E-01-246	Heater 246-H1	NO_x	2.20	7.51
		VOC	0.34	1.06
		SO_2	1.44	1.86
		SO_2 (12)	1.44	0.88
		CO	4.07	6.19
		PM	0.47	1.47
		PM_{10}	0.47	1.47
		$PM_{2.5}$	0.47	1.47
E-01-1241	Heater 1241-H1	NO_x	4.96	1.24
		VOC	0.33	0.08
		SO_2	1.64	0.15
		CO	4.86	0.64
		PM	0.43	0.11
E-02-1241	Heater 1241-H2	NO_x	4.96	1.24
		VOC	0.33	0.08
		SO_2	1.64	0.15
		CO	4.86	0.64
		PM	0.43	0.11
E-01-241	Heater 241-B101AB	NO_x	7.92	19.51
		VOC	0.53	2.34
		SO_2	2.23	3.66
		SO_2 (12)	2.23	2.93
		CO	8.15	13.49
		PM	0. 73	3.24
		PM_{10}	0. 73	3.24
		$PM_{2.5}$	0. 73	3.24
E-01-242	Heater 242-B201AB	NO_x	6.62	17.45
		VOC	0.36	1.58
		SO_2	1.87	3.11

Emission Sources - Maximum Allowable Emission Rates

		SO_2 (12)	1.87	1.80
		CO	4.04	11.91
		PM	0.50	2.00
		PM_{10}	0.50	2.00
		$PM_{2.5}$	0.50	2.00
E-01-243	Heater 243	NO_x	7.10	19.43
		VOC	0.48	1.87
		SO_2	1.78	2.92
		SO_2 (12)	1.78	2.32
		CO	6.74	10.31
		PM	0.66	2.58
		PM_{10}	0.66	2.58
		$PM_{2.5}$	0.66	2.58
E-01-244	Heater 244 F-101/102	NO_x	7.92	34.70
		VOC	0.36	1.60
		SO_2	1.90	3.11
		SO_2 (12)	1.90	1.80
		CO	5.13	11.91
		PM	0.49	2.00
		PM_{10}	0.49	2.00
		$PM_{2.5}$	0.49	2.00

Emission Sources - Maximum Allowable Emission Rates

E-01-942	Heater 942-H1_2_3	NO_x	12.83	45.56
		VOC	1.15	4.55
		SO_2	5.45	7.98
		SO_2 (12)	5.45	3.68
		CO	17.61	26.75
		PM	1.60	6.29
		PM_{10}	1.60	6.29
		$PM_{2.5}$	1.60	6.29
E-01-443	Heater 443	NO_x	14.20	42.83
		VOC	1.09	3.88
		SO_2	3.34	5.49
		SO_2 (12)	3.34	4.86
		CO	16.67	21.44
		PM	1.51	5.35
		PM_{10}	1.51	5.35
		$PM_{2.5}$	1.51	5.35

Emission Sources - Maximum Allowable Emission Rates

C-REFFUG Includes: F-1241, F-1242, F-1344, F-146, F-147, F-15BH, F-16BH, F-241, F-242, F-243, F-244, F-245, F-246, F-443, F-545, F-546, F-547, F-6341, F-7542, F-7841, F-7842, F-7848, F-843, F-844, F-8746, F-8747, F-942, FUAUCT, F-DOCKS, F-544, F-Fueling Station, F-163PH, F-41PH, F-FGMD, F-SRTF, F-Utilities, F-8741, F-543/4, F-NSTF, F-BH-19, F-7843, F-943-75K, F-844, F-547, F-1747	Refinery Fugitives VOC Subcap (4)	VOC	256.93	1121.58
		H_2S	5.59	24.47
		NH_3	1.49	5.14
		HF	0.36	1.75
2147, 2588, 2590, 78, 88, T-546-1, T-546-2, T-7842-1, T-7842-2	Refinery Tank Subcap	VOC	3.94	4.00
E-05-FLARE, F-13-FLARE, F-15-FLARE, F-18-FLARE, F-19-FLARE, F-20-FLARE, F-22-FLARE, E-23-FLARE, F-103-FLARE	Flares Subcap	NO_x	43.93	38.67
		VOC	65.74	57.86
		SO_2	24.87	8.11
		CO	302.80	266.50
		H_2S	0.26	0.09
E-18-FLARE	Flare - Normal Operations	NOx	0.01	0.06
		CO	0.10	0.46
		SO2	0.01	0.02
		VOC	0.09	0.41
C-DOCKUN	Uncontrolled Marine Loading F-03-DOCK, F-02-DOCK, F-05-DOCK, F-06-DOCK,	VOC	101.68	65.30

Emission Sources - Maximum Allowable Emission Rates

	F-08-DOCK, F-07-DOCK, F-11-DOCK, F-12-DOCK, F-14-DOCK, F-15-DOCK			
E-01-SCOT, E-02-SCOT, E-03-SCOT, E-04-SCOT	SRUs Subcap	NO_x	49.68	118.40
		VOC	64.24	151.90
		SO_2	345.83	1056.82
		CO	192.20	896.29
		PM	24.58	58.60
		PM_{10}	24.58	58.60
		$PM_{2.5}$	24.58	58.60
		H_2S	3.67	11.23
E-01-SCOT	SRU 543	SO_2	57.90	--
		H_2S	0.62	--
E-02-SCOT	SRU 544	SO_2	82.77	--
		H2S	0.88	--
E-03-SCOT	SRU 545	SO_2	137.89	--
		H_2S	1.47	--
E-04-SCOT	SRU 546	SO_2	137.89	--
		H_2S	1.47	--
E-02-SRK	SRU 543 and 544 sulfur loading	H_2S	0.36	0.28
E-01-943	HCU - Reactor 1 and Reactor 2 Furnaces	NO_x	7.81	28.51
		VOC (11)	0.60	2.20
		SO_2	8.20	11.23
		SO_2 (12)	8.20	5.87
		CO	14.93	27.27
		PM	1.66	6.07
		PM_{10}	1.66	6.07
		$PM_{2.5}$	1.66	6.07

Emission Sources - Maximum Allowable Emission Rates

E-02-943	HCU - Fractionator Feed Furnace	NO_x	5.22	22.86
		NO_x (Start-up)	52.20	(13)
		VOC (11)	1.88	8.22
		SO_2	13.31	17.51
		SO_2 (12)	13.31	10.79
		CO	23.27	50.97
		CO (Start-up)	116.37	(13)
		PM	2.90	11.81
		PM_{10}	2.90	11.81
		$PM_{2.5}$	2.90	11.81
		NH_3	1.41	6.19
E-26-FLARE	HCU 943 Flare	NO_x	0.31	1.38
		SO_2	0.01	0.03
		CO	2.27	9.94

Emission Sources - Maximum Allowable Emission Rates

E-01-WGS	FCCU Wet Gas Scrubber	NO_x	327.70	271.93
		VOC	15.70	68.80
		SO_2	114.10	256.08
		CO	498.80	896.29
		PM	63.50	278.13
		NH_3	3.19	12.37
		HCN	89.80	347.95
		H_2SO_4	18.26	80.00
E-MC-24-25	DOCK-MC (15)	NO_x	60.04	21.36
		VOC	70.74	21.98
		CO	119.87	42.63
		SO_2	0.23	0.07
		PM	3.24	1.15
		PM_{10}	3.24	1.15
		$PM_{2.5}$	3.24	1.15
E-MC-24-25	Marine Vapor Combustors 24 and 25 (17)	NO_x	3.3	0.37
		VOC	34.95	2.82
		CO	23.83	2.65
		SO_2	1.68	0.09
		PM	0.44	0.05
		PM_{10}	0.44	0.05
		$PM_{2.5}$	0.44	0.05
F-101CT	Cool Twr 101	VOC	1.30	5.70
F-136ACT	Cool Twr 136A	VOC	2.73	11.96
F-136BCT	Cool Twr 136B	VOC	2.77	11.96
F-233PS	Cool Twr 233	VOC	0.53	1.24
F-314PS	Cool Twr 314	VOC	0.01	0.01
F-316PS	Cool Twr 316	VOC	0.01	0.01
F-354CT	Cool Twr 354	VOC	0.25	1.10

Emission Sources - Maximum Allowable Emission Rates

F-360PS	Cool Twr 360	VOC	0.92	4.05
F-363CT	Cool Twr 363	VOC	0.42	0.89
F-366CT	Cool Twr 366	VOC	2.10	2.45
CT-100	Cool Twr 100	VOC	1.05	4.60
E-432-CT	Cool Twr 432	VOC	0.84	3.68
		PM	0.01	0.02
		PM_{10}	0.01	0.02
		$PM_{2.5}$	0.01	0.02
E-433-CT	Cool Twr 433	VOC	1.26	0.69
		VOC (12)	1.89	8.28
		PM (12)	0.56	1.97
		PM_{10} (12)	0.56	1.95
		$PM_{2.5}$ (12)	0.13	0.44
CT-244	Cool Twr 244	VOC	1.18	5.15
		VOC (12)	1.60	6.99
		PM (12)	0.48	6.99
		PM_{10} (12)	0.47	1.64
		$PM_{2.5}$ (12)	0.11	0.37
F-446CT	Cooling Tower 446	PM	0.03	0.11
		PM_{10}	0.03	0.11
		$PM_{2.5}$	0.03	0.11
		VOC (11)(12)	1.99	8.72
		PM (12)	0.59	8.72
		PM_{10} (12)	0.59	2.05
		$PM_{2.5}$ (12)	0.13	0.47
F-843PM	Unit 843 coke storage and loading (FINS F-843-1 to F-843-17)	PM	2.41	10.56
		$PM_{2.5}$	0.06	0.26
		PM (12)	5.17	8.71
		PM_{10} (12)	2.48	4.26

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$ (12)	0.37	0.63
E-01-BLR	Steam Boiler	VOC	2.49	9.92
		NOx	6.93	27.87
		CO	33.23	66.83
		NOx (MSS)	69.3	(13)
		CO (MSS)	166.16	(13)
		SO_2	10.70	11.84
		PM	3.44	13.71
		PM_{10}	3.44	13.71
		$PM_{2.5}$	3.44	13.71
		NH_3	2.02	8.03
T-1001	Storage Tank 1001	VOC	1.00	1.13
		NH_3	<0.01	<0.01
		H_2S	<0.01	0.01
T-134	Storage Tank 134	VOC	0.71	0.61
MSS Non-Tank Sub-Cap	Non-Tank-Related Plant-Wide Planned Maintenance, Startup, and Shutdown Emissions (16)	VOC	2,154.45	235.60
		NO_x	399.99	35.02
		CO	4,086.51	111.77
		SO_2	1,516.48	54.42
		PM	10.18	8.85
		PM_{10}	3.10	2.75
		$PM_{2.5}$	3.10	2.75
		H_2S	60.11	3.08
		HCl	1.20	5.27
		Benzene	8.84	1.08
		Exempt Solvents	0.36	0.53
		NH_3	6.99	0.27
MSS-Tank Sub-Cap	Tank Related Plant-Wide Planned Maintenance, Startup,	VOC	5,514.63	9.37
		NO_x	577.56	1.05

Emission Sources - Maximum Allowable Emission Rates

		CO	1,323.86	2.15
		SO_2	9.89	1.43
		PM	0.12	0.02
		PM_{10}	0.12	0.02
		$PM_{2.5}$	0.12	0.02
		H_2S	2.23	0.02

(1) Emission point identification - either specific equipment designation or emission point number (EPN).
(2) Specific point source names. 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
NOx - total oxides of nitrogen
SO2 - sulfur dioxide
CO - carbon monoxide
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5.}$
PM_{10} - particulate matter equal to or less than 10 microns in diameter.
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
H_2S - hydrogen sulfide
HCl - hydrogen chloride
HF - hydrogen fluoride
MTBE - methyl-tertiary-butyl ether
N_2O - nitrous oxide
NH_3 - ammonia
HCN - hydrogen cyanide
H_2SO_4 - sulfuric acid
(4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
(5) These facilities were subject to nonattainment review for VOC for Permit N65. The Non-Tank maintenance, startup, and shutdown (MSS) VOC emissions associated with the COEX II facilities must also be added to the routine VOC emissions from the COEX II facilities to determine compliance with this annual emission cap.
(6) These emission caps have been carried forward from the historic flexible permit. Except for the VOC emissions caps, these emission caps are the sum of the individual and subcap emission rates for the pollutant and are shown for information purposes only.
(7) Post-mod Phase II: After completing Boiler 15 low-NOX burner project authorized by Standard Permit 91911. These allowable emission rates shall apply in lieu of those designated as Post-mod Phase I, if the permit holder samples these facilities for $PM_{2.5}$ per Special Condition 51 after completing the Boilerhouse 15 low NOx burner project and the results show $PM_{2.5}$ emissions are less than 73 percent of the maximum hourly total PM emission rate limit.
(8) The VOC emissions caps are more limiting than the sum of the individual emission rate limits for those facilities.
(9) Installation of low NOx burners in Boilerhouse 15 boilers authorized by Standard Permit 91911.
(10) With the exception of VOC emissions from COEXII facilities, this annual emissions cap applies to the sum total of all normal emissions from the facilities listed on Attachment I and the Non-tank MSS VOC emissions from the facilities listed in Attachment 6. VOC MSS emissions from COEX II facilities and the Coker 844 Project do not need to be included when showing compliance with the annual VOC cap.
(11) Emissions are a subcap of COEXII VOC Cap.

Emission Sources - Maximum Allowable Emission Rates

(12) Emissions shall supersede all existing authorized limits of that pollutant upon completion of the facility's modification as represented in the Coker Project, PI-1 dated February 27, 2018. The modification shall be completed preceding the initial startup of the Coker Unit's DCU 844.
(13) Annual emissions are included as part of annual emissions authorized for normal facility operation.
(14) Hourly emissions from Flare EPNs E-23-Flare and E-26-Flare are a subcap of the emissions authorized for the flare in the "MSS Non-Tank Sub-Cap".
(15) Includes emissions from marine vapor combustors E-MC-24 and E-MC-25.
(16) These plant-wide MSS emissions subcaps do not include any Coker 844 Project MSS emissions except for hourly emissions from Flare EPNs E-23-Flare and E-26-Flare.
(17) These are the loading activities associated with the MSAT II Project controlled by marine vapor combustors E-MC-24 and E-MC-25.

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Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX167

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	
			lbs/hour	TPY (4)
E-01-245	Heater 245	CO_2 (5)	--	18,687.00
		N_2O (5)	--	0.19
		CH_4 (5)	--	0.95
		CO_2e	--	18,767.00
T-112	112	CH_4 (5)	-	0.03
		CO_2e	-	0.87
T-113	113	CH_4 (5)	-	0.03
		CO_2e	-	0.87
T-114	114	CH4 (5)	-	0.03
		CO_2e	-	0.87
E-01-844	DCU 844 Coker Furnace #1	CO_2 (5)	--	119,242.00
		N_2O (5)	--	1.21
		CH_4 (5)	--	6.06
		CO_2e	--	119,755.00
E-02-844	DCU 844 Coker Furnace #2	CO_2 (5)	--	119,242.00
		N_2O (5)	--	1.21

Emission Sources - Maximum Allowable Emission Rates

		CH_4 (5)	--	6.06
		CO_2e	--	119,755.00
E-05-SCOT	SRU 547	CO_2 (5)	--	90,029.00
		N_2O (5)	--	0.48
		CH_4 (5)	--	2.40
		CO_2e	--	90,232.00
CSV844	Coker Unit 844 Steam Vent	CH4 (5)	--	161.38
		CO_2e	--	4,034.00
CSV843	Coker Unit 843 Steam Vent	CH_4 (5)	--	279.00
		CO_2e	--	6,975.00
MSS	Coker 844 Project MSS	CO_2 (5)	--	1,101.00
		N_2O (5)	--	0.01
		CH_4 (5)	--	0.06
		CO_2e	--	1,106.00
E-01-146	Heater 146-H101	CO_2 (5)	--	290,556.00
		N_2O (5)	--	2.95
		CH_4 (5)	--	14.77
		CO_2e	--	291,806.00

Emission Sources - Maximum Allowable Emission Rates

E-02-146	Heater 146-H102AB	CO_2 (5)	--	148,127.00
		N_2O (5)	--	1.51
		CH_4 (5)	--	7.53
		CO_2e	--	148,764.00
E-01-147	Heater 147-F-1100	CO_2 (5)	--	225,609.00
		N_2O (5)	--	2.29
		CH_4 (5)	--	11.47
		CO_2e	--	226,579.00
E-02-147	Heater 147-F-1200	CO_2 (5)	--	97,764.00
		N_2O (5)	--	0.99
		CH_4 (5)	--	4.97
		CO_2e (5)	--	98,184.00
E-01-1344	Heater 1344-H1	CO_2 (5)	--	356,986.00
		N_2O (5)	--	3.63
		CH_4 (5)	--	18.15
		CO_2e	--	358,521.00
E-02-1344	Heater 1344-H33	CO_2 (5)	--	29,568.00
		N_2O (5)	--	0.30
		CH_4 (5)	--	1.50
		CO_2e	--	29,696.00

Emission Sources - Maximum Allowable Emission Rates

E-03-1344	Heater 1344-H2_3_32	CO_2 (5)	--	58,111.00
		N_2O (5)	--	0.59
		CH_4 (5)	--	2.95
		CO_2e	--	58,361.00
E-01-843	Heater 843-H1	CO_2 (5)	--	130,921.00
		N_2O (5)	--	1.33
		CH_4 (5)	--	6.66
		CO_2e	--	131,485.00
E-02-843	Heater 843-H2	CO_2 (5)	--	130,921.00
		N_2O (5)	--	1.33
		CH_4 (5)	--	6.66
		CO_2e	--	131,485.00
E-03-843	Heater 843-H3	CO_2 (5)	--	130,921.00
		N_2O (5)	--	1.33
		CH_4 (5)	--	6.66
		CO_2e	--	131,485.00
E-01-246	Heater 246-H1	CO_2 (5)	--	25,637.00
		N_2O (5)	--	0.26
		CH_4 (5)	--	1.30
		CO_2e	--	25,748.00
E-01-241	Heater 241-B101AB	CO_2 (5)	--	56,516.00
		N_2O (5)	--	0.57
		CH_4 (5)	--	2.87
		CO_2e	--	56,759.00
E-01-242	Heater 242-B201AB	CO_2 (5)	--	34,924.00

Emission Sources - Maximum Allowable Emission Rates

		N_2O (5)	--	0.36
		CH_4 (5)	--	1.78
		CO_2e	--	35,074.00
E-01-243	Heater 243	CO_2 (5)	--	45,065.00
		N_2O (5)	--	0.46
		CH_4 (5)	--	2.29
		CO_2e	--	45,259.00
E-01-244	Heater 244 F-101/102	CO_2 (5)	--	34,924.00
		N_2O (5)	--	0.36
		CH_4 (5)	--	1.78
		CO_2e	--	35,074.00
E-01-942	Heater 942-H1_2_3	CO_2 (5)	--	109,785.00
		N_2O (5)	--	1.12
		CH_4 (5)	--	5.58
		CO_2e	--	110,257.00
E-01-443	Heater 443	CO_2 (5)	--	93,377.00
		N_2O (5)	--	0.95
		CH_4 (5)	--	4.75
		CO_2e	--	93,779.00
C-REFFUG Includes: F-1241, F-1242, F-1344, F-146, F-147, F-15BH, F-16BH, F-241, F-242, F-243, F-244, F-245, F-246, F-443, F-545, F-546, F-547, F-6341, F-7542, F-7841, F-7842, F-7848, F-843, F-844, F-8746, F-	Refinery Fugitives VOC Subcap (4)	CH_4 (5)	-	113.20
		CO_2e	-	2829.94

Emission Sources - Maximum Allowable Emission Rates

8747, F-942, FUAUCT, F-DOCKS, F-544, F-Fueling Station, F-163PH, F-41PH, F-FGMD, F-SRTF, F-Utilities, F-8741, F-543/4, F-NSTF, F-BH-19, F-7843, F-943-75K, F-844, F-547,				
E-01-943	HCU - Reactor 1 and Reactor 2 Furnaces	CO_2 (5)	--	105,968.00
		N_2O (5)	--	1.08
		CH_4 (5)	--	5.39
		CO_2e	--	106,423.00
E-02-943	HCU - Fractionator Feed Furnace	CO_2 (5)	--	198,262.00
		N_2O (5)	--	2.02
		CH_4 (5)	--	10.08
		CO_2e	--	199,115.00
E-MC-24-25	DOCK-MC	CO_2 (5)	--	184,895.16
		N_2O (5)	--	2.09
		CH_4 (5)	--	10.44
		CO_2e	--	185,777.62
E-01-BLR	Steam Boiler	CO_2 (5)		239281.80
		N_2O (5)		0.41
		CH_4 (5)		4.06
		CO_{2e}		239504.05

(1) Emission point identification - either specific equipment designation or emission point number (EPN).
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) CO_2 - carbon dioxide
N_2O - nitrous oxide
CH_4 - methane
CO_2e - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant:

Emission Sources - Maximum Allowable Emission Rates

CO_2 (1), N_2O (298), CH_4(25), SF_6 (22,800), HFC (various), PFC (various).

(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.

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