0EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Permit Numbers 6825A, PSDTX49, and 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. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Pollutant (3)	Emission Rates * lb/hr	TPY**
Emission Caps (11) (12)		
VOC	461.0	1,003
VOC (6)	465.1	1,020
NO_x	842.4	3145 (13)
NO_x	816.5	1575 (6)(13)
CO	908.1	3471 (13)
CO	875.5	2702 (6)(13)
SO_2	771.9	1974 (13)
SO_2	682.4 (13)	1505 (6)(13)
PM	132.6	538.0
PM (6)	120.8	455.0
Ammonia	0.10	0.20
Ammonia (5)	1.43	4.87
Ammonia (6)	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

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
Emissions not in permit emission caps:				
E-V54	CCR Regen Vent	HCl	0.02	0.07
		VOC	0.16	0.70
F-20-Flare	Flare 20 MSS	VOC	0.06	0.28
		NO_x	0.87	3.81
		SO_2	0.80	3.50
		CO	2.40	10.50
E-01-1241	Heater 1241-H1 MSS (5)	VOC	0.10	0.40
		NO_x	0.20	0.90
		SO_2	0.01	0.01
		CO	0.20	0.90
		PM	0.10	0.40
E-02-1241	Heater 1241-H2 MSS (5)	VOC	0.10	0.40
		NO_x	0.20	0.90
		SO_2	0.01	0.01
		CO	0.20	0.90
		PM	0.10	0.40
F-PIPE	F-PIPE	VOC	0.18	0.78
E-01-245	Heater 245	NO_x	1.44	6.31
		VOC	0.18	0.77
		SO_2	0.85	3.73
		CO	2.48	10.84
		PM	0.24	1.07

Emissions in permit emission caps:

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

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-6341, F-7542, F-7841, F-7842, F-7848, F-843, 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-7843	Refinery Fugitives VOC Subcap (4)	VOC	180.5	790.3
100, 103, 106, 107, 110, 111, 133, 151, 1848, 1849, 2101, 2105, 2106, 2110, 2111, 2112, 2113, 2117, 2132, 2133, 2137, 2145, 2147, 2148, 2159, 2160, 2161, 2162, 2163, 2164, 2182, 2183, 2588, 2590, 283, 284, 285, 31, 5, 77, 78, 82, 88, 889, 896, 925, 926, 99, T-108, T-109, T-546-1, T-546-2, T-7842-1, T-7842-2	Refinery Tank Subcap	VOC	218.7	153.3
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, E-26-Flare	Flares Subcap	NO_x VOC SO_2 CO	0.57 1.49 2.32 4.12	2.54 6.51 10.11 18.19

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

F-03-DOCK, F-02-DOCK, F-05-DOCK, F-06-DOCK, F-08-DOCK, F-07-DOCK, F-11-DOCK, F-12-DOCK, F-15-DOCK, F-14-DOCK	Uncontrolled Marine Loading	VOC	99.48	75.40
F-943, F-7843, F-7945, F-8748 SWS, E-26-Flare, T-79, T-286, T-287, T-927, T-2190, T-2191, T-CX2-DIESL-1, T-CX2-RESID-1, T-CX2-RESID-2, T-CX2-Amine-1, T-CX2-Amine-2, E-01-943, E-02-943, F-446CT	COEXII VOC Subcap (9)	VOC	35.28	99.4
E-01-SCOT, E-02-SCOT, E-03-SCOT, E-04-SCOT	SRUs Subcap	NO_x VOC SO_2 CO PM	49.68 64.24 345.83 192.20 24.58	118.40 151.90 1056.82 896.29 58.60
E-02-BH 15, E-03-BH 15, E-04-BH 15	Boilerhouse 15 Subcap (7)	NO_x VOC SO_2 CO PM	213.56 12.30 129.01 101.29 8.62	314.3 26.99 211.90 222.21 37.78
E-06-BH 16, E-07-BH 16, E-08-BH 16	Boilerhouse 16 Subcap (10)	NO_x VOC SO_2 CO PM	200.41 12.55 98.37 103.35 8.79	414.5 27.49 161.58 226.36 38.49
E-01-BH 15, E-02-BH 15, E-03-BH 15	Boilerhouse 15 Subcap (8)	NO_x VOC SO_2 CO PM	78.03 7.05 58.74 107.46 9.15	247.5 22.27 37.12 169.9 31.09

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant, Name (3)	Emission Rates * lb/hr	TPY**
E-01-BH 15	Boilerhouse 15 Subcap (14)	NO_x	78.03	339.0
E-02-BH 15		VOC	7.05	30.51
E-03-BH 15		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
		PM	4.34	16.83
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
E-01-147	Heater 147-F-1100	NO_x	13.86	60.71
		VOC	2.14	9.35
		SO_2	10.59	17.39
		CO	32.61	68.93
		PM	2.77	12.14
E-02-147	Heater 147-F-1200	NO_x	7.80	17.28
		VOC	0.92	3.29
		SO_2	4.10	5.66
		CO	10.89	19.25
		PM	1.28	4.55
E-01-BH 15	Boiler 15-41 (7)	NO_x	52.20	228.64
		VOC	2.35	9.97
		SO_2	19.58	21.63
		CO	35.82	72.33
		PM	3.05	13.34
E-03-BH 16	Boiler 16-31 (10)	NO_x	50.00	121.43
		VOC	1.35	5.90
		SO_2	11.18	12.52
		CO	20.59	34.88
		PM	1.75	7.67
E-04-BH 16	Boiler 16-32 (10)	NO_x	50.00	121.43

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

		VOC	1.35	5.90
		SO_2	11.18	12.52
		CO	20.59	34.88
		PM	1.75	7.67
E-05-BH 16	Boiler 16-33 (10)	NO_x	102.66	449.65
		VOC	2.35	10.27
		SO_2	19.58	26.45
		CO	35.82	72.56
		PM	3.05	13.34
E-01-1344	Heater 1344-H1	NO_x	34.09	115.39
		VOC	3.65	14.80
		SO_2	11.95	19.64
		CO	40.45	82.24
		PM	5.05	20.45
E-02-1344	Heater 1344-H33	NO_x	3.82	12.46
		VOC	0.28	1.22
		SO_2	0.85	1.39
		CO	4.26	9.33
		PM	0.36	1.59
E-03-1344	Heater 1344-H2_3_32	NO_x	12.80	43.84
		VOC	0.86	2.41
		SO_2	2.89	4.75
		CO	10.64	13.43
		PM	1.12	3.33
E-01-843	Heater 843-H1	NO_x	16.00	53.40
		VOC	1.44	5.42
		SO_2	6.79	9.32
		CO	21.96	31.76
		PM	1.87	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
		CO	21.96	31.76
		PM	1.87	7.50

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

E-03-843	Heater 843-H3	NO_x	16.00	53.40
		VOC	1.44	5.42
		SO_2	6.79	9.32
		CO	21.96	31.76
		PM	1.87	7.50
E-01-246	Heater 246-H1	NO_x	2.20	7.51
		VOC	0.34	1.06
		SO_2	1.44	1.86
		CO	4.07	6.19
		PM	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	34.69
		VOC	0.53	2.34
		SO_2	2.23	3.66
		CO	8.15	13.49
		PM	0.69	3.04
E-01-242	Heater 242-B201AB	NO_x	6.62	18.95
		VOC	0.36	1.04
		SO_2	1.87	2.06
		CO	4.04	5.77
		PM	0.50	1.44
E-01-243	Heater 243	NO_x	7.10	31.08
		VOC	0.48	1.87
		SO_2	1.78	2.92
		CO	6.74	10.31
		PM	0.62	2.58

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

E-01-244	Heater 244 F-101/102	NO_x	7.92	15.60
		VOC	0.36	0.85
		SO_2	1.90	1.97
		CO	5.13	4.85
		PM	0.46	1.19
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
		CO	17.61	26.75
		PM	1.50	6.29
E-01-443	Heater 443	NO_x	24.29	42.83
		VOC	1.09	3.88
		SO_2	3.34	5.49
		CO	16.67	21.44
		PM	1.42	5.35
E-06-843	Two Tank Heaters for Charge Tanks	NO_x	0.73	3.18
		VOC	0.04	0.17
		SO_2	0.01	0.01
		CO	0.61	2.67
		PM	0.07	0.05
E-01-943	HCU - Reactor 1 and Reactor 2 Furnaces	NO_x	5.96	19.67
		VOC	0.44	1.31
		SO_2	4.70	7.76
		CO	11.88	19.64
		PM	1.26	4.19
E-02-943	HCU - Fractionator Feed Furnace	NO_x	3.45	13.14
		VOC	0.60	2.04
		SO_2	6.35	12.08
		CO	16.08	30.62
		PM	1.98	7.03
E-01-WGS	FCCU Wet Gas Scrubber	NO_x	327.70	271.93
		VOC	15.70	68.80
		SO_2	114.10	256.08

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

		CO	498.80	896.29
		PM	63.50	278.13
E-MC-24-25	DOCK-MC	NO_x	49.68	108.80
		VOC	66.66	25.72
		CO	99.18	217.20
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
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
E-433-CT	Cool Twr 433	VOC	1.26	0.69
CT0244	Cool Twr 244	VOC	1.18	5.15
F-446CT	Cooling Tower 446	VOC	1.89	8.28
F843-1 to 17	Coke Handling	PM	2.41	10.27
		$PM_{2.5}$	0.06	0.26
F-843PM	Coke Handling Fugitives	PM	2.41	10.56

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

(1) Emission point identification - either specific equipment designation or emission point number (EPN) from a plot plan per Attachment 1.
(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

NO_x - total oxides of nitrogen
SO_2 - 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

(4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
(5) Rates effective after facilities associated with COEX II Project are operating.
(6) Caps effective after sources associated with COEX II Project are complete. Boilerhouse 15 low NOx burner project and shutdown of Boilerhouse 16 combustion units must be complete.
(7) Allowable emission rates prior to the Boilerhouse 15 low NOx burner project.
(8) Allowable emission rates after the Boilerhouse 15 low NOx burner project authorized by Standard Permit 91911. The turbine GTG-1 shall be shutdown as part of this project.
(9) The VOC emissions from COEX II facilities are subject to a separate emission limit in order to establish enforceable emission limits for these sources which are authorized by Nonattainment Permit Number 65.
(10) The Boilerhouse 16 units must be shutdown and the Boilerhouse 15 low NOx burner project completed prior to the end of the 180 day shakedown period for Boilerhouse 19 Boilers 1, 2, and 3 {authorized by Permit 103765).
(11) The maintenance, startup, and shutdown (MSS) emissions authorized in Permit Number 80812 must be added to Permit Number 6825A, PSDTX49, and N65 operating emissions to determine compliance with these emission caps unless designated with a footnote (13).
(12) These emission caps have been carried forward from the flexible permit. The emission caps that are not designated with a footnote (13) are those that are more limiting than the sum of the individual emission rate limits for those facilities.
(13) These emission caps are the sum of the individual and subcap emission rates for the pollutant and are shown for information only.
(14) These allowable emission rates shall apply in lieu of those designated with footnote (8) if the permit holder samples these facilities for $PM_{2.5}$ per Special Condition 40 after completing the

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Boilerhouse 15 low NOx burner project and the results show $PM_{2.5}$ emissions are less than 73 percent of the maximum hourly PM emission rate limit.

* Emission rates are based on operating 8,760 hrs/year.

** Compliance with annual emission limits is based on a rolling 12-month period

Dated July 24, 2012