

EMISSION SOURCES - EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Flexible Permit Number 49138 and Permit Numbers PSDTX768M1, PSDTX799, PSDTX802, PSDTX932, and PSDTX992M1

This table lists the emission caps and individual emission limitations 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 permit application 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.

See Attachment I for the list of emission point numbers and source name included in each cap.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**

VOC EMISSION CAP

See Attachment D	See Attachment D	Interim MSS Cap (4)	1571.17	108.03
See Attachment D	See Attachment D	Final MSS Cap	1566.72	99.07
See Attachment D	See Attachment D	Interim Flex Cap (5)	7723.27	4262.34
See Attachment D	See Attachment D	Final Flex Cap	5323.60	4248.77

NO_x EMISSION CAP

See Attachment D	See Attachment D	Final MSS Cap	1053.18	34.95
See Attachment D	See Attachment D	Interim Flex Cap (5)	10521.18	3119.73
See Attachment D	See Attachment D	Final Flex Cap	1028.46	1461.30

CO EMISSION CAP

See Attachment D	See Attachment D	Final MSS Cap	55949.75	37.69
See Attachment	See Attachment D	Interim Flex Cap	5559.36	7594.34

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D		(5)		
See Attachment D	See Attachment D	Final Flex Cap	3921.65	7576.23

SO₂ EMISSION CAP

See Attachment D	See Attachment D	Final MSS Cap	92.48	3.20
See Attachment D	See Attachment D	Interim Flex Cap	51498.04	2266.78
See Attachment D	See Attachment D	(5) Final Flex Cap	15650.01	2160.82

PM₁₀/PM_{2.5} EMISSION CAP***

See Attachment D	See Attachment D	Final MSS Cap	28.42	6.21
See Attachment D	See Attachment D	Interim Flex Cap	821.26	1467.18
See Attachment D	See Attachment D	(5) Final Flex Cap	824.94	1482.82

PM EMISSION CAP

See Attachment D	See Attachment D	Final MSS Cap	28.42	6.21
See Attachment D	See Attachment D	Interim Flex Cap	961.99	1869.27
See Attachment D	See Attachment D	(5) Final Flex Cap	1020.69	1916.27

H₂S EMISSION CAP

See Attachment	See Attachment D	Final MSS Cap	3.03	0.68
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D				
See Attachment D	See Attachment D	Interim Flex Cap (5)	545.98	17.78
See Attachment D	See Attachment D	Final Flex Cap	157.03	15.61

H₂SO₄ EMISSION CAP

See Attachment D	See Attachment D	Final MSS Cap	0.92	0.29
See Attachment D	See Attachment D	Interim Flex Cap (5)	68.35	236.15
See Attachment D	See Attachment D	Final Flex Cap	119.95	304.65

NH₃ EMISSION CAP

See Attachment D	See Attachment D	Final MSS Cap	663.78	1.09
See Attachment D	See Attachment D	Interim Flex Cap (5)	105.79	325.30
See Attachment D	See Attachment D	Final Flex Cap	115.53	367.97

04STK_001	Coker East Heater (B-101-B)	NO _x	9.80	31.10
04STK_002	Coker Middle Heater (B-101-A)	NO _x	9.80	32.32
04STK_003	Coker West Heater (B-101-C)	NO _x	9.80	30.22
04STK_004	Coker Far West Heater(BA-3000)	NO _x	13.50	38.79
05STK_001	CUB Atmospheric Heater (H-3101)	NO _x	94.32	344.27
05STK_002	CUB South Vacuum Heater (H-	NO _x	17.90	62.50

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	3102)			
05STK_004	CUB North Vacuum Heater (H-2001)	NO _x	14.40	50.60
06STK_002	FCC Feed Preheater Heater (B-2)	NO _x	20.15	88.27
08STK_002	GP5E No. 2 Regenerator Heater	NO _x	2.10	6.13
08STK_003	GP5E Propane Dryer Heater	NO _x	0.14	0.62
15STK_001	CHD1 Charge Heater (B-1)	NO _x	16.65	47.04
16STK_001	CHD2 Charge Heater (B-1)	NO _x	10.50	26.31
16STK_001	CHD2 Stripper Reboiler (B-2)	NO _x	14.89	60.30
20STK_001	HDC 1st Stage West Heater (H-301)	NO _x	1.36	4.38
20STK_002	HDC 1st Stage East Heater (H-3302)	NO _x	3.00	12.10
20STK_003	HDC 2nd Stage Heater (H-3303)	NO _x	3.00	12.10
20STK_004	HDC Stabilizer Heater (H-3304)	NO _x	11.76	49.93
20STK_005	HDC Splitter Heater (H-3305)	NO _x	8.02	19.15
25STK_001	Isom Pretreater Charge Heater (B-1)	NO _x	5.10	17.08
25STK_003	Isom Reactor Charge Heater (B-401)	NO _x	2.50	7.88
25STK_004	Isom Regeneration Heater (B-402)	NO _x	0.40	1.75
27STK_001	PTR3 Pretreater Heater (H-3401)	NO _x	11.04	48.36
27STK_002	PTR3 Stripper Reboiler (H-3402)	NO _x	8.36	36.62
27STK_003	PTR3 Reformer Heater (H-3403,4,5,6)	NO _x	77.40	211.03
27STK_004	PTR3 Debutanizer Reboiler(H-3408)	NO _x	5.40	21.02
28STK_001	PTR4 Pretreater Charge (B-7001)	NO _x	12.00	42.05
28STK_001	PTR4 Depent Reboiler (B-7002)	NO _x	13.08	55.45
28STK_003	PTR4 Reformer Heater (B-7101-4)	NO _x	105.16	326.14
28STK_003	PTR4 Debutanizer Reboiler (B-7201)	NO _x	4.90	17.30
36STK_002e, 36STK_002w, 36STK_002i	CUA Atmospheric Heater B1-A	NO _x	25.29	100.74
36STK_004e,	CUA Atmospheric Heater B1-B	NO _x	25.29	100.74

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36STK_004w,				
36STK_004i				
36STK_006	CUA Vacuum Heater B-2	NO _x	5.70	24.97
36STK_007	CUA Vacuum Heater B-3	NO _x	5.70	23.65
38STK_001	Furf 1 Extract Heater B-1	NO _x	3.40	12.70
38STK_001	Furf 1 Extract Heater B-2	NO _x	(6)	(6)
38STK_002	Furf 1 Extract Heater B2-A	NO _x	2.50	9.37
39STK_001	Furf 2 Extract Heater BA-1	NO _x	6.83	27.47
39STK_001	Furf 2 Extract Heater BA-2	NO _x	(7)	(7)
39STK_002	Furf 2 Extract Heater B-103	NO _x	1.50	1.31
40STK_001	HDF Lube Oil Heater (10-B-1)	NO _x	0.64	2.80
40STK_002	HDF Paraffin Wax Heater (20-B-1)	NO _x	0.51	2.21
40STK_003	HDF Microwax Heater (30-B-1)	NO _x	0.31	1.37
47ENG_225	SIB Engine 225	NO _x	0.51	2.25
47ENG_226	SIB Engine 226	NO _x	0.51	2.25
47ENG_227	SIB Engine 227	NO _x	0.51	2.25
47ENG_228	SIB Engine 228	NO _x	0.51	2.25
47ENG_229	SIB Engine 229	NO _x	0.51	2.25
55STK_001	PP2 COGEN Turbine (24)	SO ₃	2.00	4.40
57STK_033	PP3 Boiler No. 33	NO _x	42.78	187.38
57STK_034	PP3 Boiler No. 34	NO _x	42.78	187.38
65STK_001	Cold Box Reactivation Heater	NO _x	0.23	0.89
27FUG_001	PTR3 Fugitive Area	Cl ₂	0.11	0.50
27VNT_001	Regenerator Vent	HCl	0.56	3.05
		HCl (During Scrubber Maintenance)	3.29	-
28FUG_001	PTR4 Fugitive Area	Cl ₂	0.10	0.44
28VNT_001	PTR4 Reactor Regeneration Vent	Cl ₂	0.40	1.90
		HCl	0.03	0.10
32VNT_002	SRU2/3 No. 2 Vent (Maintenance)	CS ₂	0.80	-
		COS	7.70	-
32VNT_003	SRU2/3 No. 3 Vent (Maintenance)	CS ₂	0.80	-
		COS	7.70	-

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32VNT_002	SRU2/3 No. 2 and No. 3 Vent (Maintenance)	CS ₂	-	0.13
32VNT_003		COS	-	1.79

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3)
 - MSS - maintenance, start-up, and shutdown
 - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 - NO_x - total oxides of nitrogen
 - CO - carbon monoxide
 - SO₂ - sulfur dioxide
 - PM - particulate matter, suspended in the atmosphere, including PM₁₀
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter, condensable and noncondensable. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.

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PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter, condensable and noncondensable. Where PM is not listed, it shall be assumed that no PM greater than 2.5 microns is emitted.

H₂S - hydrogen sulfide

H₂SO₄ - sulfuric acid mist

NH₃ - ammonia

SO₃ - sulfur trioxide

Cl₂ - chlorine

HCl - hydrogen chloride

CS₂ - carbon disulfide

COS - carbonylsulfide

(4) This cap is in affect until November 31, 2009.

(5) This cap is in affect until September 30, 2010.

(6) Emissions are emitted from the two heaters are emitted from the same stack.

(7) Emissions are emitted from the two heaters are emitted from the same stack.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____Hrs/day _____Days/week _____Weeks/year or 8,760 Hrs/year

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

*** PM_{2.5} may be up to 100% of PM₁₀

Dated November 24, 2009