

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 38754 and PSDTX324M14

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)
Routine Emission Caps		CO	1856.46	2890.68
		H <sub>2</sub> S	6.79	21.79
		H <sub>2</sub> SO <sub>4</sub>	49.00	214.63
		NO <sub>x</sub>	909.90	1760.99
		PM	188.53	747.93
		PM <sub>10</sub>	188.53	747.93
		PM <sub>2.5</sub>	188.53	747.93
		SO <sub>2</sub>	521.66	1506.78
		VOC	931.58	1344.13
		Benzene	16.33	13.49
MSS Caps		CO	3,005.00	54.35
		H <sub>2</sub> S	6.59	0.22
		NH <sub>3</sub>	4.41	0.17
		NO <sub>x</sub>	560.30	11.24
		PM	80.53	1.28
		PM <sub>10</sub>	80.53	1.28
		PM <sub>2.5</sub>	80.53	1.28
		SO <sub>2</sub>	1,019.00	37.24
		VOC	1,838.00	59.96
		Exempt Solvents	1.76	0.60

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1	Heater - Crude Heater (01-H-01)	CO	8.10	20.13
		NH <sub>3</sub>	0.05	0.17
		NO <sub>x</sub>	9.72	19.24
		PM	1.21	4.00
		PM <sub>10</sub>	1.21	4.00
		PM <sub>2.5</sub>	1.21	4.00
		SO <sub>2</sub>	2.50	5.71
		VOC	0.87	2.90
131	Heater - Crude Preflash (01-H-02)	CO	0.62	2.71
		NH <sub>3</sub>	<0.01	0.02
		NO <sub>x</sub>	1.77	6.29
		PM	0.13	0.49
		PM <sub>10</sub>	0.13	0.49
		PM <sub>2.5</sub>	0.13	0.49
		SO <sub>2</sub>	0.27	0.64
		VOC	0.10	0.35
132	Heater - Crude Stabilizer (01-H-03)	CO	0.17	0.72
		NH <sub>3</sub>	<0.01	<0.01

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		NO <sub>x</sub>	0.48	2.06
		PM	0.04	0.15
		PM <sub>10</sub>	0.04	0.15
		PM <sub>2.5</sub>	0.04	0.15
		SO <sub>2</sub>	0.07	0.22
		VOC	0.03	0.11
74	Vacuum Heater	CO	4.99	16.77
		NH <sub>3</sub>	0.03	0.14
		NO <sub>x</sub>	5.98	26.21
		PM	0.74	3.26
		PM <sub>10</sub>	0.74	3.26
		PM <sub>2.5</sub>	0.74	3.26
		SO <sub>2</sub>	1.37	4.13
		VOC	0.54	2.36
114	Heater - Desalter Heater (11-H-01)	CO	5.00	17.26
		NH <sub>3</sub>	0.03	0.11
		NO <sub>x</sub>	6.00	20.71
		PM	0.75	2.57

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		PM <sub>10</sub>	0.75	2.57
		PM <sub>2.5</sub>	0.75	2.57
		SO <sub>2</sub>	1.54	3.67
		VOC	0.54	1.86
115	HDS Heaters	CO	8.08	32.91
		NH <sub>3</sub>	0.05	0.22
		NO <sub>x</sub>	9.70	42.07
		PM	1.20	5.22
		PM <sub>10</sub>	1.20	5.22
		PM <sub>2.5</sub>	1.20	5.22
		SO <sub>2</sub>	2.49	7.45
		VOC	0.87	3.78
116	Heater - HDS Pre-Heater (12-H-02)	CO	0.31	1.10
		NH <sub>3</sub>	<0.01	0.02
		NO <sub>x</sub>	2.36	8.28
		PM	0.15	0.51
		PM <sub>10</sub>	0.15	0.51
		PM <sub>2.5</sub>	0.15	0.51

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118	Hydrogen Reformer Heater	SO <sub>2</sub>	0.30	0.73
		VOC	0.11	0.37
		CO	58.51	220.73
		NH <sub>3</sub>	0.37	1.52
		NO <sub>x</sub>	70.21	284.40
		PM	8.72	35.80
		PM <sub>10</sub>	8.72	35.80
		PM <sub>2.5</sub>	8.72	35.80
		SO <sub>2</sub>	44.53	122.64
153	Heater - HR Boiler (30-B-02) (interim limit) (6)	VOC	9.95	25.91
		CO	8.46	30.88
		NH <sub>3</sub>	0.09	0.33
		NO <sub>x</sub>	28.21	102.93
		PM	2.10	7.67
		PM <sub>10</sub>	2.10	7.67
		PM <sub>2.5</sub>	2.10	7.67
		SO <sub>2</sub>	4.34	15.85
		VOC	1.52	5.55

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153	Heater - HR Boiler (30-B-02) (7)	CO	8.46	28.94
		NH <sub>3</sub>	0.09	0.33
		NO <sub>x</sub>	22.56	82.34
		PM	2.10	5.51
		PM <sub>10</sub>	2.10	5.51
		PM <sub>2.5</sub>	2.10	5.51
		SO <sub>2</sub>	4.34	10.66
		VOC	1.52	3.99
117	Heater - Alky Frac. Reb. (31-H-01)	CO	2.51	8.83
		NH <sub>3</sub>	0.05	0.17
		NO <sub>x</sub>	5.64	19.86
		PM	1.17	4.11
		PM <sub>10</sub>	1.17	4.11
		PM <sub>2.5</sub>	1.17	4.11
		SO <sub>2</sub>	2.41	5.86
		VOC	0.85	2.97
120	Heater - Butamer Heater (36-H-01)	CO	0.27	0.98
		NH <sub>3</sub>	<0.01	0.02

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		NO <sub>x</sub>	2.00	4.30
		PM	0.12	0.26
		PM <sub>10</sub>	0.12	0.26
		PM <sub>2.5</sub>	0.12	0.26
		SO <sub>2</sub>	0.26	0.41
		VOC	0.09	0.19
162	Oleflex Heater	CO	19.45	69.49
		NH <sub>3</sub>	0.12	0.49
		NO <sub>x</sub>	23.34	65.75
		PM	2.90	11.62
		PM <sub>10</sub>	2.90	11.62
		PM <sub>2.5</sub>	2.90	11.62
		SO <sub>2</sub>	5.99	16.57
		VOC	2.10	8.41
119	Heater - Sulften Heater (46-H-01)	CO	0.35	1.49
		NH <sub>3</sub>	<0.01	0.03
		NO <sub>x</sub>	2.17	5.21
		PM	0.13	0.32
		PM <sub>10</sub>	0.13	0.32
		PM <sub>2.5</sub>	0.13	0.32
		SO <sub>2</sub>	0.28	0.63
		VOC	0.10	0.24

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150	HCU Heater (interm limit) (6)	CO	6.10	24.38
		NH <sub>3</sub>	0.06	0.26
		NO <sub>x</sub>	20.32	81.27
		PM	1.51	6.06
		PM <sub>10</sub>	1.51	6.06
		PM <sub>2.5</sub>	1.51	6.06
		SO <sub>2</sub>	3.13	12.52
		VOC	1.10	4.38
150	HCU Heater (7)	CO	6.10	24.38
		NH <sub>3</sub>	0.06	0.26
		NO <sub>x</sub>	12.19	48.76
		PM	1.51	6.06
		PM <sub>10</sub>	1.51	6.06
		PM <sub>2.5</sub>	1.51	6.06
		SO <sub>2</sub>	3.13	8.63
		VOC	1.10	4.38



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151	Heater - NHU Heater (48-H-01)	CO	1.06	3.82
		NH <sub>3</sub>	0.01	0.04
		NO <sub>x</sub>	3.52	12.72
		PM	0.26	0.95
		PM <sub>10</sub>	0.26	0.95
		PM <sub>2.5</sub>	0.26	0.95
		SO <sub>2</sub>	0.54	1.35
		VOC	0.19	0.69
152	CRU Heater	CO	16.85	57.02
		NH <sub>3</sub>	0.18	0.60
		NO <sub>x</sub>	39.31	133.06
		PM	4.18	14.16
		PM <sub>10</sub>	4.18	14.16
		PM <sub>2.5</sub>	4.18	14.16
		SO <sub>2</sub>	9.80	22.69
		VOC	3.03	10.25

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172	Heater - RSU Heater (49-H-71)	CO	3.30	12.72
		NH <sub>3</sub>	0.02	0.08
		NO <sub>x</sub>	3.96	15.26
		PM	0.49	1.90
		PM <sub>10</sub>	0.49	1.90
		PM <sub>2.5</sub>	0.49	1.90
		SO <sub>2</sub>	1.02	2.70
		VOC	0.36	1.37
49-H-90	Heater - C7 Splitter Reb. (49-H-90)	CO	5.32	16.82
		NH <sub>3</sub>	0.03	0.13
		NO <sub>x</sub>	4.25	15.46
		PM	0.79	3.01
		PM <sub>10</sub>	0.79	3.01
		PM <sub>2.5</sub>	0.79	3.01
		SO <sub>2</sub>	1.64	4.29
		VOC	0.57	2.18
195	Heater - GDU Charge Heater (52-H-01)	CO	13.65	34.29
		NH <sub>3</sub>	0.05	0.20

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		NO <sub>x</sub>	5.80	14.69
		PM	1.23	4.61
		PM <sub>10</sub>	1.23	4.61
		PM <sub>2.5</sub>	1.23	4.61
		SO <sub>2</sub>	2.55	6.57
		VOC	0.89	3.34
1F	Crude Unit	VOC	See Subcap	See Subcap
2F	Vacuum Unit	H <sub>2</sub> S	0.02	0.08
		VOC	See Subcap	See Subcap
4F	LEU Unit	VOC	See Subcap	See Subcap
11F	Desalter Unit	VOC	See Subcap	See Subcap
12F	HDS Unit	H <sub>2</sub> S	0.14	0.62
		VOC	See Subcap	See Subcap
13F	H2 Reformer	VOC	See Subcap	See Subcap
18F	LEU -2	VOC	See Subcap	See Subcap
20F	LRU	VOC	See Subcap	See Subcap
21/22F	HOC	H <sub>2</sub> S	0.03	0.12
		VOC	See Subcap	See Subcap
30F	Boiler House	VOC	See Subcap	See Subcap
07F	#07 BUP Flare	VOC	See Subcap	See Subcap
31F	Alky Unit	H <sub>2</sub> S	0.10	0.43
		HF	0.52	2.29
		VOC	See Subcap	See Subcap
36F	Butamer Unit	VOC	See Subcap	See Subcap

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37F	Iso-Octene	VOC	See Subcap	See Subcap
38F	Oleflex Unit	VOC	See Subcap	See Subcap
46-24F	SULF-10 Fugitives (5)	H <sub>2</sub> S	0.10	0.43
		VOC	See Subcap	See Subcap
41F	SRU Unit Fugitives (5)	H <sub>2</sub> S	0.02	0.09
		VOC	See Subcap	See Subcap
47F	HCU Unit	H <sub>2</sub> S	0.15	0.67
		VOC	See Subcap	See Subcap
47PSA	PSA Unit	VOC	See Subcap	See Subcap
48F	NHT Unit	H <sub>2</sub> S	0.01	0.06
		VOC	See Subcap	See Subcap
49F	CRU Unit	VOC	See Subcap	See Subcap
175	XFU/RFU/C7Split Unit	VOC	See Subcap	See Subcap
52F	GDU Unit	VOC	See Subcap	See Subcap
DOCKS	DK-Docks	VOC	See Subcap	See Subcap
08F	#08FLR/Day Tanks	VOC	See Subcap	See Subcap
LPG STGF	LPG STORAGE	VOC	See Subcap	See Subcap
MVRUF	MVRU	VOC	See Subcap	See Subcap
TERM-F	#TM-Terminal	VOC	See Subcap	See Subcap
TRKRACKFUG	TRUCK RACK (5)	VOC	See Subcap	See Subcap
83F	Wastewater Treatment Plant	VOC	See Subcap	See Subcap
54F	Selective Hydrogenation Unit	VOC	See Subcap	See Subcap
42F	Sour Water Stripper	H <sub>2</sub> S	<0.01	0.02
		VOC	See Subcap	See Subcap
168	Oleflex CCR	Cl <sub>2</sub>	<0.01	0.04

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		H <sub>2</sub> SO <sub>4</sub>	<0.01	0.01
		HCl	0.06	0.28
		SO <sub>2</sub>	0.04	0.19
37	Tank - 100	VOC	See Subcap Below	See Subcap Below
9	Tank - 101	VOC	See Subcap Below	See Subcap Below
10	Tank - 102	VOC	See Subcap Below	See Subcap Below
11	Tank - 103	VOC	See Subcap Below	See Subcap Below
12	Tank - 104	VOC	See Subcap Below	See Subcap Below
13	Tank - 105	VOC	See Subcap Below	See Subcap Below
15	Tank - 108	VOC	See Subcap Below	See Subcap Below
16	Tank - 109	VOC	See Subcap Below	See Subcap Below
17	Tank - 110	VOC	See Subcap Below	See Subcap Below
142	Tank - 111	VOC	See Subcap Below	See Subcap Below
TK-112	Tank - 112	VOC	See Subcap Below	See Subcap Below
TK-114	Tank - 114	VOC	See Subcap Below	See Subcap Below
173	Tank - 115	VOC	See Subcap Below	See Subcap Below
174	Tank - 116	VOC	See Subcap Below	See Subcap Below
48	Tank - 139	VOC	See Subcap Below	See Subcap Below
60	Tank - 14	VOC	See Subcap Below	See Subcap Below
63	Tank - 149	VOC	See Subcap Below	See Subcap Below
61	Tank - 15	VOC	See Subcap Below	See Subcap Below
64	Tank - 150	VOC	See Subcap Below	See Subcap Below

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129	Tank - 156	VOC	See Subcap Below	See Subcap Below
70	Tank - 16	VOC	See Subcap Below	See Subcap Below
140	Tank - 161	VOC	See Subcap Below	See Subcap Below
71	Tank - 17	VOC	See Subcap Below	See Subcap Below
72	Tank - 18	VOC	See Subcap Below	See Subcap Below
93	Tank - 19	VOC	See Subcap Below	See Subcap Below
94	Tank - 20	VOC	See Subcap Below	See Subcap Below
TK-51	Tank - 51	VOC	See Subcap Below	See Subcap Below
88	Tank - 57	VOC	See Subcap Below	See Subcap Below
89	Tank - 58	VOC	See Subcap Below	See Subcap Below
90	Tank - 59	VOC	See Subcap Below	See Subcap Below
91	Tank - 60	VOC	See Subcap Below	See Subcap Below
92	Tank - 61	VOC	See Subcap Below	See Subcap Below
156	Tank - 62	VOC	See Subcap Below	See Subcap Below
157	Tank - 63	VOC	See Subcap Below	See Subcap Below
164	Tank - 64	VOC	See Subcap Below	See Subcap Below
165	Tank - 65	VOC	See Subcap Below	See Subcap Below
196	Tank - 66	VOC	See Subcap Below	See Subcap Below
197	Tank - 67	VOC	See Subcap Below	See Subcap Below
198	Tank - 68	VOC	See Subcap Below	See Subcap Below
169	Tank - 75	VOC	See Subcap Below	See Subcap Below
166	Tank - 76	VOC	See Subcap Below	See Subcap

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				Below
95	Tank - 77	VOC	See Subcap Below	See Subcap Below
96	Tank - 78	VOC	See Subcap Below	See Subcap Below
69	Tank - 9	VOC	See Subcap Below	See Subcap Below
5	Tank - 93	VOC	See Subcap Below	See Subcap Below
6	Tank - 94	VOC	See Subcap Below	See Subcap Below
7	Tank - 95	VOC	See Subcap Below	See Subcap Below
8	Tank - 96	VOC	See Subcap Below	See Subcap Below
34	Tank - 97	VOC	See Subcap Below	See Subcap Below
35	Tank - 98	VOC	See Subcap Below	See Subcap Below
36	Tank - 99	VOC	See Subcap Below	See Subcap Below
Various	Tanks Subcap	VOC	119.40	281.42
122	Cooling Tower - HOC	PM	17.71	65.86
		PM <sub>10</sub>	16.82	62.58
		PM <sub>2.5</sub>	2.63	9.78
		VOC	5.67	21.09
123	Cooling Tower - Alky	PM	0.71	2.00
		PM <sub>10</sub>	0.70	1.98
		PM <sub>2.5</sub>	0.19	0.55
		VOC	1.26	3.55
167-CT	Cooling Tower - BUP	PM	4.52	19.26
		PM <sub>10</sub>	4.30	18.33
		PM <sub>2.5</sub>	0.67	2.88
		VOC	1.47	6.27

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1CT	Cooling Tower - Crude	PM	0.34	1.13
		PM <sub>10</sub>	0.34	1.11
		PM <sub>2.5</sub>	0.06	0.21
		VOC	0.17	0.55
73-P-3	Engine - 73-P-3	CO	3.21	4.23
		NO <sub>x</sub>	11.63	15.35
		PM	1.06	1.39
		PM <sub>10</sub>	1.06	1.39
		PM <sub>2.5</sub>	1.06	1.39
		SO <sub>2</sub>	0.98	1.30
		VOC	1.21	1.59
73-P-4	Engine - 73-P-4	CO	2.87	4.99
		NO <sub>x</sub>	10.42	18.09
		PM	0.95	1.64
		PM <sub>10</sub>	0.95	1.64
		PM <sub>2.5</sub>	0.95	1.64
		SO <sub>2</sub>	0.88	1.53
		VOC	1.08	1.88
73-P-5	Engine - 73-P-5	CO	3.21	8.03
		NO <sub>x</sub>	11.63	29.12
		PM	1.06	2.64
		PM <sub>10</sub>	1.06	2.64
		PM <sub>2.5</sub>	1.06	2.64
		SO <sub>2</sub>	0.98	2.46
		VOC	1.21	3.02



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72-P-6	Engine - 72-P-6	CO	3.21	3.21
		NO <sub>x</sub>	11.63	11.64
		PM	1.06	1.06
		PM <sub>10</sub>	1.06	1.06
		PM <sub>2.5</sub>	1.06	1.06
		SO <sub>2</sub>	0.98	0.98
		VOC	1.21	1.21
72-P-7	Engine - 72-P-7	CO	3.21	0.62
		NO <sub>x</sub>	11.63	2.25
		PM	1.06	0.20
		PM <sub>10</sub>	1.06	0.20
		PM <sub>2.5</sub>	1.06	0.20
		SO <sub>2</sub>	0.98	0.19
		VOC	1.21	0.23
72-P-8	Engine - 72-P-8	CO	3.21	0.77
		NO <sub>x</sub>	11.63	2.79
		PM	1.06	0.25
		PM <sub>10</sub>	1.06	0.25
		PM <sub>2.5</sub>	1.06	0.25
		SO <sub>2</sub>	0.98	0.24
		VOC	1.21	0.29
72-P-9	Engine - 72-P-9	CO	3.21	4.77
		NO <sub>x</sub>	11.63	17.32

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		PM	1.06	1.57
		PM <sub>10</sub>	1.06	1.57
		PM <sub>2.5</sub>	1.06	1.57
		SO <sub>2</sub>	0.98	1.47
		VOC	1.21	1.80
72-P-10	Engine - 72-P-10	CO	2.30	7.25
		NO <sub>x</sub>	8.36	26.31
		PM	0.76	2.39
		PM <sub>10</sub>	0.76	2.39
		PM <sub>2.5</sub>	0.76	2.39
		SO <sub>2</sub>	0.71	2.23
		VOC	0.87	2.73
72-P-11	Engine - 72-P-11	CO	3.24	6.43
		NO <sub>x</sub>	11.75	23.34
		PM	1.07	2.12
		PM <sub>10</sub>	1.07	2.12
		PM <sub>2.5</sub>	1.07	2.12
		SO <sub>2</sub>	0.99	1.97
		VOC	1.22	2.42
72-P-14A	Engine - 72-P-14A	CO	3.21	3.91
		NO <sub>x</sub>	11.63	14.17
		PM	1.06	1.29
		PM <sub>10</sub>	1.06	1.29
		PM <sub>2.5</sub>	1.06	1.29
		SO <sub>2</sub>	0.98	1.20

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		VOC	1.21	1.47
72-P-14B	Engine - 72-P-14B	CO	2.85	4.74
		NO <sub>x</sub>	10.32	17.20
		PM	0.94	1.56
		PM <sub>10</sub>	0.94	1.56
		PM <sub>2.5</sub>	0.94	1.56
		SO <sub>2</sub>	0.87	1.45
		VOC	1.07	1.78
50-P-16	Engine - 50-P-16	CO	3.01	1.31
		NO <sub>x</sub>	10.90	4.74
		PM	0.99	0.43
		PM <sub>10</sub>	0.99	0.43
		PM <sub>2.5</sub>	0.99	0.43
		SO <sub>2</sub>	0.92	0.40
		VOC	1.13	0.49
50-P-20	Engine - 50-P-20	CO	3.01	2.65
		NO <sub>x</sub>	10.90	9.61
		PM	0.99	0.87
		PM <sub>10</sub>	0.99	0.87
		PM <sub>2.5</sub>	0.99	0.87
		SO <sub>2</sub>	0.92	0.81
		VOC	1.13	1.00
16-P-04	Engine - 16-P-04	CO	2.20	0.06

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		NO <sub>x</sub>	8.00	0.21
		PM	0.73	0.02
		PM <sub>10</sub>	0.73	0.02
		PM <sub>2.5</sub>	0.73	0.02
		SO <sub>2</sub>	0.68	0.02
		VOC	0.83	0.02
16-P-07	Engine - 16-P-07	CO	2.67	0.04
		NO <sub>x</sub>	9.69	0.15
		PM	0.88	0.01
		PM <sub>10</sub>	0.88	0.01
		PM <sub>2.5</sub>	0.88	0.01
		SO <sub>2</sub>	0.82	0.01
		VOC	1.01	0.02
126	Main Flare	CO	See Subcap Below	See Subcap Below
		H <sub>2</sub> S	See Subcap Below	See Subcap Below
		NO <sub>x</sub>	See Subcap Below	See Subcap Below
		SO <sub>2</sub>	See Subcap Below	See Subcap Below
		VOC	See Subcap Below	See Subcap Below
158	Ground Flare	CO	See Subcap Below	See Subcap Below
		H <sub>2</sub> S	See Subcap Below	See Subcap Below
		NO <sub>x</sub>	See Subcap Below	See Subcap Below

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		SO <sub>2</sub>	See Subcap Below	See Subcap Below
		VOC	See Subcap Below	See Subcap Below
127	BUP Flare	CO	See Subcap Below	See Subcap Below
		H <sub>2</sub> S	See Subcap Below	See Subcap Below
		NO <sub>x</sub>	See Subcap Below	See Subcap Below
		SO <sub>2</sub>	See Subcap Below	See Subcap Below
		VOC	See Subcap Below	See Subcap Below
135	Acid Gas Flare (pilot only)	CO	See Subcap Below	See Subcap Below
		H <sub>2</sub> S	See Subcap Below	See Subcap Below
		NO <sub>x</sub>	See Subcap Below	See Subcap Below
		SO <sub>2</sub>	See Subcap Below	See Subcap Below
		VOC	See Subcap Below	See Subcap Below
Various	Flares Subcap	CO	516.23	92.94
		H <sub>2</sub> S	0.28	0.07
		NO <sub>x</sub>	84.29	19.34
		SO <sub>2</sub>	26.30	6.51
		VOC	228.27	49.55
31	Loading - Heavy Oil	VOC	14.96	4.72
SHIP FUG	Loading - Ships Fugitives (5)	VOC	237.46	91.74
VRU	Loading - MVRU	VOC	61.33	23.13
TRUCKFUG	Loading - Truck Fugitives (5)	VOC	11.88	13.48
TRUCKCOMB	Loading - Truck Combustor	CO	15.19	17.10

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		NO <sub>x</sub>	6.75	7.43
		SO <sub>2</sub>	<0.01	0.02
		VOC	8.19	11.77
AE-49601A/B	AE-49601A/B Analyzer Vent	VOC	0.01	0.01
AE-49900A/B	AE-49900A/B Analyzer Vent	VOC	0.01	0.01
AE-49901A/B	AE-49901A/B Analyzer Vent	VOC	0.01	0.01
121	HOC Belco Scrubber	CO	889.96	1,470.33
		H <sub>2</sub> SO <sub>4</sub>	49.00	214.62
		NO <sub>x</sub>	356.20	473.81
		PM	120.32	527.00
		PM <sub>10</sub>	120.32	527.00
		PM <sub>2.5</sub>	120.32	527.00
		SO <sub>2</sub>	203.53	420.09
		VOC	28.02	115.53
121	SRU Incinerators Cap	CO	220.75	678.85
		H <sub>2</sub> S	5.82	18.73
		NO <sub>x</sub>	54.64	239.31
		PM	24.72	98.38
		PM <sub>10</sub>	24.72	98.38
		PM <sub>2.5</sub>	24.72	98.38
		SO <sub>2</sub>	191.32	837.99

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		VOC	0.96	3.46
Various	Fugitives Subcap (5)	VOC	136.57	533.74
155	CRU CCR	HCl	0.07	0.29
118	SMR Condenser Vent	VOC	3.64	15.94
21 BH	MAGNACAT Unit	PM	0.18	0.60
		PM <sub>10</sub>	0.18	0.60
		PM <sub>2.5</sub>	0.18	0.60
187	Tank 25	H <sub>2</sub> S	0.02	0.04
		NH <sub>3</sub>	<0.01	<0.01
		VOC	1.43	5.33
83-P-136A	Engine 83-P-136A-EN	CO	2.48	0.06
		NO <sub>x</sub>	7.43	0.19
		PM	0.38	<0.01
		PM <sub>10</sub>	0.38	<0.01
		PM <sub>2.5</sub>	0.38	<0.01
		SO <sub>2</sub>	0.88	0.02
		VOC	7.43	0.19
83-P-136B	Engine 83-P-136B-EN	CO	2.48	0.06
		NO <sub>x</sub>	7.43	0.19

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		PM	0.38	<0.01
		PM <sub>10</sub>	0.38	<0.01
		PM <sub>2.5</sub>	0.38	<0.01
		SO <sub>2</sub>	0.88	0.02
		VOC	7.43	0.19
WWTP-OWS	WW collection system	VOC	8.62	37.77
83-TK-26	Tank 26	VOC	0.12	0.45
83-TK-159	Tank 159	VOC	0.15	0.39
83-TK-160	Tank 160	VOC	0.15	0.39
83-V-97	Tank 97	VOC	0.18	0.40
83-V-58	Tank 58	VOC	0.11	0.44
83-V-59	Tank 59	VOC	0.11	0.44
83-TK-162	Tank 162	VOC	0.39	1.77
83-TK-155	Tank 155	VOC	0.39	1.77
124	API/DGF Combustor	CO	1.65	7.22
		NO <sub>x</sub>	0.45	1.76
		SO <sub>2</sub>	0.03	0.13
		VOC	2.94	12.88
83-TK-23	Equalization Tank	VOC	0.81	3.51
83-TK27	Bio Oxidation Reactor Tank	VOC	0.51	2.22
WWTP-AERB	Aeration Basin	VOC	0.25	1.09
WWTP-CLRF	Clarifier	VOC	<0.01	0.04
WWTP-SLB	Saline Basin	VOC	<0.01	<0.01
01-01	Crude/Vacuum Unit Pump Alley	VOC	<0.01	0.02
01-02	North Side of Vacuum Unit	VOC	<0.01	0.02



## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

01-03	North Side of Vacuum Unit	VOC	<0.01	0.02
01-04	Northwest Side of Vacuum Unit - Main Sump	VOC	<0.01	0.03
03-01	N of Tanks 156/161	VOC	0.02	0.08
98-02	WP MSAT Rail Rack	VOC	0.02	0.08
11-01	Desalter Pump Alley	VOC	<0.01	0.02
41-01	North of 43-TK-08 (Amine Tank)	VOC	<0.01	0.02
41-02	W of 41-V-05 (Acid Gas K.O. Drum)	VOC	<0.01	0.02
49-01	Northwest of XFU	VOC	<0.01	0.02
49-02	North Side of NHT (Unit 48)	VOC	<0.01	0.02
49-03	NHT (Unit 48) Pump Alley	VOC	<0.01	0.02
50-01	East of Tank 62	VOC	<0.01	0.02
52-01	NW of GDU MCC Room	VOC	<0.01	0.02
70-01	East of Tank 55	VOC	<0.01	0.02
70-02	Northwest of Tank 106	VOC	<0.01	0.02
70-03	West of Tank 94 (S&D Main Sump)	VOC	<0.01	0.03
72-01	East of Tank 111	VOC	<0.01	0.02
73-01	North of Tank 152 (Terminal 2A)	VOC	<0.01	0.02
73-02	Between TK 8 & TK 164 (Terminal 2)	VOC	<0.01	0.02
83-01	WWT (Hydroblast Pad)	VOC	0.02	0.07
83-02	WWT (Desalter Lift Station)	VOC	0.01	0.05
83-03	WWT (East of KOH Treater)	VOC	0.02	0.07
83-04	WWT (Northeast of Tank 159)	VOC	<0.01	0.02
83-05	WWT (North Lift	VOC	<0.01	0.03

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

	Station)			
83-06	WWT (North of V-68)	VOC	<0.01	0.02
83-07	WWT (South of V-55)	VOC	<0.01	0.02
83-09	WWT (BSRP)	VOC	<0.01	0.02
83-10	WWT 83-V-99 (Diversion Box)	VOC	0.02	0.07
83-12	WWT 83-V-28 (SE of Catalyst Pad)	VOC	0.02	0.07
V-201	WP MSAT Rail Rack	VOC	0.51	2.23
124a	WP WWT API Combustor Back up	VOC	0.02	0.08

- (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)
  - Cl<sub>2</sub> - chlorine
  - CO - carbon monoxide
  - H<sub>2</sub>S - hydrogen sulfide
  - H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
  - MSS - Maintenance, Startup and Shutdown
  - NH<sub>3</sub> - ammonia
  - NO<sub>x</sub> - total oxides of nitrogen
  - PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
  - PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
  - SO<sub>2</sub> - sulfur dioxide
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (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) These interim limits are in effect until the earlier of completion of installation of low-NO<sub>x</sub> burners or December 31, 2014.
- (7) These limits become effective on the earlier of completion of installation of low-NO<sub>x</sub> burners being installed or January 1, 2015.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Date: January 22, 2014