Emission Sources - Maximum Allowable Emission Rates

Permit Number 18897

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)
XF1011	No 11 Boiler (8)	NO_X	13.73	60.13
		CO	3.64	15.94
		PM	0.77	3.39
		PM_{10}	0.77	3.39
		$PM_{2.5}$	0.77	3.39
		VOC	0.56	2.46
		SO_2	3.06	4.96
		H_2S	0.03	0.05
XF1601	No. 6 Crude Unit Furnace 1 (8)	NOx	5.93	25.97
		CO	5.93	25.97
		PM	1.26	5.53
		PM_{10}	1.26	5.53
		$PM_{2.5}$	1.26	5.53
		VOC	0.91	4.00
		SO_2	4.98	8.08
		H_2S	0.05	0.09

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XF1602	No. 6 Crude Unit Furnace 2 (8)	NO_X	6.16	26.98
		CO	5.28	23.13
		PM	1.31	5.74
		PM_{10}	1.31	5.74
		$PM_{2.5}$	1.31	5.74
		VOC	0.95	4.16
		SO_2	5.18	8.40
		H_2S	0.06	0.09
XF3804	Plant 38 Feed Furnace (8)	NO_X	2.59	11.34
		CO	0.92	4.05
		PM	0.20	0.86
		PM_{10}	0.20	0.86
		$PM_{2.5}$	0.20	0.86
		VOC	0.14	0.62
		SO_2	0.78	1.26
		H_2S	0.01	0.01

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XF3901	Plant 39 Diesel Furnace (8)	NO_X	2.59	11.34
		CO	2.59	11.34
		PM	0.55	2.42
		PM_{10}	0.55	2.42
		$PM_{2.5}$	0.55	2.42
		VOC	0.40	1.75
		SO_2	2.18	3.81
		H_2S	0.02	0.04
XF4131	Naphtha Hydrotreater Furnace No. 1 (8)	NO_X	3.68	16.10
		CO	1.31	5.75
		PM	0.28	1.22
		PM_{10}	0.28	1.22
		$PM_{2.5}$	0.28	1.22
		VOC	0.20	0.89
		SO_2	1.10	1.79
		H_2S	0.01	0.02
XF4132	Naphtha Hydrotreater Furnace No. 2 (8)	NO_X	3.68	16.10
		CO	1.31	5.75
		PM	0.28	1.22
		PM_{10}	0.28	1.22
		$PM_{2.5}$	0.28	1.22
		VOC	0.20	0.89
		SO_2	1.10	1.79
		H_2S	0.01	0.02

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XF4150-60	Rheniformer Reactor Furnace (F-4150) (8)	NO_X	7.07	24.99
		CO	7.07	24.99
		PM	1.51	5.32
		PM_{10}	1.51	5.32
		$PM_{2.5}$	1.51	5.32
		VOC	1.09	3.85
		SO_2	5.94	7.78
		H_2S	0.06	0.08
XF4150-60	Rheniformer Reactor Furnace (F-4160) (8)	NO_X	5.71	24.99
		CO	5.71	24.99
		PM	1.21	5.32
		PM_{10}	1.21	5.32
		$PM_{2.5}$	1.21	5.32
		VOC	0.88	3.85
		SO_2	4.80	7.78
		H_2S	0.05	0.08

Emission Sources - Maximum Allowable Emission Rates

XF4170-80	Rheniformer Reactor Furnace (F-4170) (8)	NO_X	7.28	31.89
		CO	4.90	21.46
		PM	1.04	4.57
		PM_{10}	1.04	4.57
		$PM_{2.5}$	1.04	4.57
		VOC	0.75	3.31
		SO_2	4.12	6.68
		H_2S	0.04	0.07
XF4170-80	Rheniformer Reactor Furnace (F-4180) (8)	NO_X	4.29	18.79
		CO	2.89	12.65
		PM	0.61	2.69
		PM_{10}	0.61	2.69
		$PM_{2.5}$	0.61	2.69
		VOC	0.44	1.95
		SO_2	2.43	3.94
		H_2S	0.03	0.04

Emission Sources - Maximum Allowable Emission Rates

6	Boiler No. 1 (H-901) (8)	NO_X	32.94	144.28
		CO	6.41	28.05
		PM	1.36	5.97
		PM_{10}	1.36	5.97
		$PM_{2.5}$	1.36	5.97
		VOC	0.99	4.32
		SO_2	5.38	8.73
		H_2S	0.06	0.09
8	Boiler No. 3 (H-903) (8)	NO_X	10.81	47.35
		CO	6.10	26.73
		PM	1.30	5.69
		PM_{10}	1.30	5.69
		$PM_{2.5}$	1.30	5.69
		VOC	0.94	4.12
		SO_2	5.13	8.32
		H_2S	0.05	0.09
109	Vacuum Unit Heater (H-1601) (8)	NO_x	21.62	51.30
		CO	6.31	27.62
		PM	1.34	5.88
		PM_{10}	1.34	5.88
		$PM_{2.5}$	1.34	5.88
		VOC	0.97	4.26
		SO_2	5.30	8.60
		H_2S	0.06	0.09

Emission Sources - Maximum Allowable Emission Rates

125	Vacuum Preflash Heater (H-1101) (8)	NO_x	3.31	14.48
		CO	1.18	5.17
		PM	0.25	1.10
		PM_{10}	0.25	1.10
		$PM_{2.5}$	0.25	1.10
		VOC	0.18	0.80
		SO_2	0.99	1.61
		H_2S	0.01	0.02
K501-04	Relief Gas Compressors (8)	NO_x	4.14	18.13
		CO	11.25	49.28
		PM	0.15	0.65
		PM_{10}	0.15	0.65
		$PM_{2.5}$	0.15	0.65
		VOC	1.80	7.88
		SO_2	0.01	0.04
97	Fire Water Pump (8)	NO_x	7.25	0.77
XH-103	CPS Crude Heater	CO	1.56	0.16
		PM	0.51	0.05
		PM_{10}	0.51	0.05
		$PM_{2.5}$	0.51	0.05
		VOC	0.59	0.06
		SO_2	0.48	0.05
		NO_x	6.65	29.13
		CO	6.65	29.13
		PM	1.42	6.20
		PM_{10}	1.42	6.20
		$PM_{2.5}$	1.42	6.20
		VOC	1.02	4.49
		SO_2	5.32	8.99
		H_2S	0.06	0.10

Emission Sources - Maximum Allowable Emission Rates

XF3902	Plant 39 Furnace	NO_x	1.44	6.33
		CO	1.44	6.33
111	FCCU (8)	PM	0.31	1.35
		PM_{10}	0.31	1.35
		$PM_{2.5}$	0.31	1.35
		VOC	0.22	0.97
		SO_2	1.21	2.13
		H_2S	0.01	0.02
		NO_x	74.41	75.04
		CO	58.88	91.36
		PM	24.00	91.98
		PM_{10}	24.00	91.98
		$PM_{2.5}$	24.00	91.98
		VOC	3.57	14.39
		SO_2	33.65	52.21
		H_2SO_4	3.96	15.18
SVE-TC1	Soil Vapor Extraction - Thermal Combustor 1 (8)	NO_x	1.37	6.01
		CO	1.15	5.05
		PM	0.10	0.46
		PM_{10}	0.10	0.46
		$PM_{2.5}$	0.10	0.46
		VOC	4.03	17.65
		SO_2	0.37	1.64
SVE-TC2	Soil Vapor	NO_x	1.37	6.01
		CO	1.15	5.05
		PM	0.10	0.46
		PM_{10}	0.10	0.46
		$PM_{2.5}$	0.10	0.46
		VOC	4.03	17.65
		SO_2	0.37	1.64
PK-853	North Wastewater	NO_x	0.87	3.79
		CO	0.54	2.39
T-24	TK-024 (8)	PM	0.05	0.22
		PM_{10}	0.05	0.22
		$PM_{2.5}$	0.05	0.22
		VOC	0.18	0.77
		SO_2	2.48	10.87
		H_2S	0.03	0.12
		Benzene	0.02	0.11
		VOC	0.41	0.01

Emission Sources - Maximum Allowable Emission Rates

T-52	TK-052 (8)	VOC	1.48	4.48
		Benzene	0.02	0.06
T-61	TK-061 (8)	VOC	0.92	2.39
		Benzene	0.01	0.03
T-69	TK-069 (8)	VOC	0.73	1.88
		Benzene	0.01	0.02
T-76	TK-076 (8)	VOC	0.81	1.98
		Benzene	0.02	0.03
T-90	TK-090 (8)	VOC	0.76	1.50
		Benzene	0.01	0.02
T-92	TK-092 (8)	VOC	5.25	2.04
		Benzene	0.02	0.03
T-94	TK-094 (8)	VOC	0.75	1.86
		Benzene	0.02	0.02
T-95	TK-095 (8)	VOC	1.55	2.43
		Benzene	0.05	0.04
T-96	TK-096 (8)	VOC	1.50	2.75
		Benzene	0.04	0.04
T-97	TK-097 (8)	VOC	1.50	2.70
		Benzene	0.04	0.04
T-98	TK-098 (8)	VOC	0.93	0.10
T-99	TK-099 (8)	VOC	0.28	0.08
T-100	TK-100 (8)	VOC	2.30	0.92
T-101	TK-101 (8)	VOC	0.05	0.05
T-102	TK-102 (8)	VOC	2.96	8.60
		Benzene	0.04	0.11
T-106	TK-106 (8)	VOC	1.74	1.48
T-107	TK-107 (8)	VOC	2.94	8.42
		Benzene	0.05	0.11
T-110	TK-110 (8)	VOC	1.84	5.79
		Benzene	0.03	0.07
T-113	TK-113 (8)	VOC	1.14	3.61
		Benzene	0.02	0.04
T-114	TK-114 (8)	VOC	0.98	2.36
		Benzene	0.02	0.03
T-115	TK-115 (8)	VOC	0.72	2.21
		Benzene	0.01	0.03
T-116	TK-116 (8)	VOC	1.27	3.02
		Benzene	0.02	0.04
T-117	TK-117 (8)	VOC	0.91	2.46

Emission Sources - Maximum Allowable Emission Rates

		Benzene	0.02	0.03
		Toluene	0.30	0.15
		Xylene	0.28	0.07
T-118	TK-118 (8)	VOC	1.14	3.63
		Benzene	0.02	0.05
T-119	TK-119 (8)	VOC	1.00	2.72
T-120	TK-120 (8)	VOC	0.79	2.12
		Benzene	0.02	0.03
T-123	TK-123 (8)	VOC	0.98	2.90
		Benzene	0.02	0.04
T-124	TK-124 (8)	VOC	0.95	2.81
		Benzene	0.02	0.04
T-125	TK-125 (8)	VOC	0.87	2.65
		Benzene	0.06	0.15
T-126	TK-126 (8)	VOC	0.94	2.99
		Benzene	0.01	0.04
T-127	TK-127 (8)	VOC	1.14	3.19
		Benzene	0.02	0.04
T-129	TK-129 (8)	VOC	2.12	7.08
		Benzene	0.03	0.09
T-130	TK-130 (8)	VOC	1.27	2.99
		Benzene	0.02	0.04
T-131	TK-131 (8)	VOC	2.32	6.31
		Benzene	0.03	0.10
T-132	TK-132 (8)	VOC	1.63	3.92
T-133	TK-133 (8)	VOC	4.47	13.43
		Benzene	0.06	0.17
T-135	TK-135 (8)	VOC	0.75	0.17
		Benzene	0.01	0.01
T-137	TK-137 (8)	VOC	1.72	6.53
		Benzene	0.09	0.33
T-138	TK-138 (8)	VOC	3.42	10.40
		H2S	0.02	0.06
T-139	TK-139 (8)	VOC	0.56	0.28
T-140	TK-140 (8)	VOC	3.08	8.95
		Benzene	0.06	0.12
T-141	TK-141 (8)	VOC	2.11	4.93
		Benzene	0.04	0.07

Emission Sources - Maximum Allowable Emission Rates

T-142	TK-142 (8)	VOC	1.27	3.46
		Benzene	0.02	0.05
T-143	TK-143 (8)	VOC	1.36	3.99
		Benzene	0.02	0.05
T-144	TK-144 (8)	VOC	1.39	3.63
		Benzene	0.03	0.05
T-145	TK-145 (8)	VOC	1.54	3.96
		Benzene	0.03	0.05
T-146	TK-146 (8)	VOC	1.54	4.34
		Benzene	0.02	0.06
T-164	TK-164 (8)	VOC	1.14	2.67
		Benzene	0.02	0.04
T-165	TK-165 (8)	VOC	2.14	3.97
		Benzene	0.05	0.05
T-166	TK-166 (8)	VOC	1.24	2.78
		Benzene	0.02	0.04
T-167	TK-167 (8)	VOC	1.51	3.91
		Benzene	0.03	0.05
T-181	TK-181 (8)	VOC	4.65	5.50
		Benzene	0.03	0.07
T-182	TK-182 (8)	VOC	5.53	14.78
		Benzene	0.07	0.19
T-183	TK-183 (8)	VOC	8.23	27.98
		Benzene	0.11	0.35
T-190	TK-190 (8)	VOC	8.83	29.66
		Benzene	0.12	0.37
T-191	TK-191 (8)	VOC	2.49	7.77
		Benzene	0.04	0.10
T-192	TK-192 (8)	VOC	8.58	29.30
		Benzene	0.12	0.37
T-202	TK-202 (8)	VOC	0.87	2.36
		Benzene	0.02	0.03
T-210	TK-210 (8)	VOC	1.96	6.82
		Benzene	0.05	0.16
T-211	TK-211 (8)	VOC	2.09	6.89
		Benzene	0.03	0.09
T3601	TK-3601 (8)	VOC	0.80	2.49
		Benzene	0.01	0.03
24	TK-4001 (8)	VOC	0.92	2.78

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		Benzene	0.02	0.04
70	TK-4007 (8)	VOC	1.70	0.44
71	TK-4008 (8)	VOC	0.61	0.35
66	TK-4012 (8)	VOC	0.76	0.26
52	TK-4013 (8)	VOC	0.81	0.35
79	TK-4035 (8)	VOC	0.58	1.16
		Benzene	0.01	0.01
22	TK-4040 (8)	VOC	1.19	2.79
		Benzene	0.03	0.04
54	TK-4041 (8)	VOC	0.85	0.06
53	TK-4046 (8)	VOC	1.70	0.44
28	TK-4050 (8)	VOC	11.81	39.37
		Benzene	0.17	0.49
67	TK-4051 (8)	VOC	1.83	0.41
29	TK-4057 (8)	VOC	1.66	0.12
		Benzene	0.01	0.01
T4064	TK-4064 (8)	VOC	0.81	0.04
		Benzene	0.01	0.01
45	TK-4065 (8)	VOC	4.43	13.44
		Benzene	0.08	0.17
46	TK-4113 (8)	VOC	1.83	0.44
41	TK-4114 (8)	VOC	4.82	15.95
		Benzene	0.07	0.20
48	TK-4115 (8)	VOC	1.71	0.76
49	TK-4116 (8)	VOC	1.71	0.87
50	TK-4117 (8)	VOC	1.34	3.04
		Benzene	0.03	0.04
38	TK-4118 (8)	VOC	2.10	3.84
		Benzene	0.03	0.05
39	TK-4119 (8)	VOC	1.38	3.67
		Benzene	0.02	0.05
40	TK-4120 (8)	VOC	1.38	3.80
		Benzene	0.02	0.05
42	TK-4121 (8)	VOC	1.70	5.16
		Benzene	0.03	0.07
43	TK-4122 (8)	VOC	1.64	4.81
		Benzene	0.03	0.06

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47	TK-4123 (8)	VOC	1.57	3.78
44	TK-4124 (8)	Benzene	0.02	0.05
		VOC	1.56	4.45
T4270	TK-4270 (8)	Benzene	0.03	0.06
		VOC	0.83	0.20
T4272	TK-4272 (8)	Benzene	0.01	0.01
		VOC	1.86	1.30
		Benzene	0.01	0.02
T4273	TK-4273 (8)	VOC	1.86	1.30
		Benzene	0.01	0.02
T-4274	TK-4274 (8)	VOC	0.68	0.03
T-4275	TK-4275 (8)	VOC	0.68	0.03
T4276	TK-4276 (8)	VOC	0.82	0.03
116	TK-4285 (8)	VOC	6.11	6.76
118	TK-4601 (8)	Benzene	0.04	0.08
		VOC	2.39	6.03
119	TK-4602 (8)	Benzene	0.05	0.08
		VOC	3.20	1.40
120	TK-4603 (8)	VOC	3.20	1.41
124	TK-4605 (8)	VOC	4.28	13.91
T4607	TK-4607 (8)	Benzene	0.06	0.18
		VOC	0.21	0.21
TANK504	TK-504 (8)	Benzene	0.01	0.01
		VOC	2.54	0.04
TANK506	TK-506 (8)	Benzene	0.03	0.01
		VOC	0.33	0.01
VENT507	TK-507 (8)	VOC	0.33	0.01
TANK508	TK-508 (8)	VOC	1.11	1.35
TANK509	TK-509 (8)	Benzene	0.04	0.02
		VOC	48.41	6.68
PRV512	TK-512 (8)	VOC	0.13	0.01
		Benzene	0.01	0.01
TANK513	TK-513 (8)	VOC	1.33	1.44
		Benzene	0.05	0.02
		Toluene	1.28	0.12
		Xylene	1.26	0.08
TANK514	TK-514 (8)	VOC	0.92	1.16
		Benzene	0.03	0.02

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		Toluene	0.79	0.13
TANK515	TK-515 (8)	Xylene	0.78	0.09
		VOC	0.72	1.08
TANK516	TK-516 (8)	Benzene	0.02	0.02
		VOC	0.66	1.11
TK-517	TK-517 (8)	Benzene	0.02	0.02
		VOC	1.85	0.15
VENT518	TK-518 (8)	VOC	1.85	0.11
VENT519	TK-519 (8)	VOC	1.85	0.07
TANK520	TK-520 (8)	VOC	1.26	1.14
		Benzene	0.05	0.02
TANK521	TK-521 (8)	VOC	1.31	1.62
		Benzene	0.05	0.03
TANK522	TK-522 (8)	VOC	1.20	1.79
		Benzene	0.04	0.03
T-524	TK-524 (8)	VOC	0.09	0.05
T-525	TK-525 (8)	VOC	0.09	0.05
T-803	TK-803 (8)	VOC	2.16	7.21
T-804	TK-804 (8)	Benzene	0.03	0.09
		VOC	1.92	6.41
DEATANK	DEATANK (8)	Benzene	0.03	0.08
		VOC	0.01	0.01
T-8402	DEA Tank (8)	VOC	0.01	0.01
D-4145	TK-4145 (8)	VOC	0.87	0.02
D-3106	TK-3106 (8)	VOC	3.01	0.25
WAXCLD	DHT Wax Cloud	VOC	0.01	0.01
F-38	Plant 38 Piping Fugitives (5) (8)	VOC	2.52	11.03
		H_2S	0.01	0.01
F-39	Plant 39 Fugitives (5) (8)	VOC	4.60	20.14
		H_2S	0.02	0.08
		Benzene	0.01	0.01
F-16N	No. 6 Crude Unit Piping Fugitives (5) (8)	VOC	9.30	40.71
		H_2S	0.01	0.01
F-71-72	North 84 Plant	Benzene	0.05	0.20
		VOC	1.00	4.37

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F-10N	North Plant Utilities	H_2S	0.01	0.01
		VOC	3.70	16.20
WWCTS	North API	H_2S	0.01	0.01
		VOC	1.82	7.93
		Benzene	0.01	0.01
F-20N	North Isom Piping	H_2S	0.01	0.05
		NH_3	0.01	0.05
		VOC	2.41	10.53
LE-FUG	LER Unit Fugitives (5) (8)	VOC	5.75	25.18
		Benzene	0.26	1.12
F-41	Rheniformer/NHT/LSR Splitter Fugitives (5) (8)	H_2S	0.01	0.02
		VOC	4.87	21.32
		Benzene	0.12	0.52
TNK-FUG	Tank Field Piping Fugitives (5) (8)	H_2S	0.01	0.02
		VOC	17.95	78.62
F-8	South Poly Plant	Benzene	0.15	0.65
		VOC	3.20	14.00
F-9	Jet Fuel Treating	Benzene	0.15	0.62
		H_2S	0.01	0.01
		VOC	1.04	4.54
F-5	Alkylation Fugitives (5) (8)	VOC	9.62	42.13
F-20S	Alky II Fugitives (5)	VOC	3.90	17.07
W-2	South API	VOC	0.75	3.27
F-23	South Utilities	Benzene	0.01	0.01
		VOC	2.79	12.18
F-19	Butamer Fugitives	H_2S	0.01	0.01
		VOC	3.21	14.06
F-11	FCCU Fugitives (5) (8)	VOC	8.69	38.04
		H_2S	0.01	0.02
		Benzene	0.10	0.41
F-1/2	CPS/DCU Fugitives	VOC	5.86	25.66
F-22	Merox III Fugitives	H_2S	0.01	0.01
		Benzene	0.03	0.13
		VOC	0.89	3.87
		Benzene	0.01	0.05
F-10 SP	Naphtha Merox Fugitives	VOC	1.33	5.81

Emission Sources - Maximum Allowable Emission Rates

F-18	Vacuum Distillation	VOC	5.10	22.33
F-16S	Receiving,	VOC	12.65	55.40
		Benzene	0.11	0.48
FUG	Terminal Fugitives	VOC	4.72	20.65
		Benzene	0.05	0.18
F-84	Amine Unit 1 and 2	VOC	0.96	4.19
		H_2S	0.02	0.06
F-14-5-6	5-6 Cooling Tower (5) (8)	VOC	0.78	3.41
		Benzene	0.01	0.01
F-14-7	7 Cooling Tower (5) (8)	VOC	0.34	1.47
		Benzene	0.01	0.01
F-14-8	8 Cooling Tower (5)	VOC	1.09	4.76
		Benzene	0.01	0.01
F-14-9	9 Cooling Tower (5)	VOC	0.48	2.11
		Benzene	0.01	0.01
F-21	Alky Cooling Tower (5) (8)	VOC	0.79	3.44
		Benzene	0.01	0.01
F-7	Main Cooling	VOC	0.96	4.21
		Benzene	0.01	0.01
SLR1	South Railcar	VOC	5.18	1.20
		H_2S	0.01	0.01
SLR2	South LPG	VOC	0.10	0.04
SLR4	South Acid/Caustic Tanktruck Loading Rack (8)	VOC	10.54	1.06
		H_2S	0.01	0.01
NLR2-5	North Railcar and Tanktruck Loading Rack (8)	VOC	2.24	5.63
NLR 2-5	North Loading Rack NLR3 (8)	VOC	8.27	0.81
		Toluene	1.18	0.11
		Xylene	0.61	0.06
NLR2-5	North Caustic	VOC	5.29	0.19
		H_2S	0.01	0.01
NLR-6	Solid Waste	PM	16.20	0.21
		PM_{10}	16.20	0.21
		$PM_{2.5}$	16.20	0.21
NLR-7	North Asphalt Feed Loading Rack (8)	VOC	0.01	0.01
LLPG-TC	North LPG Railcar	VOC	0.40	0.09
CA-SK	Terminal Tank Truck Loading Rack VRU (8)	VOC	0.79	3.04

Emission Sources - Maximum Allowable Emission Rates

LRACK-FUG	Terminal Loading	VOC	0.16	0.33
VACLR	Vacuum Residue	VOC	0.01	0.01
PK-854	Loading (8) North Wastewater	VOC	0.39	1.68
		H_2S	0.01	0.01
		NH_3	0.01	0.05
		Benzene	0.01	0.02
98	South API Oil	VOC	0.39	1.68
		Benzene	0.01	0.02
CA-SK	Marketing Terminal	VOC	0.14	0.60
CA-SK	Marketing Terminal Sump-2 (8)	VOC	0.14	0.60
RHENSCRUB	Rheniformer	HCl	0.09	0.02
PK-855	New North WWCTS Carbon Regeneration Catalyst	VOC	0.66	2.89
		Benzene	0.01	0.02
		H_2S	0.01	0.04
		NH_3	0.01	0.04
WWCTS2	New North	VOC	1.80	7.88
		Benzene	0.01	0.01
		H_2S	0.01	0.04
		NH_3	0.01	0.04
Compliance Caps -	NOx	189.00	499.00	
	PM	49.00	97.00	
	PM_{10}	49.00	97.00	
	$PM_{2.5}$	49.00	97.00	
	VOC	373.00	856.00	
	Benzene	1.46	4.78	
Individual Emission Rate Limits				
D-2914	Relief Gas North Main Flare (6)	VOC	9.86	-
		NO_x	18.48	-
		CO	46.20	-
		SO_2	72.90	-
R-2911	Rheniformer Flare	H_2S	0.77	-
		VOC	7.46	-
		NO_x	18.72	-
		CO	48.78	-
		SO_2	0.01	-
		H_2S	0.77	-

Emission Sources - Maximum Allowable Emission Rates

D-2914/R-2911	North Main Flare/	VOC	-	0.40
		NO_x	-	3.51
		CO	-	16.24
112	Plant	SO_2	-	0.47
		H_2S	-	0.01
		VOC	0.01	0.01
		NO_x	0.02	0.07
0.49 XF8801/2 2.61		CO		0.11
		SO_2		0.01
	Steam Reformer Heater F-8801 Steam Reformer Heater F-8802	VOC		0.70
		NO_x		4.52
		CO		4.52
		PM		0.96
PM_{10} 0.96 3.61				
	Hydrogen Plant	$PM_{2.5}$	0.96	3.61
		SO_2	3.81	1.92
		H_2S	0.08	0.04
		CO	0.01	0.06
		VOC	0.04	0.18
		H_2S	0.01	0.01
		NOx	3.87	19.92
		CO	209.09	13.19
		SO2	21.36	1.68
		SO PM10	21.36 61.07	5.79 1.68
		H2S	0.05	0.03
		NOx	41.24	9.81
D-2914/R-2911	North Flares [Including North Relief Gas Flare (EPN D-2914) and Rheniformer Flare (EPN R-2911)]	VOC	92.90	0.89
		NO_x	41.24	9.81
		CO	164.24	30.55
		SO_2	587.61	5.66
		H_2S	6.24	0.06

Emission Sources - Maximum Allowable Emission Rates

	South Main Flare	VOC	227.54	2.38
		NO_x	48.38	3.24
		CO	192.70	12.92
		SO_2	1,471.87	23.27
		H_2S	15.64	0.25

(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
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - 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
HCl - hydrochloric acid
H_2S - hydrogen sulfide
H_2SO_4 - sulfuric acid
NH_3 - ammonia

Emission Sources - Maximum Allowable Emission Rates

(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) Planned MSS activities described in Special Condition 38 and pilot emissions are authorized.
(7) Only pilot emissions are authorized for these combustion sources.
(8) Total emission rates from these emission points shall comply with compliance caps contained in this MAERT.

Date: June 6, 2014