

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Flexible Permit Numbers 8404 and PSDTX1062M1

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.

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
Cooling Towers					
FKARU3	ARU3FE	ARU3 Cooling Tower (4)	VOC	0.01	0.04
			Benzene	0.01	0.01
			Cl ₂	0.01	0.06
FKCRU4	CRU4FE	CRU4 Cooling Tower (4)	VOC	0.04	0.16
			Benzene	0.01	0.01
			Cl ₂	0.06	0.27
FKFCCU1 and 2	FCCU NO2FE	Alky Cooling Tower (4)	VOC	1.49	6.53
			Benzene	0.01	0.01
			Cl ₂	0.18	0.81
FKFCCU3	FCCU NO3FE	FCCU3 Cooling Tower (4)	VOC	4.41	19.32
			Benzene	0.01	0.01
			Cl ₂	0.54	2.38
FK33PH	FHTU4	No. 33PH East Cooling Tower (4)	VOC	0.09	0.41
			Benzene	0.01	0.01
			Cl ₂	0.04	0.18
FKDCU1	FKDCU1	DCU1 Cooling Tower (4)	VOC	0.06	0.28
			Benzene	0.01	0.01
			Cl ₂	0.11	0.48
FK33PH	FLCDU	No. 33PH West Cooling Tower (4)	VOC	0.02	0.10
			Benzene	0.01	0.01
			Cl ₂	0.04	0.18
FKMPU4	MPU4FE	MPU4 Cooling Tower (4)	VOC	0.07	0.29
			Benzene	0.01	0.01
			Cl ₂	0.11	0.50

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATE

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY
FKHTU1 and 2	HTU1FE	HTU1 and HTU2	VOC	0.02	0.07
		Cooling Tower (4)	Benzene	0.01	0.01
			Cl ₂	0.02	0.09
FKHTU1 and 2	HTU2FE	HTU1 and HTU2	VOC	0.02	0.07
		Cooling Tower (4)	Benzene	0.01	0.01
			Cl ₂	0.03	0.11
FKHTU3	HTU3FE	HTU3 Cooling Tower (4)	VOC	0.01	0.04
			Benzene	0.01	0.01
			Cl ₂	0.02	0.07
FKMPU3	MPU3FE	MPU3 Cooling Tower (4)	VOC	0.07	0.29
			Benzene	0.01	0.01
			Cl ₂	0.11	0.50
FKHTU5	FKHTU5	HTU5 Cooling Tower	VOC	0.28	1.23
FKVPS1	SRU 4 FE	VPS1 Cooling Tower (4)	VOC	0.02	0.08
			Benzene	0.01	0.01
			Cl ₂	0.03	0.14
FKVPS2	VPS2 FE	VPS2 Cooling Tower (4)	VOC	1.09	4.78
			Benzene	0.01	0.01
			Cl ₂	0.13	0.59
FKVPS4	VPS NO4 FE	VPS4 Cooling Tower (4)	VOC	1.05	4.60
			Benzene	0.01	0.01
			Cl ₂	0.13	0.57
Combustion Sources					
SFCCU3-2	FCCU3REGEN	FCCU3 Regenerator	NO _x	273.21	598.34
			VOC	20.63	90.35
			SO ₂	570.64	208.28
			CO	415.87	1821.49
			PM/PM ₁₀ /PM _{2.5}	188.60	826.10

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
SCRU4-1	Various***	Combined Heater Stack	NO _x	40.69	178.22
			VOC	3.65	16.02
			SO ₂	25.26	71.32
			CO	55.85	244.63
			PM/PM ₁₀ /PM _{2.5}	5.05	22.14
SCDHDS1	FCCU3	CDHDS1 Heater	NO _x	3.75	14.06
			VOC	0.34	1.26
			SO ₂	2.33	6.93
			CO	5.15	19.30
			PM/PM ₁₀ /PM _{2.5}	0.47	1.75
SFCCU3-1	FCCU3CHGHT	FCCU3 Charge Heater	NO _x	8.50	25.31
			VOC	0.76	2.27
			SO ₂	5.27	10.13
			CO	11.66	34.74
			PM/PM ₁₀ /PM _{2.5}	1.06	3.14
SHCU1-1	HCU1RAC1HT	HCU1 Reactor No. 1 Heater	NO _x	3.60	15.77
			VOC	0.24	1.06
			SO ₂	1.68	4.73
			CO	3.71	16.23
			PM/PM ₁₀ /PM _{2.5}	0.34	1.47
SHCU1-2	HCU1RAC2HT	HCU1 Reactor No. 2 Heater	NO _x	4.56	19.97
			VOC	0.31	1.35
			SO ₂	2.12	5.99
			CO	4.69	20.56
			PM/PM ₁₀ /PM _{2.5}	0.42	1.86
Combustion Sources					
SHCU1-3	HCU1PFRBL	HCU1 Preflash Reboiler	NO _x	6.16	26.98
			VOC	0.42	1.82
			SO ₂	2.87	8.10
			CO	6.34	27.77
			PM/PM ₁₀ /PM _{2.5}	0.57	2.51

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
SHCU1-4	HCU1FRCRBL	HCU1 Fractionator Reboiler	NO _x	7.20	31.54
			VOC	0.49	2.13
			SO ₂	3.35	9.47
			CO	7.41	32.46
			PM/PM ₁₀ /PM _{2.5}	0.67	2.94
SHTU1-1	HTU1CHGHTR	HTU1 Charge Heater	NO _x	2.10	9.20
			VOC	0.19	0.83
			SO ₂	1.30	3.68
			CO	2.88	12.62
			PM/PM ₁₀ /PM _{2.5}	0.26	1.14
SHTU2-1	HTU2CHGHTR	HTU2 Charge Heater	NO _x	3.24	14.19
			VOC	0.29	1.28
			SO ₂	2.01	5.68
			CO	4.45	19.48
			PM/PM ₁₀ /PM _{2.5}	0.40	1.76
SHTU2-2	HTU2 RBL	HTU2 Reboiler	NO _x	2.52	11.04
			VOC	0.23	0.99
			SO ₂	1.56	4.42
			CO	3.46	15.15
			PM/PM ₁₀ /PM _{2.5}	0.31	1.37
SHTU3-1	HTU3CHGHTR	HTU3 Charge Heater	NO _x	3.61	15.79
			VOC	0.32	1.42
			SO ₂	2.24	6.32
			CO	4.95	21.68
			PM/PM ₁₀ /PM _{2.5}	0.45	1.96
Combustion Sources					
SHTU3-2	HTU3 RBL	HTU3 Rerun Tower Reboiler	NO _x	3.62	14.49
			VOC	0.33	1.30
			SO ₂	2.25	7.14
			CO	4.97	19.89
			PM/PM ₁₀ /PM _{2.5}	0.45	1.80

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
SHTU4-1	SHTU4-1	HTU4 Charge Heater No. 1	NO _x	3.28	9.15
			VOC	0.18	0.49
			SO ₂	1.22	2.20
			CO	2.70	7.54
			PM/PM ₁₀ /PM _{2.5}	0.24	0.68
SHTU4-2	SHTU4-2	HTU4 Charge Heater No. 2	NO _x	3.28	9.15
			VOC	0.18	0.49
			SO ₂	1.22	2.20
			CO	2.70	7.54
			PM/PM ₁₀ /PM _{2.5}	0.24	0.68
SHTU4-3	SHTU4-3	HTU4 Reboiler Heater	NO _x	2.00	6.66
			VOC	0.13	0.45
			SO ₂	0.93	2.00
			CO	2.06	6.85
			PM/PM ₁₀ /PM _{2.5}	0.19	0.62
SHTU4-4	SHTU4-4	HTU4 Recycle Gas Heater	NO _x	7.05	28.18
			VOC	0.47	1.90
			SO ₂	3.28	10.41
			CO	7.25	29.01
			PM/PM ₁₀ /PM _{2.5}	0.66	2.62
SHTU5	SHTU5	HTU5 Heater	NO _x	2.11	9.22
			VOC	0.33	1.45
			SO ₂	1.52	5.40
			CO	4.47	19.12
			PM/PM ₁₀ /PM _{2.5}	0.46	2.00
Combustion Sources					
SLCDU1-1	LCDU CHTR	LCDU Charge Heater	NO _x	1.82	7.28
			VOC	0.16	0.65
			SO ₂	1.13	3.58
			CO	2.50	9.99
			PM/PM ₁₀ /PM _{2.5}	0.23	0.90

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
SLCDU1-2	LCDU CHTR	LCDU Reactor Heater	NO _x	2.22	9.72
			VOC	0.20	0.87
			SO ₂	1.38	3.89
			CO	3.05	13.35
			PM/PM ₁₀ /PM _{2.5}	0.28	1.21
SMPU3-1	MPU3ROHTR	MPU3 Refined Oil Mix Heater	NO _x	3.31	12.62
			VOC	0.22	0.85
			SO ₂	1.54	4.66
			CO	3.41	13.00
			PM/PM ₁₀ /PM _{2.5}	0.31	1.18
SMPU3-2	MPU3EXTHTR	MPU3 Extract Heater	NO _x	8.93	34.02
			VOC	0.60	2.29
			SO ₂	4.16	12.57
			CO	9.20	35.02
			PM/PM ₁₀ /PM _{2.5}	0.83	3.17
SMPU4	MPU4EXTHTR	MPU4 Secondary Heater Stack	NO _x	0.72	3.15
			VOC	0.05	0.21
			SO ₂	0.34	1.16
			CO	0.74	3.25
			PM/PM ₁₀ /PM _{2.5}	0.07	0.29
SMPU4	MPU4ROHTR	MPU4 Secondary Heater Stack	NO _x	3.52	13.41
			VOC	0.24	0.90
			SO ₂	1.64	4.95
			CO	3.62	13.80
			PM/PM ₁₀ /PM _{2.5}	0.33	1.25
Combustion Sources					
SMPU4C	SMPU4C	MPU4 Extract Heater	NO _x	9.07	39.74
			VOC	0.61	2.68
			SO ₂	4.22	14.68
			CO	9.34	40.90

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
			PM/PM ₁₀ /PM _{2.5}	0.84	3.70
SCDHydro/ SCHDS2	SCDHydro/ SCHDS2	SCDHydro/SCDHDS2 Heater	NO _x	3.67	13.05
			VOC	0.50	1.76
			SO ₂	3.42	9.64
			CO	7.56	26.87
			PM/PM ₁₀ /PM _{2.5}	0.68	2.43
SHCU1-5	SHCU1-5	HCU1 Prefractionator Heater	NO _x	0.80	3.50
			VOC	0.22	0.94
			SO ₂	1.49	4.21
			CO	3.29	14.43
			PM/PM ₁₀ /PM _{2.5}	0.30	1.31
SDCU1-1	SDCU1-1	Coker Heater No. 1	NO _x	15.05	65.42
			VOC	1.01	4.41
			SO ₂	7.01	19.64
			CO	15.49	67.34
			PM/PM ₁₀ /PM _{2.5}	1.40	6.09
SDCU1-2	SDCU1-2	Coker Heater No. 2	NO _x	15.05	65.42
			VOC	1.01	4.41
			SO ₂	7.01	19.64
			CO	15.49	67.34
			PM/PM ₁₀ /PM _{2.5}	1.40	6.09
STGTU1-2	STGTU1-2	Hot Oil Heater	NO _x	0.53	1.21
			VOC	0.03	0.07
			SO ₂	0.20	0.29
			CO	0.43	1.00
			PM/PM ₁₀ /PM _{2.5}	0.04	0.09
Combustion Sources					
STGTU2-2	STGTU2-2	Hot Oil Heater	NO _x	3.12	13.67
			VOC	0.17	0.74
			SO ₂	1.16	3.28

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
				lb/hr	TPY**
			CO	2.57	11.25
			PM/PM ₁₀ /PM _{2.5}	0.23	1.02
SHTU3-3	SHTU3-3	HTU3 Hydrogen Heater	NO _x	0.60	2.63
			VOC	0.11	0.47
			SO ₂	0.75	2.10
			CO	1.65	7.21
			PM/PM ₁₀ /PM _{2.5}	0.15	0.65
SVPS2-1	Various***	Combined Heater Stack	NO _x	11.62	50.90
			VOC	1.57	6.86
			SO ₂	10.82	30.55
			CO	23.92	104.78
			PM/PM ₁₀ /PM _{2.5}	2.16	9.48
SVPS2-2	VPSATM4HT	VPS2 No. 4 Atmospheric Heater	NO _x	2.40	10.51
			VOC	0.32	1.42
			SO ₂	2.24	6.31
			CO	4.94	21.64
			PM/PM ₁₀ /PM _{2.5}	0.45	1.96
SVPS4-1	VPS4ATM3HT	VPS4 Atmospheric C Heater	NO _x	8.40	36.79
			VOC	0.75	3.31
			SO ₂	5.22	14.72
			CO	11.53	50.50
			PM/PM ₁₀ /PM _{2.5}	1.04	4.57
SVPS4-4	VPS4HSRBL	VPS4 Naphtha Reboiler	NO _x	3.48	15.24
			VOC	0.31	1.37
			SO ₂	2.16	6.10
			CO	4.78	20.92
			PM/PM ₁₀ /PM _{2.5}	0.43	1.89
Combustion Sources					
SVPS4-2	VPS4ATM1HT	Atmospheric Heater No. 1 (5)	NO _x	10.50	
			VOC	0.94	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
				lb/hr	TPY**
			SO ₂	6.52	
			CO	14.41	
			PM/PM ₁₀ /PM _{2.5}	1.30	
SVPS4-3	VPS4ATM2HT	Atmospheric Heater No. 2 (5)	NO _x	10.50	
			VOC	0.94	
			SO ₂	6.52	
			CO	14.41	
			PM/PM ₁₀ /PM _{2.5}	1.30	
SVPS4-5	VPS4VAC1HT	Vacuum Heater No. 1 (5)	NO _x	8.70	
			VOC	0.78	
			SO ₂	5.40	
			CO	11.94	
			PM/PM ₁₀ /PM _{2.5}	1.08	
SVPS4-6	VPS4VAC2HT	Vacuum Heater No. 2 (5)	NO _x	8.70	
			VOC	0.78	
			SO ₂	5.40	
			CO	11.94	
			PM/PM ₁₀ /PM _{2.5}	1.08	
SVPS4-7	See above	Combined Heater Stack (5)	NO _x	39.36	172.40
			VOC	3.54	15.50
			SO ₂	24.44	68.99
			CO	54.02	236.62
			PM/PM ₁₀ /PM _{2.5}	4.89	21.41
STGTU1-1	TGTUINCINR	Tail Gas Treating Unit No. 1 Incinerator	NO _x	6.00	18.22
			VOC	0.40	1.23
			SO ₂	62.22	236.83
			CO	10.89	41.45
			PM/PM ₁₀ /PM _{2.5}	0.56	1.70

Combustion Sources

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	Emission Rates*	
				lb/hr	TPY**
STGTU2-1	STGTU2-1	Tail Gas Treating Unit No. 2 Incinerator	NO _x	7.50	22.78
			VOC	0.40	1.23
			SO ₂	62.22	236.83
			CO	10.89	41.45
			PM/PM ₁₀ /PM _{2.5}	0.56	1.70
Loading Operations					
FLR39	LR NO 39FE	Loading Rack No. 39	VOC	0.44	0.34
Storage Tanks					
TK 1945	TK 1945	Storage Tank No. 1945	VOC	3.88	3.29
TK 2040	TK 2040	Storage Tank No. 2040	VOC	1.82	1.15
TK 2041	TK 2041	Storage Tank No. 2041	VOC	6.27	4.51
TAL35144	TAL35144	Fresh Caustic	VOC	0.01	0.01
Vents					
SCRU4-2	CRU4-CCR	Regen Vent Scrubber	NO _x	0.97	4.25
			SO ₂	0.67	2.96
			PM/PM ₁₀ /PM _{2.5}	0.06	0.26
			HCl	0.06	0.24
			Cl ₂	0.01	0.05
SCRU5-2	CRU5-CCR	Regen Vent Scrubber	NO _x	1.92	8.41
			SO ₂	1.34	5.85
			PM/PM ₁₀ /PM _{2.5}	0.12	0.51
			HCl	0.11	0.48
			Cl ₂	0.02	0.48
Fugitives (4)					
FHTU5	FHTU5FE	HTU5 Fugitives	VOC	3.50	15.32
FARU4	FARU4HTU5	HTU5 Amine Recovery Fugitives	VOC	0.13	0.58

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Facility ID No.	Source Name/EPN Description (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
				lb/hr	TPY**
FCOKE1	COKE 1 FE	Coke Handling Fugitives	PM/PM ₁₀ /PM _{2.5}	wet	wet

(See Attachment I for Source Name Emission Point Number Index for emissions authorized in Emission Caps.)

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EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

<u>Emissions Caps</u>		
	<u>lb/hr</u>	<u>TPY</u>
<u>NO_x CAPS:</u>		
Initial (pre-CEP startup)	36.34	159.18
Final (after CEP startup)	253.05	792.35
<u>VOC CAPS:</u>		
Initial	319.21	856.06
Final	354.75	737.08
<u>SO₂ CAPS:</u>		
Initial	0.08	0.40
Final	493.76	1615.45
<u>CO CAPS:</u>		
Initial	0.02	0.07
Final	340.65	1473.91
<u>PM CAPS:</u>		
Initial	0.48	2.07
Final	150.86	596.99

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

PM₁₀ CAPS:

Initial	0.48	2.07
Final	150.69	596.27

PM_{2.5} CAPS:

Initial	0.48	2.07
Final	150.69	596.27

BENZENE CAPS:

Initial	0.49	1.55
Final	0.39	1.08

H₂SO₄ CAPS:

Initial	0.59	0.03
Final	32.59	58.72

H₂S CAPS:

Initial	1.05	4.59
Final	2.04	8.92

NH₃ CAPS:

Initial	0.01	0.01
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EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Final	34.04	131.82
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Cl₂ CAPS:

Initial	0.0	0.00
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Final	0.86	3.77
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MSS Emissions Caps

lb/hr

TPY

Initial:

CO	200.63	1.28
NO _x	63.59	0.20
VOC	3282.68	45.62
SO ₂	316.56	3.80
H ₂ S	65.26	0.78
Benzene	6.74	0.16

Final:

CO	5059.03	58.29
NO _x	1670.10	18.55
VOC	4668.99	94.95
SO ₂	818.18	9.02
PM/PM ₁₀ /PM _{2.5}	148.69	1.65
H ₂ S	105.68	1.27
H ₂ SO ₄	32.00	0.32
Benzene	9.09	0.39
NH ₃	37.10	0.47

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (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)
 - SO₂ - sulfur dioxide
 - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 - NO_x - total oxides of nitrogen
 - CO - carbon monoxide
 - PM - particulate matter, suspended in the atmosphere, including PM₁₀
 - PM₁₀ - particulate matter of 10 microns or less
 - PM_{2.5} - particulate matter of 2.5 microns or less
 - HCl - hydrogen chloride
 - Cl₂ - chlorine
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) The emissions from the Heater (Facility Identification Nos. [FINs] VPS4ATM1HT, VPS4ATM2HT, VPS4VAC1HT, and VPS4VAC2HT) may be routed to either the individual heater stacks or the combined heater stacks, but not both simultaneously. The annual emission rate for the Combined Stack (EPN SVPS 4-7) is also a combined annual limit for the individual Stacks (EPNs SVPS 4-2, SVPS 4-3, SVPS 4-5, and SVPS 4-6).

* Emission rates are based on operating:

8,760 Hr/year

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

*** The FINs included in EPN SCRU4-1 are CRU4DPREB, CRU4INTHT1, CRU4INTHT2, CRU4NHTCHT, CRU4PLATHT, and CRU4SRBL.

*** The FINs included in EPN SVPS2-1 are VPS2ATM1HT, VPS2ATM2HT, VPS2ATM3HT, VPS2VAC1HT, and VPS2VAC2HT.

**** Where the air contaminant is listed as PM₁₀/PM_{2.5}, up to 100% of the PM₁₀ can be PM_{2.5}. Where the air contaminant is listed as PM/PM₁₀/PM_{2.5}, up to 100% of the PM can be PM₁₀ and/or PM_{2.5}.

ATTACHMENT I - EMISSION CAPS

Flexible Permit Numbers 8404 and PSDTX1062M1

CONTAMINANTS, EMISSION POINT NUMBERS, AND SOURCE NAMES

This table lists the emission point numbers, source names, and contaminants emitted from all emission sources covered by this permit that are included in a non-MSS emissions cap. I: initial cap, represents emissions sources that will be operational upon permit renewal and prior to startup of the CEP; F: final cap, represents emissions sources that will be operational after CEP startup. The column marked PM identifies which emissions sources are included in the PM, PM₁₀, and PM_{2.5} emission caps.

Emission Cap Contaminants Emitted												
FIN	EPN	EPN Description	NO _x	VOC	SO ₂	CO	PM	Benzene	H ₂ SO ₄	H ₂ S	NH ₃	Cl ₂
GTG41-LOV	SPS-LOV1	Power Station No. 4 Lube Oil Vent 1					F					
GTG41	SPS4-1	Power Station No. 4 Cogen Unit 1	F	F	F	F	F		F		F	
GTG42-LOV	SPS-LOV2	Power Station No. 4 Lube Oil Vent 2					F					
GTG42	SPS4-2	Power Station No. 4 Cogen Unit 2	F	F	F	F	F		F		F	
GTG43-LOV	SPS-LOV3	Power Station No. 4 Lube Oil Vent 3					F					
GTG43	SPS4-3	Power Station No. 4 Cogen Unit 3	F	F	F	F	F		F		F	
GTG44-LOV	SPS-LOV4	Power Station No. 4 Lube Oil Vent 4					F					
GTG44	SPS4-4	Power Station No. 4 Cogen Unit 4	F	F	F	F	F		F		F	
COKE 2 FE	FCOKE2	DCU coke handling					F					
COKE X FE	FCOKE X	Coke stockpile surge pad					F					
CRU5 FE	FKCRU5 FE	#5 CRU Cooling Tower		F				F				F
DCU2 FE	FKDCU2 FE	DCU 2 Cooling Tower		F				F				F

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Flexible Permit Numbers 8404 and PSDTX1062M1

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PS 4 FE	FKPS 4 FE	Power Station Cooling Tower		F				F				F
VPS 5 FE	FKVPS 5 FE	VPS Cooling Tower		F				F				F
ALKY 4 FE	FALKY4	Fugitives		I, F				I, F				
ARU 1 FE	FARU1	No.1 Amine Regeneration Unit Process Fugitives		I, F				I, F		I, F		
ARU 2 FE	FARU2	No.2 Amine Regeneration Unit Process Fugitives		I, F				I, F		I, F		
ARU 3 FE	FARU3	No.3 Amine Regeneration Unit Process Fugitives		I, F				I, F		I, F		
ARU 3 FE	FSWS1	Sour Water Stripper Fugitives		I, F						I, F	I, F	
ARU 4 FE	FARU4	No.4 Amine Regeneration Unit Process Fugitives		I, F				I, F		I, F		
BSW FE	FBSW	BS and W Fugitives		I, F				I, F				
CDHDS1	FCDHDS1	CDHDS1 Fugitive Emissions		I, F				I, F				
CDHDS2	FCDHDS2	CDHydro/CDHDS2 Fugitive Emissions		I, F				I, F				
CRU 4 FE	FCRU4	Fugitives		I, F				I, F				
FCCU NO 3FE	FFCCU3	FCCU3 Fugitive Emissions		I, F				I, F				
FDCU1	FDCU1	DCU 1 Process Fugitives		I, F				I, F				
FGR-1	FGR-1	Flare Gas Recovery		I, F				I, F				
FGR-2	FGR-2	Flare Gas Recovery		I, F				I, F				
FHTU4	FHTU4	HTU No.4 Fugitives		I, F				I, F				
FMPU4	FMPU4	MPU4 Fugitive Emissions		I, F				I, F				

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HCU NO 1 FE	FHCU1	Fugitive Emissions		I, F				I, F				
HTU1FE	FHTU1	Fugitives		I, F				I, F				
HTU2FE	FHTU2	Fugitives		I, F				I, F				
HTU3FE	FHTU3	Fugitives		I, F				I, F				
LCDU FE	FLCDU	LCDU Fugitives		I, F				I, F				
LOTA FE	FLOTA	LOTA Fugitives		I								
LR NO 4 FE	FU-Rack4	No. 4 Loading Rack Emissions		I, F				I, F				
MPU3FE	FMPU3	MPU3 Fugitive Emissions		I, F				I, F				
NSGP FE	FNSGP	NSGP Fugitives		I, F				I, F				
NSSEP FE	FNSSEP	FE North API Separator		I				I				
PH 27 FE	FPH27	PH27 Fugitives		I, F				I, F				
PH 57 FE	FPH57	PH57 Fugitives		I, F				I, F				
SCTLA FE	FSCTLA	SCLTA Fugitives		I, F				I, F				
SRU 2 FE	FSRU2	SRU No. 2 Fugitives			I, F					I, F		
SRU 3 FE	FSRU3	SRU No 3 Fugitives			I, F					I, F		
SRU 4 FE	FSRU4	SRU No. 4 Fugitives			I, F					I, F		
TGTU 1 FE	FTGTU1	Tail Gas Treating Unit 1 Fugitives			I, F	I, F				I, F		
TGTU 2 FE	FTGTU2	Tail Gas Treating Unit 2 Fugitives			I, F	F				I, F		
VPS 2 FE	FVPS2	VPS2 Fugitive Emissions		I, F				I, F				
VPS NO4 FE	FVPS4	VPS4 Fugitives		I, F				I, F				
WAGS FE	FWAGS	WAGS Fugitives		I, F				I, F				

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Flexible Permit Numbers 8404 and PSDTX1062M1

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WSGP FE	FWSGP	WSGP Fugitives		I, F				I, F				
ARU 5 FE	FARU5	ARU No. 5 Fugitive Emissions		F				F		F		
ARU 5 FE	FSWS2	Sour Water Stripper 2 Fugitives		F						F	F	
ARU 6 FE	FARU6	ARU No. 6 Fugitive Emissions		F				F		F		
ARU 6 FE	FSWS3	Sour Water Stripper 3 Fugitives		F						F	F	
NHTU2 FE	FNHTU2	Naphtha Treating Complex Fugitive Emissions		F				F				
FDCU2	FDCU2	DCU No. 2B Fugitive Emissions		F				F				
HCU NO2 FE	FHCU2	HCU No. 2 Fugitive Emissions		F				F				
HCU OSBL FE	FHCU2-OSBL	HCU No. 2 Fugitive Emissions		F				F				
HTU 6 FE	FHTU6	HTU 6 Fugitive Emissions		F				F				
PS 4 FE	FPS4	Power Station No. 4 Fugitive Emissions		F				F				
SRU 5 FE	FSRU5	SRU No. 5 Fugitive Emissions			F					F		
SRU 6 FE	FSRU6	SRU No. 6 Fugitive Emissions			F					F		
SRU 7 FE	FSRU7	SRU No. 7 Fugitive Emissions			F					F		
VPS NO5 FE	FVPS5	VPS No. 5 Fugitive Emissions		F				F				
TGTU 5 FE	FTGTU5	Tail Gas Treating Unit No. 5 Incinerator			F	F				F		
TGTU 6 FE	FTGTU6	Tail Gas Treating Unit No. 6 Incinerator			F	F				F		
TGTU 7 FE	FTGTU7	Tail Gas Treating Unit No. 7 Incinerator			F	F				F		
FGR-3	FGR-3	Flare Gas Recovery		F				F				
FGR-4	FGR-4	Flare Gas Recovery		F				F				

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ASTU 2 FE	FASTU2	ASTU No. 2 Fugitive Emissions		I, F				I, F				
CRU5INTHT1	SCRU5-1	No. 5 CRU Platformer No.1 Intermediate HTR	F	F	F	F	F					
CRU5INTHT2	SCRU5-2	No. 5 CRU Platformer No.2 Intermediate HTR	F	F	F	F	F					
CRU5INTHT3	SCRU5-2	No. 5 CRU Platformer No.3 Intermediate HTR	F	F	F	F	F					
CRU5PLATH1	SCRU5-1	No. 5 CRU Platformer Heater	F	F	F	F	F					
NHTU2CHT	SNHTU2-1	Naphtha Hydrotreater CHG HTR	F	F	F	F	F					
NHTU2STRP	SNHTU2-2	Naphtha Hydrotreater Stripper Reboiler	F	F	F	F	F					
NHTU2SPLT	SNHTU2-3	Naphtha Hydrotreater Splitter Reboiler	F	F	F	F	F					
HCU2H1A	SHCU2-1	HCU No. 2 1 st Stage Charge Set A Heater	F	F	F	F	F					
HCU2H1B	SHCU2-2	HCU No. 2 1 st Stage Charge Set B Heater	F	F	F	F	F					
HCU2H2	SHCU2-3	HCU No. 2 2 nd Stage Charge Heater	F	F	F	F	F					
SHCU2-5	SHCU2-5	HCU No. 2 Fractionator Heater	F	F	F	F	F					
HCU2DH1H1	SHCU2-6	HCU No. 2 DHT Charge Heater	F	F	F	F	F					
HTU6CHGH1	SHTU6-1	HTU No. 6 Charge Heater 1	F	F	F	F	F					
HTU6CHGH2	SHTU6-2	HTU No. 6 Fractionator Reboiler	F	F	F	F	F					
SDCU2-1	SDCU2-1	Coker Heater No. 1	F	F	F	F	F					
SDCU2-2	SDCU2-2	Coker Heater No. 2	F	F	F	F	F					
SDCU2-3	SDCU2-3	Coker Heater No. 3	F	F	F	F	F					
VPS5H1/2	SVPS5-1	VPS No. 5, No. 1/2 Atmospheric Heater	F	F	F	F	F				F	

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Flexible Permit Numbers 8404 and PSDTX1062M1

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VPS5H3/4	SVPS5-1	VPS No. 5, No. 3/4 Atmospheric Heater	F	F	F	F	F				F	
VPS5VAC1HT	SVPS5-2	VPS No. 5, No. 1 Vacuum Heater	F	F	F	F	F				F	
VPS5VAC2HT	SVPS5-2	VPS No. 5, No. 2 Vacuum Heater	F	F	F	F	F				F	
BOILER 45	SPS4-5	Power Boiler 45	F	F	F	F	F				F	
STGTU5-1	STGTU5-1	SRU5/TGTU5 Incinerator	F	F	F	F	F					
STGTU6-1	STGTU6-1	SRU6/TGTU6 Incinerator	F	F	F	F	F					
STGTU7-1	STGTU7-1	SRU7/TGTU7 Incinerator	F	F	F	F	F					
SLOAD	SSSCRUB1	Sulfur Loading Vent Scrubber 1									F	
SLOAD	SSSCRUB2	Sulfur Loading Vent Scrubber 1									F	
TK1928	SSSCRUB1	Tank 1928									F	
TK1928	SSSCRUB2	Tank 1928									F	
TAL35140	TAL35140	Fresh Sulfuric Acid Tank							I, F			
TAL35141	TAL35141	Fresh Sulfuric Acid Tank							I, F			
TAL35144	TAL35144	Fresh Caustic		I, F								
TK 1247	TML01247	Storage Tank No. 1247		I, F				I, F				
TK 1248	TML01248	Tank 1248		I, F				I, F				
TK 1250	TML01250	Tank 1250		I, F				I, F				
TK 1251	TML01251	Tank 1251		I, F				I, F				
TK 1252	TML01252	Tank 1252		I, F				I, F				
TK 1254	TML01254	Tank 1254		I, F				I, F				
TK 12824	TFT12824	Tank 12824		I, F				I, F				

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Flexible Permit Numbers 8404 and PSDTX1062M1

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TK 1475	TST01475	Tank 1475		I, F								
TK 1490	TML01490	Storage Tank No. 1490		I, F				I, F				
TK 1510	TST01510	Tank 1510		I, F				I, F				
TK 1511	TST01511	Storage Tank No. 1511		I, F				I, F				
TK 1524	TML01524	Storage Tank No. 1524		I, F								
TK 1525	TML01525	Tank 1525		I, F				I, F				
TK 1526	TML01526	Storage Tank No. 1526		I, F								
TK 1530	TST01530	Storage Tank No. 1530		I, F								
TK 1535	TST01535	Storage Tank No. 1535		I				I				
TK 1553	TST01553	Storage Tank No. 1553		I, F				I, F				
TK 1600	TST01600	Storage Tank No. 1600		I, F								
TK 1601	TST01601	Tank 1601		I, F				I, F				
TK 1617	TST01617	Tank 1617		I, F								
TK 1663	TML01663	Tank 1663		I, F				I, F				
TK 1671	TST01671	Storage Tank No. 1671		I, F				I, F				
TK 1679	TST01679	Tank 1679		I, F								
TK 1681	TST01681	Storage Tank No. 1681		I, F								
TK 1691	TST01691	Tank 1691		I, F								
TK 1697	TP301697	Storage Tank No. 1697		I, F								
TK 1698	TML01698	Tank 1698		I, F				I, F				
TK 1699	TML01699	Tank 1699		I, F				I, F				

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Flexible Permit Numbers 8404 and PSDTX1062M1

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TK 1712	TST01712	Storage Tank No. 1712		I, F								
TK 1718	TST01718	Storage Tank No. 1718		I, F								
TK 1719	TST01719	Storage Tank No. 1719		I, F								
TK 1728	TST01728	Tank 1728		I, F								
TK 1740	TBS01740	Storage Tank No. 1740		I								
TK 1741	TBS01741	Tank 1741		I								
TK 1748	TAR01748	Amine Tank		I, F								
TK 1767	TML01767	Storage Tank No. 1767		I, F				I, F				
TK 1768	TML01768	Tank 1768		I, F				I, F				
TK 1775	TST01775	Storage Tank No.1775		I, F				I, F				
TK 1787	TST01787	Storage Tank No. 1787		I, F								
TK 1803	TK 1803	Storage Tank No. 1803		I								
TK 1804	TK 1804	Storage Tank No. 1804		I								
TK 1820	TVA01820	Coker Feedstock Tank		I, F								
TK 1821	TVA01821	Coker Feedstock Tank		I, F								
TK 1825	TDC01825	Refinery Sludges Tank		I, F								
TK 1850	TST01850	Tank 1850		I, F								
TK 1873	TBS01873	Storage Tank No. 1873		I								
TK 1884	TST01884	Tank 1884		I, F								
TK 1885	TST01885	Tank 1885		I, F				I, F				
TK 1886	TST01886	Storage Tank No. 1886		I				I				

ATTACHMENT I - EMISSION CAPS

Flexible Permit Numbers 8404 and PSDTX1062M1

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TK 1887	TWT01887	Storage Tank No. 1887		I, F								
TK 1893	TST01893	Tank 1893		I, F								
TK 1894	TST01894	Storage Tank No. 1894		F								
TK 1895	TST01895	Tank 1895		I, F				I, F				
TK 1898	TAR01898	Storage Tank No. 1898		I, F								
TK 1899	TAR01899	Storage Tank No. 1899		I, F								
TK 1900	TST01900	Storage Tank No. 1900		I								
TK 1904	TML01904	Tank 1904		I, F				I, F				
TK 1913	TST01913	Tank 1913		I, F				I, F				
TK 1918	TK 1918	Tank 1918		I								
TK 19194	TST19194	Tank 19194		I, F				I, F				
TK 1920	TST01920	Tank 1920		I, F				I, F				
TK 19272	TML19272	Storage Tank No. 19272		I, F				I, F				
TK 1930	TK 1930	Amine Surge Tank		F								
TK 21657	TST21657	Tank 21657		I, F								
TK 21774	TST21774	Storage Tank No. 21774		I, F								
TK 21775	TST21775	Storage Tank No. 21775		I, F								
TK 32451	TBP32451	Storage Tank No. 32451		F								
TK 8323	TBS08323	Storage Tank No. 8323		I								
TK 8874	TP108874	Storage Tank No. 8874		F								
TK 2073	TK 2073	Storage TK 2073		F				F				

ATTACHMENT I - EMISSION CAPS
Flexible Permit Numbers 8404 and PSDTX1062M1
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TK 2074	TK 2074	Storage TK 2074		F				F				
TK 2072	TK 2072	Storage TK 2072		F								
TK 1908	TK 1908	Storage TK 1908		F								
TK 1939	TK 1939	Storage TK 1939		F								
TK 1938	TK 1938	Storage TK 1938		F								
TK 2093	TK 2093	Storage TK 2093		F								
TK 2094	TK 2094	Storage TK 2094		F								
TK 2085	TK 2085	Storage TK 2085		F				F				
TK 2097	TK 2097	Storage TK 2097		F				F				
TK 2096	TK 2096	Storage TK 2096		F				F				
TK 2069	TK 2069	Storage TK 2069		F				F				
TK 2120	TK 2120	Storage TK 2120										
TK 2121	TK 2121	Storage TK 2121										
TK 1937	TK 1937	Storage TK 1937		F								
TK 1936	TK 1936	Storage TK 1936		F								
TK 1935	TK 1935	Storage TK 1935		F								
TK 2067	TK 2067	Storage TK 2067		F				F				
TK 2068	TK 2068	Storage TK 2068		F				F				
TK 2078	TK 2078	Storage TK 2078		F								

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Flexible Permit Numbers 8404 and PSDTX1062M1
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TK 2110	TK 2110	DCU quench water tank		F								
TK 2111	TK 2111	Refinery waste tank		F								
TK 2113	TK 2113	Storage TK 2113		F								
TK 2115	TK 2115	Storage TK 2115		F								
CHCU12750A	CHCU	HCU1 Compressor 2750A	I	I	I	I	I					
CHCU12750B	CHCU	HCU1 Compressor 2750B	I	I	I	I	I					

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ATTACHMENT II – MSS EMISSION CAPS

Flexible Permit Numbers 8404 and PSDTX1062M1

CONTAMINANTS, EMISSION POINT NUMBERS, AND SOURCE NAMES

This table lists the maintenance, startup, and shutdown activities from all emission sources covered by this permit that are included in a MSS emissions cap. I: initial cap, represents emissions sources that will be operational upon permit renewal and prior to startup of the CEP; F: final cap, represents emissions sources that will be operational after CEP startup. The column marked PM identifies which emissions sources are included in the PM, PM₁₀, and PM_{2.5} emission caps.

	MSS Emission Cap Contaminants Emitted					
Activity	NO _x	VOC	SO ₂	CO	PM	H ₂ S
FLARES	I, F	I,F	I,F	I,F		I,F
TANKS	I, F	I,F		I,F		
VESSELS		I,F				
VACTRUCK		I,F				
FRAC		I,F				
CHEM		I,F				
HEATERS	F	F	F	F	F	
GTG1	F	F	F	F	F	
GTG2	F	F	F	F	F	
GTG3	F	F	F	F	F	
GTG4	F	F	F	F	F	