

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4802

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

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
104	Regeneration Unit No. 2 Stack	CO	5.70	25.00
		Cl ₂	0.84	0.18
		H ₂ SO ₄	6.06	22.67
		HCl	0.28	1.23
		NO _x	37.20	162.90
		SO ₂	1250.00	5475.00
		VOC	0.01	0.01
120	Vapor Combustor Standby Operation for Backup	CO	1.51	3.33
		NO _x	1.80	3.96
		PM ₁₀	0.14	0.30
		SO ₂	0.01	0.02
		VOC	0.10	0.22
120	Vapor Combustor (5) (Startup, Shutdown, and Maintenance 1,314 hours per rolling 12-months)	Cl ₂	0.14	0.09
		CO	0.40	0.27
		HCl	0.06	0.04
		NO _x	0.48	0.32
		PM ₁₀	0.04	0.02
		SO ₂	0.01	0.01
		VOC	22.22	3.41
128	Regenerator No. 2 Preheater (1,000 hours per rolling 12-months)	CO	2.07	1.03
		NO _x	2.46	1.23
		PM ₁₀	0.19	0.10
		SO ₂	0.02	0.01
		VOC	0.14	0.07

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			lb/hr	TPY**
170	Vapor Combustor 2 Normal Operation	CO	4.28	0.30
		NO _x	2.15	0.15
		SO ₂	0.01	0.01
		VOC	0.08	0.01
170	Vapor Combustor 2 (5) (Furnace Startup, Shutdown, and Maintenance 1,314 hours per rolling 12-months)	CO	15.30	4.85
		NO _x	1.78	0.57
		SO ₂	2.02	0.13
		VOC	12.90	0.86
		HCl	2.07	0.13
		Cl ₂	0.40	0.03
170	Vapor Combustor 2 (5) (Storage Tanks 48, 49, 53, and 56 0.17 Planned Inspection Purge Control Option One)	CO	10.81	1.48
		NO _x		1.26
		SO ₂	0.02	0.01
		VOC	0.05	0.01
TKINSPMSS1	Tank 78 Planned Inspection Purge (5)	CO	3.04	0.75
		C ₂ H ₄	0.01	0.01
		NO _x	1.12	0.35
		SO ₂	0.38	0.09
		VOC (6)	0.24	0.06
TKINSPMSS2	Tanks 48, 49, 53, and 56 Planned Inspection Purge (5)	CO	3.04	0.40
		C ₂ H ₄	0.01	0.01
		NO _x	1.12	0.19
		SO ₂	0.08	0.01
		VOC (6)	0.05	0.01
FE2	Process Fugitives (4)	SO ₂	0.05	0.20
FE-12	Fugitives from HW Equipment (4)	VOC	0.04	0.19
FE-13	Fugitives from HW	VOC	0.02	0.10

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			lb/hr	TPY**
	Equipment (4)			
FE-14	Fugitives from HW Equipment (4)	VOC	0.01	0.01
FUG-SA1	Spent Acid Process Fugitives (4)	H ₂ SO ₄	0.41	1.79
		SO ₂	0.12	0.37
		VOC	0.09	0.35
FUG-SA2	Spent Acid Process Fugitives (4)	H ₂ SO ₄	0.07	0.31
		SO ₂	0.03	0.08
		VOC	0.02	0.07
FUG-SA3	Spent Acid Process Fugitives (4)	H ₂ SO ₄	0.03	0.11
		SO ₂	0.06	0.18
		VOC	0.03	0.08
FUG-SA4	Spent Acid Process Fugitives (4)	H ₂ SO ₄	0.30	1.34
		SO ₂	0.13	0.38
		VOC	0.08	0.30
MSS-HAZTK1	Hazardous Waste Tanks (F2, F3) and T554, Planned MSS Purge (5)	VOC	0.02	0.01
MSS-HAZTK2	Hazardous Waste Tanks (B1, B2, H1, and H2) Planned MSS Purge (5)	VOC	0.01	0.01

(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 area name or fugitive source name.

- (3) CO - carbon monoxide
Cl₂ - chlorine
H₂SO₄ - sulfuric acid
HCl - hydrogen chloride
NO_x - total oxides of nitrogen
SO₂ - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1.
PM₁₀ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted
C₂H₄ - ethylene
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) Planned startup, shutdown, and maintenance emissions
- (6) Ethylene emissions are not included in the VOC emission total.

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

Hrs/day 24 Days/week 7 Weeks/year 52

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

Dated: August 20, 2010