

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 97022

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)
C-1 (6)	Regeneration Heater	VOC	0.08	0.35
		NO <sub>x</sub>	1.48	6.48
		CO	1.22	5.34
		PM <sub>10</sub>	0.11	0.48
		PM <sub>2.5</sub>	0.11	0.48
		SO <sub>2</sub>	0.01	0.04
HTR1 (7)	Regeneration Heater No. 1 (8)	VOC	0.10	0.44
		NO <sub>x</sub>	0.65	2.87
		CO	1.12	4.91
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
		SO <sub>2</sub>	0.03	0.12
HTR2 (7)	Regeneration Heater No. 2 (8)	VOC	0.10	0.44
		NO <sub>x</sub>	0.65	2.87
		CO	1.12	4.91
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
		SO <sub>2</sub>	0.03	0.12

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HTR3 (7)	Regeneration Heater No. 3 (8)	VOC	0.10	0.44
		NO <sub>x</sub>	0.65	2.87
		CO	1.12	4.91
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
		SO <sub>2</sub>	0.03	0.12
	Regeneration Heater Cap (8)	VOC	0.20	0.88
		NO <sub>x</sub>	1.30	5.74
		CO	2.24	9.82
		PM <sub>10</sub>	0.28	1.22
		PM <sub>2.5</sub>	0.28	1.22
		SO <sub>2</sub>	0.06	0.24
WSAC1 (7)	WSAC System	PM <sub>10</sub>	0.03	0.15
		PM <sub>2.5</sub>	0.03	0.15
FUG	Process Fugitives (5)	VOC	0.90	3.95
FUG2 (7)	Expansion Process Fugitives (5)	VOC	0.91	3.98
FLARE (6)	Flare	VOC	2.25	8.37
		NO <sub>x</sub>	0.44	2.02
		CO	0.85	0.28
		PM <sub>10</sub>	0.01	0.01
		PM <sub>2.5</sub>	0.01	0.01
		SO <sub>2</sub>	0.01	0.01

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FLARE2 (7)(11)	Flare	VOC	2.63	9.69
		NO <sub>x</sub>	0.51	3.91
		CO	0.99	7.65
		PM <sub>10</sub>	0.01	0.01
		PM <sub>2.5</sub>	0.01	0.01
		SO <sub>2</sub>	0.01	0.01
	MSS Flare	VOC	437.06	1.31
		NO <sub>x</sub>	44.24	0.13
		CO	319.57	0.94
		SO <sub>2</sub>	0.01	0.01
MSS Flare (11)	Portable Flare	VOC	437.06	1.31
		NO <sub>x</sub>	44.24	0.13
		CO	319.57	0.94
		SO <sub>2</sub>	0.01	0.01
Flare2 and MSS Flare (11)	Flare controlled MSS hourly and annual cap.	VOC	437.06	1.31
		NO <sub>x</sub>	44.24	0.13
		CO	319.57	0.94
MSS-ATM	MSS	VOC	11.91	0.01
HTR1-MSS (7)	Regeneration Heater No. 1 Startup and Shutdown Emissions (9)	NO <sub>x</sub>	1.31	(10)
		CO	2.24	(10)
HTR2-MSS (7)	Regeneration Heater No. 2 Startup and Shutdown Emissions (9)	NO <sub>x</sub>	1.31	(10)
		CO	2.24	(10)

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HTR3-MSS (7)	Regeneration Heater No. 3 Startup and Shutdown Emissions (9)	NO <sub>x</sub>	1.31	(10)
		CO	2.24	(10)
HTR1-MSS HTR2-MSS HTR3-MSS	Regeneration Heater Startup and Shutdown Emissions Cap (9)	NO <sub>x</sub>	2.62	(10)
		CO	4.48	(10)
SITEWIDE	Sitewide Sources	Individual HAP Total HAPs		<10 <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<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
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  
HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
- (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) Emissions from EPNs C-1 and FLARE are authorized until start of operation of the second refrigeration/dehydration unit.
- (7) Emissions from EPNs HTR1, HTR2, HTR3, WSAC1, FUG2, FLARE2, HTR1-MSS, HTR2-MSS, and HTR3-MSS are authorized upon start of operation of the second refrigeration/dehydration unit.
- (8) Hourly and annual routine and MSS emissions from heater EPNs HTR1, HTR2, and HTR3 (excluding hourly NO<sub>x</sub> and CO during MSS activities) shall not exceed the hourly and annual Regeneration Heater Cap.
- (9) Hourly NO<sub>x</sub> and CO emissions during MSS activities from heater EPNs HTR1, HTR2, and HTR3 shall not exceed the Regeneration Heater Startup and Shutdown Emissions Cap.
- (10) Annual MSS NO<sub>x</sub> and CO emissions from heater EPNs HTR1-MSS, HTR2-MSS, and HTR3-MSS shall not exceed the routine annual emissions (EPNs HTR1, HTR2, and HTR3).
- (11) Controlled MSS emissions may be routed to Flare2 or MSS Flare, but combined flare MSS emissions may not exceed hourly and annual cap.

Date: October 31, 2013