

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 55046

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)	<u>Emission Rates *</u>	
			lb/hr	TPY**
33V168ST	Glycol Tank	VOC	0.64	0.19
33V169ST	Glycol Tank	VOC	0.64	0.19
33V171ST	Glycol Tank	VOC	0.01	0.01
33V172ST	Glycol Tank	VOC	0.01	0.01
33V173ST	Glycol Tank	VOC	0.01	0.01
33V174ST	Glycol Tank	VOC	0.01	0.01
33V192ST	Glycol Tank	VOC	1.47	0.35
33V225ST	Glycol Tank	VOC	2.34	0.59
33V343ST	Glycol Tank	VOC	1.80	0.44
33V366ST	Glycol Tank	VOC	2.34	0.62
33V170ST	Glycol Tank	VOC	0.64	0.24
33V191ST	Glycol Tank	VOC	1.47	0.35
33V198ST	Glycol Tank	VOC	0.15	0.03
33V23ST	Glycol Tank	VOC	1.71	0.10
33V24ST	Glycol Tank	VOC	1.71	0.10

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33V200ST	Glycol Tank	VOC	0.19	0.03
33V201ST	Glycol Tank	VOC	2.63	0.07
33V365ST	Glycol Tank	VOC	1.08	0.04
32V145ST	Kerosene Tank V145	VOC	16.40	5.26
32V220ST	Kerosene Tank V220	VOC	21.56	--
32V222ST	Kerosene Tank V222	VOC	21.56	--
	Total - Tanks V220/V222	VOC	--	2.80
32V149ST	Carbonate Tank	VOC	0.94	0.01
33V179ST	Glycol Surge Vessel	VOC	0.64	0.24
33V1171ST	Barometric Water Tank	VOC	0.08	0.02
33V730ST	Glycol Surge Pot	VOC	0.01	0.01
33HOTWELL	Hotwells A, B, and C	VOC	0.13	0.01
26UTLFLR	Utilities Flare (5) (6)	VOC	52.32	
		NO <sub>x</sub>	13.82	
		CO	70.40	
		HCl	0.12	
		Cl <sub>2</sub>	0.11	
	Utilities Flare - Guard	VOC	16.40	0.03
	Bed	NO <sub>x</sub>	1.08	0.01
	Regeneration (7)	CO	5.49	0.03
26UTLFLRTMP	Utilities Temporary	VOC	52.32	
	Flare (5)(6)	NO <sub>x</sub>	13.82	
		CO	70.40	
		HCl	0.12	
		Cl <sub>2</sub>	0.11	
26UTLFLR	Utilities Flare (5) (6)	VOC		44.36
26UTLFLRTMP	Utilities Temporary	NO <sub>x</sub>		14.36
	Flare (5) (6)	CO		73.18

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		HCl		0.14
		Cl <sub>2</sub>		0.13
32FLR0001	EO Flare (Pilot Emissions Only)	VOC	0.01	0.01
		CO	0.11	0.46
		NO <sub>x</sub>	0.02	0.09
		SO <sub>2</sub>	0.01	0.02
32T111ST	EO Absorber T-111	VOC	0.84	--
32T168ST	EO Absorber T-168	VOC	0.84	--
	Total - EO Absorbers T111/T168	VOC	--	3.66
32V181ST/ 32V182ST	Carbon Bed Regeneration	SO <sub>2</sub>	8.89	0.12
32MAINANST	EO Analyzer House	VOC	4.13	18.07
32OXYANST	EO Analyzer House	VOC	0.23	0.99
32UGCANST	EO Analyzer House	VOC	0.10	0.43
32EOFUG	Process Fugitives (4)	VOC	4.32	18.93
32MT3FUG	Cooling Tower MT-3	VOC	3.28	--
32MT4FUG	Cooling Tower MT-4	VOC	3.28	--
	Total - Cooling Towers MT-3/MT-4	VOC		14.35
32MT9FUG	Cooling Tower MT-9	VOC	2.72	11.92
30EGRCLD	Glycol Railcar Loading	VOC	10.86	--
30EGTTLD	Glycol Truck Loading	VOC	10.86	
	Total -Glycol Railcar/Truck Loading	VOC	--	0.84
26UTLFUG	Process Fugitives (4)	VOC	1.25	5.48

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26UTLFLR	Utilities Flare (7) (MSS Emissions)	VOC	9.17	<0.01
		NO <sub>x</sub>	1.14	<0.01
		CO	9.74	<0.01
33MSSFUG	MSS Fugitive Emissions	VOC	99.35	0.30
32FLR0001	EO Flare (MSS Emissions)	VOC	58.5	0.88
		CO	245.34	4.07
		NO <sub>x</sub>	28.61	0.47
		SO <sub>2</sub>	3.71	0.07

- (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 an 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
- SO<sub>2</sub> - sulfur dioxide
- PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>
- PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- HCl - hydrogen chloride
- Cl<sub>2</sub> - chlorine
- NH<sub>3</sub> - ammonia
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) EO-EG Unit contribution only - not including guard bed regeneration.
- (6) Includes maintenance, startup, and shutdown (MSS) activities authorized in MSS permit conditions. The 26UTLFLR and 26UTLFLRTMP shall not be operated at the same time. Total annual emissions from 26UTLFLR and 26UTLFLRTMP combined shall not exceed the stated tons per year emission rate.
- (7) Includes MSS activities authorized in MSS permit conditions for the EO and EG Units only.

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

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

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

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Dated July 13, 2010