

ATTACHMENT A-2

Permit Number 41618

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES ANNUAL EMISSIONS

This table lists the maximum allowable annual 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 annual 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 Numbers (1)	Source Names (2)	Air Contaminant Name (3)	<u>Emission Rates *</u> Tons per Year
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TERMINAL STORAGE TANKS (125), CAUSTIC SCRUBBER SCR-2, AND TANK FARM VENT FLARE

A Tank Farm: 45 Tanks	Terminal Storage Tanks,	Total CO Cap	21.64
B Tank Farm: 11 Tanks	P Tank Farm Caustic Scrubber SCR-2,	Total NO _x Cap	2.52
D Tank Farm: 25 Tanks	and Tank Farm Vent Flare (TVFL)	Total VOC Cap	114.60
E Tank Farm: 13 Tanks			
F Tank Farm: 10 Tanks			
P Tank Farm: 15 Tanks			
(P-15-29 to P-15-35,			
P-40-1 to P-40-3, and			
P-50-1 to P-50-5 Only)			
S Tank Farm: 4 Tanks			
DIESEL-1			
GASOLINE-1			
Scrubber SCR-2			
TVFL			

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TERMINAL STORAGE TANKS (112) AND WASTEWATER EQUALIZATION TANK EQ-02

P Tank Farm: 10 Tanks (P-15-36 to P-15-42, P-25-2, P-25-3, and P-50-6 Only)	Terminal Storage Tanks and Wastewater Equalization Tank EQ-02	Total CO Cap** 20.56 Total NO _x Cap** 5.02 Total VOC Cap** 52.50
Q Tank Farm: 20 Tanks		
V Tank Farm: 4 Tanks		
AE Tank Farm: 12 Tanks		
CE Tank Farm: 12 Tanks		
DE Tank Farm: 8 Tanks		
EE Tank Farm: 13 Tanks		
FE Tank Farm: 9 Tanks		
GE Tank Farm: 24 Tanks		
Equalization Tank EQ-02 (4)		

TERMINAL LAND AND MARINE BASED LOADING FACILITIES

Racks T-3 to T-6, T-8 to T-10 Racks R-1 to R-3, R-5 to R-8	Tank Truck, ISO Container, and Rail Car Product Transfer Racks	**Included in Above Caps
Ship Docks 2/3 and 10/11 Barge Docks C and E	Marine Vessel and Barge Transfer Docks (5)	**Included in Above Caps

TERMINAL LAND AND MARINE BASED LOADING FLARES

Flares FL-1, FL-5, MLFR and MLFR-2	McGill Truck and Rail Car Loading Flare FL-1,**Included in Above Caps East Truck and Rail Car Loading Flare FL-5, John Zink Marine Loading Flare (MLFR), and East Docks Marine Loading Flare (MLFR-2)
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INTERMODAL TRANSFER STATION FACILITIES

Racks T-4 and T-7	Intermodal Transfer Rack T-4 and T-7	Non-VOC	0.04
		VOC	1.49
FL-4	Intermodal Transfer Station MRW Flare FL-4 (Racks R-4 and T-7)	CO	1.51
		Non-VOC	1.78
		NO _x	0.76
		SO ₂	4.89
		VOC	2.18

TERMINAL BOILERS

BLR-1	Boiler BLR-1 (33.5 MM Btu/Hour) Cleaver-Brooks, 800-Horsepower	CO	10.46
		NO _x	12.45
		PM	0.95
		SO ₂	0.07
		VOC	0.68
BLR-2	Boiler BLR-2 (32.7 MM Btu/Hour) Cleaver-Brooks Model CB-LE 800-Horsepower	CO	21.48
		NO _x	10.03
		PM	1.43
		SO ₂	0.14
		VOC	0.79

INTERNAL COMBUSTION ENGINES

FIRE-PUMP	Rack R-4 Fire Water Pump Engine (6) Caterpillar Model 3406B-T 370-Horsepower	CO	0.06
		NO _x	0.30
		PM	0.02
		SO ₂	0.02
		VOC	0.02

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PIPING COMPONENT EQUIPMENT LEAK FUGITIVE EMISSIONS

FU	Piping Component Fugitive Emissions (7)	VOC	77.67
	Non-VOC		0.80

MISCELLANEOUS

DOCK-ENG	Diesel Engines		(lb/hr//tpy)
		CO	0.53//0.10
		NO _x	1.92//0.35
		PM 2.5/10	0.18//0.03
		SO ₂	0.16//0.03
		VOC	0.06//0.01
Degreaser	Degreaser	VOC	0.04//<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
 - MeOH - methanol
 - NaOH - sodium hydroxide (caustic soda)
 - NO_x - total oxides of nitrogen
- PM - particulate matter, suspended in the atmosphere, including PM₁₀.
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns in emitted.
- SO₂ - sulfur dioxide
- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Wastewater Equalization Tank EQ-02 is authorized under Permit By Rule § 106.472(2) effective September 4, 2000. Tank EQ-02 was constructed in May of 2002 and did not require agency registration.
- (5) The permitted VOC emissions cap does not include transfer operations that occur directly

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between marine vessels berthed at Stolthaven Houston's docks not utilizing shore-based equipment to facilitate the product transfer (i.e. lightering operations).

- (6) The Rack R-4 Fire Water Pump Engine is authorized under Permit by Rule § 106.511 effective September 4, 2000. This Engine was installed in November of 2000 and did not require agency registration
- (7) Fugitive emissions are an estimate only and are not considered as a maximum allowable emission rate.

- * Emission rates include emissions attributable to tank roof landing operations for listed internal floating roof tanks. Compliance with these emission limits is based on a rolling 12-month period. Emission rates are based on, and the facilities are limited by, the following maximum operating schedule:

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

Dated August 29, 2007