

ATTACHMENT A-1

Permit Number 41618

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

SHORT-TERM EMISSIONS

This table lists the maximum allowable short-term 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 short-term 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> Pounds per Hour |
|---------------------------|---|-----------------------------|--|
| A TANK FARM | | | |
| STA 3.5-1 | Fixed-Roof Storage Tank A-3.5-1 | VOC | 54.00 |
| STA 3.5-2 | Fixed-Roof Storage Tank A-3.5-2 | VOC | 54.00 |
| STA 3.5-3 | Fixed-Roof Storage Tank A-3.5-3 | VOC | 54.00 |
| STA 3.5-4 | Fixed-Roof Storage Tank A-3.5-4 | VOC | 54.00 |
| STA 3.5-5 | Internal Floating Roof Storage Tank A-3.5-5 | VOC | 0.91 |
| STA 3.5-6 | Fixed-Roof Storage Tank A-3.5-6 | VOC | 54.00 |
| STA 3.5-7 | Fixed-Roof Storage Tank A-3.5-7 | VOC | 54.00 |
| STA 3.5-8 | Fixed-Roof Storage Tank A-3.5-8 | VOC | 54.00 |
| STA 6-3 | Fixed-Roof Storage Tank A-6-3 | VOC | 54.00 |
| STA 6-4 | Fixed-Roof Storage Tank A-6-4 | VOC | 54.00 |
| STA 6-5 | Fixed-Roof Storage Tank A-6-5 | VOC | 54.00 |
| STA 7.5-5 | Fixed-Roof Storage Tank A-7.5-5 | VOC | 54.00 |
| STA 7.5-6 | Fixed-Roof Storage Tank A-7.5-6 | VOC | 54.00 |
| STA 7.5-7 | Fixed-Roof Storage Tank A-7.5-7 | VOC | 54.00 |

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SHORT-TERM EMISSIONS

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | AIR CONTAMINANTS DATA |
|---------------------------|--|-----------------------------|---|
| | | | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| STA 7.5-8 | Fixed-Roof Storage Tank A-7.5-8 | VOC | 54.00 |
| STA 7.5-9 | Fixed-Roof Storage Tank A-7.5-9 | VOC | 54.00 |
| STA 7.5-10 | Internal Floating Roof Storage Tank A-7.5-10 | VOC | 0.98 |
| STA 7.5-11 | Fixed-Roof Storage Tank A-7.5-11 | VOC | 54.00 |
| STA 7.5-12 | Fixed-Roof Storage Tank A-7.5-12 | VOC | 54.00 |
| STA 12-5 | Fixed-Roof Storage Tank A-12-5 | VOC | 54.00 |
| STA 12-6 | Internal Floating Roof Storage Tank A-12-6 | VOC | 1.29 |
| STA 12-7 | Fixed-Roof Storage Tank A-12-7 | VOC | 54.00 |
| STA 12-8 | Fixed-Roof Storage Tank A-12-8 | VOC | 54.00 |
| STA 12-9 | Fixed-Roof Storage Tank A-12-9 | VOC | 54.00 |
| STA 12-10 | Fixed-Roof Storage Tank A-12-10 | VOC | 54.00 |
| STA 12-11 | Fixed-Roof Storage Tank A-12-11 | VOC | 54.00 |
| STA 12-12 | Internal Floating Roof Storage Tank A-12-12 | VOC | 1.29 |
| STA 12-13 | Fixed-Roof Storage Tank A-12-13 | VOC | 54.00 |
| STA 15-1 | Fixed-Roof Storage Tank A-15-1 | VOC | 54.00 |
| STA 15-2 | Fixed-Roof Storage Tank A-15-2 | VOC | 54.00 |
| STA 15-3 | Fixed-Roof Storage Tank A-15-3 | VOC | 54.00 |
| STA 15-4 | Fixed-Roof Storage Tank A-15-4 | VOC | 54.00 |
| STA 15-5 | Fixed-Roof Storage Tank A-15-5 | VOC | 54.00 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | AIR CONTAMINANTS DATA |
|---------------------------|---|-----------------------------|---|
| | | | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| STA 15-6 | Fixed-Roof Storage Tank A-15-6 | VOC | 54.00 |
| STA 15-7 | Fixed-Roof Storage Tank A-15-7 | VOC | 54.00 |
| STA 15-8 | Fixed-Roof Storage Tank A-15-8 | VOC | 54.00 |
| STA 15-9 | Internal Floating Roof Storage Tank A-15-9 | VOC | 1.30 |
| STA 15-10 | Internal Floating Roof Storage Tank A-15-10 | VOC | 1.30 |
| STA 15-11 | Fixed-Roof Storage Tank A-15-11 | VOC | 54.00 |
| STA 15-12 | Fixed-Roof Storage Tank A-15-12 | VOC | 54.00 |
| STA 15-13 | Fixed-Roof Storage Tank A-15-13 | VOC | 54.00 |
| STA 15-14 | Fixed-Roof Storage Tank A-15-14 | VOC | 54.00 |
| STA 15-15 | Fixed-Roof Storage Tank A-15-15 | VOC | 54.00 |
| STA 15-16 | Fixed-Roof Storage Tank A-15-16 | VOC | 54.00 |
| STA 20-1 | Fixed-Roof Storage Tank A-20-1 | VOC | 54.00 |
| B TANK FARM | | | |
| STB 25-1 | Internal Floating Roof Storage Tank B-25-1 | VOC | 1.62 |
| STB 30-1 | Fixed-Roof Storage Tank B-30-1 | VOC | 54.00 |
| STB 30-2 | Fixed-Roof Storage Tank B-30-2 | VOC | 54.00 |

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| | | | AIR CONTAMINANTS DATA |
|---------------------------|--|-----------------------------|---|
| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| STB 30-4 | Fixed-Roof Storage Tank B-30-4 | VOC | 54.00 |
| STB 30-5 | Fixed-Roof Storage Tank B-30-5 | VOC | 54.00 |
| STB 30-6 | Internal Floating Roof Storage Tank B-30-6 | VOC | 2.91 |
| STB 30-7 | Fixed-Roof Storage Tank B-30-7 | VOC | 54.00 |
| STB 30-8 | Fixed-Roof Storage Tank B-30-8 | VOC | 54.00 |
| D TANK FARM | | | |
| STD 7-1 | Low-Pressure Storage Tank D-7-1 | VOC | 11.49 |
| STD 7-2 | Low-Pressure Storage Tank D-7-2 | VOC | 11.49 |
| STD 7-3 | Low-Pressure Storage Tank D-7-3 | VOC | 11.49 |
| STD 7.5-13 | Low-Pressure Storage Tank D-7.5-13 | VOC | 5.97 |
| STD 7.5-14 | Low-Pressure Storage Tank D-7.5-14 | VOC | 5.97 |
| STD 7.5-15 | Low-Pressure Storage Tank D-7.5-15 | VOC | 5.97 |
| STD 10-1 | Low-Pressure Storage Tank D-10-1 | VOC | 6.00 |
| STD 10-2 | Low-Pressure Storage Tank D-10-2 | VOC | 6.00 |
| STD 10-3 | Low-Pressure Storage Tank D-10-3 | VOC | 6.00 |
| STD 15-17 | Low-Pressure Storage Tank D-15-17 | VOC | 5.82 |
| STD 15-18 | Low-Pressure Storage Tank D-15-18 | VOC | 5.82 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | AIR CONTAMINANTS DATA |
|---------------------------|-----------------------------------|-----------------------------|---|
| | | | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| STD 15-19 | Low-Pressure Storage Tank D-15-19 | VOC | 5.82 |
| STD 15-20 | Low-Pressure Storage Tank D-15-20 | VOC | 5.82 |
| STD 15-21 | Low-Pressure Storage Tank D-15-21 | VOC | 5.82 |
| STD 15-22 | Low-Pressure Storage Tank D-15-22 | VOC | 5.82 |
| STD 15-23 | Low-Pressure Storage Tank D-15-23 | VOC | 5.82 |
| STD 15-24 | Low-Pressure Storage Tank D-15-24 | VOC | 5.82 |
| STD 15-25 | Low-Pressure Storage Tank D-15-25 | Lube Oil | < 0.01 |
| STD 15-26 | Low-Pressure Storage Tank D-15-26 | Lube Oil | < 0.01 |
| STD 15-27 | Low-Pressure Storage Tank D-15-27 | Lube Oil | < 0.01 |
| STD 15-28 | Low-Pressure Storage Tank D-15-28 | Lube Oil | < 0.01 |
| STD 20-2 | Low-Pressure Storage Tank D-20-2 | VOC | 5.72 |
| STD 20-3 | Low-Pressure Storage Tank D-20-3 | VOC | 5.72 |
| STD 30-9 | Low-Pressure Storage Tank D-30-9 | VOC | 22.60 |
| STD 30-10 | Low-Pressure Storage Tank D-30-10 | VOC | 5.54 |
| E TANK FARM | | | |
| STE 12-14 | Fixed-Roof Storage Tank E-12-14 | VOC | 54.00 |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | AIR CONTAMINANTS DATA |
|---------------------------|---------------------------------|-----------------------------|---|
| | | | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| STE 12-15 | Fixed-Roof Storage Tank E-12-15 | VOC | 54.00 |
| STE 12-16 | Fixed-Roof Storage Tank E-12-16 | VOC | 54.00 |
| STE 12-17 | Fixed-Roof Storage Tank E-12-17 | VOC | 54.00 |
| STE 12-18 | Fixed-Roof Storage Tank E-12-18 | VOC | 54.00 |
| STE 12-19 | Fixed-Roof Storage Tank E-12-19 | VOC | 54.00 |
| STE 12-20 | Fixed-Roof Storage Tank E-12-20 | VOC | 54.00 |
| STE 12-21 | Fixed-Roof Storage Tank E-12-21 | VOC | 54.00 |
| STE 12-22 | Fixed-Roof Storage Tank E-12-22 | VOC | 54.00 |
| STE 12-23 | Fixed-Roof Storage Tank E-12-23 | Cyclohexanol | 0.06 |
| STE 12-24 | Fixed-Roof Storage Tank E-12-24 | Cyclohexanol | 0.06 |
| STE 12-25 | Fixed-Roof Storage Tank E-12-25 | Cyclohexanol | 0.06 |
| STE 12-26 | Fixed-Roof Storage Tank E-12-26 | Cyclohexanol | 0.06 |
| F TANK FARM | | | |
| STF 6-1 | Fixed-Roof Storage Tank F-6-1 | VOC | 54.00 |
| STF 6-2 | Fixed-Roof Storage Tank F-6-2 | VOC | 54.00 |
| STF 7.5-1 | Fixed-Roof Storage Tank F-7.5-1 | VOC | 54.00 |
| STF 7.5-2 | Fixed-Roof Storage Tank F-7.5-2 | VOC | 54.00 |

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SHORT-TERM EMISSIONS

| AIR CONTAMINANTS DATA | | | |
|---------------------------|---|-----------------------------|---|
| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| STF 7.5-3 | Fixed-Roof Storage Tank F-7.5-3 | VOC | 54.00 |
| STF 7.5-4 | Fixed-Roof Storage Tank F-7.5-4 | VOC | 54.00 |
| STF 12-1 | Fixed-Roof Storage Tank F-12-1 | VOC | 54.00 |
| STF 12-2 | Fixed-Roof Storage Tank F-12-2 | VOC | 54.00 |
| STF 12-3 | Fixed-Roof Storage Tank F-12-3 | VOC | 54.00 |
| STF 12-4 | Fixed-Roof Storage Tank F-12-4 | VOC | 54.00 |
| P TANK FARM | | | |
| STP 15-29 | Internal Floating Roof Storage Tank P-15-29 | VOC | 1.30 |
| STP 15-30 | Internal Floating Roof Storage Tank P-15-30 | VOC | 1.30 |
| STP 15-31 | Internal Floating Roof Storage Tank P-15-31 | VOC | 1.30 |
| STP 15-32 | Internal Floating Roof Storage Tank P-15-32 | VOC | 1.30 |
| STP 15-33 | Low-Pressure Storage Tank P-15-33 | VOC | 5.82 |
| STP 15-34 | Low-Pressure Storage Tank P-15-34 | VOC | 5.82 |
| STP 15-35 | Low-Pressure Storage Tank P-15-35 | VOC | 5.82 |
| STP 40-1 | Internal Floating Roof Storage Tank P-40-1 | VOC | 0.70 |
| STP 40-2 | Internal Floating Roof Storage Tank P-40-2 | VOC | 0.70 |

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AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
|---------------------------|---|-----------------------------|---|
| STP 40-3 | Fixed-Roof Storage Tank P-40-3 | Lube Oil C10+ Olefins | 0.05 12.59 |
| STP 50-1 | Fixed Roof Storage Tank P-50-1 | VOC | 4.04 |
| STP 50-2 | Internal Floating Roof Storage Tank P-50-2 | VOC | 0.97 |
| STP 50-3 | Internal Floating Roof Storage Tank P-50-3 | VOC Methylene Chloride | 0.97 1.06 |
| STP 50-4 | Internal Floating Roof Storage Tank P-50-4 | VOC | 0.97 |
| STP 50-5 | Internal Floating Roof Storage Tank P-50-5 | VOC | 0.76 |
| S TANK FARM | | | |
| STS 100-1 | Internal Floating Roof Storage Tank S100-1 | MeOH | 1.58 |
| STS 100-2 | Internal Floating Roof Storage Tank S100-2 | MeOH | 1.58 |
| STS 100-3 | Internal Floating Roof Storage Tank S100-3 | MeOH | 1.58 |
| STS 100-4 | Internal Floating Roof Storage Tank S100-4 | MeOH | 1.58 |
| WASH-1 | Cleaning Station Wash Water Storage Tank No. 1 | VOC Non-VOC | 0.79 0.63 |
| WASH-2 | Cleaning Station Wash Water Storage Tank No. 2 | VOC Non-VOC | 0.79 0.63 |

MARINE, RAILCAR, TANK TRUCK, AND ISO CONTAINER LOADING/CLEANING FACILITIES

| | | | |
|----------|----------------------------------|-----|-------|
| RACK R-1 | Railcar Loading/Unloading Rack 1 | VOC | 17.97 |
|----------|----------------------------------|-----|-------|

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| AIR CONTAMINANTS DATA | | | |
|--|--|-----------------------------|---|
| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| RACK R-2 | Railcar Loading/Unloading Rack 2 | VOC | 17.97 |
| RACK R-3 | Railcar Loading/Unloading Rack 3 | VOC | 1.94 |
| RACK R-4 | Railcar Cleaning/Loading/Unloading Rack 4 | VOC | 36.18 |
| | | Non-VOC | 0.13 |
| RACK T-3 | Tank Truck Loading/Unloading Rack 3 | VOC | 17.97 |
| RACK T-4 | Tank Truck Loading/Unloading Rack 4 | VOC | 17.97 |
| RACK T-5 | Tank Truck Loading/Unloading Rack 5 | Tallow | 0.01 |
| RACK T-6 | Tank Truck Loading/Unloading Rack 6 | VOC | 17.97 |
| RACK T-7 | Tank Truck and ISO Container Cleaning/ Loading/Unloading Rack 7 | VOC | 34.73 |
| | | Non-VOC | 0.13 |
| SHIP DOCK 2 | Ship Dock 2 (6) | Methacrylic Acid | 1.42 |
| | | Propionic Acid | 7.60 |
| SHIP DOCK 3 | Ship Dock 3 (6) | Methacrylic Acid | 1.42 |
| | | Propionic Acid | 7.60 |
| BARGE DOCK C | Barge Dock C (6) | Methacrylic Acid | 3.54 |
| | | Propionic Acid | 7.60 |
| VESSEL CLEANING/INTERMODAL LOADING STATION CARBON ADSORPTION SYSTEM | | | |
| CAS-1 | Carbon Adsorption System (T-7 and R-4) | VOC | 0.10 |
| | | Non-VOC | 0.06 |

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AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
|---------------------------|--------------------|-----------------------------|---|
|---------------------------|--------------------|-----------------------------|---|

EPICHLOROHYDRIN CAUSTIC SCRUBBER SYSTEMS

| | | | |
|-------|------------------------------|-----------------|------|
| SCR-1 | A Tank Farm Caustic Scrubber | Epichlorohydrin | 1.79 |
| SCR-2 | Tank P50-2 Caustic Scrubber | Epichlorohydrin | 0.01 |

TERMINAL FLARES

| | | | |
|------|---|-----------------|-------|
| TVFL | Tank Farm Vent Flare (7) (T-6, R-2, and "D" Tank Farm [25 tanks]) | CO | 42.29 |
| | | NO _x | 4.93 |
| | | VOC | 1.89 |
| FL-1 | McGill Loading Flare (R-1, R-3, T-3, and T-4) | CO | 23.20 |
| | | NO _x | 2.71 |
| | | VOC | 10.57 |
| MLFR | Marine Loading Flare (Ship Dock 2/3 and Barge Dock C) | CO | 21.04 |
| | | NO _x | 4.21 |
| | | VOC | 46.26 |
| FL-4 | Rail Car, Tank Truck, and ISO Container Cleaning/Transmodal Loading Flare (R-4 and T-7) | CO | 4.50 |
| | | NO _x | 2.25 |
| | | SO ₂ | 28.08 |
| | | VOC | 16.48 |
| | | Non-VOC | 5.86 |

TERMINAL BOILERS

| | | | |
|-------|------------------------------|-----------------|------|
| BLR-1 | Boiler BLR-1 (29 MMBtu/Hour) | CO | 2.39 |
| | | NO _x | 2.84 |
| | | PM | 0.22 |

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| AIR CONTAMINANTS DATA | | | |
|--|--|-----------------------------|---|
| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> <u>Pounds per Hour</u> |
| | | SO ₂ 0.02 | |
| | | VOC 0.16 | |
| BLR-2 | Boiler BLR-2 (32.7 MMBtu/Hour) Cleaver-Brooks Model CB-LE | CO | 4.91 |
| | | NO _x | 2.29 |
| | | PM 0.33 | |
| | | SO ₂ 0.03 | |
| | | VOC 0.18 | |
| ENGINES | | | |
| FIRE-PUMP | Rack R-4 Fire Water Pump Engine (5) | CO | 2.47 |
| | | NO _x | 11.47 |
| | | PM 0.81 | |
| | | SO ₂ 0.76 | |
| | | VOC 0.93 | |
| EQUIPMENT LEAK FUGITIVE EMISSIONS | | | |
| FU | Piping Fugitive Emissions (4) | VOC | 4.24 |
| | | Non-VOC | 0.18 |

- (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) CO - carbon monoxide
MeOH - methanol
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
NO_x - total oxides of nitrogen
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Fugitive emissions are an estimate only and are not considered as a maximum allowable emission rate.
- (5) Rack R-4 Fire Water Pump is covered under Permit by Rule § 106.511. The Engine was

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installed in November 2000 and did not require registration

- (6) Additional chemicals handled at Ship Docks 2/3 and Barge Dock C and their associated emission rates are authorized according to: (1) the permitted product transfer scenarios of Permit Attachments B and C, (2) the transfer operations specified within the special conditions of the permit, (3) applicable Permits By Rule of 30 TAC Chapter 106, and (4) the agency guidance for marine based operations conducted prior to the September 1, 2001 effective date for 30 TAC Chapter 116 applicability to emissions from dockside marine vessels as described in the TCEQ draft publication Dockside Vessel Emissions dated September 2001. A permit amendment in accordance to Special Condition No. 12 must be submitted to the TCEQ by October 1, 2003.
- (7) Low Pressure Storage Tank P-50-6 is authorized via Permit By Rule Registration Number 54010 to also vent to this flare.
- * 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

Dated April 15, 2003