

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 18838 and PSD-TX-843

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** |
| AH-PXP-1N | Analyzer Vent | VOC | 0.01 | 0.01 |
| AH-PXP-1S | Analyzer Vent | VOC | 0.01 | 0.01 |
| DG-1 | Aromatics Degreaser No. 1 | VOC | 0.15 | 0.65 |
| DG-2 | Aromatics Degreaser No. 2 | VOC | 0.15 | 0.65 |
| DG-3 | Aromatics Degreaser No. 3 | VOC | 0.15 | 0.65 |
| DG-5 | Aromatics Degreaser No. 5 | VOC | 0.15 | 0.65 |
| EH-31 | Heater B-301 | CO | 0.67 | 2.92 |
| | | NO _x | 0.79 | 3.48 |
| | | PM ₁₀ | 0.06 | 0.26 |
| | | SO ₂ | 0.01 | 0.02 |
| | | VOC | 0.04 | 0.19 |
| EH-37 | No. 2 Lift Station Middle (330 hours per year) | CO | 1.15 | 0.19 |
| | | NO _x | 1.75 | 0.29 |
| | | PM ₁₀ | 0.01 | 0.01 |
| | | SO ₂ | 0.01 | 0.01 |
| | | VOC | 0.25 | 0.04 |
| EH-37A | No. 2 Lift Station North (100 hours per year) | CO | 1.26 | 0.06 |
| | | NO _x | 1.92 | 0.10 |
| | | PM ₁₀ | 0.01 | 0.01 |
| | | SO ₂ | 0.01 | 0.01 |
| | | VOC | 0.27 | 0.02 |

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|---------------------------|--|-----------------------------|-------|------------------|-------|
| | | | | lb/hr | TPY** |
| EH-39 | Emergency Fire Water Pump (26 hours per year) | CO | 2.34 | 0.03 | |
| | | | | | |
| | | NO _x | 10.85 | 0.14 | |
| | | | | | |
| | | PM ₁₀ | 0.77 | 0.01 | |
| | | SO ₂ | 0.72 | 0.01 | |
| | | VOC | 0.88 | 0.01 | |
| EH-40 | Emergency Fire Water Pump (26 hours per year) | CO | 2.54 | 0.03 | |
| | | | | | |
| | | NO _x | 11.78 | 0.15 | |
| | | | | | |
| | | PM ₁₀ | 0.84 | 0.01 | |
| | | SO ₂ | 0.78 | 0.01 | |
| | | VOC | 0.95 | 0.01 | |
| EH-57 | Emergency Fire Water Pump (26 hours per year) | CO | 3.49 | 0.05 | |
| | | | | | |
| | | NO _x | 16.18 | 0.21 | |
| | | | | | |
| | | PM ₁₀ | 1.15 | 0.01 | |
| | | SO ₂ | 1.07 | 0.01 | |
| | | VOC | 1.31 | 0.02 | |
| EH-9201 | Reboiler B-9201 | CO | 2.89 | 7.71 | |
| | | | | | |
| | | NO _x (7) | 7.23 | 17.34 | |
| | | | | | |
| | | PM ₁₀ | 0.72 | 1.93 | |
| | | SO ₂ | 0.09 | 0.23 | |
| | | VOC | 0.20 | 0.54 | |
| EH-9301 | Heater B-9301 | CO | 1.79 | 5.52 | |
| | | | | | |
| | | NO _x (7) | 4.48 | 12.42 | |
| | | | | | |
| | | PM ₁₀ | 0.45 | 1.38 | |
| | | SO ₂ | 0.05 | 0.16 | |
| | | VOC | 0.25 | 0.77 | |
| EH-9400 | Reboiler B-9400 | CO | 1.10 | 3.44 | |
| | | | | | |
| | | NO _x (7) | 2.75 | 7.75 | |

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| | | | | AIR CONTAMINANTS DATA | | | |
|------------------------|----------------------------|--------------------------|--------|-----------------------|-------|-------|--|
| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | | Emission Rates * | | | |
| | | | | lb/hr | TPY** | | |
| | | | | PM ₁₀ 0.28 | 0.86 | | |
| | | | | SO ₂ 0.03 | 0.10 | | |
| | VOC | 0.15 | 0.48 | | | | |
| EH-9401 | Reboiler B-9401 | CO | 6.13 | 23.21 | | | |
| | | | | NO _x (7) | 15.32 | 46.43 | |
| | | | | PM ₁₀ 1.53 | 5.80 | | |
| | SO ₂ | 0.18 | 0.69 | | | | |
| | VOC | 0.43 | 1.64 | | | | |
| EH-9402 | Reboiler B-9402 | CO | 1.12 | 2.63 | | | |
| | | | | NO _x (7) | 2.79 | 5.91 | |
| | | | | PM ₁₀ 0.28 | 0.66 | | |
| | SO ₂ | 0.03 | 0.08 | | | | |
| | VOC | 0.16 | 0.37 | | | | |
| EH-9601 | Flare Paraxylene Unit | CO | 1.57 | 6.86 | | | |
| | (Normal Operation Only) | NO _x | 0.31 | 1.35 | | | |
| | SO ₂ | 1.10 | 0.34 | | | | |
| | | | | VOC | 0.02 | 0.08 | |
| | Maintenance Operation Only | CO | 52.68 | 12.10 | | | |
| | (460 hours per year) | NO _x | 10.34 | 2.37 | | | |
| | | | | SO ₂ | 1.09 | 0.25 | |
| | | | | VOC | 15.99 | 3.67 | |
| | Maintenance Operation Only | CO | 102.90 | 34.58 | | | |
| | (672 hours per year) (9) | NO _x | 19.98 | 6.71 | | | |
| | | | | SO ₂ | 0.16 | 0.05 | |
| | | | | VOC | 55.15 | 18.53 | |
| EH-9602 | Wharf Loading VCS | CO | 2.30 | 5.04 | | | |
| | | | | NO _x | 7.40 | 16.21 | |
| | | | | VOC | 6.51 | 4.03 | |

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|---------------------------|---|--------------------------------|------|------------------|-------|
| | | | | lb/hr | TPY** |
| EH-9603 | Wharf Tank Farm Thermal Oxidizer | CO | 0.0 | 0.0 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | NO _x | 0.20 | 0.88 | |
| | PM ₁₀ | 0.26 | 1.14 | | |
| | SO ₂ | 0.01 | 0.01 | | |
| | | VOC | 0.86 | 3.48 | |
| EH-9604 | Refinery Tank Farm Thermal Oxidizer | CO | 0.12 | 0.53 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | NO _x | 0.20 | 0.88 | |
| | PM ₁₀ | 0.10 | 0.44 | | |
| | SO ₂ | 0.01 | 0.01 | | |
| | | VOC | 0.31 | 1.34 | |
| EH-9616 | Emergency Fire Water Pump (876 hours per year) | CO | 0.0 | 0.0 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | NO _x | 0.0 | 0.0 | |
| | PM ₁₀ | 0.0 | 0.0 | | |
| | SO ₂ | 0.0 | 0.0 | | |
| | | VOC | 0.0 | 0.0 | |
| EM-2 | Cooling Tower No. 2 | VOC | 0.63 | 2.76 | |
| EM-37 | Carbon Adsorption System | VOC (5) | 4.30 | 0.01 | |
| | | VOC (6) (8) | | 0.41 | 0.12 |
| EM-38 | Carbon Adsorption System | VOC (5) | 4.30 | 0.01 | |
| | | VOC (6) (8) | | 0.41 | 0.12 |
| EM-9601 | Cooling Tower M-9601 | VOC | 0.50 | 2.21 | |
| ET-4 | Sulfuric Acid Storage Tank | H ₂ SO ₄ | 0.01 | 0.01 | |
| ET-34 | Reformate Storage Tank | VOC | 0.81 | 1.05 | |
| ET-79 | Sulfuric Acid Storage Tank | H ₂ SO ₄ | 0.01 | 0.01 | |
| ET-1201 | Diesel Storage Tank | VOC | 0.26 | 0.01 | |

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| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | <u>Emission Rates *</u> | |
|---------------------------|------------------------------|-----------------------------|-------------------------|-------------|
| | | | lb/hr | TPY** |
| ET-9621 | Diesel Storage Tank | VOC | 0.26 | 0.01 |
| EF-3 | Process Fugitives (4) | VOC | 0.59 | 2.56 |
| EF-4 | Process Fugitives (4) | VOC | 0.15 | 0.68 |
| EF-6 | Process Fugitives (4) | VOC | 0.27 | 1.19 |
| EF-9 | Process Fugitives (4) | VOC | 1.35 | 5.90 |
| EF-10 | Process Fugitives (4) | VOC | 0.26 | 1.12 |
| EF-11 | Process Fugitives (4) | VOC | 0.06 | 0.26 |
| EF-17 | Process Fugitives (4) | VOC | 0.28 | 1.24 |

- (1) Emission point identification - either specific equipment designated 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
H₂SO₄ - sulfuric acid
NO_x - total oxides of nitrogen
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.
SO₂ - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Four hours per year from Emission Point Nos. (EPNs) EM-37 and EM-38 is allowed.
- (6) Emission allowables shown for EPNs EM-37 and EM-38 do not emit at the same time during planned maintenance activities.
- (7) PSD-TX-843 pollutant

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- (8) 568 hours per rolling twelve months
- (9) 672 hours per rolling twelve months when the vapor control system to EPN EH-9602 for control of collected VOC emissions from barge and ship loading is down for planned maintenance.

* 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 emissions is based on a rolling 12-month period.

Dated _____