

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 21878

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

| <u>Emission Rates *</u> | <u>Source</u> | <u>Air Contaminant</u> | <u>Emission</u> | |
|-------------------------|--|------------------------|-----------------|-------------|
| <u>Point No. (1)</u> | <u>Name (2)</u> | | | <u>Name</u> |
| <u>(3)</u> | <u>lb/hr</u> | <u>TPY</u> | | |
| 1 | Hyco-1 Reformer Furnace Stack | NO _x (5) | 6.68 | 29.25 |
| | | NO _x (6) | 11.75 | 51.44 |
| | | CO | 4.59 | 20.10 |
| | | PM | 0.68 | 2.96 |
| | | SO ₂ | 1.93 | 8.45 |
| | | VOC | 0.19 | 0.83 |
| VENT-11 | Deaerator Vent | CO | 0.85 | 3.70 |
| PSA-FUG | Pressure Swing Adsorption (PSA) Unit Fugitives (4) | CO | 0.95 | 4.20 |
| 7 | HYCO-1 Flare | ** | | |
| 12 | HYCO-2 Flare | ** | | |
| A | Fired Gas Preheater A | NO _x | 1.92 | 8.4 |
| | | PM | 0.48 | 2.1 |
| | | SO ₂ | 0.46 | 2.0 |
| | | CO | 1.15 | 5.1 |
| | | VOC | 0.09 | 0.4 |
| | | Ammonia | 0.007 | 0.03 |
| | | Cyanide | 0.0007 | 0.003 |
| B | Fired Gas Preheater B | NO _x | 1.92 | 8.4 |
| | | PM | 0.48 | 2.1 |
| | | SO ₂ | 0.46 | 2.0 |
| | | CO | 1.15 | 5.1 |

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|-----------------------------|---|------------------------|-----------------|-------------|
| <u>Point No. (1)</u> | <u>Name (2)</u> | | | <u>Name</u> |
| <u>(3)</u> | <u>lb/hr</u> | <u>TPY</u> | | |
| | | VOC | 0.09 | 0.4 |
| | | Ammonia | 0.007 | 0.03 |
| | | Cyanide | 0.0007 | 0.003 |
| C | Auxiliary Boiler | NO _x (7) | 6.00 | 26.3 |
| | | NO _x (8) | 10.0 | 43.8 |
| | | PM | 1.5 | 6.6 |
| | | SO ₂ | 1.43 | 6.3 |
| | | CO | 3.60 | 15.8 |
| | | VOC | 0.28 | 1.2 |
| D | Warm Flare | NO _x | 5.28 | 2.5 |
| | | CO | 80.6 | 39.1 |
| | | SO ₂ | 1.05 | 0.11 |
| E | Cold Flare | ** | | |
| F | Plant Fugitives (4) | CO | 4.42 | 19.4 |
| | | VOC | 0.28 | 1.2 |
| G | Liquid Oxygen Vaporizer | NO _x (9) | 2.04 | |
| | | NO _x | 1.21 | 5.3 |
| | | PM | 0.24 | 1.1 |
| | | SO ₂ | 0.23 | 1.0 |
| | | CO | 0.55 | 2.4 |
| | | VOC | 0.05 | 0.2 |
| H | Wastewater Equalization Tank | VOC | 0.002 | 0.007 |
| | | Cyanide | 0.001 | 0.002 |
| | | Ammonia | 0.020 | 0.088 |
| | | CO | 0.14 | 0.6 |
| I | Temperature Swing Adsorption (TSA) Driers | CO | 0.29 | 1.3 |

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|-----------------------------|-----------------|------------------------|-----------------|
| <u>Point No. (1)</u> | <u>Name (2)</u> | | <u>Name</u> |
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| | | | | |
|---|----------------------|-----|------|------|
| J | MEA Storage Tank (3) | VOC | 0.02 | 0.07 |
|---|----------------------|-----|------|------|

- (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) PM - particulate matter
VOC - volatile organic compounds as defined in General Rule 101.1
NO_x - total oxides of nitrogen
SO₂ - sulfur dioxide
CO - carbon monoxide
MEA - monoethanolamine
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Firing natural gas only.
- (6) Firing a combination of PSA purge gas and natural gas.
- (7) Firing natural gas or tail gas only.
- (8) Firing a combination of PSA purge gas and natural gas or tail gas.
- (9) Firing propane (Only used during upset or routine maintenance periods).

* 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 or Hrs/year _____

** Only used during upset or routine maintenance.

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|-----------------------------|-----------------|------------------------|-----------------|
| <u>Point No. (1)</u> | <u>Name (2)</u> | <u>Name</u> | <u>Name</u> |
| <u>(3)</u> | <u>lb/hr</u> | <u>TPY</u> | |

Dated _____