

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 3179

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<br>Point No. (1) | Source<br>Name (2) | Air Contaminant<br>Name (3) | Emission Rates * |      |
|---------------------------|--------------------|-----------------------------|------------------|------|
|                           |                    |                             | lb/hr            | TPY  |
| H9200                     | Incinerator        | VOC                         | 24.1             | 10.0 |
|                           |                    | NO <sub>x</sub>             | 11.0             | 14.1 |
|                           |                    | CO                          | 0.9              | 1.2  |
|                           |                    | PM <sub>10</sub>            | 0.4              | 0.5  |
|                           |                    | SO <sub>2</sub>             | <0.1             | <0.1 |
|                           |                    | Acetone                     | 8.9              | 8.0  |
| F8300                     | Heavy Ends Furnace | VOC                         | <0.1             | 0.2  |
|                           |                    | NO <sub>x</sub>             | 1.6              | 7.6  |
|                           |                    | CO                          | 0.4              | 1.9  |
|                           |                    | PM <sub>10</sub>            | 0.2              | 0.8  |
|                           |                    | SO <sub>2</sub>             | <0.1             | <0.1 |
| F8301                     | Regen. Furnace     | VOC                         | 0.1              | 0.1  |
|                           |                    | NO <sub>x</sub>             | 0.3              | 0.1  |
|                           |                    | CO                          | 0.1              | 0.1  |
|                           |                    | PM <sub>10</sub>            | 0.1              | 0.1  |
|                           |                    | SO <sub>2</sub>             | 0.1              | 0.1  |
| D306/D307                 | Phenol Tanks       | VOC                         | 53.2             | 5.0  |
| D313                      | Toluene Tank       | VOC                         | 7.9              | 0.7  |
| D342                      | Cumene Tank        | VOC                         | 18.1             | 1.9  |
| D390                      | Acetone Tank       | Acetone                     | 1.7              | 2.0  |
| D391                      | Acetone Tank       | Acetone                     | 1.7              | 2.0  |
| D392                      | Acetone Tank       | Acetone                     | 1.7              | 2.0  |

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|---------------------------|--|--------------------------------|------------------|------|
|                           |  |                                | lb/hr            | TPY  |
| D393                      | Benzene Tank                           | VOC                            | 0.46             | 1.2  |
| D394                      | Cumene Tank                            | VOC                            | 20.3             | 0.9  |
| D395                      | Cumene Tank                            | VOC                            | 20.3             | 0.5  |
| D400                      | Cumene Tank                            | VOC                            | 4.2              | 0.5  |
| D402/D403                 | Phenol Tanks                           | VOC                            | 6.2              | 5.1  |
| EX67                      | Caustic Tank                           | Caustic                        | 0.5              | 0.1  |
| S303A                     | Sulfuric Acid Tank                     | H <sub>2</sub> SO <sub>4</sub> | 0.1              | 0.1  |
| EX80                      | Wastewater Tank                        | VOC                            | 0.4              | 0.4  |
|                           |  | Acetone                        | <0.1             | 0.2  |
| WRACKFE                   | Acetone Land Loading<br>Fugitives (4)  | Acetone                        | 6.7              | 5.4  |
| SCRWRTC/<br>SCRWRTT       | Acetone Land Loading<br>Vent Scrubbers | Acetone                        | 1.2              | 1.0  |
| V9300                     | Phenol Land Loading                    | VOC                            | 2.9              | 0.6  |
| PAUFE                     | Fugitives (4)                          | VOC                            | 18.4             | 80.5 |
| ANALYZER                  | Process Analyzers                      | VOC                            | 0.1              | 0.2  |
| CWT13                     | Cooling Water Tower                    | VOC                            | 2.1              | 9.2  |
| CPI                       | CPI Separator                          | VOC                            | 4.0              | 3.0  |
| EPFLARE                   | East Property Flare                    | VOC                            | 27.0             | 15.8 |

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|---------------------------|--------------------------|-----------------------------|-------------------------|------------|
|                           |                          |                             | <u>lb/hr</u>            | <u>TPY</u> |
|                           |                          | NO <sub>x</sub>             | 1.6                     | 1.0        |
|                           |                          | CO                          | 8.2                     | 4.8        |
| V8217                     | V-8217 Relief Drum       | VOC                         | 0.1                     | 0.4        |
| E8256                     | Cleavage Reactor Vent    | Acetone                     | 1.3                     | 5.7        |
| E8309                     | Acetone Finishing Column | Acetone                     | 1.0                     | 4.4        |
| A1333                     | HIPA Flare (5)           | VOC                         | 0.1                     | 0.4        |
|                           |                          | NO <sub>x</sub>             | 0.1                     | 0.6        |
|                           |                          | CO                          | 0.9                     | 4.0        |
| CWT18                     | Cooling Water Tower      | VOC                         | 2.1                     | 9.2        |
| D345                      | Acetone Tank             | Acetone                     | 0.7                     | 1.1        |
| F335                      | Acetone Tank             | Acetone                     | 0.8                     | 0.9        |
| F354                      | Acetone Tank             | Acetone                     | 2.1                     | 4.0        |
| FUGPAU3                   | Phenol 3 Fugitives (4)   | VOC                         | 2.6                     | 11.5       |
|                           |                          | Acetone                     | 0.5                     | 2.2        |
| G330                      | Cumene Tank              | VOC                         | 40.8                    | 15.2       |
| G331                      | Cumene Tank              | VOC                         | 40.8                    | 15.2       |
| H87002                    | Thermal Oxidizer         | VOC                         | 6.7                     | 26.7       |
|                           |                          | NO <sub>x</sub>             | 0.9                     | 3.9        |
|                           |                          | CO                          | 0.5                     | 2.2        |
|                           |                          | PM <sub>10</sub>            | <0.1                    | 0.1        |
|                           |                          | Acetone                     | 1.5                     | 3.4        |

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|---------------------------|--------------------|-----------------------------|-------------------------|-----|
|                           |                    |                             | lb/hr                   | TPY |

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| Emission<br>Point No. (1) | Source<br>Name (2)                   | Air Contaminant<br>Name (3) | <u>Emission Rates *</u> |      |
|---------------------------|--------------------------------------|-----------------------------|-------------------------|------|
|                           |                                      |                             | lb/hr                   | TPY  |
| T87301                    | Acetone Tank                         | Acetone                     | 0.6                     |      |
| T87302                    | Acetone Tank                         | Acetone                     | 0.6                     |      |
| T87301/T87302             | Acetone Tanks                        | Acetone                     |                         | 3.8  |
| T665                      | Acetone Tank                         | Acetone                     | 0.4                     | 1.0  |
| V8342                     | Vent Stream Collection<br>Vessel     | VOC                         | <0.1                    | 0.2  |
| P87107                    | Diesel Engine<br>(Fire Water Pump)   | VOC                         | 0.6                     | <0.1 |
|                           |                                      | NO <sub>x</sub>             | 7.4                     | 0.4  |
|                           |                                      | CO                          | 1.6                     | <0.1 |
|                           |                                      | PM <sub>10</sub>            | 0.5                     | <0.1 |
|                           |                                      | SO <sub>2</sub>             | 0.5                     | <0.1 |
| P87921                    | Diesel Engine<br>(Demin. Water Pump) | VOC                         | 0.2                     | <0.1 |
|                           |                                      | NO <sub>x</sub>             | 1.9                     | <0.1 |
|                           |                                      | CO                          | 0.4                     | <0.1 |
|                           |                                      | PM <sub>10</sub>            | 0.1                     | <0.1 |
|                           |                                      | SO <sub>2</sub>             | 0.1                     | <0.1 |

(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) VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1

NO<sub>x</sub> - total oxides of nitrogen

CO - carbon monoxide

PM<sub>10</sub> - particulate matter (PM) 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 is emitted.

SO<sub>2</sub> - sulfur dioxide

Caustic - sodium phenate

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

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(5) The emission rates listed for the HIPA Flare include only the Phenol 3 contributions to the flare. The HIPA flare has additional grandfathered emissions of 1.2 lb/hr (5.3 TPY) of propylene and 1.8 lb/hr (7.9 TPY) of propane that are not included in the allowables on this table.

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

\_\_\_\_\_ Hrs/day \_\_\_\_\_ Days/week \_\_\_\_\_ Weeks/year or 8,760 Hrs/year

Dated\_\_\_\_\_