

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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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>Name (3) | Source<br>#/hr<br>TPY | Air Contaminant | Emission Rates* | Point No. (1) | Name (2) |
|----------------------|-----------------------|-----------------|-----------------|---------------|----------|
| TK-1                 | Tank 1                |                 | VOC             | 0.16          | 0.69     |
| TK-2                 | Tank 2                |                 | VOC             | 1.40          | 4.00     |
| TK-3                 | Tank 3                |                 | VOC             | 0.68          | 2.53     |
| TK-4                 | Tank 4                |                 | VOC             | 0.66          | 2.89     |
| TK-7                 | Tank 7                |                 | VOC             | 3.12          | 0.27     |
| TK-8                 | Tank 8                |                 | SB              | 0.11          | 0.02     |
| TK-9                 | Tank 9                |                 | SB              | 0.06          | 0.02     |
| TK-10                | Tank 10               |                 | VOC             | 0.69          | 0.41     |
| TK-11                | Tank 11               |                 | VOC             | 0.69          | 0.41     |
| TK-12                | Tank 12               |                 | VOC             | 0.69          | 0.41     |
| TK-13                | Tank 13               |                 | VOC             | 0.69          | 0.41     |
| TK-14                | Tank 14               |                 | VOC             | 3.20          | 0.56     |
| TK-15                | Tank 15               |                 | VOC             | 0.69          | 0.41     |

|       |         |     |      |      |
|-------|---------|-----|------|------|
| TK-16 | Tank 16 | VOC | 0.69 | 0.41 |
| TK-18 | Tank 18 | VOC | 0.68 | 1.30 |
| TK-28 | Tank 28 | VOC | 0.40 | 0.42 |
| TK-31 | Tank 31 | VOC | 0.68 | 0.25 |
| TK-32 | Tank 32 | VOC | 0.60 | 0.06 |

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#### AIR CONTAMINANTS DATA

| <u>Emission<br/>Name (3)</u> | <u>Source<br/>#/hr    TPY</u> | <u>Air Contaminant</u> | <u>Emission Rates*</u> | <u>Point No. (1)</u> | <u>Name (2)</u> |
|------------------------------|-------------------------------|------------------------|------------------------|----------------------|-----------------|
| TK-33                        | Tank 33                       | VOC                    | 0.60                   | 0.06                 |                 |
| TK-34                        | Tank 34                       | SB                     | 0.01                   | 0.01                 |                 |
| TK-37                        | Tank 37                       | VOC                    | 0.60                   | 0.06                 |                 |
| TK-38                        | Tank 38                       | VOC                    | 0.60                   | 0.06                 |                 |
| TK-39                        | Tank 39                       | VOC                    | 0.60                   | 0.06                 |                 |
| TK-40                        | Tank 40                       | VOC                    | 0.36                   | 1.56                 |                 |
| TK-41                        | Tank 41                       | VOC                    | 0.36                   | 1.56                 |                 |
| TK-42                        | Tank 42                       | VOC                    | 2.09                   | 0.23                 |                 |
| TK-45                        | Tank 45                       | VOC                    | 0.69                   | 0.37                 |                 |
| TK-48                        | Tank 48                       | VOC                    | 0.53                   | 0.94                 |                 |
| TK-52                        | Tank 52                       | VOC                    | 5.02                   | 8.26                 |                 |
| TK-54                        | Tank 54                       | VOC                    | 0.99                   | 4.30                 |                 |
| TK-56                        | Tank 56                       | VOC                    | 0.39                   | 6.71                 |                 |

|       |         |      |       |       |
|-------|---------|------|-------|-------|
| TK-57 | Tank 57 | VOC  | 1.33  | 2.42  |
| TK-61 | Tank 61 | VOC  | 0.14  | 0.61  |
| TK-62 | Tank 62 | VOC  | 1.01  | 1.40  |
| TK-63 | Tank 63 | VOC  | 0.65  | 0.94  |
| TK-64 | Tank 64 | VOC  | 0.16  | 1.93  |
| TK-65 | Tank 65 | VOC  | 0.12  | 1.49  |
| TK-66 | Tank 66 | VOC  | 0.12  | 1.49  |
| TK-67 | Tank 67 | NaOH | <0.01 | <0.01 |
| TK-68 | Tank 68 | NaOH | <0.01 | <0.01 |
| TK-69 | Tank 69 | NaOH | <0.01 | <0.01 |

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| <u>Emission<br/>Name (3)</u> | <u>Source<br/>#/hr TPY</u> | <u>Air Contaminant</u> | <u>Emission Rates*</u> | <u>Point No. (1)</u> | <u>Name (2)</u> |
|------------------------------|----------------------------|------------------------|------------------------|----------------------|-----------------|
| TK-70                        | Tank 70                    | NaOH                   | <0.01                  | <0.01                |                 |
| DIB-1                        | Heater                     | PM                     | <0.01                  | 0.04                 |                 |
|                              |                            | SO2                    | <0.01                  | <0.01                |                 |
|                              |                            | NOx                    | 0.16                   | 0.71                 |                 |
|                              |                            | CO                     | 0.03                   | 0.14                 |                 |
|                              |                            | VOC                    | <0.01                  | 0.04                 |                 |
| H-Penex                      | Heater                     | PM                     | 0.02                   | 0.07                 |                 |
|                              |                            | SO2                    | <0.01                  | <0.01                |                 |
|                              |                            | NOx                    | 0.33                   | 1.45                 |                 |
|                              |                            | CO                     | 0.07                   | 0.29                 |                 |
|                              |                            | VOC                    | 0.02                   | 0.08                 |                 |
| DIB-3                        | Heater                     | PM                     | <0.01                  | 0.04                 |                 |
|                              |                            | SO2                    | <0.01                  | <0.01                |                 |
|                              |                            | NOx                    | 0.16                   | 0.71                 |                 |
|                              |                            | CO                     | 0.03                   | 0.14                 |                 |
|                              |                            | VOC                    | <0.01                  | 0.04                 |                 |

|         |        |     |       |       |
|---------|--------|-----|-------|-------|
| DIB-2   | Heater | PM  | <0.01 | 0.04  |
|         |        | SO2 | <0.01 | <0.01 |
|         |        | NOx | 0.16  | 0.71  |
|         |        | CO  | 0.03  | 0.14  |
|         |        | VOC | <0.01 | 0.04  |
| H-1     | Heater | PM  | <0.01 | 0.04  |
|         |        | SO2 | <0.01 | <0.01 |
|         |        | NOx | 0.20  | 0.87  |
|         |        | CO  | 0.04  | 0.17  |
|         |        | VOC | 0.01  | 0.05  |
| WP-H300 | Heater | PM  | 0.09  | 0.38  |
|         |        | SO2 | <0.01 | 0.03  |
|         |        | NOx | 2.43  | 10.63 |
|         |        | CO  | 0.61  | 2.66  |
|         |        | VOC | 0.05  | 0.21  |
| B-3     | Heater | PM  | 0.07  | 0.29  |
|         |        | SO2 | <0.01 | 0.02  |
|         |        | NOx | 1.82  | 7.98  |
|         |        | CO  | 0.46  | 2.00  |
|         |        | VOC | 0.04  | 0.16  |

# AIR CONTAMINANTS DATA

| Emission<br>Name (3) | Source<br>#/hr<br>TPY | Air Contaminant | Emission Rates* | Point No. (1) | Name (2) |
|----------------------|-----------------------|-----------------|-----------------|---------------|----------|
| Hot-Oil-1            | Heater                | PM              | 0.07            |               | 0.29     |
|                      |                       | SO2             | <0.01           |               | 0.02     |
|                      |                       | NOx             | 1.88            |               | 8.24     |
|                      |                       | CO              | 0.47            |               | 2.06     |
|                      |                       | VOC             | 0.04            |               | 0.16     |
| B-1                  | Boiler                | PM              | 0.08            |               | 0.34     |
|                      |                       | SO2             | <0.01           |               | 0.03     |
|                      |                       | NOx             | 2.19            |               | 9.60     |
|                      |                       | CO              | 0.55            |               | 2.40     |
|                      |                       | VOC             | 0.04            |               | 0.19     |
| CATRGN 1             | Heater                | PM              | <0.01           |               | 0.03     |
|                      |                       | SO2             | <0.01           |               | <0.01    |
|                      |                       | NOx             | 0.13            |               | 0.58     |
|                      |                       | CO              | 0.03            |               | 0.12     |
|                      |                       | VOC             | <0.01           |               | 0.03     |
| H-STB                | Heater                | PM              | 0.02            |               | 0.07     |
|                      |                       | SO2             | 0.01            |               | 0.01     |
|                      |                       | NOx             | 0.30            |               | 1.32     |
|                      |                       | CO              | 0.06            |               | 0.26     |
|                      |                       | VOC             | 0.02            |               | 0.07     |
| H-101                | Heater                | PM              | 0.12            |               | 0.51     |
|                      |                       | SO2             | 0.01            |               | 0.06     |
|                      |                       | NOx             | 3.28            |               | 14.39    |
|                      |                       | CO              | 0.82            |               | 3.60     |
|                      |                       | VOC             | 0.07            |               | 0.29     |
| H-102                | Heater                | PM              | 0.07            |               | 0.31     |
|                      |                       | SO2             | 0.01            |               | 0.04     |
|                      |                       | NOx             | 2.01            |               | 8.80     |
|                      |                       | CO              | 0.50            |               | 2.20     |
|                      |                       | VOC             | 0.04            |               | 0.18     |
| H-103                | Heater                | PM              | 0.07            |               | 0.31     |
|                      |                       | SO2             | 0.01            |               | 0.04     |
|                      |                       | NOx             | 2.01            |               | 8.80     |
|                      |                       | CO              | 0.50            |               | 2.20     |
|                      |                       | VOC             | 0.04            |               | 0.18     |
| H-1, 2, 3            | Heaters               | PM              | 0.29            |               | 1.28     |
|                      |                       | SO2             | 0.04            |               | 0.15     |

|     |      |       |
|-----|------|-------|
| NOx | 8.21 | 35.95 |
| CO  | 2.05 | 8.99  |
| VOC | 0.16 | 0.72  |

AIR CONTAMINANTS DATA

| Emission<br>Name (3) | Source<br>#/hr<br>TPY | Air Contaminant | Emission Rates* | Point No. (1) | Name (2) |
|----------------------|-----------------------|-----------------|-----------------|---------------|----------|
| B-2                  | Furnace               | PM              | 0.03            | 0.11          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |
|                      |                       | NOx             | 0.52            | 2.29          |          |
|                      |                       | CO              | 0.10            | 0.46          |          |
|                      |                       | VOC             | 0.03            | 0.12          |          |
| H-7                  | Heater                | PM              | 0.02            | 0.10          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |
|                      |                       | NOx             | 0.46            | 2.00          |          |
|                      |                       | CO              | 0.09            | 0.40          |          |
|                      |                       | VOC             | 0.02            | 0.11          |          |
| H-244                | Heater                | PM              | 0.03            | 0.11          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |
|                      |                       | NOx             | 0.52            | 2.29          |          |
|                      |                       | CO              | 0.10            | 0.46          |          |
|                      |                       | VOC             | 0.03            | 0.12          |          |
| H-243                | Heater                | PM              | 0.02            | 0.10          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |
|                      |                       | NOx             | 0.46            | 2.00          |          |
|                      |                       | CO              | 0.09            | 0.40          |          |
|                      |                       | VOC             | 0.02            | 0.11          |          |
| H-242                | Heater                | PM              | 0.03            | 0.11          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |
|                      |                       | NOx             | 0.52            | 2.29          |          |
|                      |                       | CO              | 0.10            | 0.46          |          |
|                      |                       | VOC             | 0.03            | 0.12          |          |
| H-TRT                | Heater                | PM              | 0.06            | 0.27          |          |
|                      |                       | SO2             | 0.01            | 0.03          |          |
|                      |                       | NOx             | 1.73            | 7.58          |          |
|                      |                       | CO              | 0.43            | 1.89          |          |
|                      |                       | VOC             | 0.03            | 0.15          |          |
| H-PREFAC             | Heater                | PM              | 0.02            | 0.08          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |
|                      |                       | NOx             | 0.33            | 1.45          |          |
|                      |                       | CO              | 0.07            | 0.29          |          |
|                      |                       | VOC             | 0.02            | 0.08          |          |
| H-B                  | Heater                | PM              | 0.03            | 0.11          |          |
|                      |                       | SO2             | 0.01            | 0.01          |          |

|     |      |      |
|-----|------|------|
| NOx | 0.52 | 2.29 |
| CO  | 0.10 | 0.46 |
| VOC | 0.03 | 0.12 |



# AIR CONTAMINANTS DATA

| Emission<br>Name (3) | Source<br>#/hr<br>TPY | Air Contaminant | Emission Rates* | Point No. (1) | Name (2) |
|----------------------|-----------------------|-----------------|-----------------|---------------|----------|
| H-A                  | Heater                | PM              | 0.07            | 0.29          |          |
|                      |                       | SO2             | 0.01            | 0.03          |          |
|                      |                       | NOx             | 1.83            | 8.02          |          |
|                      |                       | CO              | 0.46            | 2.01          |          |
|                      |                       | VOC             | 0.04            | 0.16          |          |
| IC4-RGN              | Heater                | PM              | <0.01           | 0.01          |          |
|                      |                       | SO2             | <0.01           | <0.01         |          |
|                      |                       | NOx             | 0.05            | 0.22          |          |
|                      |                       | CO              | 0.01            | 0.04          |          |
|                      |                       | VOC             | <0.01           | 0.01          |          |
| F-2                  | Flare                 | NOx             | 0.1             | 0.4           |          |
|                      |                       | CO              | 0.1             | 0.4           |          |
|                      |                       | VOC             | 0.95            | 0.61          |          |
|                      | Fugitives (4)         | VOC             | 8.81            | 38.7          |          |

- (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 General Rule 101.1  
 NOx - total oxides of nitrogen  
 SO2 - sulfur dioxide  
 PM - particulate matter  
 CO - carbon monoxide  
 SB - sodium bisulfate  
 NaOH - sodium hydroxide
- (4) Fugitive emissions are an estimate only and should not be considered as maximum allowable emission rates.

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

Hrs/day\_\_\_\_Days/week\_\_\_\_Weeks/year\_\_\_\_or Hrs/year 8760

Revised\_\_\_\_\_