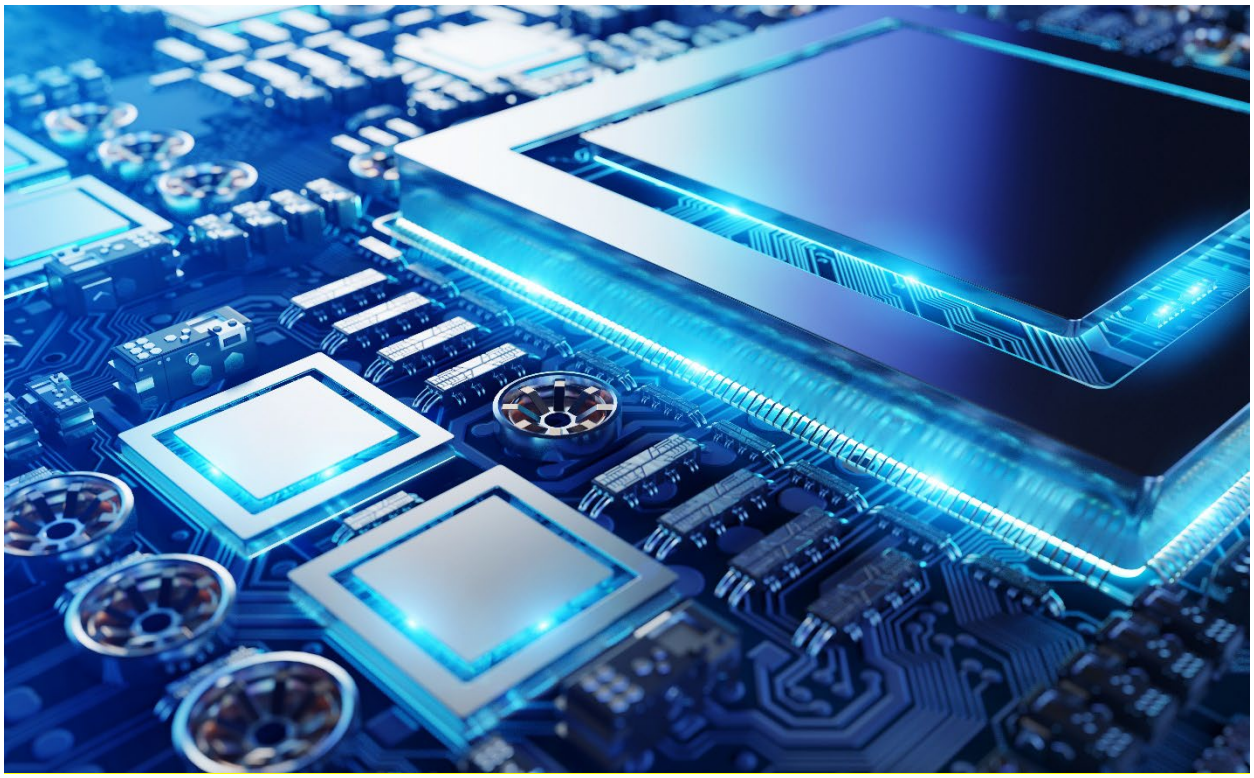

# 2024 H1 Semi-Annual Monitoring Report

**MCAQD Title V Permit Number:** P0010018
**Facility ID:** F000701
**Date Submitted:** July 22, 2024

**Submitted To:**
Maricopa County Air Quality Department
301 W. Jefferson St., Suite 410
Phoenix, AZ 85003

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# 1. Introduction

Intel Corporation's (Intel) Ocotillo Facility (Facility ID F000701), located at 4500 South Dobson Road in Chandler, Arizona, operates under Title V Permit Number P0010018 (Permit) issued by Maricopa County Air Quality Department (MCAQD). Per Permit Conditions 3.h and 40.b., Semi-Annual Monitoring Reports are required to be submitted within 30 days of the end of each reporting period. This Semi-Annual Monitoring Report is for the reporting period from January 1st, 2024 to June 30th, 2024 (H1 2024).

# 2. Rolling 12-Month Emissions

Intel calculates and maintains a record of the Ocotillo Facility's rolling 12-month emissions as required by the Permit. The rolling 12-month emissions totals for each month in this reporting period are provided below.

**Table 1-1: 12 Month Rolling Totals for PAL Pollutants**

| PAL (tpy) | Pollutant | Units | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|---|
| 198 | $NO_x$ | tons | 142.50 | 151.03 | 158.19 | 155.55 | 150.38 | 144.49 |
| 175 | VOC | tons | 79.75 | 83.54 | 86.52 | 85.97 | 81.07 | 79.40 |
| 388 | CO | tons | 215.52 | 230.16 | 243.08 | 240.99 | 235.92 | 229.87 |
| 125 | $PM_{10}$ | tons | 35.08 | 36.25 | 37.13 | 36.54 | 35.49 | 34.40 |
| 119 | $PM_{2.5}$ | tons | 28.15 | 29.31 | 30.20 | 29.61 | 28.59 | 27.51 |
| 159 | PM | tons | 58.44 | 59.62 | 60.45 | 59.80 | 58.67 | 57.55 |
| 61 | SO2 | tons | 1.19 | 1.16 | 1.12 | 1.06 | 0.98 | 0.88 |
| 24 | Fluorides | tons | 9.38 | 9.43 | 10.57 | 10.74 | 11.86 | 11.88 |

**Table 1-2: 12 Month Rolling Totals for HAPs**

| PAL (tpy) | Pollutant | Units | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|---|
| 9 | HF | tons | 2.32 | 2.47 | 2.58 | 2.50 | 2.35 | 2.19 |
| 9 | HCL | tons | 3.44 | 3.68 | 3.90 | 3.64 | 3.34 | 3.03 |
| 22 | HAPs | tons | 7.63 | 8.03 | 8.36 | 8.02 | 7.47 | 6.92 |

***Notes:***
*HF or HCl are typically the single largest HAP*

# 3. Data Relied Upon for PAL Pollutant Emissions Calculations

The data relied upon to calculate the monthly and 12-month rolling PAL pollutant emissions during the reporting period are provided in Attachment A.

# 4. Modifications or Additions to Emissions Units, Monitoring Systems, and Calculation Procedures

## 4.1. Emission Unit Modifications or Additions

The following equipment were added during this reporting period:

- The F52 Emergency Generators (S. No. 149-172) became operational in January 2024;
- The F32S packaged cooling towers (S. No. 176) became operational in February 2024; and
- The IWW Emergency Generator 2 (S. No. 146) became operational in June 2024.

The following equipment is still in the commissioning stage and is not fully operational yet but we have been monitoring natural gas usage, hours of operation, and emissions.

- F52/F62 boiler 1 (S. No. 19)
- F52/F62 boiler 2 (S. No. 20)
- F52/F62 boiler 3 (S. No. 21)

## 4.2. Monitoring System Updates

No monitoring system updates occurred during the reporting period.

## 4.3. Calculation Procedure Updates

No calculation procedure updates were made during the reporting period.

## 5. Deviation Reporting

After a thorough review including staff observations, monitoring, reporting, and recordkeeping reviews, Intel has concluded there were no deviations from Air Permit P0010018 during the H1 2024 reporting period.

## 6. Monitoring System Shutdowns

Intel did not record any pertinent monitoring system shutdown which is required as spelled out in Appendix B of Air Permit P0010018 during the H1 2024 reporting period.

## 7. Responsible Official Certification

*I certify, based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.*

| | |
|---|---|
| Oren Cohen | Vice President, Foundry, Manufacturing, and Supply Chain<br>Factory Manager, Ocotillo Technology Fabrication |
| **Printed Name** | **Title** |
| Oren Cohen | 7/22/2024 |
| **Signature** | **Date** |

# Attachment A
# Data Relied Upon for PAL Pollutant Emissions Calculations

## Section A. Emergency Engines and Fire Pumps: NOx, CO, PM, $PM_{10}$, $PM_{2.5}$, VOC, and $SO_2$ Emissions

**Table 3-1. NOx, CO, PM, $PM_{10}$, $PM_{2.5}$, VOC, $SO_2$ Emission Factors for Emergency Generator Engines and Fire Pump Engines**

| Unit | Permit ID | NOx (lb/hr) | CO (lb/hr) | PM/$PM_{10}$/$PM_{2.5}$ [1] (lb/hr) | VOC (lb/hr) | $SO_2$ (lb/hr) |
|---|---|---|---|---|---|---|
| F12 EGEN 1 | F12-03-EGEN-1 | 58.70 | 7.64 | 0.43 | 0.28 | 0.03 |
| F12 EGEN 2 | F12-03-EGEN-2 | 58.70 | 7.64 | 0.43 | 0.28 | 0.03 |
| F12 EGEN 3 | F12-03-EGEN-3 | 58.70 | 7.64 | 0.43 | 0.28 | 0.03 |
| F12 EGEN 4 | F12-03-EGEN-4 | 58.70 | 7.64 | 0.43 | 0.28 | 0.03 |
| F12 EGEN 5 | F12-03-EGEN-5 | 58.58 | 7.82 | 0.43 | 0.23 | 0.03 |
| F12/32S Link EGEN 1 | F12-ASH1-EGEN604-1A-01 | 12.22 | 0.30 | 0.56 | 0.07 | 0.01 |
| F12 Litho Chiller Pad EGEN 2 | F12-03-LSCGEN-1 | 50.59 | 6.01 | 0.41 | 1.10 | 0.04 |
| F12 Litho Chiller Pad EGEN 3 | F12-03-LSCGEN-2 | 50.59 | 6.01 | 0.41 | 1.10 | 0.04 |
| F12 Litho Chiller Pad EGEN 4 | F12-03-LSCGEN-3 | 50.59 | 6.01 | 0.41 | 1.10 | 0.04 |
| F32S CPS EGEN 1 | F22-10-CPS-GEN-1 | 32.86 | 6.02 | 1.14 | 0.45 | 0.02 |
| F32S CPS EGEN 2 | F22-10-CPS-GEN-2 | 32.86 | 6.02 | 1.14 | 0.45 | 0.02 |
| F32S CPS EGEN 3 | F22-10-CPS-GEN-3 | 32.86 | 6.02 | 1.14 | 0.45 | 0.02 |
| F32S CPS EGEN 4 | F22-10-CPS-GEN-4 | 32.86 | 6.02 | 1.14 | 0.45 | 0.02 |
| F32S EGEN 1 | F22-10-EGEN-1 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32S EGEN 2 | F22-10-EGEN-2 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32S EGEN 3 | F22-10-EGEN-3 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32S EGEN 4 | F22-10-EGEN-4 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32 Litho EGEN 1 | F32-09-LCSGEN-1 | 34.89 | 1.91 | 0.17 | 0.69 | 0.04 |
| F32 Litho EGEN 2 | F32-09-LCSGEN-2 | 34.89 | 1.91 | 0.17 | 0.69 | 0.04 |
| F32 Litho EGEN 3 | F22-EC2-LCSGEN-3 | 34.85 | 4.02 | 0.37 | 0.67 | 0.04 |
| F32 Litho EGEN 4 | F22-EC2-LCSGEN-4 | 34.85 | 4.02 | 0.37 | 0.67 | 0.04 |
| F32 EGEN 1 | F32-13-EGEN-1 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32 EGEN 2 | F32-13-EGEN-2 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32 EGEN 3 | F32-13-EGEN-3 | 45.09 | 5.80 | 0.64 | 1.29 | 3.74 |
| F32 EGEN 4 | F32-13-EGEN-4 | 34.11 | 1.16 | 0.26 | 0.71 | 0.71 |
| F32 OC30 EGEN 1 | F22-30-GEN-1 | 1.51 | 0.18 | 0.03 | 0.02 | 0.08 |
| F12 Fire Pump 1 | F12-FPHS-GEN-01 | 8.53 | 1.84 | 0.61 | 0.68 | 0.56 |
| F12 Fire Pump 2 | F12-FPHS-GEN-02 | 8.53 | 1.84 | 0.61 | 0.68 | 0.56 |
| F42 EGEN 1A | F42-17-EGEN-1A | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 1B | F42-17-EGEN-1B | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 2A | F42-17-EGEN-2A | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 2B | F42-17-EGEN-2B | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 3A | F42-GEN-3A | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 3B | F42-GEN-3B | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 1C | F42-GEN-1C | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 2C | F42-GEN-2C | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 3C | F42-GEN-3C | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 4A | F42-17-GEN-4A | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 4B | F42-17-GEN-4B | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 EGEN 4C | F42-17-GEN-4C | 46.41 | 1.54 | 0.73 | 1.05 | 0.81 |
| F42 BRW EGEN | F42-BRW-GEN1 | 4.02 | 0.64 | 0.06 | 0.05 | 1.12 |
| F42 IWW EGEN 1 | OW1-XWTG1X23A | 49.66 | 1.99 | 0.43 | 0.66 | 0.05 |
| F42 IWW EGEN 2 | TBD | 49.66 | 1.99 | 0.43 | 0.66 | 0.05 |
| F12 CAP Water EGEN | F12-CAP-X72AGENOCCA | 12.08 | 1.99 | 0.43 | 0.66 | 0.27 |
| F52/F62 EGEN 1 --> 1A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 2 --> 2A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 3 --> 3A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 4 --> 4A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 5 --> 5A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 6 --> 6A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 7 -->7A | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 8 --> 1B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 9 --> 2B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 10 --> 3B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 11 --> 4B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 12 --> 5B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 13 --> 6B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 14 --> 7B | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 15 --> 1C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 16 --> 2C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 17 --> 3C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 18 --> 4C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 19 --> 5C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 20 --> 6C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 21 --> 7C | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 22 | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 23 | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |
| F52/F62 EGEN 24 | TBD | 5.46 | 13.43 | 0.00 | 0.18 | 0.00 |

| Unit | Permit ID | NOx (lb/hr) | CO (lb/hr) | $PM/PM_{10}/PM_{2.5}$ [1] (lb/hr) | VOC (lb/hr) | $SO_2$ (lb/hr) |
|---|---|---|---|---|---|---|
| F42 FSB EGEN 1 --> 5A | TBD | 50.80 | 7.76 | 0.82 | 1.06 | 0.82 |
| F42 FSB EGEN 2 --> 5B | F42-17-EGEN-5A | 50.80 | 7.76 | 0.82 | 1.06 | 0.82 |
| F42 FSB EGEN 3 --> 5C | F42-17-EGEN-5B | 50.80 | 7.76 | 0.82 | 1.06 | 0.82 |

***Notes:***

*1 - PM emissions ≤ 2.5µm in size; therefore, emission factors represent total PM, $PM_{10}$, and $PM_{2.5}$.*

## Section A. Emergency Engines and Fire Pumps: NOx, CO, PM, $PM_{10}$, $PM_{2.5}$, VOC, and $SO_2$ Emissions

**Table 3-2. Hours of Operation for Emergency Generator Engines and Fire Pump Engines**

| Unit | Permit ID | Run Time (hrs) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F12 EGEN 1 | F12-03-EGEN-1 | 0.8 | 0.6 | 0.5 | 0.0 | 0.2 | 0.2 |
| F12 EGEN 2 | F12-03-EGEN-2 | 0.7 | 0.7 | 0.5 | 0.0 | 0.2 | 0.2 |
| F12 EGEN 3 | F12-03-EGEN-3 | 0.7 | 0.7 | 0.6 | 0.0 | 0.2 | 0.2 |
| F12 EGEN 4 | F12-03-EGEN-4 | 0.5 | 0.9 | 0.5 | 0.0 | 0.2 | 0.2 |
| F12 EGEN 5 | F12-03-EGEN-5 | 1.0 | 1.0 | 0.0 | 0.0 | 0.5 | 0.5 |
| F12/32S Link EGEN 1 | F12-ASH1-EGEN604-1A-01 | 0.5 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 |
| F12 Litho Chiller Pad EGEN 2 | F12-03-LSCGEN-1 | 0.6 | 0.6 | 0.5 | 0.0 | 0.6 | 0.6 |
| F12 Litho Chiller Pad EGEN 3 | F12-03-LSCGEN-2 | 0.6 | 0.6 | 0.6 | 0.0 | 0.6 | 0.6 |
| F12 Litho Chiller Pad EGEN 4 | F12-03-LSCGEN-3 | 0.5 | 0.6 | 0.8 | 0.0 | 0.5 | 0.6 |
| F32S CPS EGEN 1 | F22-10-CPS-GEN-1 | 0.4 | 0.4 | 0.8 | 0.8 | 0.3 | 0.3 |
| F32S CPS EGEN 2 | F22-10-CPS-GEN-2 | 0.4 | 0.5 | 0.7 | 0.7 | 0.3 | 0.3 |
| F32S CPS EGEN 3 | F22-10-CPS-GEN-3 | 1.0 | 0.4 | 0.8 | 0.6 | 0.3 | 0.3 |
| F32S CPS EGEN 4 | F22-10-CPS-GEN-4 | 0.8 | 0.4 | 0.8 | 0.4 | 0.5 | 0.4 |
| F32S EGEN 1 | F22-10-EGEN-1 | 0.3 | 0.0 | 0.8 | 0.3 | 0.5 | 0.4 |
| F32S EGEN 2 | F22-10-EGEN-2 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| F32S EGEN 3 | F22-10-EGEN-3 | 0.0 | 0.0 | 1.0 | 0.0 | 0.5 | 0.5 |
| F32S EGEN 4 | F22-10-EGEN-4 | 0.0 | 0.0 | 0.5 | 0.7 | 0.3 | 0.3 |
| F32 Litho EGEN 1 | F32-09-LCSGEN-1 | 0.5 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| F32 Litho EGEN 2 | F32-09-LCSGEN-2 | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| F32 Litho EGEN 3 | F22-EC2-LCSGEN-3 | 0.4 | 0.8 | 0.0 | 0.8 | 0.5 | 0.5 |
| F32 Litho EGEN 4 | F22-EC2-LCSGEN-4 | 0.3 | 0.2 | 0.5 | 0.9 | 0.1 | 0.1 |
| F32 EGEN 1 | F32-13-EGEN-1 | 0.0 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 |
| F32 EGEN 2 | F32-13-EGEN-2 | 0.0 | 1.0 | 1.0 | 0.0 | 0.5 | 0.5 |
| F32 EGEN 3 | F32-13-EGEN-3 | 0.0 | 1.0 | 0.0 | 1.0 | 0.5 | 0.5 |
| F32 EGEN 4 | F32-13-EGEN-4 | 1.0 | 0.0 | 1.0 | 1.0 | 0.5 | 0.5 |
| F32 OC30 EGEN 1 | F22-30-GEN-1 | 0.7 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| F12 Fire Pump 1 | F12-FPHS-GEN-01 | 0.7 | 0.7 | 3.7 | 6.6 | 10.1 | 3.9 |
| F12 Fire Pump 2 | F12-FPHS-GEN-02 | 5.6 | 6.3 | 4.3 | 5.7 | 0.0 | 0.6 |
| F42 EGEN 1A | F42-17-EGEN-1A | 0.5 | 0.5 | 0.6 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 1B | F42-17-EGEN-1B | 0.5 | 0.6 | 0.5 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 2A | F42-17-EGEN-2A | 0.0 | 0.2 | 0.2 | 0.1 | 1.1 | 1.1 |
| F42 EGEN 2B | F42-17-EGEN-2B | 0.5 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 3A | F42-GEN-3A | 0.5 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 3B | F42-GEN-3B | 0.0 | 0.5 | 0.0 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 1C | F42-GEN-1C | 0.6 | 0.6 | 0.5 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 2C | F42-GEN-2C | 0.6 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 3C | F42-GEN-3C | 0.6 | 0.6 | 0.5 | 0.5 | 0.3 | 0.3 |
| F42 EGEN 4A | F42-17-GEN-4A | 0.1 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| F42 EGEN 4B | F42-17-GEN-4B | 0.3 | 0.0 | 1.3 | 0.4 | 0.3 | 0.3 |
| F42 EGEN 4C | F42-17-GEN-4C | 0.6 | 0.5 | 0.6 | 0.5 | 0.3 | 0.3 |
| F42 BRW EGEN | F42-BRW-GEN1 | 0.5 | 0.4 | 0.9 | 0.1 | 0.0 | 0.0 |
| F42 IWW EGEN 1 | OW1-XWTG1X23A | 0.3 | 0.0 | 0.0 | 0.0 | 1.8 | 1.8 |
| F42 IWW EGEN 2 | TBD | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.5 |
| F12 CAP Water EGEN | F12-CAP-X72AGENOCCA | 1.1 | 0.6 | 1.1 | 0.1 | 0.8 | 0.8 |
| F52/F62 EGEN 1 --> 1A | TBD | 0.0 | 0.0 | 0.0 | 1.9 | 5.2 | 0.2 |
| F52/F62 EGEN 2 --> 2A | TBD | 0.0 | 0.0 | 0.2 | 1.9 | 1.8 | 0.0 |
| F52/F62 EGEN 3 --> 3A | TBD | 0.0 | 0.0 | 0.7 | 4.4 | 3.8 | 0.0 |
| F52/F62 EGEN 8 --> 1B | TBD | 0.0 | 0.0 | 0.3 | 4.6 | 0.4 | 0.0 |
| F52/F62 EGEN 9 --> 2B | TBD | 0.0 | 0.0 | 0.9 | 4.4 | 0.2 | 0.0 |
| F52/F62 EGEN 10 --> 3B | TBD | 0.0 | 0.0 | 0.6 | 4.3 | 0.1 | 0.0 |
| F52/F62 EGEN 15 --> 1C | TBD | 0.0 | 0.0 | 0.0 | 4.1 | 0.2 | 0.0 |
| F52/F62 EGEN 16 --> 2C | TBD | 0.0 | 0.0 | 0.2 | 9.2 | 0.2 | 0.0 |
| F52/F62 EGEN 17 --> 3C | TBD | 0.0 | 0.0 | 0.9 | 1.2 | 0.2 | 0.0 |
| F42 FSB EGEN 1 --> 5A | F42-17-EGEN-5A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| F42 FSB EGEN 2 --> 5B | F42-17-EGEN-5B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| F42 FSB EGEN 3 --> 5C | F42-17-EGEN-5C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

## Section B. Boilers & Trimix: PM, PM10, PM2.5, SO2, and VOC Emissions

**Table 3-3. PM, $PM_{10}$, $PM_{2.5}$, SO2, and VOC Emission Factors for Boilers & Trimix**

| Unit | Permit ID | PM/$PM_{10}$/$PM_{2.5}$ [1] | VOC | $SO_2$ | NOx [2] | CO [2] |
|---|---|---|---|---|---|---|
| | | (lb/mmscf) | (lb/mmscf) | (lb/mmscf) | (lb/mmBTU) | (lb/mmBTU) |
| F12 Boiler 1 | BLR-32-GD3-1 | 7.60 | 5.50 | 0.60 | | |
| F12 Boiler 2 | BLR-32-GD3-2 | 7.60 | 5.50 | 0.60 | | |
| F12 Boiler 3 | BLR-32-GD3-3 | 7.60 | 5.50 | 0.60 | | |
| F12 Boiler 4 | BLR-32-GD3-4 | 7.60 | 5.50 | 0.60 | | |
| F32S Boiler 1 | BLR-115-1-210 | 7.60 | 5.50 | 0.60 | | |
| F32S Boiler 2 | BLR-115-2-210 | 7.60 | 5.50 | 0.60 | | |
| F32S Boiler 3 | BLR-115-3-210 | 7.60 | 5.50 | 0.60 | | |
| F32S Boiler 4 | BLR-115-4-210 | 7.60 | 5.50 | 0.60 | | |
| F32S Boiler 5 | BLR-115-5-210 | 7.60 | 5.50 | 0.60 | | |
| F32 Boiler 2 | BLR-115-31-210 | 7.60 | 5.50 | 0.60 | | |
| F42 Boiler 1 | BLR-115-1-10 | 7.60 | 5.50 | 0.60 | | |
| F42 Boiler 2 | BLR-115-2-10 | 7.60 | 5.50 | 0.60 | | |
| F42 Boiler 3 | BLR-115-3-10 | 7.60 | 5.50 | 0.60 | | |
| F42 Boiler 4 | BLR-115-4-10 | 7.60 | 5.50 | 0.60 | | |
| F52/F62 Boiler 1 | TBD | 7.60 | 5.50 | 0.60 | 0.0105 | 0.0360 |
| F52/F62 Boiler 2 | TBD | 7.60 | 5.50 | 0.60 | 0.0105 | 0.0360 |
| F52/F62 Boiler 3 | TBD | 7.60 | 5.50 | 0.60 | 0.0105 | 0.0360 |
| F32S/32 Trimix A | PWB2-OX293-0-70 | 7.60 | 5.50 | 0.60 | | |
| F32S/32 Trimix B | PWB2B-OX293-0-70 | 7.60 | 5.50 | 0.60 | | |
| F42 Trimix 1 | F42-PB1A-OX293-0-70 | 7.60 | 5.50 | 0.60 | | |

***Notes:***

*1 - PM emissions ≤ 2.5µm in size; therefore, emission factors represent total PM, $PM_{10}$, and $PM_{2.5}$.*

*2 - Until initial performance testing is completed for the F52/F62 boilers 1, 2, and 3 and results are submitted to MCAQD, Nox and CO emissions are calculated based on permit emission limits and natural gas use.*

## Section B. Boilers & Trimix: PM, $PM_{10}$, $PM_{2.5}$, $SO_2$, and VOC Emissions

**Table 3-4. Natural Gas Usage for Boilers & Trimix**

| Unit | Permit ID | Natural Gas Usage (mmscf) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F12 Boiler 1 | BLR-32-GD3-1 | 5.48 | 0.55 | 0.39 | 0.32 | 0.18 | 0.01 |
| F12 Boiler 2 | BLR-32-GD3-2 | 33.79 | 30.97 | 32.49 | 26.78 | 26.00 | 24.02 |
| F12 Boiler 3 | BLR-32-GD3-3 | 6.67 | 0.40 | 0.34 | 0.05 | 0.18 | 0.31 |
| F12 Boiler 4 | BLR-32-GD3-4 | 4.05 | 11.85 | 11.99 | 10.28 | 5.36 | 0.26 |
| F32S Boiler 1 | BLR-115-1-210 | 8.91 | 8.12 | 8.33 | 4.09 | 0.74 | 0.01 |
| F32S Boiler 2 | BLR-115-2-210 | 0.12 | 1.11 | 9.76 | 6.35 | 7.34 | 8.39 |
| F32S Boiler 3 | BLR-115-3-210 | 11.10 | 9.37 | 9.37 | 7.87 | 7.75 | 1.19 |
| F32S Boiler 4 | BLR-115-4-210 | 0.38 | 1.21 | 0.28 | 1.50 | 0.33 | 1.41 |
| F32S Boiler 5 | BLR-115-5-210 | 14.89 | 10.27 | 0.01 | 0.01 | 0.01 | 0.01 |
| F32S Boiler 6 | BLR-115-6-210 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| F32S Boiler 7 | BLR-115-7-210 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| F32 Boiler 2 | BLR-115-31-210 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| F42 Boiler 1 | BLR-115-1-10 | 0.95 | 1.05 | 0.01 | 0.05 | 0.02 | 0.30 |
| F42 Boiler 2 | BLR-115-2-10 | 4.18 | 2.91 | 3.96 | 3.78 | 4.05 | 2.41 |
| F42 Boiler 3 | BLR-115-3-10 | 0.01 | 0.40 | 0.46 | 0.56 | 0.03 | 0.98 |
| F42 Boiler 4 | BLR-115-4-10 | 0.00 | 0.04 | 0.00 | 0.04 | 0.00 | 0.00 |
| F52/F62 Boiler 1 | TBD | 0.06 | 0.77 | 0.48 | 0.05 | 0.16 | 0.52 |
| F52/F62 Boiler 2 | TBD | 0.00 | 0.59 | 0.64 | 0.15 | 0.21 | 0.34 |
| F52/F62 Boiler 3 | TBD | 0.00 | 0.35 | 0.11 | 0.23 | 0.30 | 0.18 |
| F32S/32 Trimix A | PWB2-OX293-0-70 | 0.55 | 0.52 | 0.48 | 0.25 | 0.07 | 0.87 |
| F32S/32 Trimix B | PWB2B-OX293-0-70 | 0.00 | 0.00 | 0.07 | 0.33 | 0.58 | 0.50 |
| F42 Trimix 1 | F42-PB1A-OX293-0-70 | 0.37 | 0.37 | 0.28 | 0.21 | 0.18 | 0.20 |

## Section C. Boilers & Trimix: NOx and CO Emissions

**Table 3-5. NOx and CO Emission Factors for Boilers & Trimix**

| Unit [1, 2] | Permit ID | $NO_X$ (lb/hr) | CO (lb/hr) |
|---|---|---|---|
| F12 Boiler 1 | BLR-32-GD3-1 | 0.41 | 0.00E+00 |
| F12 Boiler 2 | BLR-32-GD3-2 | 0.58 | 0.00E+00 |
| F12 Boiler 3 | BLR-32-GD3-3 | 0.18 | 3.67E-02 |
| F12 Boiler 4 | BLR-32-GD3-4 | 0.38 | 2.70E-02 |
| F32S Boiler 1 | BLR-115-1-210 | 0.14 | 1.02E-02 |
| F32S Boiler 2 | BLR-115-2-210 | 0.20 | 1.15E-02 |
| F32S Boiler 3 | BLR-115-3-210 | 0.10 | 7.38E-03 |
| F32S Boiler 4 | BLR-115-4-210 | 0.11 | 6.94E-03 |
| F32S Boiler 5 | BLR-115-5-210 | 0.31 | 2.15E-06 |
| F32 Boiler 2 | BLR-115-31-210 | 0.10 | 4.30E-02 |
| F42 Boiler 1 | BLR-115-1-10 | 0.05 | 0.00E+00 |
| F42 Boiler 2 | BLR-115-2-10 | 0.23 | 0.00E+00 |
| F42 Boiler 3 | BLR-115-3-10 | 0.23 | 0.00E+00 |
| F42 Boiler 4 | BLR-115-4-10 | 0.23 | 0.00E+00 |
| F52/F62 Boiler 1 | Using Mfg Specs (lb/MMBtu) | 0.0105 | 0.036 |
| F52/F62 Boiler 2 | Using Mfg Specs (lb/MMBtu) | 0.0105 | 0.036 |
| F52/F62 Boiler 3 | Using Mfg Specs (lb/MMBtu) | 0.0105 | 0.036 |
| F32S/32 Trimix A | PWB2-OX293-0-70 | 0.14 | 2.700E-01 |
| F32S/32 Trimix B | PWB2B-OX293-0-70 | 0.13 | 5.000E-03 |
| F42 Trimix 1 | F42-PB1A-OX293-0-70 | 0.096 | 1.400E-02 |

***Notes:***

*1 - The Quality Assurance/Quality Control (QA/QC) data for the boiler emission factors are presented in the respective compliance test reports previously submitted to MCAQD. In an effort to keep this Semi-Annual Monitoring Report concise, that QA/QC data is not duplicated here.*

**Section C. Boilers & Trimix: NOx and CO Emissions**

**Table 3-6. Operating Hours for Boilers & Trimix**

| Unit | Permit ID | Run Time (hrs) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F12 Boiler 1 | BLR-32-GD3-1 | 325 | 10 | 0 | 0 | 0 | 0 |
| F12 Boiler 2 | BLR-32-GD3-2 | 743 | 696 | 744 | 720 | 744 | 718 |
| F12 Boiler 3 | BLR-32-GD3-3 | 550 | 0 | 0 | 0 | 8 | 5 |
| F12 Boiler 4 | BLR-32-GD3-4 | 287 | 696 | 744 | 720 | 402 | 5 |
| F32S Boiler 1 | BLR-115-1-210 | 706 | 692 | 744 | 488 | 90 | 295 |
| F32S Boiler 2 | BLR-115-2-210 | 7 | 91 | 739 | 587 | 744 | 713 |
| F32S Boiler 3 | BLR-115-3-210 | 744 | 695 | 744 | 720 | 744 | 121 |
| F32S Boiler 4 | BLR-115-4-210 | 28 | 90 | 5 | 204 | 29 | 606 |
| F32S Boiler 5 | BLR-115-5-210 | 735 | 519 | 0 | 0 | 0 | 0 |
| F32S Boiler 6 | BLR-115-6-210 | 0 | 0 | 0 | 0 | 0 | 0 |
| F32S Boiler 7 | BLR-115-7-210 | 0 | 0 | 0 | 0 | 0 | 0 |
| F32 Boiler 2 | BLR-115-31-210 | 0 | 0 | 0 | 0 | 0 | 0 |
| F42 Boiler 1 | BLR-115-1-10 | 239 | 251 | 1 | 9 | 3 | 61 |
| F42 Boiler 2 | BLR-115-2-10 | 692 | 539 | 661 | 621 | 741 | 484 |
| F42 Boiler 3 | BLR-115-3-10 | 0 | 72 | 84 | 95 | 3 | 178 |
| F42 Boiler 4 | BLR-115-4-10 | 0 | 0 | 0 | 0 | 0 | 0 |
| F52/F62 Boiler 1 | TBD | 0 | 7 | 618 | 86 | 227 | 615 |
| F52/F62 Boiler 2 | TBD | 0 | 0 | 675 | 247 | 213 | 369 |
| F52/F62 Boiler 3 | TBD | 0 | 0 | 2 | 453 | 403 | 203 |
| F32S/32 Trimix A | PWB2-OX293-0-70 | 744 | 696 | 744 | 720 | 744 | 720 |
| F32S/32 Trimix B | PWB2B-OX293-0-70 | 744 | 696 | 744 | 720 | 744 | 720 |
| F42 Trimix 1 | F42-PB1A-OX293-0-70 | 744 | 696 | 744 | 720 | 744 | 720 |

## Section D. General Fab Natural Gas Combustion Emissions: NOx, CO, PM, $PM_{10}$, $PM_{2.5}$, $SO_2$, and VOC Emissions

**Table 3-7. NOx, CO, PM, $PM_{10}$, $PM_{2.5}$, VOC, and $SO_2$ Emission Factors for General Fab Natural Gas Combustion Units**

| Unit | $NO_X$ (lb/mmscf) | CO (lb/mmscf) | $PM/PM_{10}/PM_{2.5}$ [1] (lb/mmscf) | VOC (lb/mmscf) | $SO_2$ (lb/mmscf) |
|---|---|---|---|---|---|
| General Fab Natural Gas Combustion | 100 | 84 | 7.6 | 5.5 | 0.6 |

***Notes:***

*1 - PM emissions ≤ 2.5µm in size; therefore, emission factors represent total PM, $PM_{10}$, and $PM_{2.5}$.*

## Section D. General Fab Natural Gas Combustion Emissions: NOx, CO, PM, $PM_{10}$, $PM_{2.5}$, $SO_2$, and VOC Emissions

**Table 3-8. General Fab Natural Gas Usage**

| Unit | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|
| General Fab Natural Gas Combustion | 26.28 | 35.08 | 35.55 | 22.62 | 23.47 | 23.09 |

## Section E. Cooling Towers: PM, $PM_{10}$, $PM_{2.5}$ Emissions

**Table 3-9. Cooling Tower Conductivity & Total Dissolved Solids (TDS) Concentrations**

| Unit | Permit ID | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|
| **Conductivity (µS)** | | | | | | | |
| MSB Cooling Tower Water | NA | 3337 | 3379 | 3340 | 3159 | 3402 | 3502 |
| F12 Cooling Tower Water | F12-CT-29-GG5-(001 to 010) | 3477 | 3638 | 3587 | 3654 | 3865 | 3916 |
| F32S Cooling Tower Water | F22-OCC2-CT-114-(1 to 7)-210 | 3594 | 3477 | 3196 | 2974 | 3890 | 3848 |
| F32S Packaged Cooling Tower Water | TBD | 0 | 3477 | 3196 | 2974 | 3890 | 3848 |
| F32 Cooling Tower Water | F32-CT-114-(31 to 36)-210 | 3676 | 3629 | 3570 | 3574 | 4000 | 3910 |
| F32 OC30 Packaged Cooling Tower Water | TBD | 3331 | 3324 | 3488 | 3104 | 3613 | 3703 |
| F42 Cooling Tower Water | F42-BC1A-CT114-(1 to 14)-10 | 3575 | 3598 | 3511 | 3511 | 3737 | 3798 |
| ASU Cooling Tower Water | TBD | 0 | 0 | 0 | 0 | 0 | 0 |
| F52 Cooling Tower Water | TBD | 1672 | 2772 | 1564 | 1488 | 2817 | 4207 |
| F62 Cooling Tower Water | TBD | 0 | 0 | 0 | 0 | 0 | 0 |
| **TDS (ppm)** | | | | | | | |
| MSB Cooling Tower Water | NA | 2,236 | 2,264 | 2,238 | 2,117 | 2,279 | 2,346 |
| F12 Cooling Tower Water | F12-CT-29-GG5-(001 to 010) | 2,329 | 2,437 | 2,403 | 2,448 | 2,590 | 2,624 |
| F32S Cooling Tower Water | F22-OCC2-CT-114-(1 to 7)-210 | 2,408 | 2,330 | 2,141 | 1,993 | 2,606 | 2,578 |
| F32S Packaged Cooling Tower Water | TBD | 0 | 2,330 | 2,141 | 1,993 | 2,606 | 2,578 |
| F32 Cooling Tower Water | F32-CT-114-(31 to 36)-210 | 2,463 | 2,431 | 2,392 | 2,395 | 2,680 | 2,620 |
| F32 OC30 Packaged Cooling Tower Water | TBD | 2,232 | 2,227 | 2,337 | 2,080 | 2,421 | 2,481 |
| F42 Cooling Tower Water | F42-BC1A-CT114-(1 to 14)-10 | 2,395 | 2,411 | 2,352 | 2,352 | 2,504 | 2,545 |
| F52 Cooling Tower Water | TBD | 1,120 | 1,857 | 1,048 | 997 | 1,887 | 2,819 |
| F62 Cooling Tower Water | TBD | 0 | 0 | 0 | 0 | 0 | 0 |

***Table 3-10. Cooling Tower Flow Rates***

| Unit | Permit ID | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|
| MSB | NA | 2,820 | 2,820 | 2,820 | 2,820 | 2,820 | 2,820 |
| FAB 12 CTs | F12-CT-29-GG5-(001 to 010) | 7,230 | 7,230 | 7,230 | 7,230 | 7,230 | 7,230 |
| FAB 32S CTs | F22-OCC2-CT-114-(1 to 7)-210 | 7,680 | 7,680 | 7,680 | 7,680 | 7,680 | 7,680 |
| FAB 32S Packaged CTs | TBD | 3,984 | 3,984 | 3,984 | 3,984 | 3,984 | 3,984 |
| FAB 32 CTs | F32-CT-114-(31 to 36)-210 | 3,840 | 3,840 | 3,840 | 3,840 | 3,840 | 3,840 |
| FAB 32 OC30 Packaged CTs | TBD | 3,984 | 3,984 | 3,984 | 3,984 | 3,984 | 3,984 |
| FAB 42 CTs | F42-BC1A-CT114-(1 to 14)-10 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| FAB 52 CTs | TBD | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 |

**Section F. Cooling Towers: VOC Emissions**

***Table 3-11. VOC Chemical Usage in Cooling Towers***

| Unit | Permit ID | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|
| Sitewide | Multiple | 2.2 | 2.0 | 26.0 | 1.5 | 3.6 | 61.9 |

## Section G. Storage Silos: PM, $PM_{10}$, and $PM_{2.5}$ Emissions

**Table 3-12. PM, $PM_{10}$, and $PM_{2.5}$ Emission Factors for Silos**

| Unit | Permit ID | PM/PM10/PM2.5[1] (lb PM/ton of material) |
|---|---|---|
| F12 HFW Lime Silo | F12-TK266-1-40 | 0.0049 |
| F32S HFW Lime Silo | OC9-TK266-1-40 | 0.0049 |
| F32 HFW Lime Silo | PWB2-TK266-1-40 | 0.0049 |
| F42 HFW Lime Silo | F42-PB1A-TK266-1-40 | 0.0049 |
| F42 HFW Lime Silo | F42-PB1B-TK266-1-40 | 0.0049 |
| F52 HFW Lime Silo | F42-PB1C-TK266-1-40 | 0.0049 |

***Notes:***

*1 - PM emissions ≤ 2.5µm in size; therefore, emission factors represent total PM, $PM_{10}$, and $PM_{2.5}$.*

## Section G. Storage Silos: PM, $PM_{10}$, and $PM_{2.5}$ Emissions

***Table 3-13. Storage Silo Loading Frequency***

| Unit | Permit ID | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|
| F12 HFW Lime Silo | F12-TK266-1-40 | 1 | 1 | 1 | 1 | 1 | 1 |
| F32S HFW Lime Silo | OC9-TK266-1-40 | 1 | 1 | 1 | 1 | 1 | 1 |
| F32 HFW Lime Silo | PWB2-TK266-1-40 | 1 | 1 | 1 | 1 | 1 | 1 |
| F42 HFW Lime Silo | F42-PB1A-TK266-1-40 | 1 | 1 | 0 | 1 | 1 | 1 |
| F42 HFW Lime Silo | F42-PB1B-TK266-1-40 | 1 | 1 | 0 | 1 | 1 | 0 |
| F52 HFW Lime Silo | F42-PB1C-TK266-1-40 | 0 | 0 | 1 | 0 | 0 | 0 |

## Section H. Monitoring System for Permitted VOC Abatement Control Devices (Natural Gas Combustions Emissions Only): $SO_2$ Emissions

**Table 3-14. $SO_2$ Emission Factors for VOC Abatement Control Devices**

| Unit | Permit ID | $SO_2$ (lb/mmscf) |
|---|---|---|
| F12 RCTO 1 | VOC-16-FK2-01 | 0.6 |
| F12 RCTO 2 | VOC-16-FK2-02 | 0.6 |
| F12 RCTO 3 | VOC-16-FM2-01 | 0.6 |
| F12 RCTO 4 | VOC-16-FM2-02 | 0.6 |
| F12 LCE RCTO 1 | OCF1C-VOC-138-1-20 | 0.6 |
| F12 LCE RCTO 2 | OCF1C-VOC-138-2-20 | 0.6 |
| F12 LCE RCTO 3 | OCF1C-VOC-138-3-00 | 0.6 |
| F12 LCE RCTO 4 | OCF1C-VOC-138-4-00 | 0.6 |
| F32S RCTO 3 | VOC-138-3-120 | 0.6 |
| F32S RCTO 4 | VOC-138-4-120 | 0.6 |
| F32S RCTO 5 | VOC-138-5-120 | 0.6 |
| F32S RCTO 6 | VOC-138-6-120 | 0.6 |
| F32 RCTO 1 | VOC-138-01-120 | 0.6 |
| F32 RCTO 2 | VOC-138-02-120 | 0.6 |
| F32 RCTO 3 | VOC-138-03-120 | 0.6 |
| F32 RCTO 4 | OCF3B-VOC138-1-20 | 0.6 |
| F32 RCTO 5 | OCF3B-VOC138-2-20 | 0.6 |
| F32 RCTO 6 | OCF3B-VOC138-3-20 | 0.6 |
| F42 RCTO 1 | FB1A-VOC138-1-00 | 0.6 |
| F42 RCTO 2 | FB1A-VOC138-2-00 | 0.6 |
| F42 RCTO 3 | FB1A-VOC138-3-00 | 0.6 |
| F42 RCTO 4 | OCFB1A-VOC-138-4-00 | 0.6 |
| F42 RCTO 5 | OCFB1A-VOC-138-5-00 | 0.6 |

**Section H. Monitoring System for Permitted VOC Abatement Control Devices (Natural Gas Combustions Emissions Only): $SO_2$ Emissions**

***Table 3-15. Natural Gas Usage for VOC Abatement Control Devices***

| Unit | Permit ID | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|
| F12 RCTO 1 | VOC-16-FK2-01 | 0.12 | 0.11 | 0.12 | 0.11 | 0.02 | 0.00 |
| F12 RCTO 2 | VOC-16-FK2-02 | 1.05 | 0.83 | 0.46 | 0.82 | 0.85 | 0.79 |
| F12 RCTO 3 | VOC-16-FM2-01 | 0.96 | 0.94 | 1.06 | 0.99 | 1.11 | 0.89 |
| F12 RCTO 4 | VOC-16-FM2-02 | 0.96 | 0.89 | 0.96 | 0.91 | 0.85 | 0.59 |
| F12 LCE RCTO 1 | OCF1C-VOC-138-1-20 | 1.67 | 1.45 | 1.63 | 1.57 | 1.56 | 1.51 |
| F12 LCE RCTO 2 | OCF1C-VOC-138-2-20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| F12 LCE RCTO 3 | OCF1C-VOC-138-3-00 | 1.43 | 1.25 | 1.40 | 1.23 | 1.10 | 0.94 |
| F12 LCE RCTO 4 | OCF1C-VOC-138-4-00 | 1.98 | 1.84 | 1.98 | 1.87 | 1.80 | 1.74 |
| F32S RCTO 3 | VOC-138-3-120 | 0.99 | 0.51 | 0.00 | 0.00 | 0.08 | 0.67 |
| F32S RCTO 4 | VOC-138-4-120 | 0.84 | 0.18 | 0.00 | 0.00 | 0.00 | 0.54 |
| F32S RCTO 5 | VOC-138-5-120 | 0.72 | 0.72 | 0.84 | 0.81 | 0.78 | 1.22 |
| F32S RCTO 6 | VOC-138-6-120 | 0.78 | 0.94 | 1.04 | 0.97 | 0.96 | 0.88 |
| F32 RCTO 1 | VOC-138-01-120 | 0.88 | 0.79 | 0.85 | 0.82 | 0.70 | 0.87 |
| F32 RCTO 2 | VOC-138-02-120 | 1.06 | 0.80 | 0.78 | 0.74 | 0.76 | 0.73 |
| F32 RCTO 3 | VOC-138-03-120 | 0.58 | 0.47 | 0.48 | 0.47 | 0.46 | 0.45 |
| F32 RCTO 4 | OCF3B-VOC138-1-20 | 0.59 | 0.54 | 0.57 | 0.54 | 0.54 | 0.52 |
| F32 RCTO 5 | OCF3B-VOC138-2-20 | 0.69 | 0.63 | 0.67 | 0.64 | 0.65 | 0.62 |
| F32 RCTO 6 | OCF3B-VOC138-3-20 | 1.25 | 1.17 | 1.21 | 1.16 | 1.16 | 1.14 |
| F42 RCTO 1 | FB1A-VOC138-1-00 | 0.00 | 0.01 | 0.09 | 1.92 | 2.07 | 1.92 |
| F42 RCTO 2 | FB1A-VOC138-2-00 | 2.15 | 2.09 | 2.14 | 2.24 | 2.22 | 2.40 |
| F42 RCTO 3 | FB1A-VOC138-3-00 | 1.24 | 1.66 | 0.42 | 0.06 | 1.68 | 1.30 |
| F42 RCTO 4 | OCFB1A-VOC-138-4-00 | 1.71 | 2.27 | 2.01 | 2.37 | 1.71 | 1.37 |
| F42 RCTO 5 | OCFB1A-VOC-138-5-00 | 1.81 | 1.84 | 1.78 | 1.95 | 0.73 | 0.13 |

**Section I. Monitoring System for Fab Emission Units (Process and Natural Gas Combustion Emissions Exhausted Through Ammonia Scrubbers): NOx Emissions**

***Table 3-16. Site-Wide EXAM NOx Performance Testing Results and Monthly Production Index (PI)***

| Stack Type | NOx Testing Result (lb/hr) | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|
| Ammonia Scrubbers | 2.08 (Jan-Mar) 1.847 (Apr) | 1.28 | 1.14 | 1.05 | 0.93 | 0.99 | 0.96 |

**Section J. Monitoring System for Fab Emission Units (Process and Natural Gas Combustion Emissions Exhausted Through VOC Abatement Units, Wet Acid Scrubbers and Ammonia Scrubbers): VOC Emissions**

***Table 3-17. Site-Wide VOC Performance Testing Results and Monthly Production Index (PI)***

| Stack Type | VOC Testing Result (lb/hr) | Monthly Production Indexes | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| RCTO VOC Abatement Units | 0.616 | 1.27 | 1.12 | 1.04 | 0.96 | 1.03 | 0.99 |
| Wet Acid Scrubbers | 2.77 (Jan-Mar) 2.58 (Apr) | 2.03 | 1.80 | 1.66 | 0.84 | 0.90 | 0.87 |
| Ammonia Scrubbers | 5.922 (Jan-Mar) 5.286 (Apr) | 1.28 | 1.14 | 1.05 | 0.93 | 0.99 | 0.96 |

**Section K. Monitoring Systems for Fab Emission Units (Process Emissions Only Exhausted Through Wet Acid Scrubbers and Process and Natural Gas Combustion Emissions Exhausted Through VOC Abatement Units): CO, NOx, PM, $PM_{10}$, and $PM_{2.5}$ Emissions**

***Results and Monthly Production Index (PI)***

| Stack Type | Testing Result (lb/hr) | Monthly Production Indexes | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| Wet Acid Scrubbers - CO | 26.344 (Jan-Mar) 38.64 (Apr) | 2.03 | 1.80 | 1.66 | 0.84 | 0.90 | 0.87 |
| Wet Acid Scrubbers - NOx | 13.173 (Jan-Mar) 14.83 (Apr) | 2.03 | 1.80 | 1.66 | 0.84 | 0.90 | 0.87 |
| Wet Acid Scrubbers - PM, $PM_{10}$, $PM_{2.5}$ | 2.546 (Jan-Mar) 2.92 (Apr) | 2.03 | 1.80 | 1.66 | 0.84 | 0.90 | 0.87 |
| VOC Abatement Units - CO | 4.37 | 1.27 | 1.12 | 1.04 | 0.96 | 1.03 | 0.99 |
| VOC Abatement Units - NOx | 3.91 | 1.27 | 1.12 | 1.04 | 0.96 | 1.03 | 0.99 |
| VOC Abatement Units - PM, $PM_{10}$, $PM_{2.5}$ | 0.72 | 1.27 | 1.12 | 1.04 | 0.96 | 1.03 | 0.99 |

**Section L. Monitoring System for Fab Emissions Units (Process Emissions Only): $SO_2$ and Fluoride Emissions (Fluoride emissions do not include HF)**

***Table 3-19. $SO_2$ Process Chemical Usage***

| Compound | Chemical Usage (lb) | | | | | |
|---|---|---|---|---|---|---|
| | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| Chem 1 | 3285 | 2675 | 2875 | 3335 | 3220 | 2530 |
| Chem 2 | 754 | 251 | 670 | 419 | 838 | 586 |

***Table 3-20. Fluoride Process Chemical Usage***

| Compound | Chemical Usage (lb) | | | | | |
|---|---|---|---|---|---|---|
| | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| Chem 1 | 720 | 440 | 280 | 600 | 680 | 667 |
| Chem 2 | 35 | 0 | 35 | 0 | 0 | 0 |
| Chem 3 | 808 | 808 | 539 | 1212 | 808 | 952 |
| Chem 4 | 808 | 808 | 539 | 1212 | 808 | 952 |
| Chem 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chem 6 | 3285 | 2675 | 2875 | 3335 | 3220 | 2530 |
| Chem 7 | 3285 | 2675 | 2875 | 3335 | 3220 | 2530 |
| Chem 8 | 3285 | 2675 | 2875 | 3335 | 3220 | 2530 |
| Chem 9 | 3285 | 2675 | 2875 | 3335 | 3220 | 2530 |
| Chem 10 | 461 | 362 | 165 | 231 | 231 | 438 |
| Chem 11 | 551 | 467 | 575 | 425 | 275 | 475 |
| Chem 12 | 551 | 467 | 575 | 425 | 275 | 475 |
| Chem 13 | 551 | 467 | 575 | 425 | 275 | 475 |
| Chem 14 | 150 | 200 | 100 | 450 | 0 | 100 |
| Chem 15 | 150 | 200 | 100 | 450 | 0 | 100 |
| Chem 16 | 96 | 48 | 96 | 84 | 120 | 120 |
| Chem 17 | 96 | 48 | 96 | 84 | 120 | 120 |
| Chem 18 | 2400 | 2080 | 2240 | 2480 | 2240 | 2080 |
| Chem 19 | 2400 | 2080 | 2240 | 2480 | 2240 | 2080 |
| Chem 20 | 2400 | 2080 | 2240 | 2480 | 2240 | 2080 |
| Chem 21 | 9171 | 6349 | 9877 | 8466 | 29437 | 7055 |
| Chem 22 | 9171 | 6349 | 9877 | 8466 | 29437 | 7055 |
| Chem 23 | 1 | 4 | 0 | 2 | 0 | 1 |
| Chem 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chem 25 | 33214 | 29135 | 2205 | 31780 | 20992 | 14222 |
| Chem 26 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chem 27 | 123 | 114 | 127 | 105 | 124 | 88 |
| Chem 28 | 123 | 114 | 127 | 105 | 124 | 88 |
| Chem 29 | 8800 | 17600 | 17600 | 8800 | 26437 | 17600 |
| Chem 30 | 8800 | 17600 | 17600 | 8800 | 26437 | 17600 |
| Chem 31 | 8800 | 17600 | 17600 | 8800 | 26437 | 17600 |
| Chem 32 | 55 | 0 | 109 | 0 | 0 | 0 |
| Chem 33 | 55 | 0 | 109 | 0 | 0 | 0 |
| Chem 34 | 2294 | 3227 | 2187 | 2309 | 2369 | 2034 |
| Chem 35 | 2294 | 3227 | 2187 | 2309 | 2369 | 2034 |
| Chem 36 | 4409 | 4409 | 0 | 0 | 4409 | 0 |

**Section M. Monitoring System for Fab Emission Units (Uncontrolled Evaporative Processes): VOC Emissions (from tanks)**

***Table 3-21. Tank Throughput***

| Unit | System | Tank Throughput (gallons) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F12-OCC1-TK-266-1-83 | HF | 1,339,200 | 1,209,600 | 1,339,200 | 1,296,000 | 1,339,200 | 1,296,000 |
| F12-TK-266-1-00 | HF | 6,026,400 | 5,443,200 | 6,026,400 | 5,832,000 | 6,026,400 | 5,832,000 |
| F12-TK-266-1-01 | HF | 6,919,200 | 6,249,600 | 6,919,200 | 6,696,000 | 6,919,200 | 6,696,000 |
| F12-TK-266-1-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F12-TK-266-1-60 | HF | 6,026,400 | 5,443,200 | 6,026,400 | 5,832,000 | 6,026,400 | 5,832,000 |
| F12-TK-266-1-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F12-TK-266-1-90 | HF | 6,026,400 | 5,443,200 | 6,026,400 | 5,832,000 | 6,026,400 | 5,832,000 |
| F12-TK-266-2-00 | HF | 6,026,400 | 5,443,200 | 6,026,400 | 5,832,000 | 6,026,400 | 5,832,000 |
| F12-TK-266-2-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F12-TK-266-2-60 | HF | 6,026,400 | 5,443,200 | 6,026,400 | 5,832,000 | 6,026,400 | 5,832,000 |
| F12-TK-266-2-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F12-TK-76-GH1-1 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F12-TK-76-GH1-2 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F12-TK-76-GH4-1 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F12-TK-76-GH4-2 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F12-TK-76-GH6-1 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F12-TK-79-GH10-1 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F12-TK-79-GH10-2 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F12-TK-79-GH10-3 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F12-TK-79-GH1-1 | SOG | - | 496 | - | 471 | 471 | - |
| F12-TK-79-GH1-2 | SOG | - | 496 | - | 471 | 471 | - |
| F12-TK-79-GH4-1 | SOG | - | 496 | - | 471 | 471 | - |
| F12-TK-79-GH4-2 | SOG | - | 496 | - | 471 | 471 | - |
| F12-TK-79-GH7-1 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F12-TK-79-GH7-2 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F12-TK-80-GH1-1 | HCl | - | - | - | - | - | - |
| F12-TK-80-GH1-2 | HCl | - | - | - | 1,139 | 292 | 380 |
| F22-OCB2A-TK-269-1-00 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F22-OCB2A-TK-269-1-30 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F22-OCB2A-TK-270-1-00 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F22-OCB2-TK-293-1-00 | TMXW | 845,928 | 769,548 | 922,329 | 885,220 | 918,097 | 843,696 |
| F22-OCB2-TK-293-2-00 | TMXW | 845,928 | 769,548 | 922,329 | 885,220 | 918,097 | 843,696 |
| F22-OCF2-TK-270-1-30 | TMXW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F22-PWB2-TK-293-0-92 | TMXW | 429,437 | 390,874 | 465,093 | 452,755 | 465,970 | 425,952 |
| F22-PWB2-TK-293-1-15 | TMXW | 410,688 | 377,784 | 447,210 | 432,445 | 450,471 | 412,754 |
| F22-PWB2-TK-293-2-15 | TMXW | 410,688 | 377,784 | 447,210 | 432,445 | 450,471 | 412,754 |
| F22-PWB2-TK-293-3-15 | TMXW | 410,688 | 377,784 | 447,210 | 432,445 | 450,471 | 412,754 |
| F22-TK-251-1-200 | HCl | 337 | 318 | 307 | 407 | 415 | 362 |
| F22-TK-296-1-05 | BSSW | 1,202 | - | - | 1,682 | 1,682 | 1,031 |
| F22-TK-296-1-15 | BSSW | 1,202 | - | - | 1,682 | 1,682 | 1,031 |
| F22-TK-296-2-05 | BSSW | 3,124 | - | - | 4,370 | 4,370 | 2,680 |
| F32-OC11-TK-266-1-00 | HF | 6,696,000 | 6,048,000 | 6,696,000 | 6,480,000 | 6,696,000 | 6,480,000 |
| F32-OC11-TK-266-2-00 | HF | 6,696,000 | 6,048,000 | 6,696,000 | 6,480,000 | 6,696,000 | 6,480,000 |
| F32-OC11-TK-266-3-00 | HF | 6,696,000 | 6,048,000 | 6,696,000 | 6,480,000 | 6,696,000 | 6,480,000 |
| F32-OC9-TK-266-1-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F32-OC9-TK-266-1-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F32-OC9-TK-266-1-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |

*Table 3-21. Tank Throughput (continued)*

| Unit | System | Tank Throughput (gallons) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F32-OC9-TK-266-1-90 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F32-OC9-TK-266-2-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F32-OC9-TK-266-2-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F32-OC9-TK-266-2-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F32-OC9-TK-266-3-15 | HF | - | - | - | - | - | - |
| F32-OC9-TK-266-4-15 | HF | - | - | - | - | - | - |
| F32-OCB2B-TK-269-1-00 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F32-OCB2B-TK-270-1-00 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F32-OCB2B-TK-286-1-50 | SOG | - | 496 | - | 471 | 471 | - |
| F32-PWB2B-TK-293-0-92 | TMXW | 429,437 | 390,874 | 465,093 | 452,755 | 465,970 | 425,952 |
| F32-PWB2-TK-266-1-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F32-PWB2-TK-266-1-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F32-PWB2-TK-266-1-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F32-PWB2-TK-266-1-90 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F32-PWB2-TK-266-2-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F32-PWB2-TK-266-2-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F32-PWB2-TK-266-2-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F32-PWB2-TK-269-1-50 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F32-PWB2-TK-269-2-50 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F32-PWB2-TK-270-1-40 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F32-PWB2-TK-270-2-40 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F42-FB1A-TK-266-1-00 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-FB1A-TK-266-2-00 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-FB1A-TK-269-1-00 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F42-FB1A-TK-269-1-30 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F42-FB1A-TK-269-2-00 | GSW | 10,619 | 10,220 | 10,071 | 9,666 | 9,692 | 9,080 |
| F42-FB1A-TK-270-1-00 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F42-FB1A-TK-270-2-00 | CSW | 25,739 | 22,639 | 24,963 | 23,260 | 23,690 | 21,658 |
| F42-FB1A-TK-86-1-50 | SOG | - | 496 | - | 471 | 471 | - |
| F42-FB1B-TK-266-1-00 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-FB1B-TK-266-2-00 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-FB1C-TK-266-1-00 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-FB1C-TK-266-2-00 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-PB1A-TK-251-1-00 | HCl | 687 | 893 | 423 | 837 | 1,234 | 923 |

*Table 3-21. Tank Throughput (continued)*

| Unit | Waste System | Tank Throughput (gallons) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F42-PB1A-TK-266-1-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F42-PB1A-TK-266-1-60 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-PB1A-TK-266-1-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F42-PB1A-TK-266-1-83 | HF | 1,339,200 | 1,209,600 | 1,339,200 | 1,296,000 | 1,339,200 | 1,296,000 |
| F42-PB1A-TK-266-1-90 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F42-PB1A-TK-266-2-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F42-PB1A-TK-266-2-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F42-PB1A-TK-266-2-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F42-PB1A-TK-293-0-92 | TMXW | 434,794 | 307,367 | 339,800 | 289,094 | 242,395 | 262,224 |
| F42-PB1A-TK-293-1-00 | TMXW | 399,082 | 281,442 | 298,548 | 222,506 | 206,393 | 206,496 |
| F42-PB1A-TK-293-1-15 | TMXW | 392,386 | 283,123 | 292,133 | 229,578 | 195,630 | 199,152 |
| F42-PB1A-TK-293-2-00 | TMXW | 399,082 | 281,442 | 298,548 | 222,506 | 206,393 | 206,496 |
| F42-PB1A-TK-293-2-15 | TMXW | 392,386 | 283,123 | 292,133 | 229,578 | 195,630 | 199,152 |
| F42-PB1B-TK-266-1-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F42-PB1B-TK-266-1-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F42-PB1B-TK-266-1-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F42-PB1B-TK-266-1-83 | HF | 1,339,200 | 1,209,600 | 1,339,200 | 1,296,000 | 1,339,200 | 1,296,000 |
| F42-PB1B-TK-266-1-90 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |

***Table 3-21. Tank Throughput (continued)***

| Unit | System | Tank Throughput (gallons) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
| F42-PB1B-TK-266-2-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F42-PB1B-TK-266-2-60 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F42-PB1B-TK-266-2-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F42-PB1C-TK-266-1-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F42-PB1C-TK-266-1-60 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-PB1C-TK-266-1-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F42-PB1C-TK-266-1-90 | HF | 4,464,000 | 4,032,000 | 4,464,000 | 4,320,000 | 4,464,000 | 4,320,000 |
| F42-PB1C-TK-266-2-15 | HF | 11,160,000 | 10,080,000 | 11,160,000 | 10,800,000 | 11,160,000 | 10,800,000 |
| F42-PB1C-TK-266-2-60 | HF | 5,580,000 | 5,040,000 | 5,580,000 | 5,400,000 | 5,580,000 | 5,400,000 |
| F42-PB1C-TK-266-2-75 | HF | 2,678,400 | 2,419,200 | 2,678,400 | 2,592,000 | 2,678,400 | 2,592,000 |
| F42-WTR1-TK-932-1-01 | HCl | 43,288 | 39,045 | 42,718 | 34,522 | 34,678 | 35,443 |

**Section N. Monitoring System for Fab Emission Units (Uncontrolled Evaporative Processes): VOC Emissions (from wipers, sinks, and bottles)**

***Table 3-22. Solvent Usage for Wipers, Sinks, and Bottles***

| Evaporative Process Emission Source | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|
| Bottles | 214.00 | 27.00 | 53.00 | 105.00 | 52.00 | 79.00 |
| Sinks | 326.11 | 333.89 | 389.87 | 385.62 | 348.01 | 334.52 |
| Wipers | 1930.00 | 1808.00 | 1682.00 | 1911.00 | 1692.00 | 1322.00 |

**Section Q. Monitoring System for Fugitive Dust Emissions from Vehicular Traffic: PM, $PM_{10}$, and $PM_{2.5}$**

***Table 3-23. Vehicular Traffic***

| Vehicular Traffic Area | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|
| Industrial Unpaved Roads | 2,279 | 2,132 | 2,279 | 2,206 | 2,279 | 2,206 |
| Paved Roads in Parking Lot Areas | 154,884 | 144,892 | 154,884 | 149,888 | 154,884 | 149,888 |
| Paved Roads in Manufacturing Areas | 49,665 | 45,688 | 46,670 | 47,676 | 49,665 | 44,682 |

**Section L. Monitoring System for Fab Emissions Units (Process Emissions Only): $SO_2$ and Fluoride Emissions (Fluoride emissions do not include HF)**

**Table 3-24. Emission Factors for $SO_2$ Process Emissions**

| Compound | Tech A (lb/lb) | Tech C (lb/lb) |
|---|---|---|
| Chem 1 | 0 | 0.258 |
| Chem 2 | 0 | 0.282 |

**Table 3-25. Emission Factors for Fluoride Process Emissions**

| Compound | Tech A (lb/lb) | Tech C (lb/lb) |
|---|---|---|
| Chem 1 | - | 7.29E-03 |
| Chem 2 | 6.50E-09 | 1.30E-04 |
| Chem 3 | 1.67E-01 | 9.39E-02 |
| Chem 4 | 2.06E-02 | 1.10E-01 |
| Chem 5 | 1.00E+00 | - |
| Chem 6 | - | 3.55E-03 |
| Chem 7 | - | 3.22E-04 |
| Chem 8 | 1.58E-02 | 1.08E-01 |
| Chem 9 | 3.72E-01 | 7.79E-02 |
| Chem 10 | - | 1.05E-04 |
| Chem 11 | - | 2.89E-06 |
| Chem 12 | 6.48E-02 | 3.78E-01 |
| Chem 13 | 6.41E-02 | 3.95E-02 |
| Chem 14 | 3.86E-05 | 2.95E-01 |
| Chem 15 | 2.33E-02 | 5.94E-02 |
| Chem 16 | 1.33E-02 | 5.52E-02 |
| Chem 17 | 2.63E-01 | 6.57E-02 |
| Chem 18 | - | 1.69E-05 |
| Chem 19 | 5.95E-02 | 1.23E-01 |
| Chem 20 | 4.12E-02 | 3.09E-02 |
| Chem 21 | 3.41E-02 | 2.72E-01 |
| Chem 22 | 5.46E-02 | 4.66E-02 |
| Chem 23 | - | 9.98E-01 |
| Chem 24 | 2.47E-01 | - |
| Chem 25 | - | 2.29E-02 |
| Chem 26 | 1.62E-02 | - |
| Chem 27 | - | 1.72E+00 |
| Chem 28 | 1.00E+00 | - |
| Chem 29 | - | 2.60E-04 |
| Chem 30 | 1.27E-02 | 3.79E-02 |
| Chem 31 | 5.45E-03 | 7.10E-03 |
| Chem 32 | - | 1.08E-02 |
| Chem 33 | 6.13E-03 | 7.53E-01 |
| Chem 34 | 1.22E-03 | 1.22E-03 |
| Chem 35 | 3.00E-05 | 2.99E-05 |
| Chem 36 | - | 1.14E-06 |

## Section Q. Monitoring System for Fugitive Dust Emissions from Vehicular Traffic: PM, $PM_{10}$, and $PM_{2.5}$

**Table 3-26. Emission Factors for Dust Generated by Vehicular Traffic**

| Road Type | $PM_{2.5}$ (lb/mile) | $PM_{10}$ (lb/mile) | PM (lb/mile) |
|---|---|---|---|
| Industrial Unpaved Roads | 0.046 | 0.456 | 1.625 |
| Paved Roads (Parking Lots and Manufacturing Areas) | 0.00005 | 0.00020 | 0.00099 |