



3485 Pacheco Boulevard  
Martinez, CA 94553

May 28, 2020

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

Bay Area Air Quality Management District  
ATTN: Mail Stop FM1  
375 Beale Street, Suite 600  
San Francisco, CA 94105

To Whom It May Concern:

**Subject: March 27, 2020 Reportable Flaring Event Incident Report-Public Version**

Pursuant to Regulation 12 Rule 12 Section 406, Martinez Refining Company submits the following information regarding a reportable flaring event as defined in Regulation 12-12-208 that occurred on March 27, 2020. The attached report is the public version and discusses the cause of the flaring event and any prevention measures implemented or considered to prevent recurrence of the event.

If you have any questions concerning the information, please contact Rick Shih at (925) 313-3743 or richard.shih@pbfenergy.com.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gordon Johnson', with a long horizontal flourish extending to the right.

Gordon Johnson  
Manager, Environmental Affairs  
Martinez Refining Company

Attachment

## Regulation 12 Rule 12 Reportable Flaring Event Causal Analysis Report

1. **Report Date:** March 27, 2020
2. **Refinery Name and Site Number:** Martinez Refining Company - BAAQMD Site # A0011
3. **Refinery Contact and Phone Number:** Rick Shih (925) 313-3743
4. **Flare Identification:** LOP flare S-1471
5. **Flaring Event Duration:**
  - a. **Start Date:** March 27, 2020 **End Date:** March 27, 2020
  - b. **Time:** 1:20 PM – 8:15 PM
  - c. **Total Duration of Event:** 7 hours
6. **Brief Description of Flaring Event:** Trip of HCU 1<sup>st</sup> stage recycle compressor resulted in flaring of more than 0.5 million standard cubic feet in a day at the LOP flare.
7. **Process Flow Diagram:** see attached process flow diagram
8. **Volume of Gas Flared:** 3.6 MMSCF
9. **Total Emissions due to flaring based on Regulation 12 Rule 11 Methodology:**
  - a. 434 lbs of methane
  - b. 421 lbs of non-methane hydrocarbons
  - c. 0.1 lbs of sulfur dioxide
10. **Was the Gas Scrubbed?** The vent gas that went to the flare could not be scrubbed.
11. **Primary Cause of Flaring Event including Detailed Description of the Cause and Contributing Factors:**

Flaring was caused by events in the hydrocracker unit (HCU) and Saturates Gas Plant (SGP). The HCU is used to convert feed into lighter products through the use of high pressure, high temperature, catalyst and hydrogen. The Saturates Gas Plant (SGP) serves to separate heavier hydrocarbon from process gases.

The speed controller of HCU first stage recycle compressor, [REDACTED] failed suddenly, resulting in a reduction of process steam to Hydrogen Plant #1 (HP1). The reduction of steam to HP1 caused HP1 to trip offline. About 2 hours after this trip, the pressure safety valve (PSV) on compressor [REDACTED] (part of the hydrogen system) failed sending mostly hydrogen to the LOP flare.

Later in the same afternoon, a check valve failed closed on a vessel in HCU [REDACTED], increasing the liquid level in the vessel and subsequently causing a high liquid level in SGP vessel [REDACTED], tripping off [REDACTED] (the vent gas compressor) in SGP. This resulted in additional material being sent to the flare.

To stop flaring, the [REDACTED] vent gases were diverted to the Catalytic Cracking Unit wet gas compressor. After identifying flare gas was also coming from the PSV off of the hydrogen compressor [REDACTED], This compressor [REDACTED] was blocked in to stop flaring.

**12. Immediate Corrective Actions Taken:**

Investigated cause of flaring. Blocked in control valve on [REDACTED] header and blocked in hydrogen compressor [REDACTED] to stop flaring.

**13. Was the Flaring the Result of an Emergency?**

Yes. The flaring was caused by failure of equipment in the HCU.

**14. Was the Flaring Consistent with an Approved FMP?**

Yes, the flaring was consistent with Martinez Refining Company approved Flare Management Plan (FMP). As stated on page 3-1 of the FMP, Martinez Refining Company believes the key to flare minimization is careful planning to avoid flaring coupled with evaluation of any flaring events that occur and incorporation of lessons learned back into the planning process to further reduce flaring. As part of the FMP, Martinez Refining Company developed procedures to implement this process. As stated on page 3-1 of the FMP, "when these procedures are followed, any flaring is consistent with the FMP." Operations followed procedure C(F)-20 – Unanticipated Flaring. This procedure addresses flare events caused by process upsets or unplanned events.

**15. Was the Flaring due to a Regulatory Mandate to Vent to a Flare?**

The flaring was not due to a regulatory mandate to vent to the flare.

**16. Prevention Measures Considered to Minimize Flaring from this Type of Flaring Event**

- a. Components associated with the [REDACTED] speed controller were replaced.
- b. The PSV on hydrogen compressor [REDACTED] was taken out of service, repaired, and returned to service.

Public Version

Figure 1: Process Flow Diagram of Hydrocracker Unit

Figure 2: Process Flow Diagram of Sats Gas Plant

[The figures have been redacted from the Public Version as they contain Business Confidential Information]