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Martinez Refining Company

3485 Pacheco Boulevard
Martinez, CA 94553

VIA UPS

February 24, 2023

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

Subject: December 09, 2022 Reportable LOP Flaring Event Incident Report-Public Version

To Whom It May Concern:

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 December 09, 2022. The attached report discusses the cause of the flaring event and any prevention measures considered to prevent recurrence of the event.

Should you have any questions or concerns regarding this report, please contact Ms. Katie Hoffmann at (925) 313-5161 / kaitlyn.hoffmann@pbfenergy.com, or you may contact me at the numbers below.

Sincerely,

Michael Marlowe

Michael Marlowe
Manager, Environmental Affairs
Martinez Refining Company, LLC
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Attachment

cc: ccrowley@baaqmd.gov

Regulation 12 Rule 12 Reportable Flaring Event Causal Analysis Report

1. **Report Date:** February 24, 2023

2. **Refinery Name and Site Number:** Martinez Refining Company - BAAQMD Site # A0011

3. **Refinery Contact and Phone Number:** Katie Hoffmann (925) 313-5161

4. **Flare Identification:** LOP flare S-1471

5. **Flaring Event Duration:**
   a. **Date:** December 9, 2022
      i. **Start Time:** 4:47 pm
      ii. **End Time:** 6:16 pm
      iii. **Total Duration of Event:** Approximately 89 Minutes

6. **Brief Description of Flaring Event:**
   Flaring at LOP flare when compressor, [redacted], tripped off causing flaring greater than 0.5 MMSCF in the calendar day.

7. **Process Flow Diagram:** See attached process flow diagram.

8. **Volume of Gas Flared:** 1,316,750 SCF

9. **Total Emissions due to flaring based on Regulation 12 Rule 11 Methodology:**

   a. 209 lbs of methane
   b. 2102 lbs of non-methane hydrocarbons
   c. 222 lbs of sulfur dioxide

10. **Was the Gas Scrubbed?** The vent gas that went to the flare was not scrubbed.

11. **Primary Cause of Flaring Event including Detailed Description of the Cause and Contributing Factors:**

    Due to the presence of condensed water in an instrument airline, the [redacted] on the [redacted] malfunctioned and closed, causing a high liquid level in the [redacted]. The liquid level increase triggered the shutdown of the [redacted] and consequently opened [redacted] vent to the flare.

    The root cause of the water in the instrument airline was an increased LOP IAS dew point in the Air System. One kemp dryer was not reaching the temperature required to dry off the moisture in the desiccant, thus saturating the desiccant and allowing water to condensed and enter, among other instrumentation, the [redacted] downstream.

12. **Immediate Corrective Actions Taken:**

The board operator immediately started stabilizing the unit and maintaining levels in the [redacted] including lowering the feed rate to the catalytic cracker unit. An outside operator then opened the bypass on [redacted] to manually control the liquid level in the [redacted]. The operator then verified that all valves went to the correct position, stabilized the liquid level in the [redacted] and then the [redacted] was started. The [redacted] liquid level control valve was operated manually by a dedicated operator assigned to manning the bypass on [redacted] to minimize further flaring

I&E technicians troubleshot the system and determined that water had accumulated in the [redacted] control valve positioner from the instrument airline, and upon further inspection, I&E Technicians determined that desiccant in the instrument air system was saturated with moisture due to a kemp air dryer malfunction. At the [redacted], the instrument air and plant air systems were segregated to prevent further water issues with the instrument air system. The water was drained from the instrumentation, the I&E technicians did a health check, and operators checked all bleeders at dryers, receivers, and air manifolds. Once it was determined that the system was clear of accumulated moisture, the [redacted] was tested and then put in automatic operation.

13. **Was the Flaring the Result of an Emergency?**
Yes. Regulation 12 Rule 12 defines "Emergency" as "a condition at a petroleum refinery beyond the reasonable control of the owner or operator requiring immediate corrective action to restore normal and safe operation that is caused by a sudden, infrequent and not reasonably preventable equipment failure, natural disaster, act of war or terrorism or external power curtailment, excluding power curtailment due to an interruptible power service agreement from a utility." Flaring was a result of a [redacted] closing, which caused shutdown of the [redacted]. This was an emergency caused by a "sudden, infrequent and not reasonably preventable equipment failure."

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**
Currently, MRC is evaluating the need to add or adjust alarms on the instrument air system and/or control board to allow for additional proactive intervention for issues with the instrument air system. In addition, MRC is also evaluating additional functions with operator rounds that may also identify issues with the instrument air system.

Signature: audrey galimba

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Signature: Jeremy W Kimball

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[redacted]

[redacted]