



**Tesoro Refining & Marketing Company LLC**

A subsidiary of Marathon Petroleum Corporation

Martinez Refinery

150 Solano Way

Martinez CA 94553

June 29, 2020

Mail Stop FM1  
Mr. Jeff Gove  
Director of Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105

**Subject: April 28, 2020 Flare Event Causal Analysis  
Tesoro Refining and Marketing Company, subsidiary of Marathon Petroleum,  
Martinez Refinery Plant #B2758**

Dear Mr. Gove:

Pursuant to Regulation 12, Rule 12, and the Compliance Advisory dated June 25, 2007 from the BAAQMD Compliance and Enforcement Division, the flare causal analysis for the April 28, 2020 event is attached. This report is being submitted under both the requirements specified in Regulation 12-12-406, for a reportable event when flaring occurs within a facility, and the Required Contents for Causal Analysis Reports, outlined in the Compliance Advisory. A public copy has been included.

Calculations for total volume flared as well as pollutants emitted are based on flare reports sent for the months of April and May 2020. An update to this report will be submitted with final estimates once the flaring activity has ceased.

The Refinery is temporarily idled due to COVID-19 and the decrease in product demand. If you have any questions or wish to discuss any of these items further, please feel free to call Jeffrey DeLoach at (925) 335-3440.

Sincerely,

David Chetkowski  
Advanced HES Professional

SYL/kds

Attachments

Cc: (via email)  
Chris Crowley, BAAQMD  
Miguel Zepeda, BAAQMD



**Tesoro Refining & Marketing Company LLC**

A subsidiary of Marathon Petroleum Corporation

Martinez Refinery

150 Solano Way

Martinez CA 94553

---

BCC: (electronic copy)

Christman, June M.  
McDowell, Chris. H.

# FLARE CAUSAL ANALYSIS REPORT

*Refinery Idled due to COVID-19*

**1. Date on which the report was drafted.**

June 29, 2020

**2. The refinery name and site number.**

Marathon's Tesoro Martinez Refinery, Plant # B2758

**3. The assigned refinery contact name and phone number.**

Jeffrey DeLoach, Environmental Engineer, 925-335-3440.

**4. Identification of the flare(s) at which the reportable event occurred by reviewing the water seal monitoring data to determine which seals were breached during the event.**

Steam Flares, **S944 & S945**, East Air Flare, **S854**, West Air Flare, **S1012**, Coker Flare, **S1517** See Attachments - *Steam Flares Seal Pot, East Air Flare Seal Pot, West Air Flare Seal Pot, Coker Flare Seal Pot.*

**5. The flaring event duration for each affected flare:**

**a. The date(s) of the event**

04/28/2020 - Ongoing

**b. The start and end time of the event**

See table below for start and end times

Start Date:	04/28/20	End Date:	Ongoing
From:	13:13	To:	---
Total (Hrs):	Ongoing		

**The net duration of the event**

The reportable flaring event is ongoing, but this report shows hours from the start date until midnight, 6/28/2020.

**6. A brief description of the flaring event**

The Martinez Refinery was safely brought down to an idle operating state in April 2020. This change was necessitated by reduced market demand resulting from the 2020 COVID-19 outbreak. When the No. 5 Gas Plant was taken offline, the vent flare gas pressure exceeded flare gas seal pots, resulting in an ongoing flaring event. Vapor recovery has been running throughout the refinery during this time to control emissions from Refinery storage tanks as well as product loading.

**7. A process flow diagram showing the equipment and process units that were the primary cause of the event.**

No specific unit was the cause of the flaring.

**8. The total volume of vent gas flared (MMSCF) throughout the event.**

70.00 MMSCF has been emitted from April 28, 2020 through May 31, 2020.

This value is based on calculations supplied in the monthly flare reports from this facility for April and May 2020. An update will be made once the flaring event has ceased and calculations are finalized

# FLARE CAUSAL ANALYSIS REPORT

*Refinery Idled due to COVID-19*

**9. The emissions associated with the flaring event per calendar day:**

**a. # methane emitted**

See table below

**b. # non-methane hydrocarbon emitted**

See table below

**c. # SO<sub>2</sub> emitted**

See table below

Date:	4/28/20 – 5/31/20
Lb CH4	31347
Lb Non-CH4	16525
Lb SO2	773

These values are based on calculations supplied in the monthly flare reports from this facility for April and May 2020. An update will be made once the flaring event has ceased and calculations are finalized

**Also provide the assumptions used to calculate emissions associated with the flaring event if they are different from those used for reporting under Regulation 12 Rule 11.**

The emissions associated with this flaring event were based on the methodology used for reporting under Regulation 12 Rule 11.

**10. A statement as to whether or not the gas was scrubbed to eliminate or reduce any entrained compounds and a list of the compounds for which scrubbing was performed.**

During the periods when the flared gas was not being recovered by the flare gas recovery compressors, the vented gas was not being scrubbed, but combusted at the flares. See the attachments *Flare Flow*.

**11. The primary cause of the flaring event including a detailed description of the cause and all contributing factors. Also identify the upstream process units that contributed vent gas flow to the flare header and provide other flow instrumentation data where available.**

Due to a significant decrease in market demand stemming from reduced fuel consumption during the COVID-19 outbreak, Marathon Petroleum leadership decided to temporarily idle the Martinez Refinery in April 2020. Marathon executed a safe and orderly shutdown of the refinery with temporary conversion to terminal mode of operation for the duration of the idling period. While operating in terminal mode, the Refinery has continued to operate the vapor recovery system that provides emission controls on gas blanketed tanks, the truck loading rack and Avon dock marine vapor recovery system. With both Refinery gas plants, Sulfuric Acid Plant and Sulfur Recovery Unit shut down there are not facilities available to process the material collected in the vapor recovery system. Therefore the flare gas recovery compressors have been shut down and this material is being directed to the refinery flare system. During this idling

## FLARE CAUSAL ANALYSIS REPORT

### *Refinery Idled due to COVID-19*

period, a Reportable Flaring Event as defined in BAAQMD 12-12-208 occurred at 16:00 on April 28, 2020.

Marathon will bring up the facilities required to process recovered flare gas as soon as safely possible after the end of the idling period to minimize emissions.

**12. Describe all immediate corrective actions to stabilize the flaring event, and to reduce or eliminate emissions (flared gas recovered or stored to minimize flaring during the event). If a decision was made not to store or recover flare gas, explain why.**

Since this reduction was a planned event, the idling of the Refinery's production units was accomplished in a staged sequence to maximize safety precautions and to reduce emissions from flaring. The Refinery's No. 5 Gas Plant unit was the last to be idled to maximize recovery of the flare vent gas.

On May 4, 2020, the seal pots of the Refinery's staged flaring system were reconfigured so that all flare gas would be combusted at the Coker flare (S-1517). On May 7, 2020 the North and South Steam flares were blocked out so that no further flare gas could be combusted at those sources.

**13. Was the flaring the result of an *emergency*? If so, was the flaring necessary to prevent an accident, hazard or release to the atmosphere?**

Flaring was not the result of an Emergency.

*"Emergency: 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 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."*

**14. If not the result of an emergency and necessary to prevent an accident, hazard or release to atmosphere, was the flaring consistent with an approved FMP? If yes, provide a citation to the facility's FMP and any explanation necessary to understand the basis for this determination.**

Yes, vent gas was flared at the Refinery in accordance with the Flare Minimization Plan (FMP), Section 3.4.1, which explains maintenance activities. As explained, the first step is to recover as much hydrocarbon as possible but flow during these times is usually larger than the capacity of the Refinery's flare gas compressors which results in flaring. The bringing down of the Refinery to an idle state is not specifically stated in the FMP as it is an unforeseen and rare occurrence. Since the Refinery's gas plants have been idled, it was necessary to also shut down the flare gas recovery compressors as they would have nowhere

## **FLARE CAUSAL ANALYSIS REPORT**

*Refinery Idled due to COVID-19*

to discharge the recovered flare gas – all fuel gas consumers (furnaces and boilers) are idled.

**15. If the flaring was due to a regulatory mandate, to vent to the flare, why couldn't the gas be recovered, treated, and used as fuel gas?**

The refinery is being run in a temporary terminal mode. While the vapor recovery system is active there is no place for the recovered gasses other than the flare system.

**16. Identify and describe in detail each preventative measure (PM) considered to minimize the flaring from the type of reportable flaring event that occurred:**

**a. State whether the PM is feasible (and will be implemented), or not feasible**

N/A

**b. Explain why the PM is not feasible, if applicable**

N/A