U. S. Chemical Safety and Hazard Investigation Board
RECOMMENDATION STATUS CHANGE SUMMARY

Report:	Martinez Renewable Fuels Fire
Recommendation Number:	2024-01-I-CA-R1
Date Issued:	March 13, 2024
Recipient:	Marathon Martinez Renewables
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Implement engineering safeguards to detect and prevent afterburning in the fired heater involved in the November 19, 2023, incident. The safeguards may include the use of instrumentation such as combustibles measurements, flame detectors, and/or thermocouples that measure tube metal, flue gas, and process fluid temperatures. The safeguards shall be capable of being monitored from the control room.

Board Status Change Decision:

A. Rationale for Recommendation

On November 19, 2023, a fire erupted when a metal tube within a fired heater ruptured during the initial startup of a renewable diesel hydroprocessing unit at the Marathon Martinez Renewables facility in Martinez, California. A lack of process flow due to valve misalignment combined with afterburning due to poor combustion conditions caused overheating of the tubes leading to the rupture and fire.

One employee received third-degree burns over 80 percent of his body during the incident and remained in critical condition for a period of over six months. Marathon Petroleum Corporation estimated that over 200,000 pounds of renewable diesel and 2,200 pounds of hydrogen were released. The incident resulted in approximately $350 million in damage.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including those associated with safe operating limits, worker proximity to fired heaters, low flow through fired heaters, burner operation, valve misalignment, and corporate oversight. As a result of these findings, the CSB issued four recommendations to Marathon Martinez Renewables. This status change summary addresses CSB Recommendation No. 2024-01-I-CA-R1.