



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATION STATUS CHANGE SUMMARY

Report:	Kuraray Pasadena Release and Fire
Recommendation Number:	2018-03-I-TX-R11
Date Issued:	December 21, 2022
Recipient:	Kuraray America, Inc.
New Status:	Closed – Acceptable Action
Date of Status Change:	January 20, 2026

Recommendation Text:

Modify the EVAL Plant's safe operating limits program to prevent operating under conditions that rely upon equipment design safety factors, such as the American Society of Mechanical Engineers (ASME) code material safety factors.

Board Status Change Decision:

A. Rationale for Recommendation

On the morning of May 19, 2018, the pressure relief devices of a reactor used to make ethylene and vinyl alcohol copolymer (EVAL) activated and discharged ethylene into the air through horizontally oriented discharge piping. The resulting flammable vapor cloud found a heat source and ignited. The fire burned for approximately three minutes until enough ethylene was released to reduce the pressure inside the reactor to allow the pressure relief valve to close. Kuraray America, Inc. (Kuraray) reported releasing 2,347 pounds of ethylene. Several workers sustained injuries resulting from the fire as well as from trying to escape the fire. Twenty-one injured workers were transported to off-site medical facilities for treatment. Additionally, two workers were life-flighted from the Kuraray facility.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including failures in pressure-relief system discharge design, excluding non-essential personnel during transient operations, and weakly implemented process safety management system elements. As a result of these findings, the CSB issued twelve recommendations to Kuraray. This status change summary addresses CSB Recommendation No. 2018-03-I-TX-R11.

B. Response to the Recommendation

Kuraray notified the CSB that their EVAL Plant's safe operating limits program has been modified to prevent operating under conditions that rely upon equipment design safety factors. Upon review of the relevant documentation provided, the CSB concluded that Kuraray's actions satisfy all elements of the recommendation.

C. Board Analysis and Decision

Based upon the information above, the Board voted to change CSB Recommendation No. 2018-03-I-TX-R11 to: “Closed – Acceptable Action.”