



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

<b>Report:</b>	Loy-Lange Box Company Pressure Vessel Explosion
<b>Recommendation Number:</b>	2017-04-I-MO-R6
<b>Date Issued:</b>	July 29, 2022
<b>Recipient:</b>	Mayor, City of St. Louis, MO
<b>New Status:</b>	Open - Unacceptable Response/No Response Received
<b>Date of Status Change:</b>	September 11, 2023

### Recommendation Text:

*Distribute and communicate the findings of this report to all licensed stationary engineers and all registered boiler and pressure vessel owning/operating entities in the City of St. Louis.*

### Board Status Change Decision:

#### A. Rationale for Recommendation

On April 3, 2017, an explosion occurred at the Loy-Lange Box Company (Loy-Lange) in St. Louis, Missouri when the bottom head of a pressure vessel (called a Semi-Closed Receiver (SCR)) catastrophically failed. The pressure vessel failure caused a boiling liquid expanding vapor explosion (BLEVE) which fatally injured a Loy-Lange employee working nearby. The pressure vessel then launched from the Loy-Lange building into the air and crashed through the roof of a nearby business, fatally injuring three members of the public.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found that the failed pressure vessel resulted from oxygen pitting corrosion and generalized corrosion which thinned the pressure vessel bottom head until it could no longer contain the pressure inside the vessel. The CSB determined that the cause of the incident was deficiencies in Loy-Lange's operations, policies, and process safety practices that failed to prevent or mitigate chronic corrosion in the pressure vessel as well as Kickham Boiler and Engineering, Inc.'s performance of an inadequate repair to the SCR in 2012 that left damaged material in place. Additional causal factors were gaps in regulatory oversight specific to boiler inspections by the City of St. Louis. As a result of these findings, the CSB issued one recommendation to the Mayor of the City of St. Louis. This status change summary addresses **CSB Recommendation No. 2017-04-I-MO-R6**.

#### B. Response to the Recommendation

Despite numerous requests from the CSB, the Mayor of the City of St. Louis has not responded to any of our communications regarding the recommendations.

#### C. Board Analysis and Decision

The Mayor of the City of St. Louis has not implemented the recommendation and has not provided a response to any of our communications regarding the recommendation. The Board hopes that through further dialogue and/or advocacy that they may be persuaded to implement the recommendation. Accordingly, the Board voted to change CSB Recommendation No. 2017-04-I-MO-R6 to: “Open - Unacceptable Response/No Response Received.”