



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

Report:	Packaging Corporation of America Hot Work Explosion
Recommendation Number:	2017-03-I-LA-R1
Date Issued:	April 24, 2018
Recipient:	Packaging Corporation of America (PCA)
New Status:	Closed – Acceptable Action
Date of Status Change:	July 27, 2022

Recommendation Text:

Apply the CSB safety guidance to PCA pulp and paper mills that produce NCG [Non-Condensable Gas] and operate NCG systems, which includes all foul condensate tanks. For these NCG systems:

- Apply effective process safety management elements using good practice guidance, such as CCPS Guidelines for Risk Based Process Safety, and Guidelines for Implementing Process Safety Management;*
- Consider further expanding process safety management program boundaries beyond the minimum legal requirements to provide heightened coverage of process safety hazards;*
- Apply NFPA 69, Standard on Explosion Prevention Systems, to provide effective explosion prevention;*
- Where explosions cannot be prevented in accordance with NFPA 69, apply NFPA 68, Standard on Explosion Protection by Deflagration Venting, to provide explosion protection;*
- Ensure safety instrumented systems (safety interlocks) achieve desired risk reduction by applying the life-cycle approach provided in ISA-84, Functional Safety: Safety Instrumented Systems for the Process Industry Sector;*
- Apply TIP 0416-09, Collection and burning of concentrated noncondensable gases: regulations, design and operation, for effective NCG system design and operation;*
- Provide workers with periodic training to ensure they have an understanding of all process safety hazards applicable to areas of their responsibility and job tasks, including the safety conditions needed to permit hot work*

Board Status Change Decision:

A. Rationale for Recommendation

On February 8, 2017, three contractors were fatally injured and seven contractors sustained injuries in an explosion at the Packaging Corporation of America (PCA) facility in DeRidder, LA. The fatally injured contractors were conducting hot work activities near a tank which contained a flammable atmosphere and ultimately exploded.

As a part of its investigation, the U.S. Chemical Safety and Hazard Investigation Board (CSB) reviewed PCA's corporate and facility process safety management (PSM) programs and determined that the conditions enabling the explosion to occur could have been prevented or mitigated by a broader application of the company's process safety management systems and by the use of other established industry good safety practices. Consequently, the Board issued a recommendation to PCA to enhance its PSM practices in several areas by applying national consensus standards and good safety practice guidelines.

B. Response to the Recommendation

From November 2018 through March 2022, PCA provided the CSB with periodic progress reports outlining the steps they have taken to address the CSB recommendation at its mills that produce NCG and operate low volume high concentration (LVHC) systems and have foul condensate tanks. These reports also included documentation for the CSB to review showing the process changes made; new and/or revised procedures implemented; and training conducted to satisfy the recommendation.

C. Board Analysis and Decision

As PCA has satisfactorily addressed all seven elements listed in CSB Recommendation No. 2017-03-I-LA-R1 for its mills that produce NCG and operate LVHC systems and have foul condensate tanks, the Board voted to change the status of this recommendation to: "Closed--Acceptable Action."