



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

Report:	Optima Belle LLC Explosion and Fire
Recommendation Number:	2021-02-I-WV-R15
Date Issued:	July 6, 2023
Recipient:	Center for Chemical Process Safety (CCPS)
New Status:	Open – Acceptable Response or Alternate Response
Date of Status Change:	March 15, 2024

Recommendation Text:

Update Guidelines for Process Safety in Outsourced Manufacturing Operations or develop a new tolling guidance document to supplement existing guidelines. The publication should include current best practices, introduce guidance specific to tolling brokers and/or project managing companies such as Richman Chemical Inc., and cross-reference and align with the comprehensive management systems framework and terminology contained in Guidelines for Risk Based Process Safety and other contemporary industry good practice guidance.

Board Status Change Decision:

A. Rationale for Recommendation

On December 8, 2020, a metal rotary cone double dryer containing a chlorinated isocyanurate compound (trade name CDB-56®) exploded following a decomposition reaction that resulted in a fire and toxic chlorine release at the Optima Belle LLC (Optima Belle) facility in Belle, West Virginia. The explosion occurred while Optima Belle, a toll manufacturer, was dehydrating CDB-56® on behalf of Clearon Corporation through a contractual agreement with Richman Chemical Inc.

One Optima Belle employee was fatally injured in the explosion, two others were evaluated for respiratory irritation, and one member of the public reported a minor leg injury. Debris from the explosion was found almost a half-mile from the incident. Local authorities issued a shelter-in-place order for a two-mile radius for over four hours. The facility experienced an estimated \$33.1 million in property damage.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including ineffective process knowledge management, a lack of thermal hazard assessment, ineffective selection of process equipment, shortcomings in industry practices related to tolling hazardous materials, and a lack of regulatory coverage of reactive hazards under the Occupational Safety and Health Administration's (OSHA's) Process Safety Management standard (PSM) and the Environmental Protection Agency's (EPA's) Risk Management Program rule (RMP). As a result of these findings, the CSB issued one recommendation to the Center for Chemical Process Safety (CCPS). This status change summary addresses CSB Recommendation No. 2021-02-I-WV-R15.

B. Response to the Recommendation

CCPS has notified the CSB that they intend to implement the recommendation. They have provided a plan of action that appears will satisfy the objectives of the recommendation. Additionally, they have provided a timetable for completion.

C. Board Analysis and Decision

Based upon the information above, the Board voted to change CSB Recommendation No. 2021-02-I-WV-R15 to: “Open – Acceptable Response or Alternate Response.”