



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

Report:	Bio Lab Lake Charles Chemical Fire and Release
Recommendation Number:	2020-05-I-LA-R5
Date Issued:	April 24, 2023
Recipient:	Louisiana Governor and Louisiana State Legislature/Secretary of the Louisiana Department of Environmental Quality (LA DEQ)
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Under existing statutory or regulatory authority or through the establishment of new authority by executive or legislative action, for all existing chemical manufacturing and storage facilities that:

- 1) Are located in a hurricane-prone region as defined by the International Building Code, and*
- 2) Manufacture or store or can inadvertently or otherwise produce (e.g., by chemical reaction) regulated substances inside equipment or building(s) built before more current wind design requirements came into effect*

Require the facility operators to evaluate the hazards to their facilities from hurricanes and accompanying wind, rainwater, floodwater, or storm surge forces. Require the facility operators to implement processes and safeguards for protection against those hazards, such as through:

- a. Ensuring that buildings and structures (both new and existing) can withstand hurricane winds and flooding, with a particular focus on buildings and structures containing hazardous materials;*
- b. Implementing safeguards and processes to ensure that hazardous chemicals are not compromised and released during extreme weather events; and/or*
- c. Following the guidance presented in the Center for Chemical Process Safety Monograph Assessment of and Planning for Natural Hazards.*

Board Status Change Decision:

A. Rationale for Recommendation

On August 27, 2020, extreme winds from Category 4 Hurricane Laura caused severe damage to multiple buildings and structures storing trichloroisocyanuric acid (TCCA) at the Bio-Lab, Inc. Lake Charles (Bio-Lab) facility in Westlake, Louisiana. Once the buildings at the Bio-Lab

facility were damaged, rainwater made contact with the TCCA stored inside and initiated a chemical reaction and the subsequent decomposition of the TCCA. The resulting heat initiated a fire, and the decomposition reaction released a large plume of hazardous gases, including toxic chlorine.

The plume was seen over a large portion of the nearby community. As a result, the Calcasieu Parish Office of Homeland Security and Emergency Preparedness issued a shelter-in-place order. Additionally, a portion of the nearby Interstate 10 was closed for over 28 hours. Fortunately, there were no injuries reported from this incident. The Bio-Lab facility resumed production operations in March of 2023 following an approximately \$250 million redesign and reconstruction effort.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including ineffective preparation for extreme weather, process hazard analysis implementation, and emergency planning, preparedness, and response, as well as the lack of adherence to applicable hazardous materials codes. As a result of these findings, the CSB issued one recommendation to the Louisiana Governor and State Legislature/Secretary of the Louisiana Department of Environmental Quality (LA DEQ). This status change summary addresses **CSB Recommendation No. 2020-05-I-LA-R5**.