

**U.S. Chemical Safety and
Hazard Investigation Board**

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July 13, 2023

Willie L. Phillips, Acting Chairman
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: 18 CFR Part 40 Docket Nos. RM22-10-000, RM22-16-000, & AD21-13-000

Dear Acting Chairman Phillips:

The U.S. Chemical Safety and Hazard Investigation Board (CSB) commends the Federal Energy Regulatory Commission's (FERC) efforts to ensure the reliability of the Nation's Bulk-Power System during extreme weather events.

We are aware, however, that the current final rule, Transmission System Planning Performance Requirements for Extreme Weather, which was issued on June 15, 2023, does not address extreme weather events beyond heat and cold, such as high winds and hurricanes, although stakeholders had urged FERC to include such events in the rule. These types of events may occur independently of extreme heat and cold events and may significantly impact the reliability of the Bulk-Power System, which, in turn, can result in the release of hazardous chemicals from a facility due to loss of power and put workers and the surrounding community at serious risk.

We urge you to address these other extreme weather events, such as high winds and hurricanes, in a future rulemaking as soon as possible. The CSB has recently investigated two serious chemical releases that resulted from, or were made worse by, loss of power during hurricanes. These incidents occurred as follows:

1. On August 24, 2017, Hurricane Harvey, a Category 4 hurricane, made landfall in southeast Texas. The storm produced unprecedented amounts of rainfall over southeast Texas and southwest Louisiana, causing significant flooding. The extensive flooding caused the Arkema, Inc. chemical plant in Crosby, Texas, to lose power, backup power, and critical organic peroxide refrigeration systems. The organic peroxide products inside a refrigerated trailer decomposed, causing the peroxides and the trailer to burn. Twenty-one people sought medical attention from exposure to fumes generated by the decomposing products when the vapor traveled across a public highway adjacent to the plant. Ultimately, three fires burned at the plant over

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the next few days, resulting in the combustion of over 350,000 pounds of organic peroxide.¹

2. On August 27, 2020, extreme winds from Category 4 Hurricane Laura caused severe damage to buildings storing trichloroisocyanuric acid (TCCA) at the Bio-Lab, Inc. Lake Charles (Bio-Lab) facility in Westlake, Louisiana. After the buildings at the Bio-Lab facility were damaged by Hurricane Laura winds, water contacted the TCCA stored inside, initiating a chemical reaction and subsequent decomposition of the TCCA. The heat produced from the reaction and decomposition initiated a fire, and the decomposition released a large plume of hazardous gases, including toxic chlorine, into the air. Importantly, the hurricane also caused a power outage which resulted in the failure of the facility's fire protection equipment. The company's back-up generators also failed. The TCCA decomposition and fire destroyed a production building at the Bio-Lab facility and damaged additional structures. The cost to rebuild the facility was approximately \$250 million. Also, a portion of nearby Interstate 10 was closed for over 28 hours, and a shelter-in-place order was issued.²

Because Bulk-Power System reliability directly impacts chemical process safety (and the safety of people who work at chemical facilities and who live in the communities nearby), we would like to talk with you about FERC addressing hurricanes and other such extreme weather events in a future rulemaking.

We are also extremely interested in the information that FERC will collect from the one-time informational reports described in this final rule, and we request that we be able to obtain copies of the reports from you.

Finally, we would welcome the opportunity for CSB staff to collaborate with FERC on this or any other matter that may impact chemical process safety.

Thank you for your consideration. Please contact Charles B. Barbee, Director of Recommendations, at (202) 261-7621 or via email at charles.barbee@csb.gov to discuss this further.

Sincerely,



Steve Owens
Chairperson

cc: Sylvia E. Johnson, Ph.D., Board Member, CSB
Catherine J.K. Sandoval, Board Member, CSB
Stephen J. Klejst, Executive Director - Investigations & Recommendations, CSB

¹ See Final Report: Arkema Inc. Chemical Plant Final Investigation Report at <https://www.csb.gov/arkema-inc-chemical-plant-fire/> (accessed June 28, 2023).

² See Final Report: Trichloroisocyanuric Acid Reaction, Decomposition, and Toxic Gas Release at Bio-Lab, Inc. at <https://www.csb.gov/bio-lab-lake-charles-chemical-fire-and-release/> (accessed June 28, 2023).