



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATION STATUS CHANGE

SUMMARY

Report:	LyondellBasell La Porte Fatal Chemical Release
Recommendation Number:	2021-05-I-TX-R1
Date Issued:	May 25, 2023
Recipient:	LyondellBasell Industries
New Status:	Closed – Acceptable Action
Date of Status Change:	December 4, 2025

Recommendation Text:

Update LyondellBasell policy documents to require that procedures are developed for properly removing actuating equipment from plug valves. Require that the procedures clearly identify which non-pressure-retaining components are safe to remove and pressure-retaining components that shall not be removed, as well as ensure LyondellBasell personnel are trained on these procedures. Ensure that hazardous energy is controlled when performing these procedures, as required by 29 C.F.R. 1910.147. Require in the policy document that risk assessments for process safety are conducted before the actuating equipment removal work is authorized. Ensure that sufficient procedures and safeguards are in place to prevent worker exposure to process fluid.

Board Status Change Decision:

A. Rationale for Recommendation

On July 27, 2021, three contract workers at the LyondellBasell (LYB) La Porte Complex in La Porte, Texas were removing an actuator from a plug valve in the site's acetic acid unit. While attempting to remove the actuator, the pressure retaining components of the valve were inadvertently removed causing the eventual ejection of the plug from the valve body and a release of acetic acid.

Approximately 164,000 pounds of acetic acid mixture was released from the unit. All three contract workers were sprayed with the acetic acid mixture fatally injuring two of the workers and seriously injuring the third. An additional twenty-nine personnel were transported to offsite medical facilities for evaluation and treatment.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including a lack of procedures, hazard awareness, training, as well as the potential for improvement related to plug valve design. As a result of these findings, the CSB issued two recommendations to LyondellBasell. This status change summary addresses CSB Recommendation No. 2021-05-I-TX-R1.

B. Response to the Recommendation

LYB's initial and follow-up responses provided information that addressed all of the recommendation requirements. They updated and implemented their policy documents with procedures for working on live process equipment and associated permitting requirements to control hazardous energy and ensure sufficient procedures and safeguards are in place to prevent worker exposure to process fluid. Additionally, they provided supporting documentation demonstrating that all employees were trained on the updated policy documents.

C. Board Analysis and Decision

Based upon the information above, the Board voted to change the status of CSB Recommendation No. 2021-05-I-TX-R1 to: "Closed – Acceptable Action."