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

Report:	BP - Husky Oregon Chemical Release and Fire
Recommendation Number:	2022-01-I-OH-R7
Date Issued:	June 21, 2024
Recipient:	International Society of Automation (ISA)
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Revise American National Standard ANSI/ISA 18.2-2016, Management of Alarm Systems for the Process Industries, to include performance targets for short-term alarm flood analysis so that users can evaluate alarm flood performance for a single alarm flood event. The performance targets should include:

a) number of alarm floods,
b) duration of each flood,
c) alarm count in each flood, and
d) peak alarm rate for each flood.

At a minimum, a target peak alarm flood rate should be defined, such as in the guidance provided by the ASM Consortium or Engineering Equipment and Materials Users Association (EEMUA), to establish trigger points that require alarm performance improvement actions.

Board Status Change Decision:

A. Rationale for Recommendation

On September 20, 2022, a vapor cloud ignited at the BP-Husky Refining LLC ("BP Husky") refinery in Oregon, Ohio. The vapor cloud formed when flammable liquid naphtha was intentionally released from a pressurized vessel to the ground in response to an abnormal situation. Two employees were fatally injured. BP Husky estimated that over 23, 000 pounds of naphtha was released during the event, and that $597 million in damage was incurred.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including inadequate safeguarding to prevent liquid overflow, ineffective abnormal situation management, and failure to learn from previous incidents. As a result of these findings, the CSB issued one recommendation to the International Society of Automation (ISA). This status change summary addresses **CSB Recommendation No. 2022-01-I-OH-R7**.