



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

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| <b>Report:</b>                | Honeywell Geismar Chlorine and Hydrogen Fluoride Releases   |
| <b>Recommendation Number:</b> | 2023-02-I-LA-R1   |
| <b>Date Issued:</b>           | May 23, 2025  |
| <b>Recipient:</b>             | Honeywell International Inc.                                |
| <b>New Status:</b>            | Open – Awaiting Response or Evaluation/Approval of Response |
| <b>Date of Status Change:</b> | Not Applicable – Initial Status                             |

### Recommendation Text:

*Perform a comprehensive third-party audit of the Geismar facility's process safety and allied management systems as soon as practicable. The audit shall:*

- A. Be performed or led by an individual, firm, or team meeting the requirements outlined in paragraphs (b), (c), and (d) of Appendix E of this report.*
- B. Evaluate compliance with applicable federal standards (40 C.F.R. § 68 and 29 C.F.R. § 1910.119). In particular, the audit shall include the required elements that contributed to these incidents, including but not limited to:
  - 1. management of change;*
  - 2. mechanical integrity;*
  - 3. quality assurance;*
  - 4. pre-startup safety reviews;*
  - 5. operating procedures; and*
  - 6. contractor management.**
- C. Evaluate other internal management systems that contributed to these incidents. In particular, the audit shall include but not be limited to:
  - 1. management of organizational and personnel change;*
  - 2. management of safety-related capital projects;*
  - 3. organizational resilience; and*
  - 4. safe work practices including but not limited to:
    - a. work permitting;*
    - b. preparation of equipment for maintenance;*
    - c. control of hazardous energy;*
    - d. line break safety; and*
    - e. personal protective equipment.***
- D. Use the Center for Chemical Process Safety's Guidelines for Auditing Process Safety Management Systems as guidance to verify both the suitability of these systems and their effective, consistent implementation and performance.*

*E. Result in the development of a comprehensive report meeting the requirements outlined in paragraphs (e) and (f) of Appendix E of this report. If any findings are rejected, the rationale for and documentation supporting the merit of the rejection shall be included. The report in its entirety shall be made available to the Honeywell workforce at the Geismar, Louisiana; Baton Rouge, Louisiana; and Metropolis, Illinois, sites.*

**Board Status Change Decision:**

**A. Rationale for Recommendation**

Three separate chemical incidents occurred from October 2021 to June 2024, involving the release of anhydrous hydrogen fluoride (HF) from the HFC-245fa unit at the Honeywell Performance Materials and Technologies facility in Geismar, Louisiana. The first two incidents occurred during reactor startup and the third during planned maintenance work.

One worker was fatally injured as the result of the first incident, and another was seriously injured as the result of the third. The second incident resulted in substantial property damage and a release of over 800 lbs. of HF and over 1,600 lbs. of chlorine gas when a reboiler within the unit exploded.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated these incidents and found several safety issues including those associated with safe work practices, management of change, and mechanical integrity. One factor common to all these incidents was the lack of an effectively implemented safety management system. As a result of these findings, the CSB issued three recommendations to Honeywell International Inc. This status change summary addresses CSB Recommendation No. 2023-02-I-LA-R1.