



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

Report:	Honeywell Chemical Incidents
Recommendation Number:	2003-13-I-LA-R22
Date Issued:	August 8, 2005
Recipient:	American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
New Status:	Closed – Acceptable Action
Date of Status Change:	October 26, 2021

Recommendation Text:

Develop guidance on the effective design and maintenance of HVAC systems and other necessary control room components designed to protect employees and equipment in the event of a release of hazardous materials.

Board Status Change Decision:

A. Rationale for Recommendation

On July 20, 2003, there was a release of chlorine gas from the Honeywell refrigerant manufacturing plant in Baton Rouge, Louisiana. The accident resulted in the hospitalization of four plant workers and required residents within a half-mile radius to shelter in their homes. On July 29, 2003, a worker was fatally injured by exposure to antimony pentachloride when a gas cylinder released its contents to the atmosphere. On August 13, 2003, two plant workers were exposed to hydrofluoric acid, and one was hospitalized.

During the initial July 20, 2003, incident, chlorine entered the control room through the HVAC system, forcing employees to evacuate before they could stop the leak. The chlorine then corroded the process control system, rendering it inoperable. As a result, the U.S. Chemical Safety and Hazard Investigation Board (CSB) determined that guidance and standards for design and maintenance of positive pressure control rooms were lacking in the U.S. chemical industry. The CSB therefore made a recommendation to the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) to develop such guidance.

B. Response to the Recommendation

ASHRAE published the guidance document entitled “ASHRAE Guide for HVAC in Hazardous Spaces” in Spring 2021. The guide details, among other things, equipment design and installation requirements for intake duct piping; contaminant-free air inlet and exhaust vents; room pressure and airflow sensor and switches; gas detection systems; alarm systems; and emergency shutdown and ventilation. The guide also discusses establishing preventive maintenance procedure for this equipment.

C. Board Analysis and Decision

Based upon the information above ASHRAE's actions address the CSB's recommendation. As such, the Board voted to change the status of CSB Recommendation No. 2003-13-I-LA-R22 to: "Closed – Acceptable Action."