



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

Report:	DuPont Corporation Toxic Chemical Releases
Recommendation Number:	2010-6-I-WV-R3
Date Issued:	October 17, 2011
Recipient:	DuPont Belle Plant
New Status:	R3: Closed – Acceptable Action
Date of Status Change:	June 17, 2013

Recommendation Text:

Improve the existing maintenance management by:

- *Supplementing the computerized system with sufficient redundancy to ensure tracking and timely scheduling of preventive maintenance for all PSM-critical Equipment,*
- *Conducting Management-of-Change (MOC) reviews for all changes to preventive maintenance orders for all PSM-critical equipment in the computerized maintenance management system.*

Board Status Change Decision:

A. Rationale for Recommendation

On January 22 and 23, 2010, three accidents occurred over a 33-hour period at the DuPont Corporation's Belle, West Virginia, chemical manufacturing plant. The series of accidents began when an alarm led operators to discover that 2,000 pounds of methyl chloride, a toxic and extremely flammable gas, had leaked unnoticed into the atmosphere over five days. The next morning, workers discovered a leak in a pipe carrying oleum, which produced a fuming cloud of sulfur trioxide, another toxic gas. A release of highly toxic phosgene occurred later that day, exposing a worker who died the following evening in a hospital.

In investigating these three incidents, the CSB identified common deficiencies in multiple DuPont Belle plant safety management systems, including maintenance and inspections, alarm recognition and management, accident investigation, emergency response and communications, and hazard recognition. Three recommendations were issued to the DuPont Belle Plant; this summary addresses the Board's actions with regard to the recommendation to improve the site's maintenance management system.

B. Response to the Recommendation

DuPont reported that the site now runs periodic reports to ensure the software anomaly that resulted in the failure to schedule PSM critical equipment for maintenance does not reoccur. Also, a new standard monthly report was developed which contains PSM critical equipment preventive maintenance work order reports, data analysis summaries, and running six month data forecast charts. These are distributed to unit operations leaders and key maintenance personnel at the Belle site to ensure that PSM-critical equipment is being scheduled for maintenance.

A site procedure requiring approval for changes in computerized maintenance plans was also issued in March 2011, and DuPont provided documentation that site maintenance personnel were trained on this procedure.

C. Board Analysis and Decision

As all the elements of CSB Recommendation No. 2010-6-I-WV-R3 appear to have been addressed by the DuPont Belle site, the Board voted to change the status of this recommendation to: "Closed – Acceptable Action."