



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

<b>Report:</b>	DuPont Corporation Toxic Chemical Releases
<b>Recommendation Number:</b>	2010-6-I-WV-R14
<b>Date Issued:</b>	October 17, 2011
<b>Recipient:</b>	E. I. du Pont de Nemours and Company (DuPont)
<b>New Status:</b>	R14: Closed – Acceptable Action
<b>Date of Status Change:</b>	April 10, 2013

### Recommendation Text:

*Reevaluate and clarify the DuPont corporate MOC policies to ensure that staff can properly identify and use the distinctions between subtle and full changes and train appropriate personnel how to properly apply the distinctions on any changes in the policy.*

### 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 plant. The series of accidents began when an alarm sounded, leading operators to discover that 2,000 pounds of methyl chloride, a toxic and extremely flammable gas, had been leaking unnoticed into the atmosphere for five days. The next morning, workers discovered a leak in a pipe carrying oleum, which produced a fuming cloud of sulfur trioxide, also a toxic gas. A release of highly toxic phosgene occurred later that day, exposing a worker who died the following evening in a hospital.

The CSB investigation concluded that incomplete management of change (MOC) reviews on the rupture disc burst sensors contributed to the methyl chloride release. CSB also found that no MOC review was conducted following changes to the site's computerized maintenance software, which had failed to generate the necessary work order to change the phosgene flex hose that ruptured, causing the release that caused the fatality.

While investigating these three incidents, the CSB also reviewed E. I. du Pont de Nemours and Company (DuPont) corporate policies pertaining to MOC requirements in its process safety management program. The CSB found that the MOC policies required more comprehensive reviews for "full" changes and less comprehensive reviews for "subtle" changes, but did not make clear to personnel how to differentiate between a "full" and a "subtle" change. The CSB issued a recommendation to address the lack of clarity of this distinction.

## B. Response to the Recommendation

In late 2011, DuPont revised the management of change requirements contained in its process safety management program to include expanded criteria for differentiating between the two types of management of change analyses and when each should be applied. By the end of 2012, DuPont reported that management of change training and the associated challenge to verify understanding had been completed by 8240 individual employees at all U.S. manufacturing locations.

## C. Board Analysis and Decision

As the actions reported by DuPont address all the elements contained in CSB Recommendation No. 2010-6-I-WV-R14, its status was changed to: "**Closed-Acceptable Action.**"