



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

<b>Report:</b>	US Ink Fire
<b>Recommendation Number(s):</b>	2013-1-I-NJ-R8
<b>Date Issued:</b>	January 15, 2015
<b>Recipient:</b>	US Ink/Sun Chemical Corporation
<b>New Status:</b>	Closed – Acceptable Action
<b>Date of Status Change:</b>	August 11, 2016

### Recommendation Text:

#### CSB Recommendation No. 2013-1-I-NJ-R8

*Develop and implement a management of organizational change protocol to allow for the transfer of knowledge and information to new personnel, at a minimum including initial or refresher training in the following:*

- *Safety and health procedures*
- *Lessons learned from previous incidents*
- *Technical information for equipment*
- *Routine plant operations.*

### Board Status Change Decision:

#### A. Rationale for Recommendation

On October 9, 2012, a flash fire caused burn injuries to seven workers, including three who sustained third-degree burns, at the US Ink/Sun Chemical Corporation (Sun Chemical) ink manufacturing facility in East Rutherford, New Jersey. The U.S. Chemical Safety Board's (CSB) investigation into this incident found that, during the start up of US Ink's new dust collection system, a flammable mixture consisting of hydrocarbons and combustible dusts accumulated in the ductwork and ignited, causing a flash fire.

The CSB investigation found that the original design of the dust collection system was intended strictly for dust collection but was modified before commissioning to include a housekeeping function. The modification caused insufficient flow rate and contributed to an accumulation of a flammable mixture in the duct system. Although the design, construction, and installation of the new dust collector required capital project approval at the corporate level, Sun Chemical did not provide adequate oversight of the system's safety. As a result, safety management elements such as a Process Hazard Analysis (PHA) and Management of Change (MOC) procedures were not conducted. Furthermore, Sun Chemical's hazard communication, emergency response plan, and other incident prevention programs did not reinforce an understanding of the potential hazard associated with flammable vapors entering the dust collection system and mixing with the combustible dust. As a result of these findings, the CSB made recommendations to Sun Chemical to develop and implement a MOC protocol which includes transfer of knowledge and information to new personnel.

#### B. Response to the Recommendation

Sun Chemical has amended its existing MOC procedure to incorporate the organizational change elements requested by the CSB recommendation. The MOC procedures now include "transfer of knowledge and information to new personnel" by including in the procedure scope that the MOC

procedure is applicable to “Critical Operations.” “Critical Operations” is then defined as including “personnel changes (management or supervisory),” and the information shall include “relevant safety and health procedures, lessons learned from previous incidents, plant operations, hazard awareness, etc.” The MOC is now also required as part of Sun Chemical’s Capital Appropriations/Asset Request (CAR) form. Sun Chemical also stated that they are in the process of implementing an electronic platform to track the progress of MOC reviews. The CSB found in the US Ink investigation at the dust collection system was a replacement in kind and the Sun Chemical MOC procedures also apply to Replacements-In-Kind as well as to Not-In-Kind Replacements. The MOC procedures also apply to operational instructions, written operating procedures, equipment selection, maintenance procedures, and training. The revisions to the MOC procedures address the intent of the CSB recommendation by including requirements for each bulleted point of the recommendation.

#### C. Board Analysis and Decision

Based on the above actions, the Board voted to change the status of CSB Recommendation No. **2013-1-I-NJ-R8** to “**Closed – Acceptable Action.**”