



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

<b>Report:</b>	CAI/Arnel
<b>Recommendation Number:</b>	2007-3-I-MA-R2
<b>Date Issued:</b>	May 13, 2008
<b>Recipient:</b>	Commonwealth of Massachusetts
<b>New Status:</b>	Closed – Acceptable Alternate Action
<b>Date of Status Change:</b>	December 29, 2015

### Recommendation Text:

*Amend the General Laws of Massachusetts to require the Office of the State Fire Marshal to audit local governments for compliance with the flammable materials licensing regulation and audit fire departments for compliance with permit issuance and inspection of manufacturing facilities licensed to store and handle flammable liquids and solids. The audits should be conducted at least once every five years.*

### Board Status Change Decision:

#### A. Rationale for Recommendation

On November 22, 2006, a powerful explosion and fire occurred at the CAI/Arnel ink and paint products manufacturing facility in Danvers, Massachusetts. CAI Inc. (CAI) manufactured solvent-based inks and stored alcohols, heptane, other solvents, pigments, resin, and nitrocellulose in its Danvers facility. The CSB investigation concluded that an unattended mixing tank overheated in an unventilated building, causing the release of flammable vapors which subsequently ignited, triggering an explosion. The resulting fire, fueled by other flammables stored inside, destroyed the facility and heavily damaged numerous homes and businesses nearby, some beyond repair. Minor injuries were reported from the community.

The CSB investigation found that in the years prior to the incident, CAI had increased its quantities of flammable materials stored in the Danvers facility, increasing the risk of fire or explosion due to flammable vapor accumulation. Local authorities were unaware of this change and the fire department had never inspected to evaluate whether the company was in compliance with state fire code or federal regulations for the safe storage of flammable liquids inside the building. In reviewing the Massachusetts licensing and registration system, the CSB found that companies are not required to notify local authorities of the quantities of flammable materials stored in their facilities or to demonstrate whether they are in compliance with state or federal regulations pertaining to safe handling and storage of hazardous chemicals.

#### B. Response to the Recommendation

In April 2012, the CSB Board voted to designate the status of this recommendation as “Open – Acceptable Response,” after the recipient proposed to fulfill the recommendation by developing training materials on the new Massachusetts regulation 527 CMR 33, “Hazardous Material Process or

Processing,” which passed on January 5, 2012. The Massachusetts Department of Fire Services developed training materials for local fire personnel entitled “Massachusetts Hazardous Material Process Information Training,” which was first held in May 2012. This training program is aimed at ensuring that fire personnel can effectively review a company’s hazardous material permit and inspect facilities for compliance with both state and federal safety regulations, including 527 CMR 33. The training materials are available on the Massachusetts Department of Fire Services website.

C. Board Analysis and Decision

The Massachusetts Department of Fire Services developed training materials on 527 CMR 33 that meet the intent of the recommendation. Therefore, the Board voted to change the status of CSB Recommendation No. 2007-03-I-MA-R2 to: **“Closed-Acceptable Alternate Action.”**