



**Chemical Safety and Hazard Investigation Board**

**OFFICE OF GENERAL COUNSEL**

Memorandum

To: Board Members

From: Kara Wenzel, Acting General Counsel *KW*

Cc: Leadership Team  
 Mark Kaszniak, Senior Recommendations Specialist  
 Veronica Tinney, Recommendations Specialist

Subject: Board Action Report – Notation Item 2017-04

Date: January 12, 2017

On January 11, 2017, the Board approved Notation Item 2017-04, thereby designating Recommendation 2001-01-H-R9 to the American Chemistry Council (from the Improving Reactive Hazard Management Study (2000-01-H)) with the status of Closed – Reconsidered/Superseded.

**Voting Summary – Notation Item 2017-04**

**Disposition: APPROVED**

**Disposition date: January 11, 2017**

	Approve	Disapprove	Calendar	Not Participating	Date
<b>M. Ehrlich</b>	X				1/11/2017
<b>R. Engler</b>		X <sup>1</sup>			1/11/2017
<b>K. Kulinowski</b>	X				1/05/2017
<b>V. Sutherland</b>	X				1/04/2017

<sup>1</sup> A dissent is attached.

**Dissent by CSB Board Member Rick Engler  
CSB Recommendation No. 2001-01-H-R9:  
Improving Reactive Hazard Management  
To American Chemistry Council  
January 11, 2017**

This memo memorializes my dissent to Notation Item #2017-04 to close CSB Recommendation No. 2001-01-H-R9: "Improving Reactive Hazard Management", to the American Chemistry Council with the status of "Reconsidered/Superseded."

In considering how to vote on this recommendation, I have reviewed extensive materials, including: information provided to Board Members by CSB staff; the 252 page transcript of the 2002 CSB public hearing on reactive hazards; the 2002 CSB report entitled "Improving Reactive Hazard Management"; and materials from the Center for Chemical Process Safety and the American Chemistry Council. I have also met with CSB staff, discussed this status change proposal individually with other Board Members, and reviewed the transcript from the CSB public meeting on April 20, 2016, when this recommendation was discussed with other Board Members and there was an opportunity for public comment.

The issue in question is *not* whether to close this recommendation. I have supported changing the recommendation to "Closed – Unacceptable Action..." However, the proposal to do that did not receive sufficient Board support.

I have four central reasons for opposing changing the status of this recommendation to "Closed – Reconsidered/Superseded".

1. Serious incidents involving reactive chemical hazards continue to occur.
2. ACC has not implemented the clear CSB language of Recommendation R-9.
3. Workers and the public have a Right to Know about chemical hazards, including incidents involving reactives.
4. ACC should fulfill the intent of its Responsible Care Program by sharing what it has learned about reactive chemical incidents.

**1. Serious incidents involving reactive chemical hazards continue to occur.**

For example, here are just five examples in 2016 from public sources recorded in the CSB incident database that illustrate this:

**DOW Chemical/Rohm and Haas LLP**  
**North Andover, MA**  
**January 7**

Four workers were injured, three critically, during a routine process of transferring trimethylaluminum from one cylinder to another in a laboratory at the Dow Chemical/Rohm and Haas facility in Andover, MA.

**PeroxyChem**  
**Pasadena, TX**  
**January 16**

One contractor was fatally injured and three others were hurt at the PeroxyChem facility in Pasadena, TX, when a valve on a vacuum truck failed during routine transfer operations in a hydrogen peroxide process. Contractors from Evergreen were injured when over pressurization caused the valve on the vacuum truck to fail, hitting one contractor.

**Texas A&M Food Protein Lab**  
**College Station, TX**  
**March 9**

A visiting scholar received second degree burns to his hands in an explosion while processing some liquid samples containing hexane and insect protein in a container hooked up to a vacuum pump.

**Texas Technical University**  
**Lubbock, TX**  
**March 10**

A student experienced injuries during a precipitation reaction when the flask housing the experimental products exploded.

**MGP**  
**Atchison, Kansas**  
**October 21**

An inadvertent mixture of suspected incompatible materials created a chemical fog that spread to downtown Atchison and led to evacuations and highway shutdowns. Thousands of people sheltered in place and scores sought medical attention. (CSB is currently investigating).

The first two incidents cited above were at ACC member company sites, Dow and PeroxyChem. As is well known, the April 17, 2013 disaster involving ammonium nitrate at the West Fertilizer Company in West, Texas, which killed 15 people, was also a reactive chemical incident.

There are likely many more reactive chemical incidents. However, because there is no specific requirement that they be reported to CSB (or another federal agency), CSB is likely not aware of all of them.

Clearly, the impacts on workers and the public from reactive chemical incidents continue to this day, more than 14 years after CSB issued its initial recommendation letter to ACC, subsequent to our report on the Morton Chemical explosion and fire in 1998 in Paterson, New Jersey, in which nine employees were injured and hazardous chemicals were released into the community.

As the CSB concluded in a 2007 update to our 2002 report, "Improving Reactive Hazard Management", although the available data are lacking in important respects, they strongly suggest that many reactive incidents continue to result in fatalities, injuries, property damage, and public impacts.

That update further concluded that "It is impossible to reach any firm conclusions about trends since the publication of that report, however, because of continuing limitations in the data."

**2. ACC has not implemented the clear CSB language of Recommendation 2001-01-H-R9.** In

2002, the CSB made four recommendations to the American Chemistry Council (ACC) concerning reactive hazards. I commend the ACC for their actions to address reactive hazards

and for developing an *internal* system to annually collect a summary of process safety incident data from their members and to flag incidents that may involve a reactive chemical. CSB's recommendation R-9, specifically, however, stated that ACC should ensure that they: "Develop and implement a program for reporting reactive incidents that includes **the sharing** of relevant safety knowledge and lessons learned with your membership, **the public, and government to improve safety system performance and prevent future incidents.**" (Emphasis added).

In CSB's recommendation response evaluation, our staff has found that ACC remains unwilling to make that information available to the public or to the government due to "unresolved questions regarding legal protections" needed to make this information available. *Fourteen years after this CSB recommendation was made, ACC's assertion remains undocumented, and in my view, inadequate.*

### **3. Workers and the public have a Right to Know about chemical hazards, including incidents involving reactives.**

Workers need to know what dangers they are likely to be exposed to on the job. Firefighters, EMTs, and police officers need to know about the hazards they may face before they respond to an incident. Neighbors need to know what they may be exposed to, including those substances that may cause fires and explosions near their homes and businesses. And policy-makers need to know as well so they can assess gaps in regulations and take necessary steps to protect the public well-being. All of us have the right to know so that we may take steps to protect our health, safety, families, and livelihoods.

CSB has found that workers (including emergency responders) and the public need access to critical information about hazardous substances, including Safety Data Sheets and training.

Among CSB investigations that support this conclusion are: Morton (2000); DPC Enterprises (2003); Kaltech Industries (2003); West Pharmaceutical Services (2003); Formosa Plastics (2004); CTA Acoustics (2005); Bethune Point Wastewater (2006); Barton Solvents (2008); DuPont (2010); and West Fertilizer (2013).

Moreover, the Right to Know about chemical hazards is a recognized public right and the fundamental premise of widely accepted public policies. These include:

- OSHA's Hazard Communication and Process Safety Management Standards;
- The Emergency Planning and Community Right to Know Act;
- Clean Air Act Section 112(r), which created the Environmental Protection Agency's Risk Management Plan Program (as well as which established the Chemical Safety Board).

On January 13, 2017, EPA issued amendments to *expand* the public's right to know about chemicals as part of its revision to its Risk Management rule.

While these laws and regulations today constitute overall a major advance for public transparency compared to the early 1980s when workers, firefighters and plant neighbors could often not even discover the real names of the chemicals to which they were exposed, they remain insufficient. Labor unions, plant management, trade associations such as the ACC, and government agencies at all levels have a shared responsibility, even when not required by the letter of the law, to share information about chemical dangers, such as reactive hazard incidents.

**4. ACC should fulfill the intent of its Responsible Care Program by sharing what it has learned about reactive chemical incidents.**

In the absence of a federally mandated chemical incident database, it is incumbent upon ACC, which includes about 2,000 facilities at their member companies, to help ensure that workers and the public are protected.

This appears to be the intent of the ACC's 1988 Responsible Care program. In 1990, Responsible Care Guiding Principles included:

"To make health, safety, the environment...critical considerations for all new and existing products and processes" and "To provide information on health or environmental risks and pursue protective measures for employees, the public, and other key stakeholders."

In 2005, Technical Specifications of Responsible Care included to "Provide information on health, safety, security and environmental risks and pursue protective measures for employees, the public and other key stakeholders."

Responsible Care stakeholders are defined to include employees, neighbors, emergency responders, other industries, competitors, the public at large, and regulators.

Part of the Responsible Care process safety code covering each ACC member firm requires "information sharing" and says that experience from process safety reviews, inspections, audits, and incident and near-miss investigations **should be shared with stakeholders**.

[Emphasis added].

Current Responsible Care Guiding Principles include to communicate process risks to stakeholders and to openly report health, safety, environmental, and security performance.

While the ACC website reports that Responsible Care companies have reduced process safety incidents by 51% since 1995, there is no public reporting that I can find about specific chemical incidents or lessons learned.

ACC, as documented by the CSB staff, has not shared specific reactive hazard incident information with the public or government.

ACC has suggested that other organizations are better positioned to share safety knowledge and lessons learned with the public and government. However, these organizations either do not receive specific reactive incident reports from facilities and/or, like the Center for Chemical Process Safety, they also deem such information confidential.

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I would have supported closing this recommendation as “Reconsidered/Superseded” if OSHA and/or EPA had established appropriate regulatory requirements concerning reactive chemical incidents. Despite multiple CSB submissions of information and CSB recommendations to these agencies -- and the opportunities for progress afforded by President Obama’s Executive Order on Chemical Safety and Security-- neither OSHA nor EPA have adopted new rules that address this continuing risk.

The chemical industry should support stronger federal safeguards and enforcement to prevent chemical incidents, including reactive hazards. If the industry is not going to do this, however, they have alternatives, such as to develop effective and transparent internal programs to ensure chemical safety, including incident reporting to external stakeholders. Developing and implementing CSB’s recommendation for reporting reactive incidents that includes the sharing of relevant safety knowledge and lessons learned with ACC membership, the public, and government to improve safety system performance and prevent future incidents would be one such opportunity.

A CSB Board decision to change the status of this Recommendation to “Closed – Reconsidered/Superseded” is unjustified. Thus, I vote no on Notation Item 2017-04.

I look forward to a continuing dialogue with the ACC and other stakeholders about effective approaches to preventing chemical incidents, including those involving reactive hazards.

Dissent Rec No 2001-01-H-R9 Reactives Engler.docx