



# Management Division Newsletter

AUGUST 2010

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## **2010 AIChE Annual Meeting**

Salt Lake City, Utah, USA (November 7-12, 2010)

Monday, November 8, 2010 (Cottonwood, Marriott Downtown)

8:30 am Managing Innovation

12:30 pm Project Management: What's New? What Works?

3:15 pm R&D Management from Beginning to End

Tuesday, November 9, 2010 (Cottonwood, Marriott Downtown)

8:30 am Managing Technology Collaborations I -- Academia, Industry and  
Government

12:30 pm Managing Technology Collaborations II -- Academia, Industry  
and Government

Wednesday, November 10, 2010 (Grand Ballroom G, Salt Palace Convention Center)

8:30 am Intellectual Assets in the Digital Era

We encourage you to attend these sessions, as well as the **Division Committee meeting** (Tuesday, November 9, 11:30 am / check program schedule for exact location) and **Dinner** (Tuesday, November 9, Spencer's Restaurant, Hilton hotel / check program schedule for exact time).

## **Call for Papers — 2011 AIChE Spring Meeting (Chicago)**

### **Submissions accepted until October 22, 2010**

Consider submitting an abstract for the 2011 Spring Meeting, which will be held in Chicago, Illinois (March 13-17, 2011). The Management Division is sponsoring or co-sponsoring nine interesting sessions and we are looking for papers in all of them. To submit an abstract online go to:

<http://aiche.confex.com/aiche/s11/cfp.cgi>

The sessions planned for the Spring Meeting are the following:

#### **Best Practices and Case Studies in Pilot Plants**

Covering the breadth of pilot plant themes from detailed examples, management strategies, design and operating strategies.

**Sponsor:** Pilot Plants; **Co-Sponsor:** Management Division

**Chair:** William Hollar, [William.Hollar@sabic-ip.com](mailto:William.Hollar@sabic-ip.com), +1 (812) 831-4751

**Co-Chair:** Adam Whalley, [awhalley@zeton.com](mailto:awhalley@zeton.com), +1 (905) 632-3123

#### **Challenges in Global Collaboration**

This session is intended to share learnings and experiences in multi-national collaborative projects focusing on issues relating to legal and intellectual property issues unique to these types of collaborations.

**Sponsor:** Management Division; **Co-Sponsors:** Chemical Engineering & the Law Forum, Technology Transfer

**Chair:** Gretchen Baier, [baierg@dow.com](mailto:baierg@dow.com), +1 (989) 636-2365

**Co-Chair:** Robert A. Madayag, [rmayadag@woodcock.com](mailto:rmayadag@woodcock.com), +1 (404) 459-0500

#### **Intellectual Property Protection of Cleantech, Nanotech, and Other Chemical Technologies**

This session will cover topics relevant to effectively translating chemical engineering know how into intellectual property assets. The course will cover strategic considerations in determining whether technology should be patented or kept as a trade secret as well as some of the legal requirements for obtaining utility patent, design patent, plant patent or trade secret protection. A discussion on the importance of patent claims will provide a foundation for patent claim and foreign filing strategies for CleanTech, NanoTech, and Chemical Technologies. The course is designed to provide a foundation so that one can be led to raise and address certain issues upon the identification of potentially valuable knowledge. It will provide the opportunity for technical exchange between the participants and the presenter.

**Sponsor:** Chemical Engineering & the Law Forum; **Co-Sponsors:** Management Division, Nanoscale Science and Engineering Forum, Environmental Programs

**Co-Chair:** Chad Walter, [walter@cclaw.com](mailto:walter@cclaw.com), +1 (972) 367-2001

**Co-Chair:** Vivek Koppikar, [vivek\\_koppikar@hotmail.com](mailto:vivek_koppikar@hotmail.com), +1 (571) 272-1000

#### **Management Response to Environmental Challenges**

The recent release of large amounts of hydrocarbons into the Gulf of Mexico has highlighted the importance of a company and industries' capabilities to respond to major environmental disasters. This includes not only the technical response to the situation, but the public relations challenges in communicating hazards, clean up plans, and appropriate compensation. This session invites those with experience in this area to share their lessons learned.

**Sponsor:** Management Division; **Co-Sponsors:** Air, Environmental Division, Legislation and Regulation, Water, Safety and Health Division

**Chair:** Richard D. Siegel, [richarddsi@aol.com](mailto:richarddsi@aol.com), +1 (781) 935-7555

**Co-Chair:** Jack Hipple, [jwinnovator@earthlink.net](mailto:jwinnovator@earthlink.net), +1 (813) 994-9999

### Management Rewards and Challenges

This session is an opportunity for current chemical industry managers to share their lessons learned with our young professionals group as well as with other chemical industry managers.

**Sponsor:** Management Division; **Co-Sponsor:** The Young Professional Advisory Board (YPAB)

**Chair:** Jessica Swary, [Swaryjr@Middough.com](mailto:Swaryjr@Middough.com), +1 (630) 756-7450

**Co-Chair:** Jack Hipple, [jwinnovator@earthlink.net](mailto:jwinnovator@earthlink.net), +1 (813) 994-9999

### Management with Startup Ventures

More and more growth in the chemical and specialty materials area is occurring in small, venture startup organizations. These types of firms have a significantly different paradigm of operation and management than conventional Fortune 500 organizations. This session will explore some of the learnings and lessons from individuals experienced in these types of commercial ventures.

**Sponsor:** Management Division; **Co-Sponsors:** Graduate Education, The Young Professional Advisory Board, Process Research and Innovation

**Chair:** Jack Hipple, [jwinnovator@earthlink.net](mailto:jwinnovator@earthlink.net), +1 (813) 994-9999

**Co-Chair:** Jessica Swary, [Swaryjr@Middough.com](mailto:Swaryjr@Middough.com), +1 (630) 756-7450

### Manufacturing's Role in Process and Product Development

Manufacturing can play a key role in process and product development: (a) identification of capability for new product specifications; (b) production of test market quantities of a new product line; (c) operation of slip-stream or independent pilot units; (d) advice on scale-up of critical unit operations. This session will present examples of this key role in technology development and improvement.

**Sponsor:** Manufacturing; **Co-Sponsor:** Management Division

**Chair:** Shu Shu, [shu.shu@shell.com](mailto:shu.shu@shell.com), +1 (281) 544-7812

### Pilot Plant Startup Stories

Construction, commissioning, and startup of pilot plants is challenged by schedule, costs, and prototype technology. This session presents best practices and learnings from pilot plant startups, via real world examples.

**Sponsor:** Pilot Plants; **Co-Sponsor:** Management Division

**Chair:** David C. Attride, [dattride@eastman.com](mailto:dattride@eastman.com), +1 (423) 229-2692

**Co-Chair:** William Hollar, [William.Hollar@sabic-ip.com](mailto:William.Hollar@sabic-ip.com), +1 (812) 831-4751

# Safety Management: Beyond the Basics

by **Yolanda Y. Marshall**, Assistant to the Director, Innovation and Partnership, NASA Johnson Space Center, Houston, Texas, USA

Paper presented at AIChE Spring Meeting, San Antonio, Texas, USA (March 2010); published with permission by NASA Johnson Space Center.

Thinking outside the box is nothing new for NASA. Even where safety's concerned -- perhaps especially where safety's concerned -- we're an agency accustomed to coming at a problem from every conceivable angle.

But that's rockets, spaceships and spacewalks. Back on the ground, in our aging office buildings, it's easier to forget to look beneath the surface on safety.

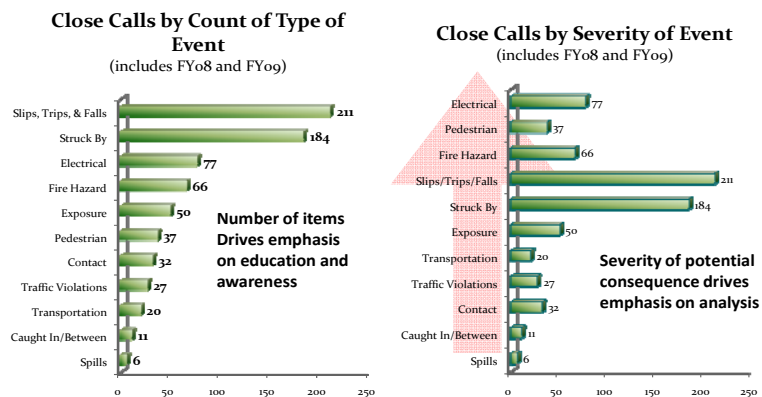
In 1999, just a year after it was possible for federal worksites to do so, Johnson Space Center became "Star" recognized in the Occupational Safety and Health Administration's Voluntary Protection Program. To achieve that award, we had to look at our safety culture -- how people thought about safety at the center, how we monitored ourselves and collected data. We had to ensure tangible and productive relationships, focused on personal safety, were maintained throughout the workforce and leadership. We made a lot of improvements, and the number of mishaps we experienced fell steadily.

And then it didn't. In 2001 we noticed that it was increasingly difficult to reduce the number of mishaps, and through the latter half of this decade we had leveled out. They weren't increasing, but we wanted improvement, not stagnation. None of the usual suspects presented themselves as likely causes, so we had to dig deeper, look into data that we might not normally associate with safety statistics.

I call that the Iceberg of the Unknown. When you're steering a ship, you can see the top of an iceberg and steer around it. But that's only about 10 percent of the iceberg. The rest is lurking below the surface, out of sight, presenting dangers you don't even know are there. You're thinking you've got yards to go to steer around it, but you really have no space at all.

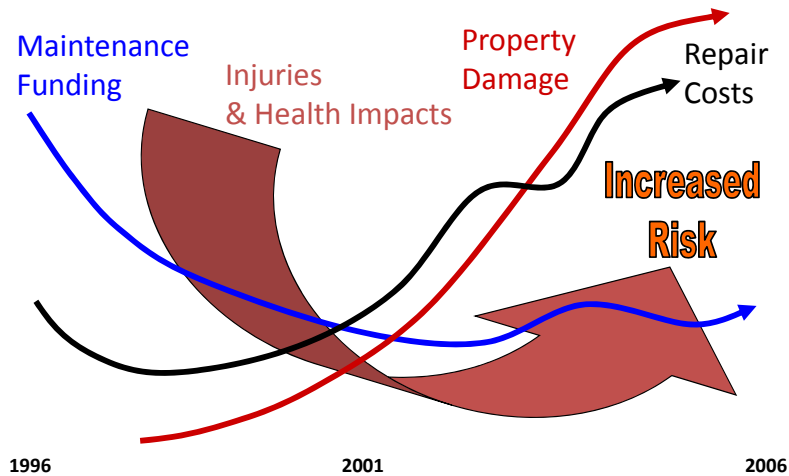
That's why it's so important to capture not only actual safety incidents that occur, but also complaints and close calls, where they occurred and what their severity was. Then investigate those close calls, correlate it with other factors that might have been an influence and extrapolate lessons learned. I cannot stress enough to analyze the data. Do not use metrics for the sake of metrics.

## Close Calls Most Effective Leading Measure



When we did that, we found that our Iceberg of Unknown was building maintenance. Other potential risks are buried in the systems, controls, training and preparations we count on to prevent mishaps, but too often take for granted.

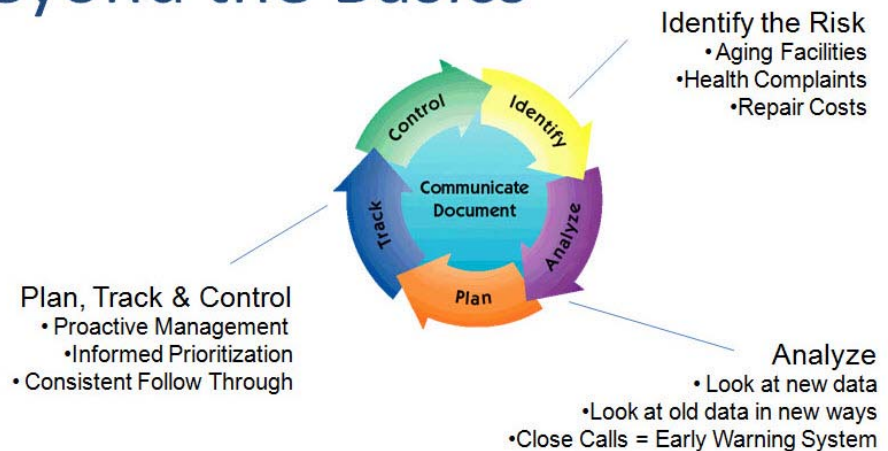
## Correlation of Data (Notional)



While our mishap numbers ran steady, the preventative maintenance costs on our buildings and support systems -- many of which are 40 years old or more -- were going down and our repair costs were going up. The cost data was telling us something: We had a risk building that we hadn't understood.

We could have easily missed that. Property maintenance cost isn't a number that's normally on my radar -- it's not even handled by my office. And repairs are a trailing indicator. But once we made the connection, we were able to present the information in a way that enabled management to make an informed decision. We identified a legitimate risk and began making corrections to fix it -- the data went into our risk management processes and we started buying down the risk.

## Beyond the Basics



Using the risk management methodology as your basis for managing the risk, you

1. Identify the risk
2. Analyze by looking at new data, looking at old data in a new way and being sensitive to early warning signs.
3. Plan, track and control with a proactive management that makes informed decisions utilizing a risk-based prioritization strategy while being consistent with their following through.

There isn't always more money on the table to fix these issues, but we can understand better where the greatest potential consequences can bite us if we don't prioritize appropriately.

Maybe we'll never get our number of mishaps down to zero, but we can try. After all, another thing we're used to doing at NASA is overcoming insurmountable odds. And we do that by thinking outside the box.

(For questions or comments about the article, you may contact the author at [yolanda.y.marshall@nasa.gov](mailto:yolanda.y.marshall@nasa.gov))

## **Division Website**

The Management Division will be moving its website to a platform sponsored by AIChE and built upon Drupal, which is recognized as the best content management system (CMS) platform. AIChE has created a custom layer over the standard Drupal package to give a consistent and professional look to all of the AIChE sites while at the same time providing a flexible system that is easy to set up, update, and use.

We had planned to build the site in August 2010 and launch it a month later, but AIChE National is still working on the development of training materials. This has pushed our plan back a month so you can expect a launch in October 2010.

The new website will help us keep division members up-to-date and also be more effective in getting our message out to prospective division members.

Once we get the site set up, we will need help from division members to keep sections fresh and current. We'll also need input and feedback from everyone in the division to make sure we have a good supply of fresh information about the division and that we properly serve our membership.

## AIChE Management Division Leadership (2010)

### Officers

Chair	Jack Hipple Innovation-TRIZ	<a href="mailto:jwhinnovator@earthlink.net">jwhinnovator@earthlink.net</a> +1 (813) 994-9999
1st Vice Chair	Vacant	
2nd Vice Chair	Gretchen Baier The Dow Chemical Company	<a href="mailto:baierg@dow.com">baierg@dow.com</a> +1 (989) 636-2365
Secretary	Bill Welker Nestlé USA	<a href="mailto:bill.welker@us.nestle.com">bill.welker@us.nestle.com</a> +1 (818) 551-3544
Treasurer	Rosemarie D. Wesson National Science Foundation	<a href="mailto:rwesson@nsf.gov">rwesson@nsf.gov</a> +1 (703) 292-7070

### Past Chair

Past Chair	Mukund R. Karanjikar Technology Holding LLC	<a href="mailto:mukund.karanjekar@gmail.com">mukund.karanjekar@gmail.com</a> +1 (281) 217-3471
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