

### Check-The-Box Safety Management System—Procedures

- Failure to go beyond the minimum requirements
- Incomplete Process Hazards Analysis (PHA) documentation
- Inadequate audits and investigation reports

#### BACKGROUND

A corporate process safety audit found that the documentation for key process safety activities at a facility was extremely sparse. Previous internal audit reports consisted of 2-page memos. PHA reports of major process units contained 10 pages of worksheets and these contained many blanks. Incident investigation reports contained root cause analyses that were described in a brief paragraph.

#### WHAT HAPPENED

Further interviews revealed these documents were created as the result of activities intended mainly to get activity off the facility's to-do list. The auditors pointed out such practices and the thin documentation did not reflect typical industry practices for those Process Safety Management System elements.

The Facility Manager and members of his management team reacted angrily. They stated forcefully that the facility had never suffered a process safety incident and that their documentation met the minimum regulatory. This, they said, was proof enough that no additional effort was required or needed.

What other symptoms of weak process safety culture do you believe existed at this facility?

#### SAFETY CULTURE FOCUS

- ✓ A lack of incidents is not a true indicator of a strong safety culture.
- ✓ Performing only the minimum requirements does not support continuous improvement.
- ✓ Safety should be effectively integrated into all activities.
- ✓ Having a questioning environment is essential to a healthy safety culture.

**\*\*Only 37% of those surveyed indicated management involvement was a strength in their organization.\*\***

## IMPROVING HYDROGEN SAFETY CULTURE

*LEARNING OPPORTUNITIES FROM OTHER'S EXPERIENCES*

***“Safety culture is how the organization behaves...  
...when no one is watching.”***

## **Safety Culture Framework**

- ▶ Safety is everyone's responsibility
- ▶ Strong leadership support
- ▶ Integrated into all activities
- ▶ Open, timely, effective communications
- ▶ Questioning/learning environment
- ▶ Mutual trust
- ▶ Continuous improvement

## **What are the benefits?**

- ✓ Eliminates common weaknesses identified as contributing factors to catastrophic events.
- ✓ Promotes trust in the hydrogen energy industry's ability to deliver safe, reliable, quality products and services.
- ✓ Supports a sustainable legacy for companies and the hydrogen industry.
- ✓ Fosters efficiency and productivity in the workplace.

## **Resources**

- ✓ For further information and resources on safety culture, see: <https://www.aiche.org/ccps/safety-culture-what-stake>
- ✓ For further case studies on safety culture, see: <https://h2tools.org>