CENTER FOR Hydrogen SAFETY
Connecting a Global Community

Safety Culture Spotlight

Process Hazards Analysis Silos—Hazards Analysis

- Failure to communicate Process Hazards Analysis (PHA) recommendations
- Failure to integrate PHA results
- Mitigation plans defeated

BACKGROUND

A large facility performed complete PHAs that comprehensively identified controls for process safety risks. These studies were carefully revalidated over the years to keep them up-to-date. The recommendations were resolved promptly and there were good records of these practices.

WHAT HAPPENED

However, a closer look at PHA practices revealed that although they were thoroughly performed, the PHAs were not used for any other purpose. The Asset Integrity/Mechanical Integrity (MI) team did not receive the report so they could ensure critical equipment identified in the PHA was included in the MI Inspection, Testing, Preventive Maintenance and Quality Assurance programs. The training team was unaware of why recommended training was needed. The emergency response planning team was unaware of the potential consequences they needed to plan for. The PHA program, as good as it was, had become a silo activity.

How can this happen in a large facility? How can cross-fertilization be encouraged when the PHA team is in a completely different organizational structure and where so many people are involved?

SAFETY CULTURE FOCUS

- ✓ Strong leadership must ensure timely, effective communications to other entities is part of the hazard analysis process.
- ✓ Recommendations and results from PHAs need to be integrated with other activities.
- ✓ Mutual trust is promoted through an open, sharing environment.

****Only 26% of those surveyed indicated communication 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

Keywords: weak, poor, minimum, regulations, flammable, chemical, checklists, compliance