CENTER FOR Hydrogen SAFETY
Connecting a Global Community

Safety Culture Spotlight

Becoming The Best—Continuous Improvement

- Deviations to processes affect public relations
- Management transparency promotes trust
- Public outreach yields unexpected improvements

BACKGROUND

A manufacturing plant was struggling with their relationships with the environmental agency and their local community. Process deviations would frequently cause process emissions to spike, leading to significant odors offsite and exceeding the permitted level. The process would also periodically generate significant noise at a decibel level and frequency that was very irritating beyond the fence line.

WHAT HAPPENED

One Earth Day, the plant dutifully held an open house to show off their state-of-the-art facility and show how they had all but eliminated their process and office waste. The neighbors were not as interested in this and their questions quickly turned to the site's odor and noise. One neighbor asked, "What is happening in the plant when emissions increase?" The technical manager hesitated, and then with encouragement of the plant manager explained that it happened when the gas rate was high. The neighbor then asked the same question about noise. The technical manager explained that it happened when the gas rate was low. Another neighbor then asked, "So if you know why there are the odors and noise, why not avoid those conditions?" The technical manager explained that they were trying to, but it was not a direct correlation and they had not yet figured it out, but they would keep looking for a solution.

The meeting ended amicably, and a few days later, the technical manager received a call from the neighbor saying, "Your gas rate is low." The technical manager signaled through his office window and the operator turned up the gas. The neighbor, noticing the immediate reduction in noise replied, "Thank you." Over the following months, with neighbor input, the plant got the gas rate under control and achieved the lowest rate of emissions in the company.

This example shows how the linkage between culture and the Process Safety Management System element of stakeholder outreach. What positive culture attributes did the plant manager exhibit in being open with the community?

SAFETY CULTURE FOCUS

- ✓ Strong, transparent leadership promotes trust and opportunity for improvements.
- ✓ An open, questioning environment with the public enhanced process safety.
- ✓ Continuous improvement can come from unexpected places.

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

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