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Safety Culture Spotlight

Performance Indicators Fail to Indicate—Process Metrics

- Failure to manage classification change in system process
- Failure to identify implications of schedule change on Inspection, Testing, Preventive Maintenance (ITPM)
- Failure to coordinate key performance indicators with ITPM

BACKGROUND

A facility tracks an overdue ITPM metric monthly. The data is reported to a corporate process safety metrics program, and the Key Performance Indicators (KPI) is analyzed and published for everyone in the company to see. The values for all facilities, since the metrics program was established three years ago have been consistently above 99% completed on time, which the company was proud about result.

WHAT HAPPENED

The facility had just undergone a major turnaround that was planned to be 3 weeks but was shortened by 5 days due to production pressures. The month following the end of the turnaround, the overdue ITPM KPI still showed 99.6 % ITPM completion. Upon closer review it was discovered that 75 ITPM tasks scheduled for the turnaround had not been performed due to the shorter time. This included many proof tests of Basic Process Control System and Safety Instrumented System functions.

The overdue ITPM KPI did not reflect these unperformed tasks because they had been reclassified in the maintenance management system as turnaround maintenance tasks and not recurring maintenance tasks, while the KPI only considered recurring maintenance tasks.

Planned turnarounds do get shortened. However, some ITPM tasks can only be performed during turnarounds. What can be concluded about a facility that does not consider turnaround ITPM tasks in its ITPM KPI? Do you think ITPM was considered in the decision to shorten the turnaround? If business considerations really required shortening the turnaround, what should the facility have done to ensure that turnaround ITPM was conducted?

SAFETY CULTURE FOCUS

- ✓ Safety must be integrated into all processes and activities including ITPM and KPI.
- ✓ Effective and timely communication is essential to review safety implications from schedule changes.
- ✓ Maintaining a questioning environment can help identify data abnormalities.

****Only 37% of those surveyed indicated management of change as a strength in their organization.****

"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