Lessons Learned from Process Incidents – Viewing Historical Data through the Lens of “Tenets of Operational Excellence”

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Abstract

Do we really learn from past incidents? Well, the general public’s perception is that we in the chemical, petrochemical, oil and gas industries mostly do not learn well from loss incidents of the past and that is why we keep having repeat incidents. In our region alone in the past decade we have had several major incidents that have resulted in massive financial loss and property damage and/or multiple fatalities in the oil and gas industries in Algeria, Kuwait, and Saudi Arabia.

We want to assure our readers that there definitely are some organizations and individuals who take this learning from incidents very seriously. We can draw useful lessons from not only major incidents that have caught the public and media eye, but also from smaller incidents that occur in one’s industry. When an incident is reported in the media, everyone is naturally curious as to what has happened. But if we want to learn from the incident, we have to go beyond simple curiosity. There are some known hurdles in our ability to learn from other people’s incidents. In order to learn lessons, we need to review the incident in depth. In analyzing these incidents for the purpose of learning lessons for the future, there is no point in trying to blame a specific person or persons. “Culpability” is applicable in cases of sabotage or other deliberate actions with malice aforethought. In accidents and incidents, it is better to concentrate on systemic or procedural failures or design deficiencies so that viable, effective, and long-term remedial measures can be proposed and implemented.

The learning process is not easy. You need to have the will and ability to pay attention to detail. Bapco has recently adopted a unique tool called “Tenets of Operational Excellence” which lists two over-riding principles: Do it safely or not at all, and There is always time to do it right.

All recorded incidents related to process plant, equipment, instrumentation, and environmental consequences are analyzed at Bapco to identify which of the above ten tenets was most likely violated so as to cause the loss incident. This viewing of the historical records through the lens of tenets of operational excellence yields some very interesting results. On the basis of the results, the company is then able to direct resources that remedy the specific shortcomings identified through this analysis. The system provides a ready and usable means of assessing cost-effectiveness of remedial measures.