

GREY PAPER

insights



PROTECTING THE SAFETY CULTURE
IN AN OPERATING FACILITY



Pilko & Associates Grey Paper

Concise summaries of key Operations/EHS and Transaction Risk challenges and how to unlock value for your project, assets and enterprise.

Pilko & Associates is the industry leading Operational and Environmental, Health, and Safety Risk advisory firm — working with clients in 78 countries and advising on M&A deals worth more than \$600 billion.



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PROTECTING THE SAFETY CULTURE IN AN OPERATING FACILITY

Modern energy/petrochemical facilities, by their very nature, are highly complex facilities. They are designed to ensure their many potential hazards are safely mitigated to allow a low-risk operation. Maintaining this low-risk operation demands highly competent and experienced employees operating within a strong culture of operational discipline and EHS excellence. This strong culture, however, can be compromised should the experience level in the facility drop too low. This drop in experience level can occur for a variety of reasons:

- Employee retirement
- Employees leaving for other companies
- Employees leaving for other jobs within the company
- Rapid company or facility growth
- Forced headcount reductions
- Any combination of the above

Circumstances can develop such that the loss rate of experienced personnel exceeds the organizations capability to replace them. When this situation occurs, a strong culture can be weakened/diluted to the point that the past safe, reliable operation of the facility can no longer be assured. Plant leadership must, therefore, always ensure that a minimum level of experience exist within their facilities. By experience, we mean the total knowledge, judgement and skill sets available on each shift for recognizing and responding to critical plant circumstances (**NOT** just years of service). Maintaining this level of experience requires the following:

1. Methodology for measuring the current experience level of the facility. This determination can be performed for the entire facility/company but is generally performed only for plant operators. Key factors to be considered include:
 - Past performance reviews
 - Years of service in job, in plant, in company, in industry
 - % of plant jobs for which the individual is qualified
2. Agreement on the minimum required experience level in the plant (usually agreement with both operations and site leadership)

3. Process for maintaining the appropriate experience level in the facility, which should include:
 - An effective hiring program to bring the right people into the organization
 - An effective training program designed not just to impart process knowledge but to replace lost experience
 - Identification of the maximum number of trainees that can be effectively managed and trained on shift without compromising plant operations
 - Periodic (e.g., annual or every 6 months) experience level review by site/facility leadership including status of all trainees
 - Periodic review of company demographics alongside capital plans to ensure site leadership is aware of potential future downward pressures on the experience levels in its plants
4. Agreed actions to take when facility experience level drops below the accepted minimum, which includes but is not limited to:
 - Immediate freeze of all transfers (plant operators, supervisors, engineers, managers, etc.) out of the facility (including promotions) until effective experience level rises above minimum (Critical: you must stop the bleeding!). This freeze can be extremely challenging for union facilities – all the more reason to never allow experience levels to drop below the minimum
 - Accelerated training focused on rapidly enhancing the experience of new employees (retirees can be a great benefit here)
 - Movement of experienced employees from other facilities/locations (especially if they have previous experience in the effected or similar facility)
 - Hiring of new employees with experience from other companies

A drastic reduction in the experience level below the minimum in an energy/petrochemical facility necessarily

means a weaker culture of operational discipline and EHS excellence exists – a dangerous situation. Rebuilding a strong culture once lost is extremely difficult. Leaders must take the responsibility to maintain the experience level in each facility and protect the culture at all costs – it's that important.

Grey Paper Author:

Arthur Colwell, Lead Advisor, Pilko & Associates

ABOUT PILKO & ASSOCIATES

We are the trusted Advisor to corporate officers and boards on mitigating Operational/EHS Risks and unlocking value in the global Energy, Chemical and related industries.

Since 1980, we have served energy and chemical clients in more than 78 countries, advising on over \$600 billion in transactions and ongoing operations. In addition, we have developed an excellent reputation advising on Governance of Operational/EHS Risks at existing as well as planned operations. Our global experience, combined with extensive knowledge and capabilities, is invaluable to firms in mitigating their most significant Operational/EHS Risks and liabilities, thereby maximizing value and optimizing business performance.

For more information about our services and capabilities, please visit us at www.pilko.com.

About the Author:



Art Colwell's career in the chemical industry has spanned over 40 years. Prior to his retirement in 2010, Art was responsible for BASF's largest North American manufacturing facility located in Freeport, Texas. In this role, Art oversaw the daily operation of 24 plants that manufacture 23 different products, including acrylic acid used in textiles, adhesives, and plastics; superabsorbent polymers used in baby diapers;

caprolactam used in nylons and solvents; and intermediate chemicals like oxo alcohols used to produce polyesters, surface coatings and plasticizers. During Art's tenure, the Freeport site was recognized by the Texas Chemical Council with its two highest honors – the Best in Texas Safety Award (four of the last six years) and the Sustained Excellence in Caring for Texas Award (last four years).

Art also served as Chairman for BASF's North American Manufacturing Community (2005-2008). In this role, Art was responsible for the development and implementation of operational excellence programs across all North American manufacturing facilities.

An active supporter of the industry, Art served on the Board of Directors for the Texas Chemical Council for nine years, holding various offices culminating in his selection as TCC Chairman for 2009 - 2010.

At Pilko & Associates, Art has been able to leverage his extensive chemical industry experience to help companies in the chemical/ petrochemical, automotive and oils sands industry improve overall EHS performance. Working directly with senior corporate executives, Art has advised and provided guidance on EHS risk assessment, risk mitigation and governance.

Art and his wife Nita reside in Magnolia, Texas. They have one son, Paul, a graduate of Vanderbilt University in Chemical Engineering. A native of Huntsville, Alabama, Art earned both a bachelor's degree and a Master of Science in Chemistry from the University of Alabama in Huntsville.