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Delta-S (ΔS) in Due Diligence

Its Significance in Chemical & Energy Transactions

by Rick L. Monty, Head of Chemical Transactions

Virtually all companies who acquire chemical and energy assets are fully conversant with the importance of assessing Environmental, Health & Safety (EHS) compliance risks as an essential part of transactional due diligence. However, in the past few years in a growing number of chemical and energy transactions, Operational Risk (OR) has moved from the periphery of risk due diligence to becoming a preeminent topic of key operational due diligence. OR disciplines address the process safety aspects (PSM) of operating units controlling the likelihood of incidents that may present hazards to property, personnel or present threats to asset capacity and reliability. These risks have become of particular concern in the past few years because of global economic stress. The "cash crunch" effect of the recent recessionary period has seriously stressed operational, maintenance and replacement capital budgets across a broad spectrum of chemical and energy companies. As a result, many businesses have found it challenging to be able to maintain their assets to excellent, or even median, industry standards. These factors have become an important part of the "risk intelligence" needed to produce a complete due diligence in the chemical and energy space.

So what is this factor known as "Delta-S" (ΔS)? If we assume for a moment that "S" is the assessed operational standard of a target asset for sale, then "ΔS" is defined as the difference between the operating standards and disciplines of the target versus the standards of the buyer. It is clear that companies who maintain their assets to high standards will enjoy a lower total OR. On the other side of the coin, when standards decline, operational risk increases - sometimes to a dramatic extent. One only needs to read the summaries of the US Chemical Safety Board (CSB) reports over the past few years to see what can happen to facilities that have drifted to less rigorous operating standards. The CSB has documented the erosion of operating standards due to economic priorities as a primary cause in dozens of incidents which have resulted in serious property damage and loss of life. In a nutshell, an increasingly important aspect of due diligence is to assess how far below assets' standards are compared to the acquirer's operating standards - the ΔS.

But why is that important in transactions? Acquiring companies with highly developed operating standards and expectations know that they may have to significantly modify and develop acquired assets to their own high standards during the transition and integration phases post-closing. The answer lies in the fact that many deals still do not employ a robust OR aspect during their due diligence process and therefore companies frequently underestimate the cost and potential downside risks of significant ΔS. Some EHS due diligence processes are still an exclusively environmental risk exercise and do not attempt to assess OR, let alone the risk aspects of differing standards. In a properly executed ΔS analysis in due diligence, there are two key risks that can impact a buyer's total realized value for a newly acquired asset. These risks are a) the valuation impacts of underestimated future capital flows and b) the substantial concern of a "vulnerability window" for major hazard incidents.

Clients often relate that, although they realized that an acquired asset was operated below their own standards, it wasn't until their own controls were applied post-closing, that they realized how much capital it would take to close the ΔS gap. These experiences often led to a wish that those factors had been assessed properly within the deal's economic model prior to the negotiation of the purchase price. The priority of the acquirer's own policies on operational standards often delay the employment of future capital for capacity or economic return in favor of closing OR gaps. This can mean that the harvesting of the

deal's value can take longer than the CEO or the Board's expectations of the transaction - a common deal leader concern.

But ΔS can also present a darker risk than delayed deal return. Every deal leader's nightmare is that, shortly after closing, a significant process safety event occurs well before they can have an influence on the asset's operating standards and disciplines. Not even the most advanced and energetic company can effect change to a newly acquired asset's standards overnight. There is always a period of operating or compliance vulnerability for any buyer during the transition and integration phase for a new asset introduction. If the ΔS is relatively small, this period could be manageably short but if the ΔS is substantial, the "vulnerability window" could be uncomfortably long. As all who operate chemical and energy assets know, although property loss and business interruptions can be expensive, reputational impacts can be much more damaging to both public image and market capitalization. For a strategic buyer, the reputational costs of a serious incident can be significant. For a financial buyer, such process safety incidents can entirely erase the valuation gains of ownership lifecycle.

So what are benchmark companies doing with respect to these deal factors? A growing number of strategic and financial buyers are electing to include OR and ΔS analysis factors within their definition of complete due diligence for chemical and energy assets. This is achievable through the employment of an integrated EHS/OR review performed concurrently, utilizing advisors that have the relevant experience to assess and determine ΔS gaps. This allows the resulting "risk intelligence" to be used in capital/economic modeling in the deal and also to aid in negotiating a realistically assessed purchase price (or in the case of extreme findings, whether to do the deal or not). The analysis also can be used to determine the size of potential "vulnerability windows" created by ΔS gaps. This analysis provides transition and integration teams with a roadmap to minimize the risk window through careful capital and resource planning. ΔS analysis also can be an important vehicle for deal risk communications to the CEO and Board-level leadership, essential factors in setting priorities and executing decisions aimed at deal success.

And, after all, buying at the right price and minimizing post-transaction deal risk are two very important success factors for all transactions.

For more information about Pilko & Associates', or if you have additional questions about ΔS, please contact us directly at +1.713.357.1000.