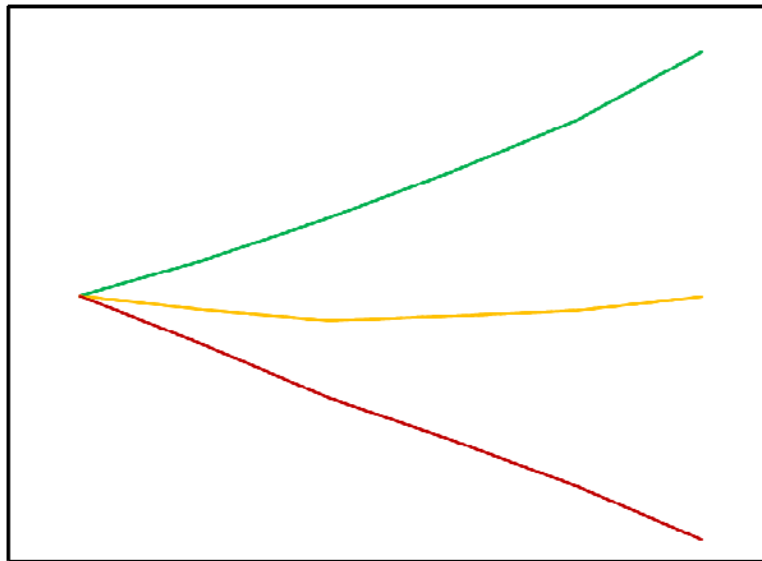


**ENVIRONMENTAL LIABILITIES:
ARE ESTIMATES DISCLOSED TO THE SEC RELIABLE?**

An Enight™ Study of Accounting Estimates for Environmental Liabilities of
24 Companies in the Petroleum and Chemical Industries

November 2009



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1 Executive Summary

This report describes the methodology and findings of a study of environmental liabilities of 24 companies in the petroleum and chemical industries as reported in annual reports filed with the Securities and Exchange Commission for the five-year period covering fiscal years 2004 – 2008. The study examined the reliability of accounting estimates, the relevance of estimated unquantified environmental liabilities to overall financial condition, and the financial incentives and disincentives for companies to improve the quality of disclosure.

The study found wide variation in reliability, relevance, and opportunity. Major findings include the following;

- Accounting estimates were almost universally unreliable where reliability is defined as the degree to which estimates fully reflect eventual cash payments to resolve liability.
- Estimates of unquantified liabilities showed significant variation, ranging from zero to over six times reported estimates.
- Estimated unquantified liabilities were relevant to the overall financial condition of nearly two-thirds of the study group where the threshold for relevance is defined as estimated unquantified liabilities equal to or greater than five percent of stockholders' equity.
- Expenditures were highly consistent and predictable and more akin to ongoing operations and maintenance expense than to random and episodic payments to settle claims.
- There is strong evidence of the influence of management discretion to generate accounting estimates that do not fully reflect available information according to a pre-determined formula.
- One-third of the companies were found to have a financial incentive to improve the reliability of accounting estimates.

Consistent or increasing expenditures, recurring large accruals that closely correlated with cash payments, and relatively stable reserve balances were common. Strong serial correlation of accruals coupled with a high accrual rate exhibited by a majority of the companies implies that accruals are attributable to reserve adjustments and not new liabilities, and that accounting estimates do not reflect all available information. It further implies the influence of management discretion to match expense with cash payments (cash basis method) rather than to match expense with incurrence of liability (accrual basis method).

Estimates of liabilities not quantified in accounting estimates showed significant variation, ranging from zero to over seven times reported estimates. Estimated liabilities were found to be relevant to the overall financial condition of 62.5 percent of the study group where the threshold for relevance is defined as estimated unquantified liabilities equal to or greater than five percent of stockholders' equity.

Cash expenditures were highly constant from year to year. This implies that expenditures are more akin to ongoing operations and maintenance (O&M) expense than to random and episodic payments to settle claims. It also implies that future expenditures can be reasonably forecasted based on historical cash flows.

An analysis of financial incentives and disincentives found that nine of the 24 companies had a neutral to positive financial opportunity to increase market value by establishing reliable accounting estimates and eliminating recurring accruals. The remaining companies had a financial disincentive to improve reliability.

In summary, the study found strong evidence of unreliable accounting estimates resulting primarily from the influence of management discretion to generate accounting estimates that do not reflect all available information. Estimated unquantified liabilities frequently are relevant to overall financial condition, which suggests that financial statement users would benefit from increased reliability. Finally, many companies have a financial incentive to improve the reliability of accounting estimates, although more have a financial disincentive to do so.