Article

How companies can get more value from their environmental liability reserve estimates

Every public company with environmental liabilities on its books knows the process: Each quarter, the accounting department asks the environmental department for a reserve estimate of its likely contingent environmental liability to meet financial disclosure requirements. The environmental group looks at the previous numbers and updates them if needed, satisfying company leadership, auditors, and the requirements of the U.S. Securities and Exchange Commission (SEC).

Many companies then use this SEC estimate as part of their environmental group's budget. While that approach meets the specific disclosure and accounting requirements, it misses opportunities to integrate reserve estimating into effective programs to manage the liabilities. Companies should use the process comprehensively to better understand risks and potential liabilities and to determine how to direct resources strategically.

Even private companies that don't have to meet disclosure requirements benefit from a more inclusive and structured estimating process. Any company with environmental liabilities can more effectively manage costs and priorities through models that give a more defined picture of those liabilities as well as possible alternatives for addressing them.

What does a more inclusive and structured

reserve estimating process look like?

Using scenario or event-tree cost models, project teams can develop full lifecycle cost estimates that meet the requirements for disclosure and also provide an understanding of the critical decisions involved in managing a liability to a desired outcome. These modeling approaches allow teams to evaluate multiple reasonable outcomes and incorporate those outcomes into the estimating process.

For example, perhaps a project team does not know if an agency will accept a particular remedy, or what the agency will require for the remedy to proceed. Using event trees, the team can consider multiple agency responses in its model. Once the model is constructed, the team can work with its accounting department to extract the appropriate number — such as the expected value or lowest known minimum cost for a particular remedy — for purposes of reserve estimating. They can then use the other aspects of the model for strategic planning.

As project teams develop scenarios to model, they should review a site's history and current status as well as the regulations that govern the remediation (e.g., a state voluntary cleanup program; the Resource Conservation and Recovery Act Corrective Action requirement; Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] requirements). Where possible, teams can develop unit costs for the components of each remediation scenario, starting with quotes, comparables, references, and finally, professional judgment (following the hierarchy laid out under ASTM and generally accepted accounting principles). They can then build out quantity information for those unit costs based on site-specific information.-

Unit costs and quantity information help develop cost estimates for each response scenario, using expected value and

probabilistic estimating approaches. Teams can then model costs, assigning probabilities of occurrence — using their professional judgment, and factoring in effectiveness, cost, and other variables — to the multiple response actions identified to remedy a liability for each component. This approach is preferable, second only to full quotes, in determining contingent environmental liabilities. The individual scenarios also serve as mini-feasibility-studies and cost-benefit analyses to support internal strategic remediation decisions.-

Why go beyond the basics when modeling reserve estimates?

Lower costs and wiser spending. Companies are always looking for ways to make the future less uncertain. A first, counterintuitive step is to embrace and fully communicate the range of uncertainty associated with contingent liabilities. Estimates of environmental liabilities can aid financial planning and direct spending toward the right priorities.

For example, the leadership team of one large company asked for Haley & Aldrich's help to quantify the liabilities associated with an environmental remedy at a large portfolio of sites. Our team's initial estimates predicted $70 million to remove contaminants — prohibitively expensive. So, we instead used the modeled costs to demonstrate the lifecycle costs of managing the contaminants in place rather than a removal cleanup and cut the estimate by $40 million.

After the company completed the remediation, five years later, the overall budget had remained within 5% of our initial

estimate. In summary, comprehensive modeling allowed the team to conduct a more thorough evaluation of total costs of different approaches and resulted in the development of a predictable remediation plan in line with the company's business and environmental goals.

Improved communication. Environmental managers can also rely on cost-estimate models to inform company leadership about costs, risks, and liabilities on the horizon, using estimates to round out discussions of how best to manage and allocate resources. Giving a range of estimates rather than a single number can set expectations for how and why costs can change over the course of a project. These models can also help communicate expectations for the return (reduction in future liability) on a company's spend. For example, discovery during investigation phases can be more variable, swinging estimates higher or lower depending on results. However, remediation construction tends to provide equal return for the spend by lowering the overall liability. Unfortunately, costs for long-term system operation and maintenance (landfills, pump-and-treat systems, etc.) may remain flat until the conclusion of the remediation period is definable.

With a more robust model, your environmental group can bring more predictability and clarity to your organization. Of course, your environmental and accounting groups should take part in any revision to the current reserve estimating process.

Contact either of us using the author links-below for more information on how we can support your reserve obligations while making the process more helpful to your environmental managers.