

Challenges and opportunities in managing remediation programs at multinational corporations

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Main Theme

- **It's a challenging time if you are managing the remediation program for a global company**
 - Demands from investors and suppliers
 - Focus on sustainability
 - Focus on transparency
 - New accounting regulations
 - New environmental issues
- **How are remediation managers coping?**
- **Are there some opportunities to lower costs and reserves too?**

Where Does ERM's Insight Come From?

- **Client assignments in portfolio management and individual projects**
- **Global Remediation Management sessions with clients**
- **Benchmarking activities with groups of clients**

Tightening of US requirements

- **Environmental reserves for historic soil and ground water contamination – FAS 5**
- **Sarbanes-Oxley Act – 2002**
 - Certifications
 - Audits
- **Asset Retirement Obligations – FIN 47**

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SPECIAL REPORT -- THE ENRON SCANDAL

Accounting Failures Aren't New--Just More Frequent

Investors have lost close to \$200 billion in the past half-dozen years in earnings restatements and stock meltdowns following audit failures. And the pace seems to be accelerating. Between 1997 and 2000, the number of restatements jumped 100%, from 116 instances to 233.

One driver behind the Sarbanes-Oxley Act



When are environmental matters material?

- **Many companies have remediation reserves in excess of \$300 million**
- **If material, the reserves have to either be estimated or discussed in Financial Statements**
- **No clear guidance from US regulators on how to determine what is material**

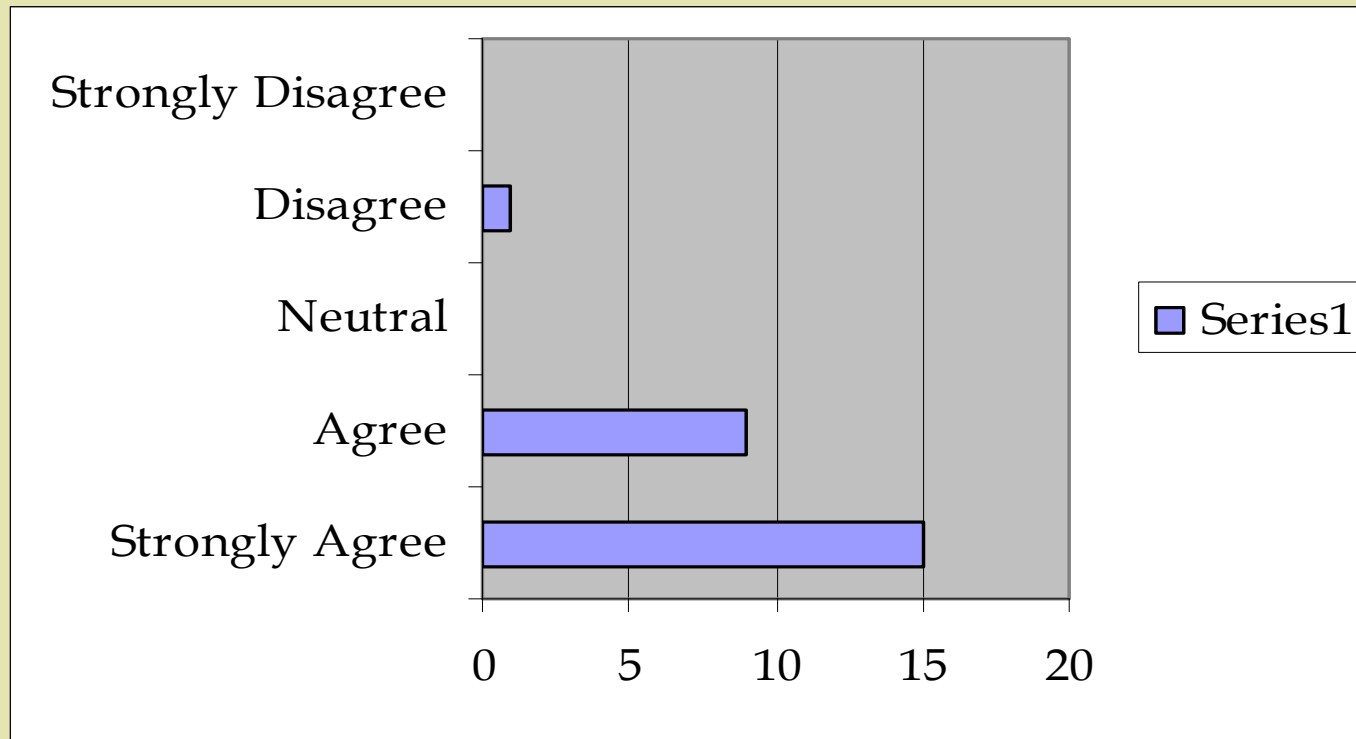
Benchmarking Survey of 25 Global Companies

- **Sections cover**
 - Corporate Philosophy and Strategy
 - Corporate Organization and Structure
 - Remediation Portfolio Management
 - Remediation Portfolio Statistics
 - Business Processes

Benchmarking Survey of 25 Global Companies

- **9 diversified manufacturing**
- **6 chemicals**
- **3 metals**
- **3 automotive**
- **3 pharmaceutical**
- **1 consumer**

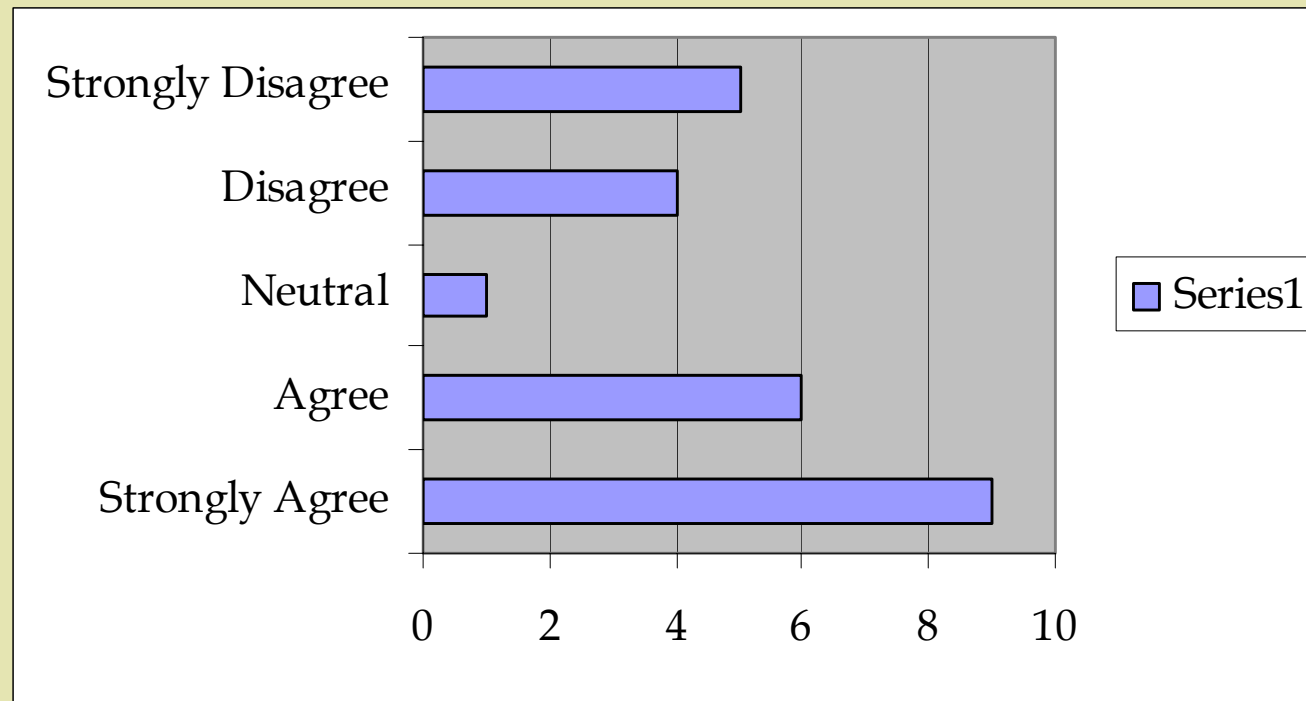
Remedial strategies are developed by a central organization



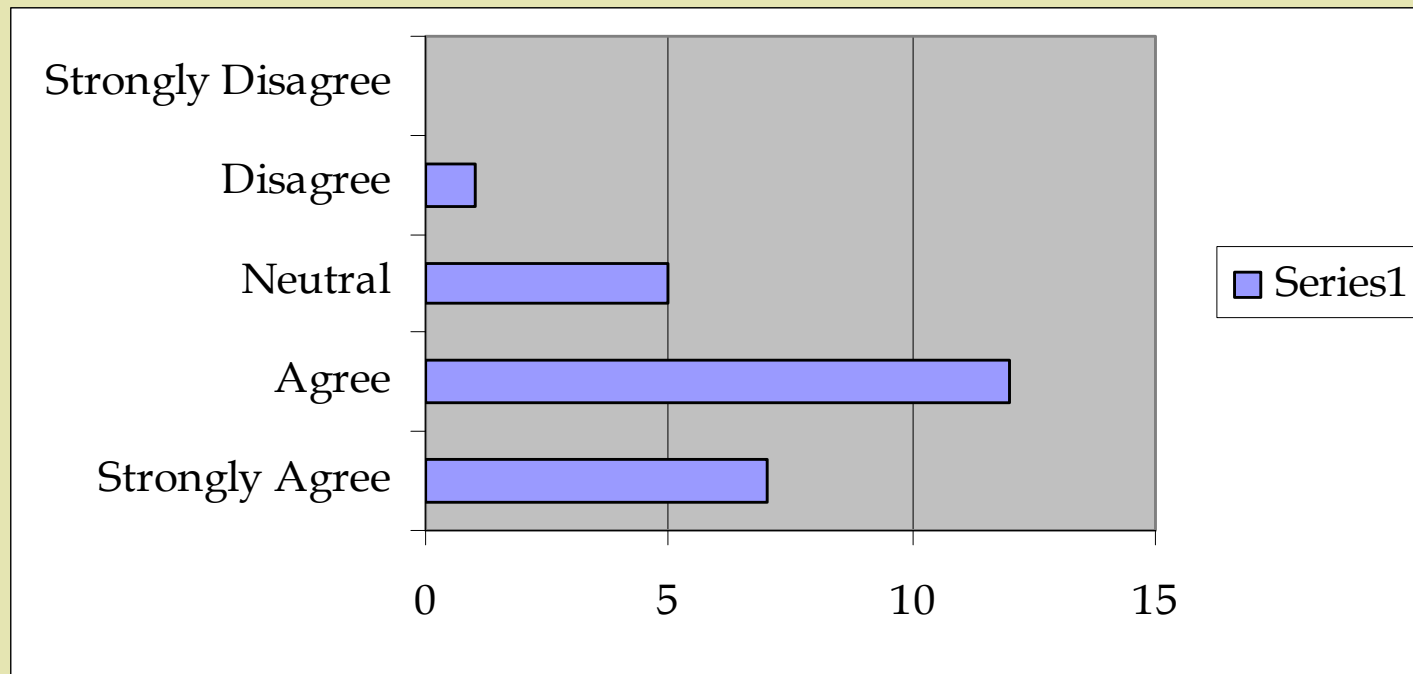
Remediation projects are managed by a central group

- **23 votes – Yes**
- **2 Votes – No**

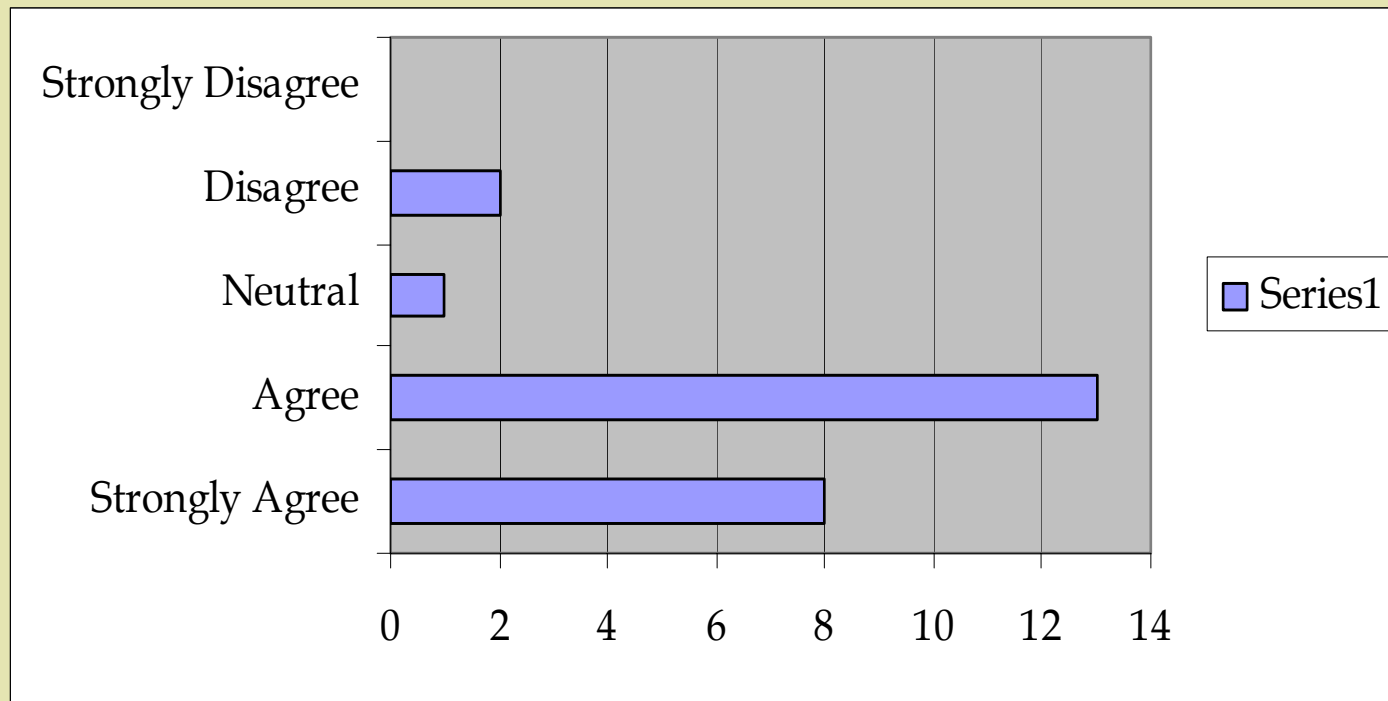
Reserves are controlled at the corporate management level



Corporate policy for establishing soil and groundwater remediation liabilities is consistent and well understood



Company has a specific protocol for inclusion of O&M estimates in reserves



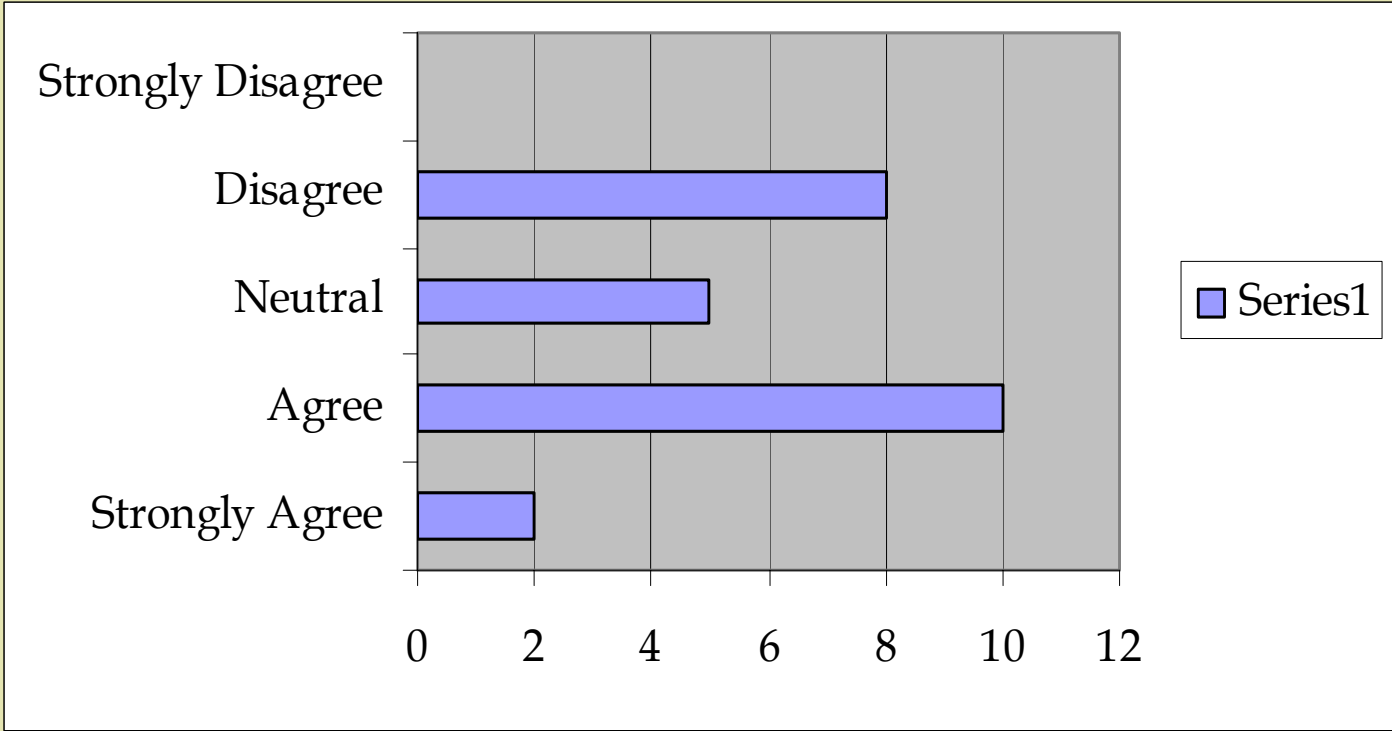
Do you have any formal methodologies for managing and tracking soil and ground water remediation liabilities?

- **19 votes – Yes**
- **6 Votes – No**

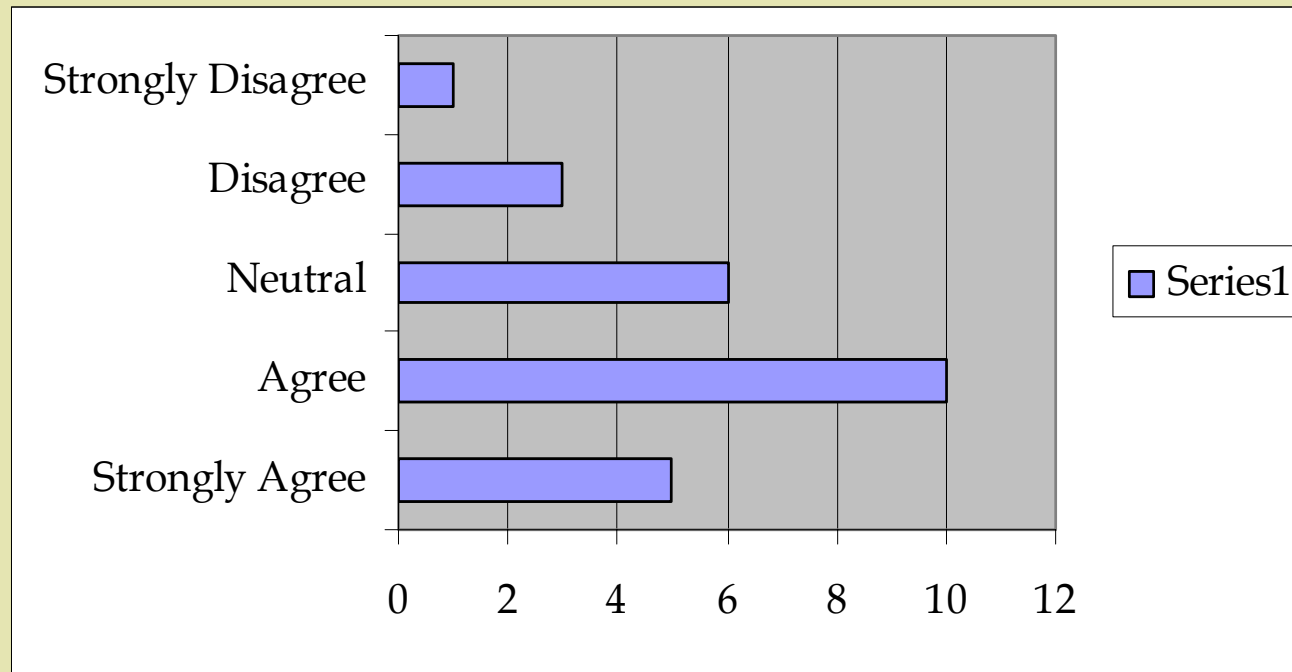
Remediation Management Systems - Typical elements

- **Developing portfolio objectives**
- **Site ranking/classification processes**
- **Portfolio tracking systems**
- **Establishing metrics**
- **Updating progress**

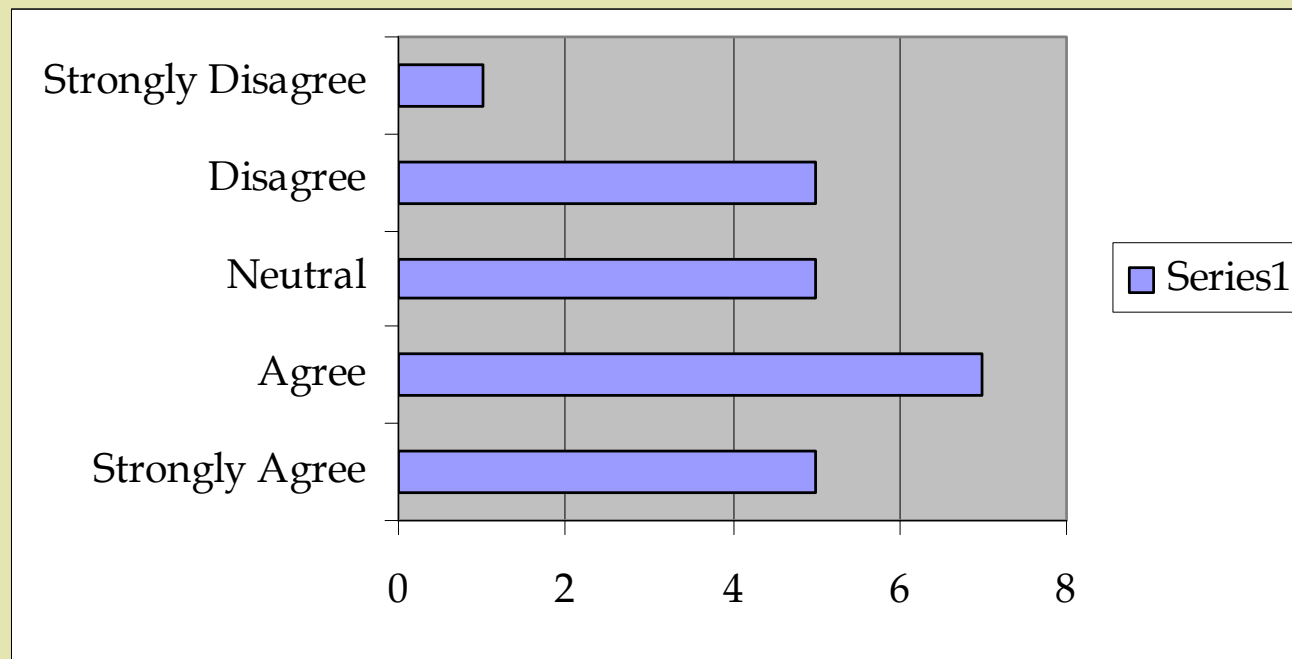
Does your company have a formal process for managing the interaction with external auditors?



Does your company have a program to maintain awareness of regulatory drivers at both domestic and international locations?



Does your company develop and maintain written strategic plans for all major remediation locations?



Primary concerns over reserving

- **Inconsistent advice from auditors**
- **How to deal with long-term treatment system O&M costs?**
- **Developing the right approach to handle Asset Retirement Obligations**

Emerging Liabilities

Emerging liabilities in the US

- **Changes in standards/remediation targets**
- **Newly identified chemicals of concern (e.g., 1,4-dioxane and perchlorates)**
- **Vapor intrusion**
- **Sediment remediation**



ENVIRONMENTAL WORKING GROUP

THE POWER OF INFORMATION



Thyroid Threat: Under Proposed Rocket Fuel Standards, Many Women Would Need Treatment To Protect Baby

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US emphasis on contaminated sediment sites

- **Contaminated Sediment Remediation Guidance (Dec, 2002)**
- **Risk reduction methods:**
 - Dredging
 - Capping
 - Monitored Natural Attenuation (MNA)
- **Recent USEPA decisions show a strong preference for removal**
- **Ecological risk assessments**
- **Natural Resource Damage claims**
 - So far 12 settlements have been over \$10 million

New laws and regulations in Europe

- **EU Liability Directive**
- **EU Water Framework Directive**
- **Significant changes in cleanup regulations in individual member countries, e.g., Italy and Spain**

Use of Innovative Technologies to Limit Liabilities

Benefits of innovative technologies

- **Pump and treat alone rarely will lead to Site closure**
- **Source treatment technologies are more likely to lead to closure**

Source treatment technologies for VOCs

- **Soil Vapor Extraction**
- **Groundwater Sparging**
- **Biostimulation**
- **In Situ Chemical Oxidation**
- **Thermal Treatment**

Creating Balance Sheet Value

Controlling reserves and creating balance sheet value

- **Historically, many companies have been very good at managing portfolios from a cash flow perspective**
- **Increasingly, they are looking to manage these portfolios differently, with a view to creating value, transferring, or releasing the liability**

One Company's portfolio management approach

Generate value
Closure (NFA)
Shed liability
Stick with it and manage it well
Least cost compliance
No added liability
Minimize risk



- **Generate value**
- **Release the liability**
- **Manage the liability**
- **Transfer the liability**

All sites in the portfolio were assigned to one of these categories

Management approaches to get more value

- **Special Purpose Companies**
- **Centralized Asset Management Groups with experience in:**
 - **Environmental Remediation**
 - **Brownfields Redevelopment**
 - **Real Estate**
 - **Facility Decommissioning**
 - **Operations Management**
 - **Project Management**
- **Transfer of assets and liabilities**

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