

Remedy Performance Reporting: Driving Remediation System Optimization and Site Progression

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Background/Objectives. Tracking and understanding remediation system performance and safe operation are critical to managing environmental liabilities. Large multinational companies and industrial conglomerates often have a diverse environmental liability portfolio consisting of various types of sites across diverse geographies, consultant cultures and practices, and regulatory programs.

This presents a challenge in centralized portfolio management and optimization. One solution to this challenge is the development of a systematic approach for routine collection and analysis of site and remediation system data.

Approach/Activities. Responsible parties managing these long-term liabilities have developed and deployed various standardized approaches that rapidly assess the performance of a remedy and identify necessary actions to optimize life cycle cost and drive the site to closure. This holistic approach includes not only performance optimization (e.g., by increasing the mass removed over time) but also safety barrier assessment, proactive risk identification and mitigation, optimization of life cycle cost, and steps to drive the site to closure.

Remedy performance programs typically include written technical practices, standardized field reporting formats, remediation system key performance indicator (KPI) reports, and routine site visits by senior leadership and technical staff.

Results/Lessons Learned. Both active and passive remediation remedies need to be evaluated and optimized to ensure regulatory conformance, effectiveness, safe operation, and efficiency. Key lessons learned include:

- Closure of a site may require more than one remedial method.
- Standardize performance tracking as much as possible, but allow flexibility in site-level implementation.
- Specialized software applications can be extremely valuable in identifying trends.
- Use independent “fresh eyes” reviews or peer assist reviews to share best practices, highlight innovation, and provide continuous learning opportunities.
- Strong project management is important to keep the overall project goals on track.
- Interpretation of remedy data by experienced professionals is vital to delivering implementable improvements.

Remedy performance monitoring offers significant opportunities for improving efficiency within remediation projects, increasing safety for workers and surrounding communities, reducing waste, and protecting the environment—particularly at sites undergoing long-term operation, maintenance, and monitoring activities.