

The Sustainable Remediation Forum White Paper

Integrating Sustainable Principles, Practices, and Metrics into Remediation Projects

The Sustainable Remediation Forum (SURF) White Paper communicates SURF members' thoughts on incorporating sustainability principles into environmental remediation. Large remediation projects can consume significant amounts of energy and emit large quantities of greenhouse gases. Site owners and local communities are increasingly knowledgeable about these sustainable remediation issues. In this paper, sustainable remediation is broadly defined as a remedy or a combination of remedies whose net benefit on human health and the environment is maximized through the judicious use of limited resources. The White Paper is divided into the following sections:

Description and Current Status of Sustainable Remediation:

This section identifies public entities affected by remediation projects and outlines guidance and programs available worldwide. While much debate exists around how to incorporate sustainability into remediation, SURF members agree that the considerate use of resources is an important topic and that remediation should only take place once the environmental benefit of the remediation technique has been evaluated.

The Sustainable Remediation Forum (SURF) promotes the use of sustainable practices during implementation of remedial action activities with the objective of contributing to the balance of economic viability, conservation of natural resources and biodiversity, and the enhancement of the quality of life in the surrounding community.

Sustainability Concepts and Practices in Remediation: A foundation of sustainable remediation tools has been established and is described in this section. While some regulators are already considering sustainability during the decision making process and are using the sustainability tools in sustainable remediation pilots, a consensus has not yet been reached on specific remedial approaches and tools. Reaching this consensus would ensure consistent decision making.

Impediments and Barriers: Barriers preventing the implementation of sustainable remediation include a lack regulatory guidance, insufficiently defined frameworks and metrics, and few financial or other incentives. Moreover, regulators do not require the incorporation of sustainability into remediation assessments.

A Vision for Sustainability: Sustainable remediation must be consistent throughout the remediation process – from initial investigation throughout site closure. Consistency can be achieved through a wide acceptance and application of industry guidance, metrics and tools. Effective communication between regulators, the industry, and the public also is essential. Sustainable remediation is an evolving concept that must be responsive to emerging – and changing – societal issues and markets (such as the carbon market).

Case Studies: The White Paper provides the most comprehensive collection of sustainable remediation examples available. The case studies illustrate how sustainability can play an important role through all stages of an environmental remediation project, both in the United States and in other countries.

Conclusions: Sustainability assessments matter during remediation. These assessments should be flexible, site-specific, and reflect stakeholder values. Even small improvements in efficiency can reduce environmental impacts. Uniform guidelines and metrics are required to produce consistent sustainability assessments. A large number of remedies already are available and are prime candidates for reducing the environmental impacts of remediation. Moreover, sustainability can be applied both to new projects and those already underway. Changing perceptions about contaminated sites will be a challenge; securing a commitment to change from a broad range of environmental stakeholders will be a necessity. The White Paper does not answer every question about sustainable remediation, but aims to identify many of the right questions.

The white paper will be published in a special edition of the June 2009 [Remediation Journal](#).

