

Green Remediation: Getting Started by Debunking Some Myths

**Prepared by the Greener Cleanups Task Force of the
ASTSWMO Sustainability Subcommittee
August 2009**

The following is a list of common misperceptions about green remediation, along with a rebuttal for each. While all of the “myths” listed below are valid concerns, they do not hold true in general and there are plenty of examples which prove them to be unfounded on a project-specific basis. More importantly, there is no need to wait until such concerns are addressed through standards, guidance, or changes in law. There is plenty that we can do now to implement the concept of a greener approach to remediation projects.

Myth #1 - Green remediation is an additional regulatory burden that agencies will have to impose on projects and responsible parties.

No legislation has been passed to date at the State and federal levels that mandate green remediation methods in site cleanups. While there may be statutory mandates in the future, green remediation is likely to evolve from primarily a voluntary approach. The U.S. Environmental Protection Agency (U.S. EPA) and many State agencies are encouraging the consideration of sustainability on cleanup projects, and some agencies may actively seek greener remedies. But on a voluntary basis, there is much that we can accomplish simply by providing information about green remediation and allowing innovative agency project managers, consultants, and remediating parties to determine where sustainable practices will benefit a specific project.

Myth #2 - Green remediation will divert resources from our primary responsibility of protecting human health and the environment from releases of petroleum and hazardous substances.

Achieving and maintaining “protectiveness” will continue to be the first priority for remediation, irrespective of whether a project takes a green approach. Moreover, a traditional focus on active contaminant treatment and disposal may only be successful on a site-specific basis. For example, moving contaminants from one media to another (e.g., soil to air) or moving contaminated media from one location to another (e.g., on-site to off-site) may address site-specific risk, but may not account for overall impacts to human health and the environment. Expanding our view to consider the “net environmental benefit” of a project allows us to assert that we are protecting the environment as a whole, which should always be an overarching goal of remediation.

Myth #3 - Cleanup is already green. There is no need to change our approach.

While conventional cleanups are protective of human health and environment, the technologies used are not always considered green. Heavy equipment and trucks used in cleanups that entail excavation, removal, and off-site disposal generate large quantities of air emissions and greenhouse gases. Capping and containment technologies limit land resources from being utilized for their highest and best use. Therefore, there is a need to be more efficient and effective on remediation projects. Additionally, of those case studies that have implemented what today we might call a greener approach, few have documented the trade-offs between different approaches or included an evaluation of the broader goal of “net environmental benefit.” In part, green remediation involves assessing and giving credit to projects that achieve a broader set of economic, social, and environmental accomplishments in addition to achieving protectiveness in the traditional sense (e.g., brownfields redevelopment).

Myth #4 - Green remediation will cost more.

Not necessarily. Some green remediation methods may cost more, others may result in efficiencies that actually reduce the costs of a project. Typically, green remediation does require some additional work upfront to evaluate different approaches and to look for efficiencies, but that work can ultimately result in a net savings or at the least can identify the time period over which different approaches will become more cost effective.

Myth #5 - The benefits or trade-offs of different green remediation approaches are too difficult to assess.

Some remedies may clearly be greener without the need for a detailed analysis, and there are simple approaches that can be used now to easily document success. For example, use of low-sulfur diesel to fuel heavy equipment clearly reduces impacts to air quality from remediation. While the use of life cycle analysis or standard metrics to quantify green remediation is very challenging, many groups, including the U.S. EPA and the Interstate Technology and Regulatory Council (ITRC), are working to develop the tools and standards for assessing green remediation.

Myth #6 - Responsible parties will use green remediation to argue for doing no remediation at all.

Green remediation does not relieve a project from satisfying regulatory agency requirements. Sustainability should only be considered part of the evaluation of an appropriate remedy. Agencies have been and will continue to ensure that less aggressive approaches such as capping in place or natural attenuation are applied appropriately and effectively; and there will always be the need for professional judgment in determining whether a specific project meets regulatory requirements.

Myth #7 - We don't have the authority to do green remediation.

Regulators can typically evaluate the sustainability and net environmental benefit of a remedy under existing regulations even absent a specific authority requiring that parties perform such an analysis. In practice, regulatory agencies, consultants, and responsible parties are presenting successful green remediation case studies under existing authorities. This is true because efficiencies that save resources and reduce costs are valuable within existing criteria. Additionally, pilot projects can accommodate innovative approaches without violating current authorities. Finally, emerging State climate, energy, and environmental assessment legislation may in the future update authorities to support implementing greener remedial actions.