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Brownfields

Trend Toward Green Remediation Is Changing Way Cleanup Professionals View Bottom Line

NEW ORLEANS—The growing trend in brownfields remediation toward “greener” cleanups and more sustainable end results is changing the way professionals in the field view the bottom line, according to speakers at the Brownfields 2009 conference.

At a Nov. 16 session on Integrating Green Technologies and Strategies into Site Remediation, panelists agreed that the long-term value of using green practices and achieving greater sustainability at brownfields sites is worth the initial investment, but they recognized that others still invested in the more conventional approach to brownfields may not share their view.

Paul Hadley, a member of the California Department of Toxic Substances Control’s Green Remediation Team, said the conventional dollars-and-cents view of the bottom line is not the only one to consider in brownfields remediation. There is a “triple bottom line,” he said, a balance among the economic, environmental, and social benefits and costs of a cleanup remedy.

“Brownfields seem to have achieved much of this balance already,” Hadley said at the conference, which was co-sponsored by the International City/County Management Association and the Environmental Protection Agency.

California Guidelines, ASTM Standards. Hadley said the California Department of Toxic Substances Control’s Green Remediation Team conducted an international symposium in February on green and sustainable remediation, and by the end of 2009, it will release “unofficial” guidance on the subject, which it calls its *Green Remediation Advisory*.

Green remediation generally focuses on enhancement after a remedy is selected, while sustainable remediation is a more “holistic” approach, integrating some of the same considerations throughout the cleanup pro-

cess, including the selection of the remedy itself and its impact on the environment.

Conventional remediation focuses on endpoints and does not factor in energy usage and greenhouse gas emissions, Hadley said. Although green or sustainable remediation focuses on the endpoint, too, it also examines impacts of factors beyond the site’s immediate boundaries, for example, the emissions from diesel engines used in the cleanup work.

A green or sustainable remediation plan would take into account energy consumption and its impact at the cleanup site. It also might look at the biodegradability or reuse potential of raw materials used in the cleanup process or on the ways building materials from demolished structures could be recycled or reused, Hadley said.

These same elements, among others, are included in EPA’s *Superfund Green Remediation Strategy*. It was released for comment in September, and EPA is now considering comments (172 DEN A-10, 9/9/09).

Likewise, an ASTM International committee is working on developing “a standard guide for green cleanup that evaluates and recognizes efforts to maximize the net environmental benefit of cleaning up contaminated sites.” ASTM International is a standard-setting body and was formerly known as the American Society for Testing and Materials.

The goal of the standard is to establish a uniform approach and to encourage property owners, responsible parties, developers, and communities to use green cleanup practices during planning and implementation, according to ASTM.

California Develops Matrix. One objection often raised about green or sustainable cleanups is the additional work and money required, Hadley said. But other factors, such as the environmental costs and benefits, can now be more accurately quantified and factored into “the triple bottom line,” he said.

Research and methods of calculating factors contributing to sustainability are growing more sophisticated, he said. The California Department of Toxic Substances

Control team has developed a matrix for tracking the sustainability of a remedy at a site, which will be included in its advisory.

The matrix includes three main categories: stressors, affected media, and mechanism/effect, each of which is quantified with a score.

Stressors might be substance releases such as airborne nitrous oxide; a thermal release such as warm water; physical disruptions such as traffic or noise; and resource depletions such as use of petroleum or destruction of trees, according to the matrix.

Others Skeptical About Cost Savings. Michael Goldstein, an attorney with Akerman and Senterfitt in Miami, said he “must sound a cautionary note” on the subject of green sustainable remediation.

Although many are looking on it as something positive, as evidenced by the many sessions devoted to sustainability issues at the conference, there are others who react “skeptically at best,” according to Goldstein.

Some clients will ask, “Isn’t all remediation green?” Others will balk at the additional financial cost, despite likely environmental and long-term economic gains, he said.

Goldstein said “thought leaders” and policymakers need to educate others and make them aware of the value gained by green sustainable remediation.

It will be an uphill battle to convince people that certain remedies can be “acceptable proxies” for some financial return on investment or that sustainable rem-

edies which are more costly up front may pay off over the long term in terms of property value or public environmental health, he said.

Sites Could Be Used for Energy Installations. “We like to be associated with green projects,” said Larry Starfield, acting administrator of EPA Region 6. He said the Obama administration is providing support for greener remediation practices and technology and there is a lot of interest in reusing brownfields sites for renewable energy installations.

“We want to find renewable energy uses for brownfields,” Sam Coleman, director of the EPA Region 6 superfund office, told BNA. Installing photovoltaic cells on the roof of a building is a natural use of that otherwise unused space, and it will enhance a building’s value in the long term, he said.

Old landfills, where land is typically capped and not reusable for many purposes, are good for solar installations or some other renewable energy uses, which can also enhance a property’s value, Coleman said.

Asked if EPA should designate a separate type of grant for projects that specify renewable energy as an end use, Coleman said, “The grant award process is already competitive, very competitive.” Therefore, applicants proposing the most sustainable end uses are likely to stand out and are more likely to receive grants, Coleman added.

BY JANICE VALVERDE