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Cutting contaminated soil clean-up costs with marine bioremediation products

Summary: Traditional best practices for contaminated soil clean-up can prove challenging for the maritime industry's onshore facilities with today's rising fuel and transportation costs. Bioremediation products can solve the problem while creating an ecologically-safe atmosphere for both the worker and the environment says bioremediation expert John Paparone of Environmental Solution, Inc.

(Wake Forest, NC) March 20, 2012 Shipowners and workers alike in various onshore maritime facilities like marinas and shipyards know that the usual tasks of building, repairing and performing maintenance on ships requires a lot of toxic oils, solvents, paints, and other lubricants, many of which, can contaminate soil in surrounding areas.

And while best practices call for damaged soil to be treated in keeping with environmental regulations, labor, transportation and rising fuel costs are a growing concern.

The traditional clean-up of contaminated soil can also include the use of heavy machinery and sometimes containment of highly-toxic materials and sites. Not only that, but soil contamination poses health risks through both contact and leaching.

"The key is to have minimal disruption to surrounding environments while maintaining economic feasibility," says Paparone "The easiest way to do this is by using bioremediation products, which are active, work-ready preparations with natural absorbents that include specially-blended hydrocarbon-digesting microbes."

Bioremediation is the process of using naturally occurring, safe and beneficial microorganisms to degrade environmentally harmful contaminants and turn them into non-toxic compounds. The microorganisms break down most petroleum hydrocarbons and transform them into carbon dioxide (CO2) and water. The process of bioremediation has been studied since the 1940s, and many of its uses are endorsed by the Environmental Protection Agency's Citizen's Guide.





However, not all bioremediation products are alike, says Paparone. The best indicators are the length of time the manufacturer has been in business, product test results, testimonials, as well as characteristics like pH-neutral products and products that are readily renewable.

Bioremediation can be accomplished in place (*in situ*), thereby eliminating the hazard of "off-site" contamination caused by digging, hauling and transporting of contaminants to other areas and there is virtually no investment in capital equipment. The process generally costs 60-70% less than other technologies and poses no health or safety risks to workers.

"Most of our liquid soil products can be applied in a variety of combinations, based on the product being treated, etc." says Paparone. "General instructions for liquid products are that one diluted gallon treats one cubic yard. Liquid products can be augmented or used in conjunction with dry product, and it is more productive to rake or till them into the soil prior to applying liquid product."

About Environmental Solution, Inc.

Environmental Solution, Inc. distributes alternative, EPA-approved "green" cleaning products for maritime, industrial, and food processing applications. Our proven product line, backed by our manufacturer's 20-year track record of success, provides superior cost-effective, neutral pH, aqueous, safe-to-use, non-corrosive, and non-toxic results. Products are in active, work-ready preparations and require little training, and virtually no capital expense. Our mission is to keep your people safe and your working environment as clean and green as possible while saving you time and money. Visit our website for more details and a complete online catalogue at <u>www.totalbiosolution.com</u>.

