



Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

July 25, 2002

Mr. Jay H. Murland, President
EnviroLogic Inc./SpillAway Brands
827 Glenside Avenue
Wyncote, Pennsylvania 19095

Re: **Remediact™**

Dear Mr. Murland:

The Bureau of Petroleum Storage Systems hereby accepts Remediact™, a two-part bioremediation product for the cleanup of petroleum-contaminated soil. The first part is a powder consisting of natural occurring, non-pathogenic microorganisms and an inert natural absorbent, which are tilled or mixed into the contaminated soil. The second part is an aqueous solution of nutrients, prepared by the mixing of nutrient packets into water, followed by application to the soil until it is thoroughly wet. The soil is then maintained at a 30 to 40% moisture level, and re-tilled in 3 to 4 weeks.

This acceptance applies to the use of Remediact™ for the cleanup of petroleum pursuant to Chapter 62-770, Florida Administrative Code (F.A.C.), which is the jurisdiction of this bureau. Other bureaus within the Department of Environmental Protection and other state agencies may choose to recognize this acceptance if their needs and regulations are similar. However, the Bureau of Petroleum Storage Systems is not responsible for applications beyond its jurisdiction.

The types of applications covered by this acceptance are the ex situ, topical and land farming uses of Remediact™. It also applies to in situ remediation of soil, but only to the extent that leachate from the Remediact™ nutrients will not affect the underlying groundwater. Enclosure 1 contains additional information about Remediact™, along with some advice that the bureau would like to pass along to readers of this letter.

Users of Remediact™ should place a copy of this letter in the appendix of their site-specific Remedial Action Plans proposing its use, so that technical reviewers throughout the state will be informed that the bureau has evaluated the acceptability of the product from a regulatory standpoint.

While the bureau does not endorse specific or brand name remediation products or processes, it does recognize the need to determine their acceptability from an environmental standpoint with respect to applicable rules and regulations, and the interests of public health, safety and welfare. Vendors must then market the products and processes on their own merits regarding performance, cost and safety in comparison to competing alternatives in the marketplace. In no way, however, shall this regulatory acceptance letter be construed as certification of product performance. Additionally, the

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Department emphasizes a distinction between its regulatory "acceptance" and an approval. Products and processes are accepted but they are not approved.

The bureau reserves the right to revoke its acceptance of a product or process if any aspect of its nature, components, constituents, or performance has been falsely represented. Additionally, bureau acceptance of any product or process does not imply it has been deemed applicable for all cleanup situations, or that it is preferred over other treatment or cleanup techniques in any particular case. A site-specific evaluation of applicability and cost-effectiveness must be considered for any product or process, whether conventional or innovative, and adequate site-specific design details must be provided in Remedial Action Plans prescribing the product or process. You may contact me at 850/487-3299 if there are any questions.

Sincerely,

Rick Ruscito, P.E.
Bureau of Petroleum Storage Systems

c: Tom Conrardy - FDEP/Tallahassee

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ENCLOSURE 1

ADDITIONAL REGULATORY AND TECHNICAL INFORMATION ABOUT REMEDIACT™

1. Applicable regulations: The regulations that apply to the use of Remediact™ for the cleanup of petroleum-contaminated soil include but are not necessarily limited to those that follow. Section 62-770.300, F.A.C., contains rules pertaining to the land farming of soil when it is performed during the Source Removal phase of cleanup at a petroleum-contaminated site. Section 62-770.700, F.A.C., contains rules pertaining to the Remedial Action phase of cleanup at a petroleum-contaminated site, and the Bureau of Petroleum Storage Systems' Remedial Action Plan Checklist at web page www.dep.state.fl.us/waste/categories/pcp/pages/active.htm contains a reminder list of items that should be considered during the preparation of a land farming Remedial Action Plan. Chapter 62-777, F.A.C., contains soil cleanup target levels for various contaminants. And Chapter 62-713, F.A.C., applies to stationary and mobile soil treatment facilities. These chapters are presently available at web page www.dep.state.fl.us, under the heading "Categories", and listed as "Rules".
2. Material Safety Data Sheet (MSDS): As with any product, the user should carefully read the Material Safety Data Sheet, and not rely solely on the few items of information that the Bureau of Petroleum Storage Systems has chosen to pass along in this letter. Remediact™ is a gray powder consisting of natural occurring, non-pathogenic microorganisms and an inert absorbent. When mixed with water, the resulting pH is in the 7.0 to 7.1 range. As a precaution, it should not be exposed to strong oxidizers and strong acids.
3. Dosage and application: The dosage and application of Remediact™ is site-specific but the manufacturer provides general instructions that it believes will cover most situations. Two (2) pounds of the powder-form Remediact™ microorganisms and absorbent mixture are applied to each cubic yard of contaminated soil, and then tilled. Four (4) packets of nutrients are then mixed into approximately 150 gallons of water and then applied to the soil until it is thoroughly wetted. The moisture level of the soil is then maintained at 30% to 40%, and it is re-tilled in 3 to 4 weeks. The Bureau of Petroleum Storage Systems notes that the Remediact™ available in 35-pound pails contains 30 pounds of the microorganisms and adsorbent, and 5 pounds of nutrients. This is equivalent to a 6:1 weight ratio of microorganisms and absorbent to nutrients.
4. Operating conditions: In addition to maintenance of a 30% to 40% moisture level in the soil, the manufacturer indicates that optimum performance is obtained when the product is used at temperatures in the range of 50 to 90 degrees Fahrenheit.
5. Underlying groundwater and nearby surface waters: In most cases, the proper use of Remediact™ for ex situ, topical or land farming remediation of petroleum-contaminated soil should not pose a threat to the underlying groundwater or nearby surface waters, so there should not be a need to monitor them for adverse effects.

If, however, there are situations in which the nutrient components of Remediact™ will be used close to a shallow water table, or site

conditions are such that the nutrients could easily leach into the underlying groundwater or nearby surface water, then appropriate consideration should be given.

One way to act prudently in these situations could be to monitor the underlying groundwater and/or nearby surface water before, during, and after the use of Remediact™ for the chemical species present in its nutrients, to make sure that no adverse effects are taking place. At the least, based on information provided by the manufacturer in its brochure, the Bureau of Petroleum Storage Systems believes that the underlying groundwater and/or nearby surface water should be monitored for ammonia nitrogen in these situations. However, those who prepare Remedial Action Plans for sites where groundwater and/or surface water monitoring is deemed necessary will have to contact the manufacturer to obtain more information about the type and amounts of nutrients in Remediact™. The information should be included in the Remedial Action Plan, along with the proposed locations, frequency and analyses for groundwater and/or surface water monitoring samples.