



Department of Environmental Protection

Jim Burdick
Governor

Tom Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2100

David B. Stone
Secretary

May 6, 1999

Mr. Mark Ryckman
Remtech Engineers
200 North Cobb Parkway, Suite 208
Marietta, Georgia 30068

Re: HC-2000

Dear Mr. Ryckman:

The Bureau of Petroleum Storage Systems hereby accepts HC-2000 as a product for both in situ and exsitu bioremediation of soil and groundwater at petroleum and other suitable hazardous waste contaminated sites in Florida. As indicated in Remtech's submittal of information, the product is a non-toxic, non-allergenic, biodegradable mixture of proteins, enzymes, micronutrients, and emulsifiers. It does not contain bacteria or other microorganisms but rather stimulates the activity of the indigenous contaminant-degrading microorganisms already present at a remediation site. Enclosure 1 is a proprietary chemical analysis voucher for the product.

For vadose remediation where the underlying groundwater will not be affected by leaching of this product, there are no special concerns beyond those which would normally need to be addressed in preparing a Remedial Action Plan and conducting a cleanup in accordance with the petroleum cleanup requirements of Chapter 62-770, Florida Administrative Code (F.A.C.). For ex situ groundwater treatment, where an aboveground treatment system produces effluent meeting the petroleum cleanup criteria of Chapter 62-770, F.A.C., and the drinking water standards of Chapter 62-550, F.A.C., for disposal via recharge gallery or NPDES permit, there are no special concerns. But for in situ groundwater remediation, via injection of products into an aquifer, there are underground injection control (UIC) regulations that must be observed. Since in situ aquifer remediation via injection is likely to be the most common application of this product, the bulk of the regulatory requirements discussed herein will be directed to that topic.

The bureau recognizes HC-2000 as a viable product for the bioremediation of petroleum contaminated sites in Florida. There are no objections to its use provided: (a) the considerations of this letter are taken into account; (b) a Remedial Action Plan is approved by the Department; and (c) applicable and appropriate underground injection control regulations are observed when the product is used for in situ remediation.

While the Department of Environmental Protection does not provide endorsement of 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. Vendor's must then market the products and processes on their own merits regarding performance, cost, and safety in comparison to competing alternatives in the marketplace. For HC-2000, the major environmental and regulatory considerations are set forth in enclosure 2.

Preparers of Remedial Action Plans are advised to include a copy of this letter in the appendix of plans they submit, and call attention to it in the text of their document. In this way, technical reviewers throughout the state will be informed that you have contacted the Department of Environmental Protection in regard to HC-2000. To aid those reviewers, the Bureau of Petroleum Storage Systems provides supplemental information as enclosure 3.

The Department reserves the right to revoke its acceptance of any product or process if the nature or composition of either or any of its principal and proprietary ingredients, or its performance has been falsely represented. Additionally, Department 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: W. Evans - FDEP/Tallahassee
T. Conrardy - FDEP/Tallahassee