



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

May 18, 2007

David W. Casey
Universal Remediation Incorporated
1405 Parkway Drive
Pittsburgh, Pennsylvania 15205

Re: **Petroleum Remediation Product (PRP)™ / Oil Buster™**

Dear Mr. Casey:

The Bureau of Petroleum Storage Systems hereby accepts Petroleum Remediation Product (PRP)™ / Oil Buster™ for the remediation of petroleum and other suitable hydrocarbons in soil and water. As Universal Remediation Incorporated has indicated, PRP™ is a biodegradable, fine yellow powder made from filtered, natural beeswax. It is at the same time both oleophilic and hydrophobic, and works by immediately absorbing up to twice its own weight in petroleum and other hydrocarbon contaminants, and then serves as a source of nutrients for indigenous microorganisms that biodegrade the contaminants. PRP™ itself does not contain microorganisms, and the amount of contaminant that it can degrade is not limited to just that which is initially absorbed.

PRP™ can be used in different ways. It can be applied as a loose powder for the absorption and degradation of hydrocarbons on the ground or in water, or it can be loaded into a cloth sock casing. An in-the-well sock version is known as Well Boom®, and it also contains some sand, as a weight, in order to float at 50% submergence. A surface water sock version is known as Bio-Boom®, and it floats on the surface of water (a water-filled excavation pit for example) from which a petroleum sheen or a free product layer of 1 inch or less must be removed. An advantage of the sock-type applicator over conventional absorbent materials is that its PRP™ content is completely consumed in 20 to 40 days (at temperatures ranging from 30 to 90 degrees Fahrenheit) leaving just an empty cloth sock containing no residual petroleum. For this reason, empty socks can be disposed as ordinary trash. In addition to the Well Boom® and Bio-Boom® sock-type casings, there is also a Bio Pad casing available. The main point of this acceptance, however, is not the casings into which PRP™ is loaded, but rather the PRP™ formulation itself with respect to Florida's soil and groundwater quality regulations.

This acceptance applies only to the regulatory jurisdiction and the remediation needs of the Bureau of Petroleum Storage Systems, which is the cleanup of petroleum contamination pursuant to Chapter 62-770, Florida Administrative Code (F.A.C.). Other state agencies and local governments may choose to recognize this acceptance if their needs and regulations are similar, but this Bureau is not responsible for applications beyond its own jurisdiction. Other applications that may be of interest to potential users and regulators include but are not limited to

the cleanup of petroleum on open waterways, retention ponds, floors, boat bilges and other places where there is a need to remove unwanted hydrocarbon contaminants.

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 and safety. 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 Department certification of performance. Additionally, the Department emphasizes a distinction between its regulatory "acceptance" letters and an approval. Products and processes are accepted but they are not approved.

Also, it is not a requirement that a particular remediation product or process have an official acceptance letter in order for it to be proposed in a site-specific Remedial Action Plan. The plan, however, must contain sufficient information about the product or process to show that it meets all applicable and appropriate rules and regulations.

Those who prepare Remedial Action Plans are advised to include a copy of this letter in the appendix, and call attention to it in the text of their document. In this way, technical reviewers will be informed that you have contacted the Department of Environmental Protection to inquire about the environmental acceptability of PRP™.

As for regulatory advice from the Bureau of Petroleum Storage Systems to users of PRP™, there does not appear to be a need for a great deal of it since the product is relatively benign from a toxicological standpoint and not difficult to use. There are no "ingredients of concern" in PRP™ that require groundwater monitoring when it is used. For that reason, all applications, such as the tilling of the loose powder form into the subsurface, sprinkling of it onto the surface of the exposed groundwater in an excavation pit, the placement of socks into monitoring wells, and even the underground injection of it (should that ever be considered) do not require groundwater monitoring of PRP™'s beeswax.

There is one point, however, that the Bureau suggests be kept in mind when a WellBoom® sock is inserted into a groundwater monitoring well. The WellBoom® sock, unlike other types of in-the-well remediation socks, does not project treatment in an outward radial direction (because PRP™ is insoluble) but rather works by drawing petroleum contamination inward, by absorption, for treatment. For that reason, it should be possible to insert a WellBoom® into a groundwater monitoring well, for the purpose of treating dissolved petroleum contaminants, and still be able to obtain a representative groundwater sample from that well, provided the sock is removed and the well adequately purged prior to taking the sample.

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The Department reserves the right to revoke its acceptance of a product or process if it 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 a Remedial Action Plan submitted pursuant to Section 62-770.700, F.A.C., for Department approval. This does not apply, however, to situations in which PRP™ is used for Interim Source Removal pursuant to Section 62-770.300, F.A.C., since rule 62-770.300(1)(b), F.A.C., allows initial recovery of free product by absorbents to be conducted without requesting approval from the Department. You may contact me at (850) 877-1133, extension 3722, if there are any questions.

Sincerely,

Rick Ruscito

Rick Ruscito, P.E.

Ecology and Environment, Inc.

Bureau of Petroleum Storage Systems

Petroleum Cleanup Section 6

Rebecca S. Lockenbach

Rebecca S. Lockenbach

FDEP Section Leader

Bureau of Petroleum Storage Systems

Petroleum Cleanup Section 6

c: Tom Conrardy - FDEP/Tallahassee

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