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

September 4, 2008

Craig McGree
EVOILUTION, LLC
2618 Sugarloaf Lane
Fort Lauderdale, Florida 33312

Re: Bio-Matrix/Spill Sorb

Dear Mr. McGree:

The Bureau of Petroleum Storage Systems hereby reaffirms its original July 17, 2001 acceptance of Bio-Matrix/Spill Sorb (Bio-Matrix) as an absorbent and filtration medium for free product recovery, and as a land farming amendment for the remediation of contaminants adsorbed to soil. Bio-Matrix is the North American label for the product and Spill Sorb is the Canadian and International label. This reaffirmation serves to update the name and address of the Florida distributor for Bio-Matrix.

As indicated in the product literature, Bio-Matrix is processed from sphagnum peat moss. The inherent capillary action of the activated peat encapsulates the contaminants to be remediated. The product is mined in Canada and manufactured in Entwistle, Parkland County, Alberta. Enclosure 1 contains supplemental information about Bio-Matrix absorbent.

The Bureau of Petroleum Storage Systems recommends that a copy of this letter should be provided in the appendix of site-specific Remedial Action Plans proposing the use of Bio-Matrix 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 and safety. Vendors, however, must 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 acceptance be construed as certification of product performance.

The Bureau reserves the right to revoke its acceptance of a product or process if it has been falsely represented. Additionally, acceptance of a 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. Please contact Rick Ruscito at (850) 877-1133, extension 3722, or at the letterhead address, MS 4590, 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
FDEP Section Leader
Bureau of Petroleum Storage Systems
Petroleum Cleanup Section 6

Enclosure: (1) Supplemental Information

c: T. Conrardy, P.E. – FDEP, Tallahassee

History:

ppl #148
INN_065
7/17/01

ppl#360
INN_065a
9/4/08

SUPPLEMENTAL INFORMATION

1. Absorbent: Bio-Matrix is manufactured from sphagnum peat moss that is heat treated and air dried to reduce moisture content to less than 10%. The Material Safety Data Sheet indicates that Bio-Matrix contains approximately 90% sphagnum peat moss and 10% water. It has a time-weighted exposure limit of 10 mg/m^3 and the use of an approved respirator is recommended as a protective measure due to high dust concentrations. Bio-Matrix is available in standardized and customized booms, socks, cushions, pads, spill kits, customized filtration units, and bioremediation treatment packages.

2. Land farming: Bio-Matrix may be applied to soil as a land farming amendment. Approximately one-third of a cubic yard of Bio-Matrix is required for each square yard of contaminated media. The process requires frequent tilling of the soil to expose it to oxygen in the atmosphere and heat from the sun. Rules pertaining to the land farming of contaminated soil as an Interim Source Removal can be found in 62-770.300(3)(b), Florida Administrative Code (F.A.C.).

3. Vapor suppression: Due to the high vapor suppression capacity of the peat moss, Bio-Matrix is able to reduce combustible vapors and the risk of explosion. In the case of gasoline, a 90% vapor suppression is reported.

4. Absorption rating: Absorption ratings will vary depending upon the uniformity, composition, and specific gravity of the liquids to be absorbed. Twenty by twenty-inch quilted mats have a three-gallon absorbency rating. Thirteen-foot long by 7.5 inch wide booms have a 37.5-gallon absorbency rating.

5. Design: For Remedial Action Plans that serve as the design document for systems that will cleanup contaminated sites, the design considerations for the Bio-Matrix as a filter will be similar to those of conventional filters, including the sizing of motors, pressure drops, and flow rates.

6. Total organic carbon (TOC): Naturally occurring total organic carbon must be taken into account when designing a treatment system utilizing Bio-Matrix. A background sample for TOC should be collected and analyzed from the effluent (pre-treatment) or from a monitor well outside the groundwater contaminant plume at the site. In this way, the additional burden placed on the system by naturally occurring TOC can be taken into effect. Like any other petroleum remediation system constructed pursuant to Chapter 62-770, F.A.C., the effluent must meet the cleanup criteria for the petroleum contaminants of concern and/or the criteria for the selected method of effluent disposal, whichever is more stringent.

7. Disposal of spent media: The manufacturer indicates that the spent media will burn to a residue of less than 2% of its original volume and that it may be land filled or land farmed into a useable compost. Additionally, it is reported that spent (used oil) media does not leach or discharge used pollutant and has passed the Toxicity Characteristics Leaching Procedures (TCLP) test. It was reported that the New Jersey DEP allows the absorbent to be classified

as non-hazardous waste (ID27) for motor vehicle accident fluids absorbed when it is applied at a ratio of 1:1 by weight. However, the manufacturer provided a word of caution that the generator of the waste is responsible for determining whether the absorbed spill meets the definition of hazardous waste and must manage the waste in accordance with the regulations of state and local authorities. In addition to the reminders of the manufacturer, the Bureau of Petroleum Storage Systems provides a reminder that the onus shall be on the user regarding proper disposal of spent absorbent when used at remediation sites in Florida.

8. Safety: The safety considerations associated with the Bio-Matrix filter utilized for the remediation of a contaminated site shall be similar to those of a conventional filter. The National Electrical Code should be observed to ensure that electrical components are appropriately rated when used in hazardous Class I, Group D, Division 1, or Class I, Group D, Division 2 areas to prevent fires. Appropriate instrument shutdown features and/or pressure relief valves to prevent over-pressurization should be included, as applicable, to maintain a safe working environment. The material should be kept away from sources of combustion due to its auto ignition temperature of 500° F and its ability to wick petroleum based products.