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FROM: Drew Kaczmarek, Assistant Director EH&S

SUBJECT: Use of Micro-Blaze For Organic Chemical Spills/Residues [at NMSU]

Micro-Blaze contains environmentally friendly, non-toxic bacteria that can break down organic compounds and render them non-toxic (by-products are water and carbon dioxide). The Environmental Protection Agency (EPA) and New Mexico Environmental Department (NMED) have approved Micro-Blaze for use as a bioremediation agent. Common examples of organic materials that are broken down by Micro-Blaze are gasoline, oil, antifreeze, acetone, and benzene. It is simple to use and has proven to be very effective for small, well dispersed spills. Micro-Blaze also is effective in controlling toxic vapors and fire hazards from spilled organics. For most standard automotive fluid spills Micro-Blaze application is all that is necessary.

Micro-Blaze is available locally from Artesia Fire & Equipment Inc. [<http://www.artesiafire.com>] phone:800-748-2076 or 575-746-2426 (revised 2014).

Procedures for use

1. Prepare a 10% solution of Micro-Blaze in water. The solution should last indefinitely since the microbes are highly resilient to inactivity and temperature changes.

2. Shake: To use, shake vigorously and then apply generously to an organic material spill/residue. A general rule of thumb is to determine the amount of contamination by volume and then apply an equal amount of the 10% Micro-Blaze solution. Thus if one liter of oil is spilled, one liter of 10% Micro-Blaze should be applied.

3. Aerate: Ensure the Micro-Blaze is effectively mixed with the organic material. If possible, stir or agitate the Micro-Blaze/organic mixture for a few minutes. For the microbes to work effectively they need oxygen, and thus must be properly aerated. This means that the microbes will quickly degrade only thin layers of organics. One could not spray the microbes in a partially filled bucket and expect them to degrade all the materials in the bucket. One could however, spray the microbes in a bucket that has been emptied for the most part, and expect them to work effectively.

4. Wet: The microbes need water to work effectively. Thus if a small organic spill occurs on the ground, it is best to generously spray the spill with 10% Micro-Blaze and then when the ground dries, re-apply regular water. The microbes will be re-activated and go back to work. Drying the microbes out does not kill them.

When Micro-Blaze is correctly used, none of the spilled materials or contaminated items needs to be disposed of as hazardous waste. Thus, NMSU can save thousands of dollars annually in reduced hazardous waste disposal costs.

Remember Micro-Blaze needs oxygen and water to work properly. It also requires more time/mixing with thicker organic materials like oils than more fluid materials like acetone. It is also not a miracle worker, i.e. do not use it on large, pooled spills. If you do not feel that Micro-Blaze can be effectively used, collect all contaminated materials and treat them as hazardous waste.