



25 Breakthroughs in Georgia



NO. 6:

A way to restore polluted ground

The threat of bombs, mines and other explosives extends long after they detonate. That's because munitions, both exploded and unexploded, leave behind a toxic residue that pollutes soil and groundwater. Dealing with this contamination is costly, dangerous and time consuming.

But a University of Georgia scientist found a novel way to restore these damaged ecosystems: a neutralizing chemical mixture called MuniRem®. The reagent can be applied directly to explosive residues in soil, water, equipment and buildings, as well as to bulk explosives themselves.

Invented by Valentine Nzungu, a UGA geology professor, MuniRem is the first substance to instantly neutralize explosives, bomb fillers and chemical warfare materiel. It can be scattered as a powder, sprayed as a liquid or even injected into groundwater.

The MuniRem reagent is marketed by Georgia-based MuniRem Environmental, and it's not an off-the-shelf product. The company's technicians visit each contaminated site to take samples and identify pollutants, then create a custom formulation.

Since its inception in 2000, MuniRem Environmental (formerly known as Planteco) has worked extensively with the U.S. Department of Defense, Department of Agriculture and many other public and private sector clients. Contamination from spent munitions poses major risks at military training grounds, weapons manufacturing plants and storage facilities.

As a cost-effective way to reclaim valuable land and structures, MuniRem can help protect natural resources around the world for years to come.

"25 Breakthroughs in Georgia" celebrates 25 years of the Georgia Research Alliance. GRA expands research and commercialization capacity in Georgia's universities to launch new companies, create high-value jobs and transform lives. More: GRA.org