



## MAKE MERCURY Non-HAZARDOUS

### MBS® ... A PERMANENT & COST EFFECTIVE SOLUTION TO MERCURY CONTAMINATION

Mercury and mercuric compounds are extremely toxic and difficult to stabilize. As the only metal with low vapor pressure, compounds of mercury are readily absorbed in the respiratory track, which can result in permanent damage to health, most particularly brain damage. To combat this, the U.S. Environmental Protection Agency (EPA) promulgated stringent regulations regarding total and leachable concentrations of hazardous metals in August 1998. The new Universal Treatment Standards (UTS) criteria reduced the leachable mercury limit to 0.025 mg/l (from 0.2 mg/l under prior RCRA legislation).

Current legislation requires that total mercury concentrations in excess of 260 ppm be retorted, an expensive and time-consuming operation. Costs for shipping, retortion and landfill disposal of mercury contaminated soil usually exceed \$300 per ton, and can exceed \$500 per ton. The EPA's new UTS leaching criteria both augments and exacerbates the problem of mercury totals.

Solucorp Industries' patented Molecular Bonding System (MBS®) has been proven to cost effectively and permanently immobilize mercury contamination by preventing the leaching of elemental mercury and mercuric compounds in soils and industrial wastes which were previously resistant to treatment. MBS achieves this stabilization without changing the treated material's physical characteristics, and without creating the solid block encapsulation of contaminants of traditional cement-based processes.

The table below demonstrates the ability of MBS to stabilize hazardous mercury and mercuric compounds. Soil materials treated range from silty, sandy soils to caliche to various clays.

**MBS TREATMENT RESULTS ON HAZARDOUS MERCURY**  
( < Indicates results below the specific testing laboratory's detection limits. )

Contaminated Matrix	Mercury Concentration (ppm)	Untreated Mercury TCLP (mg/l)	MBS Treated Mercury TCLP (mg/l)	U.S. EPA's UTS TCLP Limit (mg/l)
Clay	13,490	29.6	< 0.04 *	0.025
Caliche	24,180	2.54	< 0.04 *	0.025
Clay/Caliche	20,330	3.74	< 0.04 *	0.025
Silty/Sands		1.85	< 0.02	0.025
Silty/Sands		1.85	0.0051	0.025
Silty/Sands		11.0	< 0.005	0.025

(\* Achieved under prior RCRA legislation when criterion / limit was 0.2 mg/l)