

### 2.1.4 Stabilization

Stabilization is a process of employing additives (reagents) to reduce the hazardous nature of wastes by minimizing the rate of contaminant migration into the environment (reducing leachability), or by reducing the level of toxicity ( $\text{Cr}^{+6}$  ?  $\text{Cr}^{+3}$ ). These processes render the material nonhazardous and typically enable on-site disposal or off-site disposal as nonhazardous waste. Either alternative offers a significant cost savings over disposing the material as hazardous waste.



**Hexavalent chrome stabilization  
Hagerstown, IN**

The application of the MITU technology is rapidly growing within the stabilization sector of the remediation industry. Both providers and end users, of stabilization technologies and chemistries, are realizing that a thorough homogeneous mix is required throughout the soil column to ensure “one-pass” treatment operations. The MITU’s effective breakdown of soil particle size assures uniform distribution of chemical reagents from top to bottom of the contaminated zone.

The addition of chemical reagents for stabilization is becoming more and more popular. CBA has utilized various chemical reagents and mixtures for the stabilization of different heavy metals, including; Chromium, Cadmium, and Lead. CBA’s mixing process eliminates the “powdered doughnut” effect created by conventional soil mixing techniques, and it increases the contact of chemical reagents with the targeted constituents of concern. On strict chemical/soil mixing projects, the MITU is utilized without the vapor collection hood, as at the hexavalent chrome site in Hagerstown, IN.



**Lead stabilization  
South Glenn Falls, NY**

However, the hood can be utilized for dust control, if necessary. During a lead stabilization project in South Glenn Falls, New York, the MITU operated continuously without the use of the vapor collection hood. The chemical was applied to the surface of the treatment area and thoroughly mixed from top to bottom of the contaminated area.