

ACTIVATED METAL TREATMENT SYSTEM (AMTS)

According to the Environmental Protection Agency (EPA), over 1.5 billion pounds of polychlorinated biphenyls (PCBs) were manufactured in the United States before production ended in the late 1970's. The U.S. National Aeronautics and Space Administration (NASA) and Scientific Specialists, Inc. (SSI) have developed and patented an Activated Metal Treatment System (AMTS) to extract and destroy PCBs (via reductive dechlorination) in various media through direct application. AMTS is a paste comprising an activated zero-valent metal within a solvent solution. NASA and SSI initially developed AMTS in order to remediate PCBs from industrial grade paints without requiring the removal of the paint.

RemQuest was the first NASA licensee (2009) for the AMTS technology. Subsequently, RemQuest has worked very closely with SSI to evaluate the efficacy and implementability of AMTS for various PCB contaminated media. RemQuest/SSI has successfully sequestered and destroyed PCBs from concrete, soils, caulk, and sludge materials using variations of the AMTS technology. Work is ongoing to develop additional formulations of this technology to facilitate implementation beyond painted surfaces.



The AMTS technology provides a highly effective, adaptable, green, and sustainable solution to a challenging remediation issue.

APPLICATIONS

- Painted surfaces (e.g. buildings, windows, doors, caulks)
- Electrical equipment
- PCB contaminated debris
- Concrete surfaces contaminated with PCB oils
- Caulks and other adhesives
- Soils and sludge

ADVANTAGES

- Laboratory and field-scale tests have demonstrated the removal of > 94% of total PCBs from various industrial paints within 3 weeks
- Removes and destroys PCBs from media without creating a hazardous waste
- Allows for reuse or recycling of the structure/ material being treated
- Safer and better for the environment than other alternatives
- Useful in a variety of applications
- In-situ or ex-situ