

KSC teams with industry to fight structural corrosion

By Joel Wells

A combined effort by NASA researchers at Kennedy Space Center and private industry could ultimately keep buildings across the country from corroding away.

A Space Act agreement signed recently will merge KSC's research into electrical treatments of structural corrosion with chemical processes developed by Surtreat Southeast, Inc., of Cape Canaveral, FL.

The results could have national significance, said Rupert Lee, the NASA project engineer leading the effort. "Any breakthrough in corrosion mitigation technology will have a significant impact on the integrity of this nation's infrastructure," he said.

Structural corrosion is a multi-billion-dollar problem in the United States. Over the past two years, KSC materials scientists have focused on an electrical treatment known as electromigration, which sends corrosion-inhibiting ions to the rebar or steel bars imbedded in

a concrete slab to prevent the rebar from rusting, corroding and separating from the concrete.

With the help of Florida's Technological Research and Development Authority, an independent state agency that partners with KSC in technology transfer initiatives, Surtreat Southeast approached KSC with a chemical option.

Surtreat's product, Surtreat GPHP, is applied to the surface of a corroding concrete slab and then seeps through to the rebar, coating it and preventing further corrosion.

"It corrects the chemical imbalance that causes the rebar to corrode. Traditional structural repair methods only last a couple of years," explained Jim Emory, president of Surtreat Southeast.

The agreement, signed Feb. 2 by Gene Thomas, KSC's deputy center director, and Emory, combines the two efforts without requiring the transfer of funds. "It's a mutually beneficial relationship between KSC and private industry," said



SURTREAT SOUTHEAST Inc. President James Emory and KSC Deputy Director Gene Thomas shake hands following the signing of a Space Act Agreement Feb. 1. Standing in the background are, from the left, Kristen Riley of NASA, Frank Kinney of Florida's Technological Research and Development Authority, Karen Thompson of NASA, Bruce Ellis of Surtreat, Dick Lyon of NASA and Robert Walde, Surtreat GPHP inventor.

Kristen Riley, manager of KSC's dual use program, part of NASA's technology transfer and commercialization effort.

"Combining NASA and Surtreat technologies may result in a unique process with broad corrosion control applications and could save NASA and others a lot of money," Surtreat GPHP inventor Robert Walde said. Surtreat will provide the corrosion-inhibiting chemical and concrete testing slabs along

with technical and personnel support as needed. Kennedy will provide testing specifications and procedures, prepare the test slabs with the Surtreat chemical, and environmentally test the chemical.

KSC materials scientists will also consider the applicability of the chemical treatment to the electromigration process and prepare a report on its effectiveness. The testing process lasts about 12 months.

Employees of the month



HONORED IN FEBRUARY were, seated from the left, Erin Campbell, Comptroller's Office; Nancy Hoffman, Installation Operations Directorate; Julie Hallum, Administration Office; and Stephanie Stilson, Payload Operations Directorate. Standing, from the left, are Jessie Clark, Chief Counsel's Office; Patricia Metcalfe, Shuttle Operations Directorate; Eric Dirschka, Engineering Development Directorate; Sue Prentice, Safety and Mission Assurance Directorate; and Dorothy Davis, Procurement Directorate. Not pictured is Diane Vess, Logistics Directorate.

New employee viewing site opens for launch of STS-75

Center Director Jay Honeycutt has made it possible for a limited number of KSC employees to view a Shuttle launch from a new VIP viewing site.

NASA and contractor employees deserving special recognition for their support of KSC's human space flight program will be issued a vehicle pass to drive their families to this special viewing area.

The new site, located at the LC-39 Barge Turn Basin, will be operational for the STS-75 launch, scheduled at press time for Feb. 22.

As with other VIP viewing areas, launch commentary, bleachers, restroom facilities, and food and souvenir sales will be provided.

The pass will be valid for entrance through KSC gates two hours before launch for vehicles no larger than a 15-passenger van.

A badged employee must be in each vehicle.