

State of the Art Demanufacturing of Electronic Equipment for Reuse and Recycling (DEER2)

Nelson Colon and Laura Battista
United States Army Tank – Automotive and Armaments Command,
Armament Research, Development and Engineering Center
Picatinny Arsenal, NJ

Glenn Kuntz and Woody Allen, PE
Concurrent Technologies Corporation
7990-114th Avenue, Largo, Fl 33773
E-mail: kuntzg@ctc.com

ABSTRACT

The disposal of electronic equipment in landfills is receiving significantly increased consideration due to the unknown impact of the environmental hazards they contain. It is also estimated that more than 63.4 million personal computers (PCs) and workstations will be come obsolete in the year 2005 in the United States alone. The DOD projects an annual disposal requirement for more than 25 million pounds of electronic equipment . While computers originating from the Department of Defense (DOD) represent only ten percent (10%) of the total electronic scrap found in landfills, ninety percent (90%) of this scrap consists of military-unique electronic equipment (i.e., test equipment, radios and radar equipment); the remaining 10% is desktop equipment (Federal Electronic Asset Management Task Force Final Report to the Federal Environmental Executive February 16, 1999 Draft Working Copy.) The sheer volume of electronic material, coupled

with environmental considerations, is prompting states to keep electronic equipment out of landfills. Consequently, the Department of Defense and other Federal Agencies are voluntarily striving to dispose of its inactive, obsolete or surplus electronic scrap by implementing demanufacturing, reusing, and recycling options rather than landfilling. One way the Department of Defense is addressing the environmental concerns associated with the disposal of its inactive, obsolete or surplus electronic equipment is through the DEER2 Program (Demanufacturing of Electronic Equipment for Reuse and Recycling). This program will develop, demonstrate and validate technology enhancements to facilitate separation and decontamination of materials, tracking, glass and plastics reprocessing and reuse, and precious metals recovery. These innovations will take place in a state of the art technology facility located in Largo, Florida.