PROGRESS REPORT

October 1, 2003 to December 31, 2003

PROJECT TITLE: Assessment of True Impacts of E-Waste Disposal in Florida

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COMPLETION DATE: December 31, 2003 **PHONE NUMBER:** (352) 392-0846

Progress to Date:

Task 1: Fate of Heavy Metals when Co-Disposed with MSW. This task involves the construction of simulated landfills for the assessment of EWaste impact on landfill leachate quality. Landfill lysimeters have been designed and permission has been granted for placement at the Polk County NC landfill. The installation of the lysimeters has been scheduled for February 2004.

Task 2: Survey of BFRs in Florida Landfill Leachate. This task involves collecting 24 leachate samples from different landfills around Florida and analyzing them for BFRs. To date leachate samples have been collected from approximately 30 distinct landfill cells. All of the samples have been extracted for BFRs and analyzed. While the results indicate that very little if any BFRs are encountered in typical landfill leachates, the problematic nature of leachate as a matrix suggests that alternative analytical techniques will be necessary to provide precise measurements at low concentrations.

Task 3: Comparing E-Waste Metal Leachability in Landfill Leachate to TCLP. This task involves leaching several EWaste devices in 10 different MSW landfill leachates and comparing the results with TCLP and SPLP. Leaching on the printed wire boards and the CRT glass have been completed. The cell phones, Ni-Cd batteries, and the fluorescent lamps have been leached in 9 different leachates. Analysis on these samples has been completed.

Task 4. Assessing Impact of E-Waste on WTE Facilities in Florida. This task involves conducting a mass-balance assessment to determine the impact of EWaste on WTE ash in Florida. Preliminary mass balance models have been developed.

Future Work

The landfill lysimeters will be constructed, installed and filled in early 2004. A report describing the findings of the research to date is being prepared. This report will be submitted to the TAG members for review and comment. Additional research funding has been obtained from the Center to continue to support this research effort (project title: Simulated Landfill Lysimeters for Evaluating Leachate Quality). Results from the existing project will be incorporated with results of the new project for one comprehensive final report (scheduled for completion in early 2005). The report currently being written will serve as an interim report of the findings.