

# **PROGRESS REPORT**

April 1, 2003 to June 30, 2003

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

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**COMPLETION DATE:** December 31, 2003

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## **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. A mock lysimeter has been constructed. The researchers are awaiting the arrival of a drill rig on site; this is anticipated to arrive in September or October.

**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 some have been analyzed. Preliminary results indicate very little if any BFRs occurring in the leachates.

**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 is ongoing.

**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. Analysis will begin on the lysimeter leachate. The BFR samples will be analyzed. The final set of leaching will be completed on the cell phones, N-Cd batteries and fluorescent lamps. The analysis of the leachates will be completed. The EWaste WTE assessment will be completed.