

QUARTERLY PROGRESS REPORT
October 1, 2004 to December 31, 2004

PROJECT TITLE: Extent of CCA-Treated Wood Used for Commercial Mulch

PRINCIPAL INVESTIGATOR: Dr. Helena Solo-Gabriele, Ph.D., P.E.

AFFILIATION: University of Miami, Dept. of Civil, Arch., and Environ. Engrg.

ASSOCIATE INVESTIGATOR: Dr. Timothy Townsend, Ph.D., P.E.

AFFILIATION: University of Florida, Dept. of Environ. Engrg. Sci., Solid & Haz. Wst. Prog.

COMPLETION DATE: May 15, 2005

RCRA Sponsored Project

Title: Management and Disposal Options for CCA-Treated Wood Waste
(July 1, 2003 to June 30, 2003)

Project Administration

1. The final report for this project has been drafted. The title of the report is, "Management and Disposal Options for CCA-Treated Wood Waste." This report will be revised in the near future and will include information obtained from the FCES conference held February 2004.

"YEAR 7" Research

Title: Extent of CCA-Treated Wood Used for Commercial Mulch
(July 1, 2002 to June 30, 2004)

Project Administration

1. The final report for this project has since been completed and posted on the internet. The report was open for comments through November 2004. The research team plans to finalize this report during the next reporting period.

"YEAR 8" Research

Title: Environmental Impacts of CCA Contaminated Mulch
(July 1, 2003 to May 15, 2005)

Project Administration

1. A TAG meeting was held in Gainesville on October 22, 2004. The minutes of the meeting along with corresponding Powerpoint presentations have been posted on the internet.

Research Activities

1. All samples have been processed and analyzed.
2. We have started to draft the final report for the project (about 90% complete). During the analysis of the data, the team noticed that there was a mass balance problem associated with some of the analyses. The team has since held a conference call (December 17, 2004) to develop plan to address the concern. As a result, a 6 month extension was requested and granted for this project.

Information Dissemination

1. The web site: www.ccaresearch.org continues to be updated.
2. Helena Solo-Gabriele and Tim Townsend provided a joint presentation before the 19th Annual Hazardous Materials Management Conference on Household and Small Business Waste, sponsored by the North American Hazardous Materials Management Association (NAHMMA). The title of the presentation was "CCA Management Issues." The conference took place in Miami, Florida.
3. The following manuscript has been published.

Townsend, T., Tolaymat, T., Solo-Gabriele, H., Dubey, B., Stook, K. and Wadanambi, L., 2004. Leaching of CCA treated wood: Implications for waste disposal. *Journal of Hazardous Materials*, B114 (2004): 75-91.

"YEAR 9" Research

Title: Arsenic-Specific Stain for Identifying CCA-Treated Wood
(July 1, 2004 to October 31, 2005)

Project Administration

1. Notice of award for this project was received from the FCSHWM. The main contract is pending. Dr. Tim Townsend's sub-contract will be issued once the main contract is executed.
2. A student, Amy Omae, has since been hired to work on this project.

Research Activities

1. Amy Omae has been working on developing an arsenic specific stain since the beginning of the summer of 2004. Her work has been successful and we have initiated the U.Miami paperwork to determine if the stain developed to date can be patented.

COURTESY REPORT For Complimentary Studies

Project Administration

1. The project funded by Florida International University (FIU) and the National Institutes of Environmental Health Sciences (NIEHS) has been completed and the results from this study have since been written up for possible publication.
2. Dr. Solo-Gabriele is currently collaborating with Dr. Stuart Shalat of Rutgers University and Dr. Lora Fleming of the University of Miami Medical School on an epidemiologic study evaluating the impacts of CCA-treated playgrounds on children. Sampling of playgrounds and children has been completed. The final report is currently being drafted.
3. Drs. Solo-Gabriele and Townsend assisted with the planning of a conference titled, "Environmental Impacts of Preservative-Treated Wood." Tim Townsend and Helena Solo-Gabriele are currently working on an edited book from material presented at this

conference. So far they have received drafts for 22 chapters.

4. A proposal was submitted in collaboration with the Town of Medley to the FDEP Innovative Recycling Grants Program. The title of the proposal is, "Augmented Sorting of Recovered Wood Waste Using Stain and X-ray Technologies." This proposal has since been funded through the FDEP. Contracts are pending. A loaner XRF unit has been received from Innov-X. During November 2004, Helena Solo-Gabriele visited the Innov-X and Niton facilities in Massachusetts.
5. Helena Solo-Gabriele and Martin Grosell of the University of Miami Marine School and Yong Cai of Florida International University are collaborating on a project focusing on toxicity testing of leachate from wood treated with chromated copper arsenate (CCA). This project will evaluate the effects of salinity on the toxicity of CCA-treated wood to a fish species.