

## QUARTERLY PROGRESS REPORT

April 1, 2004 to June 30, 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: June 30, 2004

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### “YEAR 6” Research

Title: Environmental Impacts of CCA-Treated Wood

(September 1, 2001 to May 31, 2003)

#### Project Administration

1. The final report for this project has been drafted. The title of the report is, “Arsenic and Chromium Speciation in Leachates from CCA-Treated Wood.” Comments have been received. We plan to address these comments during the next reporting period.

### 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 shortly 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 web. The report is open for comments through November 2004.

### “YEAR 8” Research

Title: Environmental Impacts of CCA Contaminated Mulch

(July 1, 2003 to November 15, 2004)

#### Project Administration

2. The minutes of the last TAG meeting have since been completed. The minutes along with the Powerpoint presentations have since been posted on the [ccaresearch.org](http://ccaresearch.org) web site.

## Research Activities

1. Sample collection for this project has been completed with over 90 mulch samples collected from Florida. 20 samples are remaining to be ashed. All 90 samples have been visually inspected, analyzed for particle size distribution, and analyzed for SPLP. The 70 samples ashed to date have since been analyzed for total metals. Ashing of the remaining 20 samples is estimated at 50 days. Data are currently being organized, compiled, and analyzed.
2. The mulch leaching study is continuing as part of phase II for this project. The vessels for experimentation were placed outside in January 2004. So far, 14 sets of leachates have been collected.

## Information Dissemination

1. The web site: [www.ccaresearch.org](http://www.ccaresearch.org) continues to be updated.
2. Presentations
  - Brajesh Dubey presented a paper at the International Research Group on Wood Preservation Conference held in Ljubljana, Slovenia June 2004. The title of his paper was, "Metal Leaching from Pressure Treated Wood in Sanitary Landfill Leachate." Brajesh Dubey received funding to present this paper through the Ron Cockcroft Award presented by the International Research Group.
  - John Schert presented a paper at the International Research Group on Wood Preservation Conference held in Ljubljana, Slovenia June 2004. The title of his paper was, "Future Directions Regarding Research on the Environmental Impacts of CCA-Treated Wood."
  - Helena Solo-Gabriele presented a paper at the 2004 Annual FLERA (Florida Local Environmental Resource Agencies, Inc.) Conference held in Jupiter, FL during June 2004. The title of her presentation was, "Regulations and Environmental Impacts of CCA-Treated Wood."
  - Tomoyuki Shibata presented a poster at the 2004 University of Miami Student Creativity Forum held at the University of Miami, Coral Gables, FL during April 2004. The title of his poster was, "Leachable and Dislodgeable Arsenic and Chromium from In-Service CCA-Treated Wood." Tomoyuki Shibata won first prize within the engineering category for this poster.
  - Helena Solo-Gabriele made a presentation at Southwest Miami High School which focused on treated wood. Her presentation during May 2004 included a set of videos.
  - Helena Solo-Gabriele and Timothy Townsend presented at the Wood and Pallet Waste Reduction Best Management Practices Workshop held in Sumter County, FL during April 2004. They also participated in a panel session. The title of Helena Solo-Gabriele's presentation was, "Identification Methods for CCA-Treated Wood Within the Wood Waste Stream." Timothy Townsend's presentation focused on alternative wood preservatives.
  - Helena Solo-Gabriele provided a presentation at the Solid Waste Association of North America, Northwest Regional Conference held in Everett, WA during April

2004. The title of her presentation was, "Disposal of CCA-Treated Wood in Florida and Washington State."

### 3. Publications

- Solo-Gabriele, H., Schert, J.D., and Townsend, T.G., 2004. *Future Directions Regarding Research on the Environmental Impacts of CCA-Treated Wood*, IRG/WP 04-50222. International Research Group on Wood Preservation, Stockholm, Sweden.
- Dubey, B., Townsend, T.G., and Solo-Gabriele, H., 2004. *Metal Leaching from Pressure Treated Wood in Sanitary Landfill Leachate*, IRG/WP 04-50220. International Research Group on Wood Preservation, Stockholm, Sweden.

### "YEAR 9" Research

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

1. Helena Solo-Gabriele presented the proposal for this project before the FCSHWM Selection Committee on April 26, 2004.
2. Notice of award for this project was received from the FCSHWM.
3. A student, Amy Omae, has since been hired to work on this project. Another student, Michael Laas, has volunteered to work on this project as part of a course he is taking.

### COURTESY REPORT

For Complimentary Studies

#### Project Administration

1. Dr. Solo-Gabriele continues to work on the project funded by Florida International University (FIU) and the National Institutes of Environmental Health Sciences (NIEHS). The title of the project is, "Impacts of arsenic from CCA-treated wood within marine and terrestrial environments." Work from this study is currently being written up for 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. Samples are currently being analyzed.
3. Drs. Solo-Gabriele and Townsend assisted with the planning of a conference titled, "Environmental Impacts of Preservative-Treated Wood." This conference was held February 8-10, 2004 and was sponsored by the Florida Center for Environmental Solutions. Tim Townsend has since finished up the post-conference proceedings and Helena Solo-Gabriele has completed the documents that resulted from the conference workshop. They have begun preparations for publishing an edited book from the proceedings of that conference.
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.

5. Helena Solo-Gabriele is currently collaborating with Dr. Rick Maas of the University of South Carolina – Asheville to develop educational materials concerning CCA-treated wood. This project was funded through the Public Health Trust located in California.
6. 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.