

QUARTERLY PROGRESS REPORT

April 1, 2005 to June 30, 2005

PROJECT TITLE: Arsenic-Specific Stain for Identifying CCA-Treated Wood

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: October 31, 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 8" Research

Title: Environmental Impacts of CCA Contaminated Mulch

(July 1, 2003 to May 15, 2005)

Research Activities

1. The draft of the final report has been posted on the web at <http://www.ccaresearch.org/publications.htm> or more specifically the main text is available at http://www.ccaresearch.org/final_mulch_text_m18.pdf. The comment period for this report is open until August 30, 2005. The report will be finalized shortly thereafter.

"YEAR 9" Research

Title: Arsenic-Specific Stain for Identifying CCA-Treated Wood

(July 1, 2004 to October 31, 2005)

Project Administration

1. The main contract for this project was executed during the last reporting period. A sub-contract was drafted between U.Miami and U.Florida. This subcontract is undergoing review.
2. Claire Cornillier of the Centre Technique du Bois et de l'Ameublement (Technical Center for Wood and Furniture) in Bordeaux, France received a research award from the International Research Group on wood preservation for a short scientific study (1 week) with the research team during the week of August 15th. Currently an itinerary is being prepared for her including sorting at Florida Wood Recycling and the TAG meeting scheduled for August 18th.
3. Drs. Solo-Gabriele, Townsend, Gary Jacobi and Brajesh Dubey met in Miami on May 25

through 26 to discuss various research issues and to work on the Medley sorting project.

Research Activities

1. An arsenic specific stain has been developed. The stain has been tested with wipes, ash, and wood. Pending work includes evaluation of the arsenic detection limit for the blue color formation
2. The research team has been informed in writing that the University plans to pursue a patent for the stain.
3. Amy Omae has started to write the first draft of the final report for this project.

Information Dissemination

1. The web site: www.ccaresearch.org continues to be updated.
2. Helena Solo-Gabriele was invited as a key note speaker at the upcoming Cost Action 31 meeting in Bordeaux, France scheduled for the end of September. A conference proceeding was written and submitted for that conference.
3. Several members of the research team participated in the International Research Group of Wood Preservation Conference held in Bangalore, India during April 2005. Specifically, Tim Townsend, Jenna Jambeck, Brajesh Dubey, and Tomoyuki Shibata provided presentations. The conference proceedings are referenced as follows:
 - Jambeck, J., Weitz, K., Townsend, T., Solo-Gabriele, H., 2005. CCA-treated Wood Disposed in Landfills and Life-cycle Trade-Offs With Waste-to-Energy and MSW Landfill Disposal, IRG/WP 05-50231. International Research Group on Wood Preservation, Stockholm, Sweden.
 - Shibata, T., Solo-Gabriele, H., Townsend, T., Dubey, B., 2005. Leaching of Arsenic from Mulch Made from Recycled Construction and Demolition Wood, IRG/WP 05-50232. International Research Group on Wood Preservation, Stockholm, Sweden.
 - Townsend, T., Dubey, B., Jambeck, J., Solo-Gabriele, H., 2005. Disposal of Pressure Treated Wood in Construction and Demolition Debris Landfill, IRG/WP 05-50235. International Research Group on Wood Preservation, Stockholm, Sweden.
 - Dubey, B., Townsend, T., Bitton, G., Solo-Gabriele, H., 2005. Comparison of Temporal Changes in Metal Leaching and Aquatic Toxicity from Wood Treated with CCA and Alternative Preservatives. IRG/WP 05-50236. International Research Group on Wood Preservation, Stockholm, Sweden.

COURTESY REPORT
For Complimentary Studies

Project Administration

1. 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 has been drafted and a final presentation will be made at the upcoming TAG meeting.
2. Tim Townsend and Helena Solo-Gabriele continue to work on an edited book titled, "Environmental Impacts of Preservative-Treated Wood."
3. Helena Solo-Gabriele and Tim Townsend continue to work on the project funded by the Town of Medley and the FDEP Innovative Recycling Grants Program. The title of the proposal is, "Augmented Sorting of Recovered Wood Waste Using Stain and X-ray Technologies." Work has been initiated with the 3 XRF units purchased for this project.
4. 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.
5. Helena Solo-Gabriele and Tim Townsend contributed to the submission of a proposal to NSF's Partnership for Innovation.