TREATED WOOD COUNCIL

FACTS ON CCA-PRESERVED WOOD

September 6, 2001

I. WHAT IS CCA-PRESERVED WOOD?

- Wood is often pressure-treated to extend its life and make it resistant to insects and decay, especially if it will be used outdoors. Building codes generally require preserved wood for outdoor structures and where the wood comes into contact with the ground. The pressure-treatment process forces chemical preservatives deep into the cellular structure of the wood in a closed cylinder under pressure.

- The chemical compound Chromated Copper Arsenate (CCA) is one EPA-approved preservative used in the treatment process that has been shown to be very effective. In the course of pressure-treatment, the CCA "fixes" to wood in a way that makes it highly insoluble and leach resistant.

II. WHAT ARE THE BENEFITS OF CCA-PRESERVED WOOD?

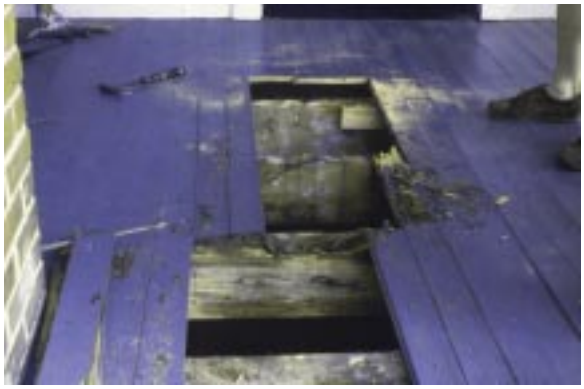
- **Pressure treatment protects wood from attacks by insects, microorganisms, and decay by fungi.** The life of outdoor wood products, which may be just a year or two if the wood is left untreated, may expand with pressure treatment to well over 40 years.

- **CCA-preserved wood has a proven track record.** CCA-preserved wood has been used safely and effectively for almost 70 years. Epidemiological studies of wood-treatment plant workers and carpenters show no increased risk of cancer as a result of exposure to treated wood[1]. The U.S. Consumer Product Safety Commission (CPSC) conducted a study of CCA-preserved wood in playgrounds and found that the level of exposure to arsenic was not a health risk.[2]

- **Using pressure-treated wood is environmentally friendly**. It preserves forests by extending the useful life of wood almost indefinitely. Pressure treatment conserves the equivalent of 226 million trees each year in the United States alone. Preservation gives us the ability to use more renewable trees, such as pines, rather than less renewable trees like redwoods.

- **Use of pressure-treated wood is economical.** Substitute materials, such as steel, concrete and aluminum, often result in much higher costs, higher energy requirements in the manufacturing process, greater air/water pollution and/or environmental protection costs, and higher dependency on foreign sources for imported materials. Of the preserved lumber that's sold for residential uses like decks, fences and playsets, 98% is treated with CCA. Alternatives that don't contain arsenic are available for most of those uses, but they are more expensive -- currently 20% to 25% more expensive for the lumber at the retail level. Even more expensive are plastic alternatives, which many regard as less attractive and more environmentally problematic.

III. IMPACT OF ROT AND TERMITE DAMAGE ON UNTREATED WOOD




IV. EXPERT REVIEW OF THE SAFETY AND ENVIRONMENTAL BENEFITS

"Even with simplified assumptions that likely overestimate the risks, our assessment is that the estimated health risks from the inorganic arsenic in CCA-treated wood fall within the Environmental Protection Agency's standards."

-Dr. Barbara Beck, toxicologist at Gradient Corporation, 2001[3]

"It would take far more arsenic in soil than what I have seen in scientific reports or the press before any threat of health effects to children might occur….I recognize this as a product that is very useful and safe under the appropriate circumstances."

"As a husband and a father of two young sons, with a playset in the backyard, I plan no changes. The product has been used safely for generations, and I have seen no reason why it shouldn't continue to be properly used in the future."

-Dr. Christopher Teaf, director of toxicology program at Florida State University, 2001[4]

"Under normal and anticipated use in playsets and decks, there's just no reasonable way a child or anybody else will get cancer or neurological diseases from this type of exposure; it just doesn't make medical, scientific, or common sense. There is no evidence that normal exposure to CCA-treated wood presents any type of increased health risk."

-Alan H. Hall, M.D., FACEP, a Board Certified Medical Toxicologist, 2000[5]

"We have found that there is no risk to human health….There has never been any evidence that a human being has ever been harmed by it. There is no evidence that children are exposed to toxic levels of arsenic from playing on pressure treated wood."

-Dr. Gilbert Ross, medical and executive director of the American Council on Science and Health, 2000[6]

"If you look at the safety record and health effects, you find this is a very safe product."

-Dr. Gaylord Lopez, director of the Georgia Poison Control Center, 2000[6]

"There are no documented instances describing a compromised biological integrity associated with the use of any form of treated wood, including CCA-treated wood."

-Dr. Kenneth Brooks, president of Aquatic Environmental Sciences, 2000[6]

"We have to be careful to preserve forests by using wood resources to the maximum, and using minerals such as CCA extends the life of resources by at least five-fold."

-Dr. Stanley Rhodes, president of Scientific Certification Systems, 2000[6]

"You may have heard health concerns raised about the chemicals used to 'pressure treat' some wood to limit rot and insect damage, but there's nothing to fear. The concern is that the wood preservative used, copper chromium arsenate, contains arsenic, an element that causes cancer in humans who are exposed to a lot of it. But tests conducted by the CPSC [Consumer Product Safety Commission] have shown the beams used in swing sets don't leach enough arsenic to pose a risk worth worrying about. If you'd rather not take any risk at all, you can always paint the wood, but we think that's a needless expense."

-Consumer Reports magazine, 1996[7]

"Through the use of preservatives in pressure-treated lumber for fences, porches, decks, and homes, we have saved a forest of trees two times the size of New England."

-The late Dr. Dixy Lee Ray, noted scientist, former Governor of Washington state, 1990[8]

V. SUMMARIES OF SCIENTIFIC RESEARCH (as of 9/6/2001)

- **Renowned toxicologist Dr. Barbara Beck** of Gradient Corporation conducted a human health risk assessment, completed in July 2001.

  - The study concludes that **both the cancer and non-cancer health risks from exposure to arsenic in CCA-preserved wood fall within the EPA's acceptable risk limits**. Gradient examined exposure to arsenic that may occur from ingestion and dermal exposure to soil beneath a preserved wood deck and ingestion exposure to arsenic that has been dislodged from preserved wood.
  - The study included a summary of the estimated cancer and non-cancer health risks from subchronic (ages 2-6) and chronic (ages 2-31) exposures to arsenic in soil, and dislodgeable arsenic on two different types of treated wood. The treated wood types included the commonly used Southern Pine, and the wood type associated with the highest risk- Southern Pine w/ Pressure-Applied Water Repellent.
  - **The Gradient team was led by Dr. Beck, a renowned toxicology and risk assessment expert who has been a lecturer at Harvard University**. Beck notes that the level of exposure to inorganic arsenic from CCA-preserved wood is less than that from either drinking water or from a typical diet.

- **Florida State University toxicology program director Dr. Christopher Teaf** conducted three studies in 2000 to determine safe levels of exposure to arsenic from CCA-preserved wood in decks, playgrounds and the soil beneath them. **Dr. Teaf found that the levels of arsenic generally reported were well within the zone of safety**.[9]

  - **Wood Surface Exposure.** Tests by the Consumer Product Safety Commission and others show that CCA-treated wood for playground use generally had surface levels of arsenic below 6.3 micrograms per 100 square centimeters. Taking hand-to-mouth contact into consideration, Dr. Teaf found that an average level of 420 micrograms per 100 square centimeters of wood surface is safe for occasional childhood exposure (5 years) and 40 micrograms per 100 square centimeters for long-term exposure (30 years).
  - **Soil Under Decks.** Dr. Teaf found that acceptable average levels of arsenic in soil under CCA-treated decks ranged from 170 parts per million for long-term exposure (30 years) to 390 parts per million for occasional childhood exposure (5 years).
  - **Soil Under Playground Equipment.** Dr. Teaf found that acceptable average levels of arsenic in soil under CCA-treated playground equipment ranged from 90 parts per million for long-term exposure (30 years) to 260 parts per million for occasional childhood exposure (5 years). These acceptable levels for arsenic in soil under decks and playground equipment are far higher than what academic researchers and the media generally report finding in the soil under decks and playground equipment.

- **A Consumer Product Safety Commission study** by the Health Sciences staff measured dislodgeable arsenic in eight samples of CCA-preserved wood.[2]

    - **CPSC Findings.** Five of the samples had an undetectable amount of arsenic; two other samples yielded small quantities. The highest yield in the eighth sample was found in rough-sawn lumber, a type of lumber classified as not acceptable for playground equipment by the wood-treatment industry. This led John Preston of the CPSC Division of Mechanical Engineering to conclude, **"…the amounts were much below the level that makes a difference to health. I have no problems with telling consumers that it's appropriate for playground use."** The CPSC announced in August 2001 that it will conduct a new risk assessment.

- **Epidemiology studies**: Three separate studies conducted on the health status of wood-treatment plant workers and carpenters found that they have shown no increased risk of cancer or other health problems due to that high level of exposure.[1]

- **Evaluation of Risk to Children Using Arsenic-treated Playground Equipment:** This study for the California State Department of Health Studies found that there is negligible risk to children from exposure to CCA-preserved materials.[10]

- **Evaluating the Environmental Risks Associated With the Use of Chromated Copper Arsenate-Treated Wood Products in Aquatic Environments**: Dr. Kenneth M. Brooks conducted this study of the effects of CCA-preserved wood on the aquatic environment in Washington State. His study found that CCA-preserved wood being properly used in aquatic environments is effective and safe.[11]

- **Arsenic Availability from CCA Treated Lumber and Uptake by Plants**: University of Minnesota researchers found that vegetables in gardens using CCA-treated wood accumulated some arsenic from the wood, but the amounts accumulated were well within U.S. Public Health Service standards.[12]

VI. GOVERNMENT AGENCIES THAT REGULATE CCA

- **ENVIRONMENTAL PROTECTION AGENCY (EPA)**

    - **Role**: Wood preservatives are registered and regulated as pesticides by the EPA under the Federal Insecticide, Fungicide, Rodenticide Act (FIFRA). From 1978 to 1986, a review of wood preservatives was conducted by the EPA as part of its registration, and the agency concluded that the benefits of preserved wood far outweighed the risks. The EPA is now conducting a regular re-registration process.

- **CONSUMER AWARENESS PROGRAM**

  - **The preserved wood industry and the EPA have worked together since 1986 to educate consumers about the proper and safe use of CCA-preserved products.** Since 1986, the industry has voluntarily implemented a consumer awareness program, originally consisting of Consumer Information Sheets made available to buyers of preserved wood.

  - The American Wood Preservers Institute (AWPI) has worked to improve this program over the years, building a website for consumers at www.preservedwood.com, distributing the information sheets directly, and issuing news releases and conducting media tours to keep consumers informed. One recent news release on safe-handling procedures has been carried by 560 newspapers in 30 states, 215 radio stations in 45 states, and 168 TV stations in 41 states.

  - The industry has been cooperating with the EPA to enhance and expand the consumer awareness program and increase consumer access to safe handling information.

  - **The industry's current enhancement of the program, adopted on June 28, 2001, includes:**

    1. End tag safety labeling for CCA-preserved lumber
    2. Improved stickers and signs at retail locations
    3. Toll-free hotline (1-800-282-0600) in order to hear the Consumer Safety Information Sheet (CSIS) in English or Spanish with a fax back option to receive a hard copy of the CSIS
    4. Website (www.ccasafety.com) with CSIS and link to EPA website
    5. Outreach campaign, including advertising, news releases, media tour, and spokespersons
    6. Review of design and presentation of the Consumer Safety Information Sheet
    7. Stewardship program to ensure retailer participation and consumer engagement, including improved training at retail locations and a monitoring program

  - On June 7, 2001, the EPA held a public meeting with environmental stakeholders and the media in attendance. The purpose of the meeting was to allow the President and CEO of AWPI to present the industry's proposal and also to request public input on the program.

- Since that meeting, the industry has worked with EPA to finalize elements of the program and implement several of the components. Consumer Safety Information can be accessed now at www.ccasafetyinfo.com or by calling 1-800-282-0600. The following are the five basic safety messages at the core of the program:
    1. Caution: Arsenic is in the pesticide applied to this wood
    2. Never burn treated wood
    3. Wear dust mask & goggles when cutting or sanding wood
    4. Wear gloves when working with wood
    5. Ask for the Consumer Safety Information Sheet or call 1-800-282-0600. www.ccasafetyinfo.com

Safe Handling Information for CCA Preserved Wood

CAUTION : ARSENIC IS IN THE PESTICIDE APPLIED TO THIS WOOD

- NEVER BURN TREATED WOOD
- WEAR DUST MASK & GOGGLES WHEN CUTTING OR SANDING WOOD
- WEAR GLOVES WHEN WORKING WITH WOOD

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VII. CONTACT INFORMATION FOR INDUSTRY SPOKESPERSONS AND SCIENTIFIC RESOURCES

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1-800-282-0600
www.ccasafetyinfo.com

U.S. Environmental Protection Agency:
www.epa.gov

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A Cross-sectional Health Study of Workers at a Wood Preserving Plant, 1954-1979. Tabershaw Associates, Rockville, Maryland, 1979.
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Prepared by Toxicologist John Butala, May 28, 1992

[2] *Estimate of Risk of Skin Cancer from Dislodgeable Arsenic on Pressure-treated Wood Playground Equipment*. Consumer Product Safety Commission, 1990.

[3] "Risk Assessment Underlines Safety of Preserved Wood" (press release), August 6, 2001

[4] http://www.preservedwood.com/news/010314stpete.html, 2001.

[5] http://www.preservedwood.com/news/001115hall.html, 2000.

[6] "How Safe Is Preserved Wood?", American Wood Preservers Institute video, 2000.

[7] "Swing Sets – Test; Playing It Safe", Consumer Reports magazine, May 1996, page 42.

[8] "Trashing the Planet", Dixy Lee Ray, pp. 75-77, 1990.

[9] *Assessments of Risk from Exposure to CCA-Treated Wood in Decks, Playgrounds and the Soil Beneath Them*, Dr. Christopher Teaf, Florida State University, 2000.

[10] *Evaluation of Risk to Children Using Arsenic-treated Playground Equipment (A Report to the California State Department of Health Services)* by Consultants in Epidemiology and Occupational Health, Inc., January 15, 1984

[11] *Evaluating the Environmental Risks Associated With the Use of Chromated Copper Arsenate-Treated Wood Products in Aquatic Environments*, Kenneth M. Brooks, Ph.D., Aquatic Environmental Sciences from Estuaries, Vol. 19, No. 2A, June 1996.

[12] *Arsenic Availability from CCA Treated Lumber and Uptake by Plants*, Farhana Alamgir, Deborah Allan, and Carl Rosen, Department of Soil, Water, and Climate, University of Minnesota.