

Upcoming Changes in the Huntington District's Use of Pressure Treated Wood

Synopsis:

On February 12, 2002, the US Environmental Protection Agency and the wood treating industry announced a voluntary decision to move consumer use of treated lumber products away from a variety of pressure treated wood that contains arsenic by December 31, 2003. The term "pressure treated" wood found at consumer lumberyards in the United States has been lumber most commonly treated with chromated copper arsenate (CCA). Although considered a safe (no unreasonable risk) product by the US EPA, most states, many universities, and the wood treating and retailing industry, CCA treated lumber is nonetheless attacked as unsafe by environmental groups, and the growing negative perception of CCA lumber has led to the development of non-arsenic preservatives; two preservatives which are emerging are ACQ (Ammoniacal Copper Quat) and CBA (Copper Boron Azole). Plastic and composite products that are durable and perform the functions of pressure treated wood are becoming increasingly available.

After December 31, 2003, wood treatment facilities will no longer be able to use CCA to treat wood intended for uses where individuals, especially children, can touch on a routine basis. Structures and products containing CCA pressure treated wood which are already built are not affected by this action, and will not need removal under this decision.

The procedure for CELRH-OR projects: 1) to continue use of CCA wood as needed, especially for foundations, signposts, and other applications where the public (especially children) cannot readily contact; 2) to handle and utilize CCA wood at all times in accordance with the MSDS sheet information (example MSDS sheet attached as Appendix A); 3) to utilize non-arsenic pressure treated products as soon as commercially practicable; and 4) project personnel should be aware that for those structures in place, coatings can reduce the potential for arsenic pentoxide and chromium trioxide releases from the surface of the wood. ***Specific procedures and recommendations for District Operating Projects are contained within the report in Section 6.***

Projects should not abnormally stockpile CCA lumber prior to December 31, 2003 for use after that date. All indications are that the EPA wishes to eliminate CCA treated wood for new "residential uses" (see discussion). CCA wood must never be burned; it is most commonly disposed of by depositing in a landfill, since recycling efforts are minimal.

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1. The Controversy Surrounding CCA Pressure Treated Wood

The United States Environmental Protection Agency (EPA), the US Department of Agriculture Forest Products Laboratory, most states, many universities, and industry insiders all say that lumber pressure treated with the preservative chromated copper arsenate (CCA) poses no undue risks and is therefore safe. With 70 years of use and the millions of board feet utilized every year, CCA pressure treated wood has an outstanding safety record when proper handling techniques are used. Yet changing times are demanding the end of the availability of these products.

According to a recent Environmental Working Group (EWG) study, children are more likely to be exposed to harmful levels of arsenic from play structures, picnic tables and decks than from drinking water. They state that their study finds that an average 5-year-old playing on arsenic-treated wood playground will ingest enough arsenic to exceed EPA's "acceptable" lifetime cancer risk in less than 10 days.

Across the U.S., despite constant public reassuring by various state environmental and natural resources departments that this wood is safe, concerns have increased that the arsenic pentoxide, chromium trioxide or copper oxide released from the surface of CCA pressure treated wood used in playground equipment and decks can harm people or the environment. Documentation shows that this belief is generally unfounded. As an example, the Missouri Department of Health has not received a single case report (poisoning) of children exposed to CCA lumber, important because CCA products have been used extensively for many years. In St. Louis County, soil samples were taken in a county park due to concerns for children's safety; the soil samples collected by the county Health Department showed soil arsenic levels at that park were within the range of background soils for Missouri. The state of Iowa encourages its use, citing multiple studies; the state summarizes under the title "CCA Treated Lumber is Safe for Lawn and Garden."

There are instances when, mishandled, wood treated with CCA can be hazardous. While most arsenic case reports received by states are due to occupational exposure, there are those case reports involving the general public which have been adults exposed to arsenic from CCA lumber. Investigation of these poisonings found that they were all involving inhalation of the chromium, copper, and arsenic, either from sawing large quantities of CCA lumber in an unventilated area, or burning CCA-treated lumber in fireplaces or wood stoves.

2. Facts about Chromated Copper Arsenate (CCA) and Wood Treatment

The pressure treating process involves placing lumber into a vacuum-sealed horizontal cylinder and forcing Chromated Copper Arsenate, or CCA, deep into the wood fiber. Each of the three elements in CCA is important to its overall performance. **Chromium** plays an important part in the fixation of preservative to the wood fiber. **Copper** is an effective fungicide and the **Arsenic** is pentavalent arsenic, a naturally-occurring trace element in the soil, water, air, plants, and in the tissues of most living creatures, including man. CCA is intended to protect wood from dry rot, fungi, molds, termites, and other pests that can threaten the integrity of wood products.

Chromated copper arsenate is a registered pesticide, and is the most common wood preservative used in the United States, containing 22% pure arsenic. Arsenic can be an acute poisoning hazard, causing skin, bladder and lung cancer in humans and is linked to diabetes and endocrine disruption. The amount of arsenic common in one 12 foot long 2 x 6 is one ounce, which is “enough to kill 250 adults if they were to ingest it” (quote from the Environmental Working Group). Although arsenic is banned as a pesticide for agriculture and food applications, wood treatment has a special exemption under U.S. pesticide laws.

The CCA chemical itself is listed as a hazardous waste under the EPA's Resource Conservation and Recovery Act (RCRA) guidelines. Arsenic, along with hexavalent chromium (another of the primary chemical components in CCA), is known to be *toxic*, (*poisonous*), *carcinogenic* (cancer-causing) and *teratogenic* (able to produce birth defects or fetal malformations). CCA-treated wood products, including scrap lumber, would also be considered a hazardous waste were it not given a special exemption.

From this discussion, it is apparent that the CCA *must maintain its integrity inside the treated wood product*. To assist in this, especially in picnic tables and play structures, various coatings are successful (see “Coatings and Effectiveness,” Section 5 of this report).

3. EPA and Industry Announce Voluntary Decision to Limit Uses

On February 12, 2002, the US Environmental Protection Agency (EPA) announced a voluntary decision by industry to move consumer use of treated lumber products away from a variety of pressure treated wood that contains arsenic by December 31, 2003, in favor of new alternative wood preservatives. This transition affects virtually all residential uses of wood treated with chromated copper arsenate, including wood used in playground equipment, decks, picnic tables, landscaping timbers, residential fencing, patios, and walkways/boardwalks. By January 2004, EPA will not allow CCA products for any of these residential uses.

After December 31, 2003, CCA will continue to be used for a number of industrial products such as utility poles, piling and crossties. Wood treaters will no longer be able to use CCA to treat wood intended for use in decks, picnic tables, landscaping timbers, gazebos, residential fencing, patios, walkways, and boardwalks, and playground equipment. Already built structures containing CCA pressure treated wood are not affected by this action.

Since EPA has never been able to conclude that CCA-treated wood poses unreasonable risks to the public, existing CCA-treated wood being used around or near their homes or wood that remains available in stores can continue to be utilized. "EPA does not believe there is any reason to remove or replace CCA-treated structures, including decks or playground equipment. EPA is not recommending that existing structures or surrounding soils be removed or replaced." (Quote from US Environmental Protection Agency)

The industry agreement has pleased the US EPA, as it has substantially increased the speed of eliminating the use of the CCA products to a short 22 months (from February 2002 – December 2003). If EPA had tried to phase out the use of CCA products through their traditional regulatory process, the time could have been up to 10 years.

4. Alternatives to CCA Pressure Treated Wood

The wood treating industry continues to research and test safe, effective wood preservatives. Two wood preservatives are now being marketed as substitutes for CCA pressure treated lumber. They include ACQ (Ammoniacal Copper Quat) found in the brand name products ACQ Preserve and NatureWood; and CBA (Copper Boron Azole) found in the brand name Natural Select. The new preservatives are copper-based fungicides like CCA, but without the arsenic. In place of arsenic, ACQ uses DDAC (the quat component) and copper azole uses tebuconazole to provide protection against copper tolerant fungi and insects. Both preservatives perform similar to CCA.

Although these alternatives are considered to be more environmentally friendly than CCA, they are more difficult to obtain due to a very small market share. This

results in a higher priced product. However, this situation is expected to change since the alternatives will increase their market share rapidly in the coming year. Contained in Appendix B is a recent availability schedule of ACQ treated wood.

Other alternatives to CCA include: untreated wood (cedar and redwood); and non-wood alternatives, such as plastics, metal, and composite materials.

5. Coating and Effectiveness

All sources agree that there are situations, such as picnic tables and play structures, where migration of the CCA needs to be strictly controlled.

A researcher at North Carolina State University notes a controlled test at the Forest Products Lab where specimens of 2 X 6 pressure treated wood which were given one of the following coatings: (1) latex primer followed by one coat of outdoor latex paint, (2) oil-based primer followed by one coat of oil-based paint or (3) two coats of a penetrating oil semi-transparent deck stain. The results were very promising. All three coatings reduced leaching of arsenic pentoxide, chromium trioxide, and copper oxide by over 99% in comparison to uncoated specimens. None of the tests performed on the specimens coated with latex or oil-based paint contained any detectable copper, chromium or arsenic. Some tests performed on the specimens that were coated with the penetrating oil stain did contain detectable levels, but the highest level of arsenic detected in these samples was still well below the EPA's drinking water standard. The study concluded that the application of these common coatings was an excellent response to further protect against chemical exposure from CCA pressure treated wood.

The US EPA itself suggests that "while available data are very limited, some studies suggest that applying certain penetrating coatings (e.g., oil-based semi-transparent stains) on a regular basis (one re-application per year or every other year depending upon wear and weathering) may reduce the migration of wood preservative chemicals from CCA-treated wood." Another independent study suggests that "if used for picnic tables or children's play equipment, CCA lumber should be covered with a polyurethane sealer."

6. Procedures and Recommendations for CELRH-OR Projects

This section contains the procedures which are recommended for Operations Division to follow in their utilization of projects containing CCA pressure treated wood.

1) Projects should begin to utilize non-arsenic pressure treated products as soon as commercially available, within a reasonable cost. Alternatives to CCA pressure treated wood are listed under Section 4 of this report.

2) Through 31 December 2003, projects may continue to use CCA wood as needed, especially for foundations, signposts, and other applications where the public (especially children) are not expected to readily contact.

3) Projects building new picnic tables and play structures should immediately use materials other than CCA pressure treated wood. On a case by case basis, weak boards on existing tables may be replaced with CCA wood until stockpiles of the wood are exhausted. Any use of CCA treated wood on picnic tables and play structures (and other "frequently touched areas") after 31 December 2003 MUST be coated as directed in Section 5 of this report.

4) Handling and utilization of CCA wood will at all times be in accordance with the MSDS sheet information (example MSDS sheet attached as Appendix A). Cutting will only take place in well-ventilated areas with proper protective equipment. Burning must never be allowed.

5) No products or structures which contain CCA pressure treated wood and are currently in place will need to be removed at this time.

6) CCA pressure treated picnic tables, play structures, and other constructed products (fences, exposed parts of boardwalks and bridges, etc) where Corps personnel or the public may frequently touch should be coated in accordance with Section 5 of this report (e.g., latex paint over latex primer, oil-based paint over oil-based primer, or two coats of penetrating deck stain). Coatings must be applied by 31 December 2003 or else a plan be submitted to OR-E detailing the schedule for treating the remaining uncoated structures. Structures should be recoated when needed.

7) Projects should NOT abnormally stockpile CCA lumber prior to 31 December 2003 for use after that date. Limited stockpiles can be exhausted beginning 1 January 2004, but should NOT be used for picnic table or play structures.

8) Disposal: When a constructed product is discontinued or dismantled, Projects should first determine if the CCA wood is suitable for reuse. Treated wood can be reused in a manner compatible with its original purpose, such as fence posts, retaining walls, landscaping, decks, general construction or erosion containment projects. This "recycling" by using in other products is encouraged. In those cases when the wood is not in a condition for re-use, then disposal in a landfill is appropriate. Pressure-treated wood is not a hazardous product and, although it contains a pesticide in the cells of the wood, it is not a hazardous waste.

7. Point of Contact

This paper was prepared by Denis Chabot, PE, Environmental Engineer, of Operations and Readiness Division, Readiness Branch (CELRH-OR-E) on 15 January 2003. Please contact him with questions, comments and suggestions by telephone at (304)529-5140 or by Email at denisc@lrh.usace.army.mil

Appendix A

Sample MSDS Sheet for CCA Pressure Treated Wood

MATERIAL SAFETY DATA SHEET FOR CCA PRESSURE TREATED WOOD

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Chromated-Copper-Arsenate (CCA) Pressure-Treated Wood
General Use: Treated wood products

Manufacturer's Name and Address:

Wood Treaters, Inc.
P.O. Box 41604
Jacksonville, FL 32203

Telephone Numbers, Web Site and Email Address:

Phone: (904) 358-2507
Fax: (904) 353-4125
Web Site: <http://www.woodtreaters.com>
Email: info@woodtreaters.com

SECTION II - COMPOSITION / INFORMATION ON INGREDIENTS

<u>HAZARDOUS INGREDIENTS</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>	<u>EXPOSURE LIMIT</u>	<u>(mg/m³)</u>
Chromium (III)	7440-47-3	<2**	OSHA-PEL (as Cr) ACGIH-TLV(as Cr)	0.5 0.5
Arsenic (V)	7440-38-2	<2**	OSHA-PEL (as As) ACGIH-TLV(as As)	0.01 0.01
Copper	7440-50-8	<2**	OSHA-PEL(dusts/mists) ACGIH-TLV(dusts/mists)	1.0 1.0
Wood Dust* (regulated as a particulate)	NONE		OSHA-PEL(total dust (respirable fraction) ACGIH-TLV (softwood) ACGIH-STEL (softwood)	15.0 5.0 5.0 15.0

OSHA - Occupational Safety and Health Administration
ACGIH - American Conference of Governmental Industrial Hygienists
PEL - Permissible Exposure Limit
TLV - Threshold Limit Value
STEL - Short-Term Exposure Limit (15 minute exposure standard)
SARA - Section 313 Chemicals: Arsenic, Chromium and Copper compounds

* A state-run OSHA program may have more stringent limits for wood dust. Please contact the state representative for further details.

** Based on wood retention of 0.6 pounds CCA per cubic foot of wood. Actual retention percentage may vary slightly due to differences in wood stock and treatment retention levels.

SECTION III - HAZARDS IDENTIFICATION

INHALATION: Airborne treated or untreated wood dust may cause nose, throat or lung irritation and other respiratory effects. Burning treated wood can release toxic metals into ash and possibly smoke. Various species of untreated wood dust can elicit allergic respiratory response in sensitized persons.

EYE CONTACT: Treated or untreated wood dust may cause mechanical irritation.

SKIN CONTACT: Handling wood may result in skin exposure to splinters. When there is prolonged and/or repeated direct contact with treated or untreated wood dust, mild, transient irritation may occur. Various species of untreated wood dust can elicit allergic contact dermatitis in sensitized individuals.

INGESTION: Not anticipated to occur. A single ingestion by a small child of a large amount (approximately 2.5 ounces or 6 cubic inches) of treated wood dust may require immediate medical attention.

CHRONIC EFFECTS: Treated or untreated wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation. The International Agency for Research on Cancer (IARC) classifies untreated wood dust, inorganic arsenic and hexavalent chromium as human carcinogens (SEE NOTE). Wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust.

NOTE: Some forms of the components of the liquid preservative used to manufacture this product (arsenic and chromium) have caused lung, skin and possibly other cancers in humans occupationally or environmentally overexposed. **REPORTS OF THESE CANCERS DO NOT INCLUDE THE CCA-TREATED WOOD INDUSTRY OR THE USE OF CCA-TREATED WOOD.** Warning: This product contains chemicals known to the State of California to cause cancer (This statement issued in accordance with California Proposition 65).

SECTION IV: FIRST AID MEASURES

INHALATION: Remove from wood dust exposure. If breathing has stopped or is difficult, administer artificial respiration or oxygen. Seek medical aid if symptoms persist.

EYE CONTACT: Gently flush any particles from the eyes with large amounts of water for at least 15 minutes. **DO NOT RUB THE EYES.**

SKIN CONTACT: Rinse skin free of material with water to avoid abrasion of skin. **DO NOT RUB** until skin is free of material then wash thoroughly with soap and water.

INGESTION: Rinse the victim's mouth out with water. Induce vomiting only if directed by a physician or at the advice of a poison center.

NOTE TO PHYSICIAN: If one ounce of treated wood dust per 10 lbs. of body weight is ingested, acute arsenic intoxication is a possibility.

SECTION V: FIRE FIGHTING MEASURES

Flash Point	Not Applicable
Auto-ignition	Not Available
Lower Explosive Limit	Not Applicable
Upper Explosive Limit	Not Applicable

EXTINGUISHING AGENTS: Use water, dry chemical, or other common extinguishing media.

FIRE-FIGHTING PROCEDURES: Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing harmful fumes and/or gasses including oxides of carbon and nitrogen. Wear complete fire service protective equipment, including full-face National Institute of Occupational Safety and Health (NIOSH)-approved self-contained breathing apparatus.

FIRE AND EXPLOSION HAZARD: High airborne levels of wood dust may burn rapidly in the air when exposed to an ignition source.

SECTION VI: - ACCIDENTAL RELEASE MEASURES

Spill or leak Procedures (Product): Not Applicable.

SECTION VII: - HANDLING AND STORAGE

STORAGE CONDITIONS: Protect from physical damage. Maintain good housekeeping.

CAUTION: Do not burn treated wood. Whenever possible, sawing or machining treated or untreated wood should be performed outdoors to avoid accumulations of airborne wood dust.

SECTION VIII: - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Not required under normal use conditions. When sawing or cutting treated or untreated wood, wear an NIOSH-approved dust mask.

EYE PROTECTION: Wear safety glasses with side shields or safety goggles when sawing or cutting.

SKIN/FOOT PROTECTION: When handling wood, wear leather or fabric gloves, long sleeve shirt, long pants and steel-toed safety shoes/boots.

VENTILATION: Saw or machine wood in open (outdoor) or well ventilated areas. Provide sufficient ventilation to maintain inhalation exposures below OSHA PEL for particulate.

HEARING PROTECTION: Wear ear plugs or earmuffs when power sawing and/or cutting wood.

SECTION IX: - PHYSICAL AND CHEMICAL PROPERTIES

Appearance.....	Slightly green colored	Odor.....	None
Physical State.....	Solid	pH.....	N/A
Vapor Pressure.....	N/A	Vapor Density (Air = 1).....	N/A
Boiling Point.....	N/A	Melting Point.....	N/A
Solubility in Water.....	Insoluble	Specific Gravity (Water = 1) ..	N/A.

SECTION X: - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY: None known.

INCOMPATIBILITY: Strong acids, open flame and oxidizers.

HAZARDOUS REACTIONS / DECOMPOSITION / COMBUSTION PRODUCTS: Contact with strong acid may release metals. Combustion products may include smoke, oxides of carbon and nitrogen, chrome, copper and arsenic. The metals may remain in the ash if the wood is burned.

HAZARDOUS POLYMERIZATION: Does not occur.

SECTION XI: - TOXICOLOGICAL INFORMATION

STUDY ABSTRACTS: In Hawaii, where over 45,000 homes have been built almost entirely of CCA-treated wood, a study was conducted by the Pacific Biomedical Center of the University of Hawaii (the Budy-Rashad study) in 1977 to determine any possible effect on the health of carpenters. The study concluded that exposure to CCA-treated sawdust is not associated with increased risk of total cancer, lung cancer or lymphatic cancer and shows that excess respiratory cancer mortality was not observed in the carpenters. A study was conducted by the University of Alabama to evaluate the teratogenicity of CCA-impregnated sawdust when exposed to rabbits and mice. Sawdust from CCA-treated wood has been shown not to cause chromosome damage or teratogenicity in mice fed sawdust nor to cause birth defects in rabbits receiving sawdust applied to their skin. A series of reports released in 1990 from the Consumer Product Safety Commission (CPSC) assessed the risk of cancer to children playing on CCA-treated wood playground equipment. Seven playground equipment samples were collected. The results of the study indicated the approximate risk of cancer from five samples was less than one in a million, a risk considered negligible. The remaining two samples yielded estimated risks of 3-4 in a million, also considered by CPSC to be a small risk.

CARCINOGENIC STATUS: IARC, the NTP, OSHA and California Proposition 65 do not consistently distinguish among arsenic or chrome species but list inorganic arsenic and chromium and certain chromium compounds as human carcinogens. Cancers in humans have followed from long term: consumption of Fowler's Solution, a medicinal trivalent arsenical; inhalations and skin contact with inorganic trivalent arsenical sheep-dust; the combined inhalation of arsenic trioxide (trivalent arsenical), sulfur dioxide, and other particulates from ore smelting in arsenic trioxide production; and occupational exposure to nonwater-soluble hexavalent chromium. IARC has classified untreated wood dust as a Group I human carcinogen.

WARNING : This wood contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. (This statement issued in accordance with California Proposition 65).

SECTION XII: ECOLOGICAL INFORMATION

STUDY ABSTRACTS: A technical paper published in the Forest Products Journal (September, 1974) by Levi, Huisingsh and Nesbitt described a study conducted to determine if CCA wood preservative in grapevine support posts might be absorbed by the vines, leaves and/or grapes. This study concluded that "... CCA preservatives are bound in wood, are not readily leached and are not concentrated in plants growing close to the treated wood." The Springborn Laboratories Environmental Sciences Division in 1993 conducted a sediment exposure study using leachate from CCA treated and untreated marine pilings and exposing *Ampelisca abdita* for a period of 10 days. Survival of the organisms during the 10-day exposure period was the biological endpoint used to establish the effects of exposure. Results indicated that leachate from treated pilings had no adverse effect on organism survival. It was concluded that the primary constituents of the CCA-treated wood piling were not present in the leachate at concentrations, which would adversely affect the survival of the organisms. Hickson Corporation conducted tests to evaluate treated wood used in raised vegetable gardens. Vegetables harvested from gardens in raised bed structures built of CCA-treated wood were compared with vegetables grown in untreated raised bed structures and with vegetables purchased at a local grocery store. Testing revealed that all vegetables contained minuscule amounts of each element in CCA. In some cases the levels of metals were actually higher in the vegetables grown in untreated bins, and in one case the store-purchased vegetable had the highest level of arsenic. The report concluded that there was "no uptake of the metal constituents into the vegetables." The Food and Drug Administration's (FDA) "Market Basket Survey" has consistently shown that arsenic

in tomatoes is below the analytical level of detection despite the increased usage of arsenically-treated wood for tomato stakes. Moreover, even though CCA-treated wood has been increasingly used in applications such as cattle bunks and stalls and poultry brooders for the last ten years, the FDA survey has shown a decrease in the arsenic content of dairy, meat and poultry products. A study funded in part by the National Oceanic and Atmospheric Administration (NOAA) and prepared by the Marine Resources Division of the South Carolina Department of Natural Resources in 1995 measured the impact of wood preservative leachate from docks in an estuarine environment. Copper, chromium, arsenic, and polynuclear aromatic hydrocarbons (PAHs) were measured in composite samples of sediments and naturally occurring oyster populations from creeks with high densities of docks, and from nearby reference creeks with no docks. Sediments from all but one site had metal and total PAH concentrations, which were below levels reported to cause biological effects and the oysters, showed no significant difference in their physiological condition. Bioassays were also conducted on four common estuarine species and hatchery-reared oysters. The results suggest that wood preservative leachates from dock pilings have no acutely toxic effects on these common species, nor do they affect the survival or growth of juvenile oysters over a six-week period. In some cases, metal leachates may accumulate in sediments and oysters immediately adjacent to pilings, but do not appear to become concentrated in sediments or oysters elsewhere in the same creeks.

SECTION XIII: - DISPOSAL CONSIDERATIONS

DISPOSAL GUIDANCE: Do not burn treated wood. Dispose of in accordance with local, state and federal regulations. Treated wood may be disposed of by regular disposal based on the exemption under 40 CFR 261.4(b) (9). This product is not defined as an US-EPA hazardous waste under 40 CFR 261. 4(b) (9). This product is exempted as a hazardous waste under any sections of the Resource Conservation and Recovery Act (RCRA) regulations as long as the product is being utilized for its intended end use as stated in 40 CFR 261.4(b) (9). State-run hazardous waste programs may be more stringent than the federal requirements.

SECTION XIV: - TRANSPORT INFORMATION

DOT HAZARDOUS MATERIAL CLASSIFICATION: This material is not regulated as a hazardous material by the Department of Transportation (DOT).

SECTION XV: - REGULATORY INFORMATION

OSHA: This product is regulated by the Occupational Safety and Health Administration (OSHA) under the Hazard Communication Standard (29CFR1910.1200).

RCRA: This product is exempted as a hazardous waste under any sections of the Resource Conservation and Recovery Act (RCRA) regulations as long as the product is being utilized for its intended end use as stated in 40 CFR 261.4 (b) (9).

SUPERFUND (CERCLA/SARA) (40 CFR 302.4, 370, 372) If the wood products are treated with levels of preservative not typically used in consumer products, then the wood products in storage must be counted in the threshold determination as required under Sections 311 and 312 of EPCRA. SARA Section 313 chemicals: Arsenic, Chromium and Copper compounds.

SECTION XVI: - OTHER INFORMATION

Refer to the Consumer Information Sheet (CIS) for additional information on this product. While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Wood Treaters, Inc. and Hickson Corporation make no guarantee or warranty, expressed or implied, as to the accuracy, reliability, or completeness of the information.

MSDS: F4, 12/98

Appendix B

Recent Availability Schedule for ACQ Treated Wood

As of January 15th, 2003, one manufacturer notes the following products available:

Dimensions	Lengths
2 x 4	12'
	16'
2 x 6	12'
	16'
2 x 8	12'
	16'
2 x 10	12'
	16'
2 x 12	12'
	16'
4 x 4	12'
	16'
4 x 6	8'
6 x 6	8'
6 x 8	8'

Note: The same manufacturer suggests that advantages of ACQ treated wood are:

- Less hazardous than CCA
- Kid, garden, and wetland safe
- No heavy metals or toxic leaching
- Disposed with ordinary trash collection and can be burned
- Can be easily painted and stained
- Performs just the same as CCA lumber
- Priced comparable to CCA

Note: Trials in the Huntington District on ACQ pressure treated wood products is unknown to CELRH-OR-E, and therefore, the accuracy of the stated advantages has not been ascertained.

Appendix C

Local Manufacturers and Retailers of Preserve® Lumber, treated with ACQ®

Note: This listing contains manufacturers and retailers within 175 miles of Huntington, West Virginia, which deal in Preserve® Lumber, treated with ACQ®. The responsiveness or suitability of these manufacturers and retailers for use by the Huntington District US Army Corps of Engineers is unknown to CELRH-OR-E at this time.

Manufacturers are listed in grey.

If a retailer is not in your area, then products can also be specially ordered through your local lumber supplier from a manufacturer of that product.

Odell True Value Lumber

61 Vine Street
Gallipolis, OH 45631
740-446-1276

Dealer Type: **Retailer**

Product Type: Preserve, Preserve Plus

Big Sandy Hardwoods

Box 610
Kermit, WV 25674
304-393-3328

Dealer Type: **Manufacturer**

Product Type: SupaTimber

McArthur Lumber and Post

31310 State Route 93
McArthur, OH 45651
740-596-2551

Dealer Type: **Manufacturer**

Product Type: UltraWood, Preserve, Preserve Plus, SupaTimber

Acme Wood Preserving, Inc.

P.O. Box 1717
Princeton, WV 24740
304-425-8769

Dealer Type: **Manufacturer**

Product Type: SupaTimber

Ed Arey & Sons

P.O. Box 206
Buchannon, WV 26201
304-472-3506

Dealer Type: **Manufacturer**

Product Type: SupaTimber

Johnson Doppler Lumber
3320 Llewellyn Avenue
Cincinnati, OH 45223
513-541-0050

Dealer Type: **Retailer**
Product Type: UltraWood

Laurel Treated Wood Products, Inc.
4834 Somerset
London, KY 40741
606-878-8645

Dealer Type: **Manufacturer**
Product Type: SupaTimber

Savin Lumber
35 Turkey Run
Buckhannon, WV 26201
304-472-8485

Dealer Type: **Manufacturer**
Product Type: SupaTimber

Requarth Lumber Company
447 East Monument Avenue
Dayton, OH 45402
937-224-1141

Dealer Type: **Manufacturer**
Product Type: D-Blaze

Erwin Industries, Inc.
P.O. Box 100
Bulls Gap, TN 37711
423-235-4131

Dealer Type: **Manufacturer**
Product Type: SupaTimber

Mountain Lumber Company
9877 NC Highway 105 South PO
Box 1813
Boone, NC 28608
828.898.8545

Dealer Type: **Retailer**
Product Type: Preserve, Preserve Plus

Cherokee Wood Preservers, Inc.
P.O. Box 68
Mosheim, TN 37818
423-422-6011

Dealer Type: **Manufacturer**
Product Type: UltraWood, SupaTimber

Georgia-Pacific

5353 South D Street
Richmond, IN 47374
765-962-4354/334-269-9663 Ext.
321

Dealer Type: **Manufacturer**
Product Type: Preserve Plus

Southeast Wood Treating, Inc.

5353 South D Street
Richmond, IN 47374
765-962-4354

Dealer Type: **Manufacturer**
Product Type: SupaTimber

Blue Ridge Wood Pres. Inc.

P.O. Box 39
Moneta, VA 24121
540-297-6607

Dealer Type: **Manufacturer**
Product Type: SupaTimber

Northwood Lumber Inc.

8859 East Lincoln Way
Orrville, OH 44667
330-683-2508

Dealer Type: **Retailer**
Product Type: UltraWood
