



COMPETITIVE ENTERPRISE INSTITUTE

October 16, 2003

Office of the Secretary
U.S. Consumer Product Safety Commission
Washington, D.C. 20207

RE: Information Quality Guidelines

Dear Secretary:

Please consider the following a Request for Correction pursuant to the Federal Data Quality Act (FDQA, enacted as Section 515 of the Treasury and General Government Appropriations legislation of FY2001, 44 U.S.C. 3502). It is submitted on behalf of the Competitive Enterprise Institute (CEI). CPSC included inaccurate information in its Memorandum: "HP 01-3 Petition to Ban the Use of CCA-Treated Wood in Playground Equipment," dated September 29, 2003 and reviewed and accepted by the commission on October 9, 2003.

That memorandum is posted on the Commission webpage at <http://www.cpsc.gov/library/foia/foia04/brief/chromate.pdf>. It responds to public comments on the Environmental Working Group petition to ban the use of wood treated with chromated copper arsenate (CCA) for playground equipment.

FDQA requires that information disseminated by covered agencies including CPSC be of "quality," which is defined as requiring "objectivity, integrity, and utility." CPSC's data quality guidelines assert that objectivity "involves a focus on ensuring that the information is accurate, reliable, and unbiased and that information products are presented in an accurate, clear, complete, and unbiased manner." However, CPSC's posted response to public comments includes, and thereby disseminates, a purported summary of my June 12, 2003 letter to Patricia Bitner that is neither accurate nor complete. In fact, by omitting key information asserted in the June 12 letter, CPSC's summary is misleading and undermines the credibility of my statements. Furthermore, it violates FDQA's integrity requirement by incorrectly filtering the content to alter the meaning and thereby vitiating the intended utility of the information presented.

The attached letter is referred to on page 12, in the section numbered 13 of the CPSC document. In disseminating a purported summary of my comments CPSC completely omits information in the third paragraph of my letter — more than half of the letter's text and on its face the most important information. CPSC made it appear as if my conversation with Kent Knutson was the

only documentation that I presented in the letter to address the problems that Home Depot and Lowes had selling alternatives to CCA-treated wood. After noting that conversation, CPSC states: "Ms. Logomasini also stated that Lowes and Home Depot continue to have problems selling CCA-treated wood and that alternatives now are only available by special order and are not being stocked in the stores as planned. She provided no additional information to support this statement."

CPSC staff does cite a March 2003 article that I provided, but they only noted information that they contended undermines my findings. CPSC staff quotes a Home Depot representative who claimed there was market demand for the wood. CPSC staff ignored the fact that the article noted that the wood was only available by special order — hence it was not stocked in the store as Home Depot announced it would be in 2002. Home depot had announced in 2002 that it was stocking the wood in its stores; but by 2003 it reported to the press that the wood was available by "special order" rather than in store supplies.

But my letter to Patricia Bitner included more important, additional details and documentation that explain why the wood is not was stocked in the stores in March 2003. Problems with the wood were so substantial that stores returned the product to the wood processors in 2002. This documentation was completely omitted from CPSC summary. I noted in the letter that I had a conversation with Ed Harris, a consulting engineer who works for many wood treatment facilities. He informed me of serious problems with the wood as conveyed to him by the wood processors themselves. Harris documented those problems in an article that I enclosed with the letter to Patricia Bitner. It notes that the wood was returned the wood to processors because of serious mold problems. His findings are worth quoting at length here:

By the middle of 2002 things were settling down; the industry had gotten over most of its announcement shock and most treaters were putting in their plans for converting their facility to ACQ or CA. Several wood treating plants converted to ACQ or CA and were producing product. A few treaters were producing wood treated with EnviroSafe or ACC. The two "Big Boxes" (Home Depot and Lowe's) were courted to place "new generation" (ACQ and CA) treated wood in their facilities. At the end of 2002, plans were made to place new generation treated wood into at least one of the "Big Boxes" around the start of 2003. This would have given the new generation wood products the launch they needed.

But wood that was treated with the new generation chemicals and shipped experienced a major problem: Mold! To the amazement of the treaters that had stepped forward and produced and sold new generation treated wood products, there was a significant problem with white mold appearing on their products. The mold problem was widespread and occurred on both ACQ and CA treated wood. Treaters that supplied KDAT (kiln dried after treatment) new generation treated wood had fewer problems. Millions of board feet of new generation treated wood that had been shipped and molded was returned.

The mold problem devastated the market for new generation wood. The "Big Boxes" both delayed the majority of their plans to place new generation wood into their stores until the end of 2003 or the beginning of 2004. Except for a few regional market areas, the market for new generation treated wood appears to be on hold until late in 2003 [emphasis added]. A lot of good treaters were stung by the mold problem.

Several treaters have gone back to treating with CCA at their converted plants to stay in business and will have to bear the additional expense of cleaning their plants again when and if they re-convert. All of the

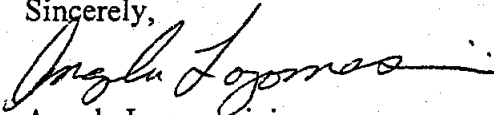
original projections for the sale of new generation wood treatment products and the conversion of treating plants appear to have gone out the window.

The producers of ACQ and CA continue to pursue a solution to the mold problem. To date, the answer to dealing with the mold problem is to dramatically increase the amount of mold inhibitor (moldicide) in ACQ and CA. In many cases, this is as much as 10x what was needed with CCA. Treating plant operators and personnel are very concerned with both the added cost and safety of the increased levels of moldicide that have been recommended. Treaters tell me that the moldicides are the most expensive and the "most toxic" chemical in their plants.

CEI requests that CPSC correct the information purporting to accurately summarize my findings as inaccurately presented in their October 9 response to comments. The law does demand that CPSC make this letter and the prior letter and all enclosures available on their website along with other CCA information, although it is self-evident that merely maintaining the information which proves the inaccuracy of other, CPSC-originated information, is not sufficient to constitute correction or justify violation of FDQA's requirements.

Enclosed with this letter is a copy of my original letter and its enclosures. I look forward to your assistance.

Sincerely,

A handwritten signature in dark ink, appearing to read "Angela Logomasini", with a stylized flourish at the end.

Angela Logomasini
Director of Risk and Environmental Policy
Competitive Enterprise Institute



COMPETITIVE ENTERPRISE INSTITUTE

June 12, 2003

Patricia Bittner
Consumer Product Safety Commission
4330 East West Highway
Bethesda, Maryland 20814

Dear Ms. Bittner:


The following should answer your question regarding where I learned that Home Depot stopped stocking wood treated with alternatives to the preservative chromated copper arsenate (CCA). I confirmed with the Home Depot Washington Office¹ that the company had problems selling the alternatives and hence returned to selling CCA. We didn't discuss it much beyond that.

Home Depot and Lowes continue to have problems marketing alternatives. Alternatives are now only available by "special order," rather than being stocked in the stores as originally planned. For example, I am including an article from the March 21 issue of the *Detroit News*. It demonstrates that CCA markets remain so robust that Home Depot and Lowes will continue to stock wood made with it instead of the alternatives until consumers are forced to buy other products via the CCA ban.

I received additional information on the situation from Ed Harris, a registered professional engineer who provides services to 50 CCA wood treatment plants.² On February 18, 2003, I spoke with Mr. Harris over the telephone. He explained to me that after Home Depot and Lowes decided to sell the alternatives to CCA, they had problems selling the wood because the quality of the alternative products proved inferior to CCA. In particular, alternatives not only more expensive, they quickly became moldy (while in stock, before sale). Stores returned moldy wood to the wood processors who had to add additional moldicides to reduce that problem, which increased the price further and raised new safety issues for workers who process the wood. It is my understanding that Mr. Harris learned this information in his dealings with wood processors who had the wood returned to them from Home Depot and other stores. Ed Harris recently documented his findings in an article for *Timber Processing* magazine, which I am enclosing for your review as well.

Thanks for following up on this issue.

Sincerely,



Angela Logomasini

Enclosures (2)

¹ In person meeting with Kent Knutson, Vice President for Government Relations on December 16, 2002.

² This is how Mr. Harris identifies himself in comments to the Environmental Protection Agency dated March 21, 2002; docket control number OPP-66300.



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SPORTS

Friday, March 21, 2003



David Guralnick / The Detroit News

Mike Noble of Lincoln Park picks out a piece of lumber while shopping at Lowe's in Southgate. Lowe's now sells pressure treated lumber that is not treated with chromate, copper and arsenic, which have been linked to cancer.

Safer treated lumber offered

Lowe's provides CCA alternative in advance of deadline

By Eric Pope / Special to The Detroit News

SOUTHGATE -- As the deck building season gets under way, Lowe's Corp. stores in Metro Detroit are trying to get the jump on competitors by selling a new type of treated lumber, but it could cost the retailer some profit margins.

The change comes because the U.S. Environmental Protection Agency has ordered lumber producers to stop treating wood for outdoor use with the preservative chromated copper arsenate, or CCA, which some studies have shown to be a carcinogen, by the end of this year. Retailers such as Lowe's and Home Depot must end their purchases of the product, also by the end of the year.

Pressure-treated wood is used in outdoor applications, such as in decks and

CCA safety

Here are tips from www.ccasafetyinfo.com for using lumber treated with chromated copper arsenate (CCA):

- Avoid prolonged inhalation of sawdust.
 - Wear gloves while working with the wood.
 - Wash work clothes separately.
 - Remove all sawdust and construction debris.
 - Don't burn wood in open fires or in the home.
- Source: American Wood Preservers Institute
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Industry experts expect the new non-arsenic, or ACQ, treated lumber to cost as much as 20 percent more, but that's not the case at the Lowe's store in Southgate, which is matching Home Depot's pricing for CCA-treated lumber.

"Lowe's has worked very hard to make ACQ available in advance of the EPA deadline because our customers wanted the alternative right away," said a spokesman at the Lowe's national headquarters in Wilkesboro, N.C. He would not comment on pricing.

Home Depot will make the transition to the non-arsenic lumber in the Detroit area by November, and it's supposed to be available by special order now, according to a Home Depot spokesman at the Atlanta headquarters. He said there is still a strong demand for the old type of lumber, which has been used for residential construction since the 1930s and for playgrounds and decks since the 1970s.

The Home Depot spokesman said producers are expected to charge 15-20 percent more for non-arsenic lumber, but he didn't rule out a price war with Lowe's at the retail level.

"Once it gets in the store, obviously we will price it competitively against other retailers," he said.

John's Lumber, an independent retailer in Clinton Township, won't be changing over its lumber until later in the year.

"We're going into this year's deck season with the CCA product," said John's Lumber sales manager David Stoutenger. "We'll probably change over when we clean out our inventory in the summer."

Stoutenger expects the non-arsenic treated lumber to cost 20 percent more, and his main concern about the transition is giving contractors -- who make up 92 percent of his business -- enough advance notice to make adjustments in their bids. He reported that so far, customers are willing to buy CCA-treated lumber after reading information about the product.

Last month the Consumer Product Safety Commission, an independent federal agency, announced the results of a study that showed CCA can be a carcinogen. Out of every one million children exposed to CCA-treated lumber an average of three times a week, between two and 100 might develop lung or bladder cancer, the study concluded.

Last August, the Environmental Working Group reported the amount of arsenic found on the surface of CCA-treated lumber exceeds safe levels even after years of wear.

In February 2002, when the agreement was reached with lumber producers, the EPA said CCA-treated lumber posed no "unreasonable risks" to the public. The EPA said there wasn't enough evidence to warrant the removal of existing structures made with CCA-treated lumber. However, a new EPA report on CCA's health risks is due later this year.

While the safety commission has determined that CCA poses a cancer risk to children, it has not acted on a petition to ban CCA-treated lumber. The commission's staff recommends such a decision be deferred until after the EPA and producers reach a final agreement on the phaseout.

Eric Pope is a Metro Detroit free-lance writer.

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Friday, March 21, 2003

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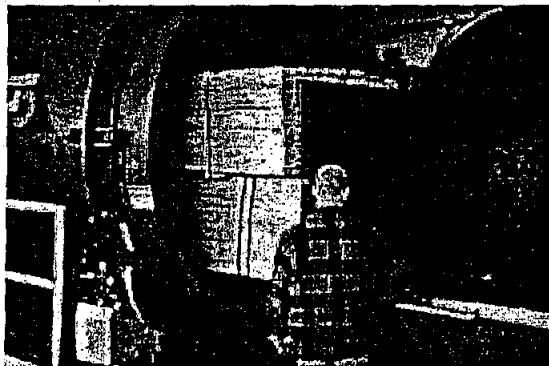
Deep In Chemicals

A consultant analyzes the transition to new preservatives the wood treating industry is undertaking.

By Ed
Harris
April 2003

On February 12, 2002, the Environmental Protection Agency (EPA) made an announcement that was a bombshell to most wood treaters using Chromated Copper Arsenate (CCA): The treating industry would be moving consumer use of treated lumber products for residential applications away from pressure-treated wood that contains arsenic in favor of wood treated with "new alternative wood preservatives."

CCA had weathered several earlier efforts to bring about its replacement by new "alternative" wood treating chemicals. There were growing pressures from environmental groups to eliminate CCA; there were lawsuits that for the most part were frivolous. The industry was anxiously awaiting the publication of the EPA's Children's Risk Base Assessment Study for CCA treated wood products. It was felt that the study would, once and for all, define the safety or danger of CCA treated wood and allow the industry to plan for its future. (The study has still to be completed.)



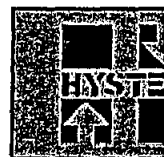
The bullet that was not seen coming and could not be dodged, which led to EPA's announcement, was the request by the four companies who held the registration to manufacture CCA for universal use in treating wood to voluntarily change their registrations and eliminate the use of CCA to treat most residential use wood products. It appears that most, if not all, of the proposed registration changes requested will take place. The final date for the changes to occur is December 31, 2003.

The EPA/Federal Register document announcing the request entitled "Notice of Receipt of Requests to Cancel Certain Chromated Copper Arsenate (CCA) Wood Preservative Products and Amend to Terminate Certain Uses of CCA Products" provided the opportunity for comments

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by the industry and the public on the proposed changes to the registration. The EPA received more than 9,000 pages of comment. The majority of the comments came from the wood treating industry with some comment from environmental groups and private citizens.

Due to the unexpected amount of comment it received, EPA extended the comment period an additional 30 days beyond the original 30-day period. EPA has been working hard to sort through, read and categorize these comments, and intends to officially respond to the comments. The release of this response has been delayed several times, but is due soon. EPA has made field trips to lumber treating plants and post treating plants to help it make the right decisions and recommendations on issues addressed by the comments.

At the time of the EPA announcement, my survey of the wood treating industry indicated that the great majority of the industry had little to no idea that the registration-change actions were going to occur. There had been little or no warning from within the industry or by industry trade associations. There was great concern and confusion within federal (EPA) and state regulatory agencies as to why this had happened and how they would deal with product category enforcement and treating plant "conversion" issues.

To its credit, EPA immediately began and continues to work hard on all the conversion and enforcement issues. Immediately after the announcement and for the next several months there was a lot of frustration, confusion, disappointment and anger within the industry brought on by the situation and the manner in which it occurred. By mid 2002, things had settled down a bit and everyone began to plan for their conversion to one of the new generation wood treatment products.

NEW GENERATION

There are two new generation wood treatment products currently being manufactured, distributed and used that are supplied by the current CCA registration holders. Alkaline Copper Quaternary (ACQ) is manufactured and distributed by Chemical Specialties (CSI) and Osmose. Copper Azole (CA) is manufactured and produced by Arch Wood Protection. Both ACQ and CA are arsenic- and chromium-free. Both products have multiple times the copper as CCA. Specific information on the chemistry of these products is available from the manufacturer.

There are two other "non-arsenic/non-hazardous" wood treatment products now being used. EnviroSafe Plus is a new generation wood preservative manufactured by EnviroSafe using borates. EnviroSafe Plus is available through EnviroSafe of Clermont, Fla. The new kid on the block, Acid Copper Chromate (ACC), is really an old re-birthed chemical that is a lot like CCA and is gaining a lot of interest. Plans are in place to make ACC available through at least one of the current CCA producers/distributors.

There are likely to be additional new generation products that will appear in the future. I have been made aware that there are other chemical companies that are taking a look at producing wood treating chemicals. The current CCA manufacturers and producers of the new generation products are already advising the industry that the current products (ACQ and CA) are temporary and that they will have another generation of products out within three to five years (probably natural/organics). The market is new. CCA's product life cycle had created a low cost, widely used product that had previously made entry of new alternatives unattractive. That has now changed.

MARKET TROUBLES

The EPA / Federal Register "Notice" document included a vision by the registrants of what the future would be for new generation wood treatment products. EPA requires such information from the registrants. The future has not turned out to be exactly what was envisioned.

The registrants forecasted that during the first year following acceptance of the amendments by EPA, sales of new generation wood treatment products were likely to increase to 15% to 25% of the total historic sales markets (1999-2001) for non-industrial treatment categories and were estimated to increase to 60% to 70% of the same market during the second (and final) year following acceptance of the amendment. The EPA clock started on February 12, 2002 and runs out on December 31, 2003. I believe that except for a string of several very unfortunate and unpredicted events, this could have happened.

By the middle of 2002 things were settling down; the industry had gotten over most of its announcement shock and most treaters were putting in their plans for converting their facility to ACQ or CA. Several wood treating plants converted to ACQ or CA and were producing product. A few treaters were producing wood treated with EnviroSafe or ACC. The two "Big Boxes" (Home Depot and Lowe's) were courted to place "new generation" (ACQ and CA) treated wood in their facilities. At the end of 2002, plans were made to place new generation treated wood into at least one of the "Big Boxes" around the start of 2003. This would have given the new generation wood products the launch they needed.

But wood that was treated with the new generation chemicals and shipped experienced a major problem: Mold! To the amazement of the treaters that had stepped forward and produced and sold new generation treated wood products, there was a significant problem with white mold appearing on their products. The mold problem was widespread and occurred on both ACQ and CA treated wood. Treaters that supplied KDAT (kiln dried after treatment) new generation treated wood had fewer problems. Millions of board feet of new generation treated wood that had been shipped and molded was returned.

The mold problem devastated the market for new generation wood.

The "Big Boxes" both delayed the majority of their plans to place new generation wood into their stores until the end of 2003 or the beginning of 2004. Except for a few regional market areas, the market for new generation treated wood appears to be on hold until late in 2003. A lot of good treaters were stung by the mold problem. Several treaters have gone back to treating with CCA at their converted plants to stay in business and will have to bear the additional expense of cleaning their plants again when and if they re-convert. All of the original projections for the sale of new generation wood treatment products and the conversion of treating plants appear to have gone out the window.

The producers of ACQ and CA continue to pursue a solution to the mold problem. To date, the answer to dealing with the mold problem is to dramatically increase the amount of mold inhibitor (moldicide) in ACQ and CA. In many cases, this is as much as 10x what was needed with CCA. Treating plant operators and personnel are very concerned with both the added cost and safety of the increased levels of moldicide that have been recommended. Treaters tell me that the moldicides are the most expensive and the "most toxic" chemical in their plants.

CONVERSION

The EPA announcement of the impending changes has brought about a flurry of activity within the industry to figure out marketing strategies and conversion strategies for each individual treating facility. Early on, it was thought that conversion might be straightforward and reasonable in cost. This has not been the case.

Both the new ACQ and CA products (due to corrosion) require the removal of all brass, bronze, copper and aluminum process equipment from the treating plant. ACQ and CA are not chemically compatible with CCA and require a comprehensive and thorough cleaning (including tank de-scaling) of the facility and drip pad. The delivered concentrate solution for ACQ and CA is much lower than CCA. This has required the addition of new tanks to make delivery and process use of the chemicals feasible. ACQ requires the addition of a "quat injection system." CA requires the addition of agitators to keep the solution mixed properly. Both have come to require significant amounts of mold inhibitor to avoid mold problems. Overall, based on experience from treaters I work with, the cost of conversion for either ACQ or CA has been about the same. To date, there have been about 40 treating plants that have converted from CCA to either ACQ or CA. There are two treaters that have switched from one chemical formulation to another to try both.

To the best of my knowledge, there is one treater that is now using the EnviroSafe product. The plant is in Florida, close to the manufacturer. EnviroSafe uses borate solutions for treating. It is not directly compatible with CCA and requires a thorough cleaning for conversion. Because it uses borates, replacement of plant equipment (due to corrosion) should not be necessary. Product appearance is quite different than CCA; it looks very natural.

ACC is an old product, a pre-cursor to CCA. In their search for an alternative treating chemical, five independent treaters began using ACC by mixing it themselves. ACC is directly compatible with CCA and minimizes conversion cleanup. Like CCA, it does not have any significant corrosion problems. Process equipment (bronze, brass, copper and aluminum) does not have to be replaced. Treaters using ACC tell me it treats like CCA and does not require any additional mold inhibitor than CCA. There is at least one major wood treater that plans to use ACC. Plans are in place to make ACC available through at least one of the current CCA producer/distributors.

While there are approximately 40 treating plants that have undergone conversion to treating with the new generation chemicals, there are more than 300 treating plants that will probably need to convert. The math here suggests that as of February with more than 300 plants remaining to be converted and only 10 months remaining until December 31, 2003, the industry needs to average converting 30 plants per month to get everyone converted on time. An average conversion has been taking four to six weeks to complete. This is an overwhelming amount of work to be done with little time left to do it.

Conversion of a CCA treating plant to ACQ or CA requires all mechanical components (pumps, valves, sight gauges, etc.) that are made of bronze, copper, brass or aluminum to be replaced with stainless steel components. There are also compatibility concerns with rubber and polymer seals that will require replacement of these components. The extent of equipment replacement significantly varies with the type of treating plant being converted. Plants that use pumps to transfer process liquids will have higher replacement costs than plants that use air/vacuum transport systems. Treating plants should not have to replace carbon steel process piping. Most treating plants will elect to install additional chemical storage/mixing tank capacity to manage the new chemicals. ACQ and CA require the addition of mold inhibitor products and the equipment to insert this into the process if the plant does not already have this equipment

Based on completed conversion work that I have been associated with, conversion costs have been ranging between a low of \$45,000 \$50,000 for simple straightforward conversions at air/vacuum system plants to a high of \$150,000 (and up) at other treating plants.

A reasonable budget for a single cylinder average size treating plant conversion might be:

- * Removal of solid wastes and disposal: \$7,500
- * Cleaning, rinsing, flushing of equipment and transport of liquids to another plant: \$10,000
- * Cleaning, rinsing of drip pad/tram/pits and transport of liquids to another plant: \$7,500
- * Replacement of equipment (pump plant): \$30,000

* Lab tests and analysis work (compatibility): \$2,000

* Professional Engineer Fees/Reports \$3,000

Costs for Basic Work \$60,000

* Additional items required or desired for plant conversion--tanks, agitator, mold inhibitor systems: \$40,000

Reasonable Budget: \$100,000

Conversion of an existing treating plant to ACC or EnviroSafe would eliminate the cost of equipment replacement due to corrosion problems. In the case of converting to ACC, the same equipment would be used (no additional tanks, etc. needed). I would assume the same for EnviroSafe.

The actual conversion process for converting a CCA facility to an alternative chemical includes:

* Collection and transfer of all recyclable treating chemicals and mixed chemical/water solutions to another operating treating plant for recycled use into their systems. As an option, a plant can work down its treating chemicals and process solutions to a very low amount and then dispose of the remaining liquids. Disposal of liquid wastes is not desirable or easy to do. At this point, we are fortunate that EPA and state agencies are allowing the transfer of treating plant liquids to other operating treating plants.

* Collection/removal, characterization and proper disposal of all solid F035 hazardous wastes. These solid wastes must be removed from all process tanks, piping and equipment as well as the drip pad, interceptor pit Subpart J steel box system. For now, cleaning of secondary containment concrete and equipment outside the "closed loop" system is not a requirement.

* Thorough cleaning, rinsing and flushing of all process tanks, treating cylinder(s), piping and equipment associated with the treating plants closed loop treating process. Cleaning is accomplished by a series of washes and rinses using high pressure water or water/cleaning solutions compatible with the new treating solutions and CCA. Some tanks and equipment may need to be scrubbed or de-scaled to remove scaling and deposits. Collection, filtering out of solids and transfer of all cleaning and rinse waters to another operating treating plant for recycled use into their systems.

* Thorough cleaning, rinsing and flushing of the drip pad, tram tracks, Subpart J steel interceptor pit box system and all containment associated with the treating plants closed loop treating process. Collection, filtering out of solids and transfer of all cleaning and rinse waters to another operating treating plant for recycled use into their systems.

* For most of the treating plant conversions done so far, the cleaning process has been taken to a level of cleanliness being termed as "Chemical Compatibility." CCA and ACQ or CA don't mix, so you must clean your plant to at least a level where there is not enough CCA remaining to cause a problem. The term "compatibility" has no meaning, at this point, to any current EPA or state cleaning requirement level. This level would not be acceptable for a Clean Closure of a treating plant. Compatibility is a level that has been suggested and employed by the chemical suppliers in assisting treating plants with conversions. The exception to this are treating plants in the state of Florida. Florida is the only state with a published Conversion Guideline (draft form). The treating plant I assisted with conversion in Florida had to clean to a very tough, defined cleaning criteria of drinking water standards @ 5 PPB. Both Florida DEP and the EPA are reviewing this matter carefully.

* For the transfer of all liquids of any form for recycled use at another operating treating plant, it is of major importance that competent and licensed hazardous waste transportation companies do the collection, containment, transfer and re-entry of these liquids. The treating plant must obtain and keep accurate records in the form of manifests or bill of lading that support this work and record the types and volumes of liquids transferred. Most states have published lists of licensed hazardous waste transporters from which to select in doing this work.

* Once all cleaning, flushing and rinsing of all process equipment is completed, there are several mechanical conversion requirements that go along with using either ACQ or CA (not with ACC or EnviroSafe). As discussed earlier, both ACQ and CA require all mechanical components (pumps, valves, sight gauges, etc.) that are made of bronze, copper, brass or aluminum to be replaced with stainless steel components along with rubber and polymer seals that may require replacement. The three chemical companies (Arch, Osmose, CSI) are providing a field survey of the needs of individual treating plants as part of their sales and customer service. Treating plants should take advantage of this. As an option, some treating plants have converted and kept their basic equipment in place, allowing observation to be the determining factor for replacement. This is a more risky approach, but it has worked out and saves/spreads out cost as well as using equipment until it fails. Given a choice, I would recommend changing out components before problems arise. At this time, I understand that treating plants do not have to replace carbon steel process piping.

* Concerns have come up about compatibility with the new non-arsenic treating chemicals and drip pad/containment system sealers and joint repair materials. So far, the treaters that I work with have not experienced any compatibility issues. Hopefully, we are home free here.

* The treating plant will, most likely, require additional chemical storage/mixing tank capacity to be installed to manage ACQ or CA chemicals. The recommendation for installing additional tanks may vary depending on which chemical supplier the treating plant is working with. It is my opinion that additional tank capacity will be

required for most treating plants. It is my understanding that, without added tank capacity, chemical delivery will be up to 4x as often as with CCA. Plan for adding tanks!

- * The CA product requires adding equipment to maintain continuous agitation in the mix tank. The ACQ product requires adding "totes" and equipment to inject "quat" into the mixed solution. Both ACQ and CA require the addition of mold inhibitor products and the equipment to insert this into the process.

- * Every treating plant that converts will require additional training of plant operating and management staff on the use and management of any of the new chemicals as well as maintenance training for the plants process equipment after the conversion is completed. The treating plant should obtain specific training and guidance from the chemical supplier selected as to handling and exposure to the new treating chemical selected by plant personnel. This training and guidance should include ingestion, inhalation and dermal exposure effects to humans as well as managing possible risks to animals and aquatic life. I recommend extra caution and training of treating plant personnel until the industry fully understands the new chemicals.

- * As the Registered Professional Engineer of Record for the treaters I work with, I have overseen the conversion process and written a short report documenting the process. This is a requirement in the state of Florida and is recommended by EPA, state agencies and chemical suppliers. This is normal procedure for this type of activity associated with listed chemicals and hazardous waste. Take photos, keep good records of your work and have your PE oversee and sign off on what you do.

OPPORTUNITIES

Several of my treating plant clients are adding another cylinder or even a new plant to treat both CCA and new generation products. I believe there will continue to be strong markets for CCA materials. Obviously, wood treating plants that treat utility poles, plywood, heavy timbers, marine and specialty wood products not subject to the voluntary registration changes will continue to treat with CCA only. Adding another cylinder is a marketing opportunity to look at. If a treating plant adds a cylinder, I would install it as if it were a current CCA plant. This is the best way to protect against future regulatory problem with the new chemicals.

If you have multiple treating cylinders now in place, consider switching one of them to a new generation or alternative treating chemical now to ease into the market. As the market develops, you can then switch your cylinders to the appropriate market mix for your business. There will be a need for CCA materials in the future and fewer places to get them from.

As a stretch, it is possible to use the same treating cylinder and switch between CCA and a new generation or alternative chemical every few

weeks as sales dictate. Thorough cleaning during switch-over is required. I do not recommend this for most wood treaters, but it has been done and it works. I do feel that this practice could eventually create problems for the treater in marketing the wood as "arsenic free." EPA will eventually address the meaning of the term "arsenic free" in its changes to labeling requirements for treated wood.

Several of my treating plant clients have voiced their frustration with the entire situation and brought up just "closing the doors." I understand their frustration and the fact that conversion costs may force the consideration of other options, including closure. Based on the five treating plant closures I have overseen in the past, I feel the cost of a "clean closure" will be much higher than staying in business. Closure involves most, if not all, the same steps as "conversion" does. It also requires removal of all equipment, often the removal of a lot of soils, significant concrete cleaning and a lot of soils/concrete sampling and testing. EPA and state environmental agencies continue to lower the acceptable levels of arsenic (chromium and copper, too) that can remain for "clean closure" to levels that are increasingly expensive to obtain. To me, the best thing to do looks like staying in business.

GUIDELINES

My most recent discussions with EPA relative to publishing of specific guidelines for conversion of wood treating plants from CCA to non-hazardous chemicals indicates that it is still trying to figure out just what to do with the situation that has developed from the "voluntary" request to change the pesticide registration for CCA. The EPA wants to do something reasonable, but also realizes it has responsibility to enforce present RCRA regulations.

The EPA Wood Preserving Resource Conservation And Recovery Act (RCRA) Compliance Guide (June 1996) contains the strongest language that deals with "Switching formulations to Non-hazardous Generating Preservatives"... *"the drip pad must be closed pursuant to applicable regulations (FULL CLEAN CLOSURE) if the wood treater wishes to stop managing the drip pad as a hazardous waste management unit (i.e., complying with Subpart W standards). Closure of a drip pad is not required just because the facility switches chemicals. However, if an owner or operator switches chemicals without first performing RCRA clean closure, the drip pad must continue to be operated as a Subpart W drip pad and all wastewater, preservative drippage, and process residuals subsequently managed on the drip pad must continue to be treated as hazardous waste."*

My discussions with EPA and state environmental agencies is that they do not want to require an expensive and time consuming "full closure" of treating plants that convert from CCA to a non-hazardous treating chemical. EPA is still discussing all of its available options and has asked for comment from within EPA and from state agencies. EPA wants to publish something soon, but the format its response will take is not yet clear. It has put together a grant/study to work with a few selected treaters as they go through their conversion process. This project will pay for the costs associated with the cleanup portions of

the conversion work. The study would be complete by now and guidance published except it fell victim to the hold on treating plant conversions when the new generation wood market disappeared. EPA needs industry's help here! It is trying to come up with the right solution. Please contact the author for information about this program.

To the best of my knowledge, EPA believes the conversion process will not be managed as an "industry wide switch," but rather at the individual plant level. At this time, I feel EPA is still considering several approaches, including:

1. Requiring Clean Closure to change to non-hazardous chemicals based on above RCRA guidance document.
2. Creating a "Partial Closure" capability, with defined cleanup guidelines but continue to require operation of the treating plant under Subpart W and J requirements. This would be similar to the existing Florida FDEP Guidelines for Conversion.
3. Some entirely new way--"Part now and Part later"--this might involve "chemical conversion" work and testing of the solid waste stream for the plant, with generator status changes later after the plant waste stream history shows no CCA.

For all cases, EPA is counting on treating plants that have already converted to remain in full compliance with the requirements of all current 40CFR, Subpart W requirements.

EPA has put its Childrens Risk Base Assessment Study work on CCA back on the front burner and hopes to complete the study by mid-2003. I feel (and have encouraged EPA) that completion of this study is its most important task for the wood treating industry. I urge you to contact EPA and ask it to complete its study in a timely manner.

CORROSION ISSUES

Because of the corrosiveness of ACQ and CA new generation wood treatment products, it is imperative that consumers use at least hot-dipped galvanized and preferably stainless steel fasteners in construction. It is also necessary for treaters to utilize end tag staples that will not corrode off their treated lumber. ACQ and CA suppliers have information available on recommended fasteners. There appears to be a need for a major consumer awareness program for new generation treated wood to assure that construction does not occur with conventional fasteners that could result in failures due to corrosion.

Within the treating plants that I work with that have converted to new generation (ACQ or CA) products, problems with corrosion have occurred. The level of corrosion has varied between the two new products. The most significant corrosion problems occur where the treating chemical is exposed to the atmosphere such as open tanks,

open piping, tram cars, tram car bearings, tram tracks and sump/interceptor pit areas. Some plants have noticed minor corrosion of building components. One plant has even had a problem with corrosion of an aluminum trailer bed from freshly treated (but drip free!) wood loaded in a light rain event.

Overall, the type of plant/equipment corrosion I have observed has been fairly consistent. Both ACQ and CA tend to "strip out" the inside of the treating cylinder and all process piping and tanks. If you have tanks with thin walls or walls with significant CCA slag built up (from age), watch out! Each individual treater will need to be more watchful for signs of equipment corrosion with the new generation products than with CCA. As far as I am aware, there appear to be no corrosion problems with ACC or EnviroSafe alternative treatment chemicals.

DEVELOPMENTS

Early February brought about the somewhat unexpected demise of our industry trade association, the American Wood Preservers Institute (AWPI). This was an unfortunate event. Without an active, truly representative trade association, the industry has no true voice. EPA was surprised by this untimely event and seeks direction as to who now truly represents the industry. I have advised EPA to talk directly to you, the treaters.

Mid-February brought yet another attack on arsenic and treated wood from the Consumer Product Safety Commission. The CPSC has used poor and insignificant data to launch another attack on CCA and the wood treating industry based on the "terrors" of arsenic. I encourage you to obtain a copy of a short article by Steven Malloy (JunkScience.com) published at the FoxNews.com internet site that tells all about this effort. You should also make an effort to respond to CPSC about this. To environmentalists it is not just an issue with CCA, but also an overall issue with pesticides. ACQ, CA, EnviroSafe and are pesticides, too. Are they next?

This is a time, not unlike when the current Subpart W drip pad regulations were being formed and implemented, that a bit of patience has probably paid off. Time, however, is getting very short. December 31, 2003 will be the date the registration changes (whatever they turn out to be) will take place. Treaters should get a workable plan in place as to how you will convert your plant or plants. You should ask all suppliers of new generation wood treatment products to survey your plant(s) and provide you their budget for conversion (equipment to replace and add) along with pricing for supplying their chemical.

This is a whole new market for both you and the chemical suppliers. You should consider ALL of the available chemical options--ACQ, CA, EnviroSafe and ACC. You should get competitive quotations for the cleanup and disposal portions of your conversion work and get into a schedule for this work. Remember, you can still treat and inventory for sale all of the CCA treated wood you want to. You can get together and arrange for a "last man out" strategy between independent plants

or groups of company plants. You can form relationships to manufacture/supply CCA products from one facility and non-hazardous products from another. Be innovative in your production and sales strategies.

Wood treating facilities should plan to continue operation under current Subpart W regulations, even after conversion. This is what I have been told by EPA and state agencies. It will still take some time for EPA to develop written regulations relative to the conversion process and after-conversion compliance.

If CCA endures the EPA Children's Risk Base Assessment plus the political pressures for its demise from environmental groups, it could make a comeback as a viable wood treating chemical for residential products. CCA will continue to be used for industrial products, creating a dilemma for treaters that must supply treated wood products in both markets. I feel that CCA will survive the Children's Risk Base Assessment Study, but not the political pressures. Plan to use an alternative to CCA.

It is unfortunate that the new generation wood treatment products have gotten off to such a rocky start. A lot more homework would have been nice. There are some emerging alternative wood treatment products such as ACC and EnviroSafe that show a lot of promise. I am confident that the industry will get through this with workable, effective and competitive products. As for the average consumer, he doesn't appear to know or care about these ongoing developments with treated wood.

Ed Harris is the Registered Professional Engineer/Engineer of Record for more than 50 wood treating facilities throughout the U.S. and Puerto Rico that treat wood with CCA, creosote, penta, ACQ, CA and ACC treating chemicals. He has overseen the conversion of several treating plants from CCA and is presently working with several treating plants as they consider and complete their conversion process. He serves as an industry resource to EPA and state environmental agencies as they go about understanding the wood treating industry. He is also a partner in PME Consulting in the design and operations of all types of wood products facilities including state-of-the-art wood treating facilities. Contact Ed Harris at 525 Stony Ridge Road, Heber Springs, AR 72543/501-206-0194; e-mail: edharris@cox-internet.com

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