

MERCATUS CENTER
GEORGE MASON UNIVERSITY

REGULATORY STUDIES PROGRAM

**Public Interest Comment on the Consumer Product Safety Commission's
Briefing Package Prepared to Evaluate a Request to Ban Chromated
Copper Arsenate in Playground Equipment¹**

The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, these comments on the Consumer Product Safety Commission (CPSC) staff's briefing materials developed in response to a petition to ban chromated copper arsenate (CCA) from playground equipment² do not represent the views of any particular affected party or special interest group, but are designed to evaluate the effect of the Agency's proposals on overall consumer welfare.

This comment first provides background on the legal and administrative history behind the CPSC staff's recommendation, and the characteristics and use of CCA as a wood preservative. Section II summarizes the statutory basis for CPSC and Environmental Protection Agency (EPA) action with respect to CCA. Section III examines the costs and benefits of a ban on CCA-treated playground equipment. Section IV examines competitive issues related to canceling the registration of CCA and banning it in playground equipment. Section V concludes the comment and offers recommendations. The appendix evaluates the staff briefing package against the elements of the RSP checklist.

I. Introduction

A. Legal/Administrative History

On May 22, 2001, two environmental groups, the Environmental Working Group (EWG)³ and the Healthy Building Network (HBN),⁴ filed a request with the Consumer Products Safety

¹ Prepared by Daniel R. Simmons. This comment is one in a series of Public Interest Comments from Mercatus Center's Regulatory Studies Program. The views expressed herein do no reflect an official position of George Mason University.

² Petition HP 01-3 Requesting a Ban of Chromated Copper Arsenate (CCA)-Treated Wood in Playground Equipment, 68 Fed. Reg. 7,510 (Feb. 14, 2003).

³ According to the Environmental Working Group's website, "The Environmental Working Group (EWG) is a not-for-profit environmental research organization dedicated to improving public health and protecting the environment by reducing pollution in air, water and food." Environmental Working Group, *About the Environmental Working Group*, <http://www.ewg.org/about.html> (last visited Mar. 22, 2003).

⁴ According to the Healthy Building Network's website, "The Healthy Building Network (HBN) is a national network of green building professionals, environmental and health activists, socially responsible investment advocates and others who are interested in promoting healthier building materials as a means of improving public

Commission requesting that the Commission ban wood that has been treated with chromated copper arsenate (CCA) for use in playgrounds.⁵ CCA is the chemical compound that is most frequently used in treating pressure treated wood. EWG and HBN argued that arsenic was more carcinogenic than previously believed and that previous risk assessments involving arsenic in wood were incomplete.⁶ CPSC staff studied the petition and assembled a briefing package to the Commission.⁷ The Briefing materials assembled by CPSC staff estimated that a child who plays on playground structures made of CCA-treated wood 156 days per year between the ages of 2 and 6 has an increased risk of 2 to 100 per million of developing lung or bladder cancer.⁸ CPSC staff also concluded that the Commission should wait for the Environmental Protection Agency (EPA) to take its proposed regulatory action.⁹

The EPA regulates CCA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).¹⁰ FIFRA defines CCA as a pesticide which must be registered before it can be sold or produced in the U.S.¹¹ FIFRA also allows for registrants to cancel their registration. On February 4th, 5th, and 6th of 2002, all four producers of CCA sent a letter to the EPA to have their registration of CCA cancelled.¹² This means that if the EPA takes the action requested by these companies, by December 31, 2003, “it will be illegal to use CCA to treat wood for most consumer uses.”¹³ The action by these four companies is peculiar. Why would the four companies all file, at the same time, to have their registrations cancelled? Even if the EPA’s assessment is correct that the companies filed their cancellations as a result of “current and projected market demand and availability of new generation wood treatment products”¹⁴ that still does not explain why these companies would give up their valuable permits and the ability to make CCA. Even if the market is indeed moving toward next generation products, older generation products can still retain some value.

health and preserving the global environment.” Healthy Building Network, *About the Healthy Building Network*, <http://www.healthybuilding.net/about.html> (last visited Mar. 22, 2003).

⁵ Petition HP 01-3 Requesting a Ban of Chromated Copper Arsenate (CCA)-Treated Wood in Playground Equipment, 68 Fed. Reg. 7,510 (Feb. 14, 2003). The petition is available at <http://www.healthybuilding.net/pdf/petition.pdf> (last visited Mar. 24, 2003).

⁶ *Id.*

⁷ The Briefing Package is available at: <http://www.cpsc.gov/phth/ccafact.html> (last visited Mar. 13, 2003).

⁸ CONSUMER PRODUCTS SAFETY COMMISSION, BRIEFING PACKAGE: PETITION TO BAN CHROMATED COPPER ARSENATE (CCA-TREATED WOOD) IN PLAYGROUND EQUIPMENT (PETITION HP 01-3)1 (2003).

⁹ Petition HP 01-3 Requesting a Ban of Chromated Copper Arsenate, 68 Fed. Reg. at 7,511.

¹⁰ 7 U.S.C. § 136 et seq. (2000).

¹¹ FIFRA § 3(a), 7 U.S.C. §136a (a) (2000).

¹² Notice of Receipt of Request to Cancel Certain Chromated Copper Arsenate (CCA) Wood Preservative Products and Amend to Terminate Certain Uses of CCA Products, 67 Fed. Reg. 8,244 (Feb. 22, 2002). Specifically, the letter from Chemical Specialties, Inc. was dated February 4, 2002, the letter from Arch Wood Protection, Inc, was dated February 5, 2002, and the letters from Osmose, Inc. and Phibro-Tech, Inc. were dated February 6, 2002. *Id.* at 8,245.

¹³ CONSUMER PRODUCTS SAFETY COMMISSION, BRIEFING PACKAGE: PETITION TO BAN CHROMATED COPPER ARSENATE (CCA-TREATED WOOD) IN PLAYGROUND EQUIPMENT (PETITION HP 01-3) 2 (2003).

¹⁴ Notice of Receipt of Request to Cancel Certain CCA Wood Preservative Products, 67 Fed. Reg. at 8,245.

B. Introduction to Chromated Copper Arsenate

Although wood is a cost-effective and renewable building material for outdoor structures, untreated wood is easily destroyed by rot, insects, and microorganisms.¹⁵ Damage may occur rapidly and usually occurs within three to five years, but sometimes within one year.¹⁶ To combat this deterioration, wood can be protected through a pressure treating process. The wood is placed in a chamber, a preservative chemical mixture is pumped into the chamber, and the pressure of the chamber is increased to force some of the preservatives into the wood.¹⁷ The wood is then resistant to insect and fungal attack,¹⁸ which extends the life of pressure-treated wood 10 to 20 times beyond untreated wood.¹⁹

Introduced in the 1930's, CCA is the most commonly used preservative to treat wood.²⁰ As its name suggests, CCA is a mixture of chromium, copper, and arsenic.²¹ The current formulation of CCA is 47.5 percent chromic oxide, 18.5 percent cupric oxide, and 34.0 percent arsenic pentoxide.²² It is the most common of the three main types of wood preservatives.²³ Unlike other wood preservatives, CCA-treated wood is easily painted and does not give off odor or vapor.²⁴ Because of these properties, CCA is most frequently used in consumer products such as fences, decks, and playground equipment.²⁵ In fact, in 2001 CCA was used in 98 percent of the pressure-treated wood produced for residential uses.²⁶

II. Statutory Basis for Regulation

The CPSC regulates CCA under the Federal Hazardous Substances Act (FHSA).²⁷ As noted above, the EPA regulates CCA under FIFRA. Section 2(f)(2) of the FHSA excludes pesticides that are regulated under FIFRA from its definition of "hazardous substances."²⁸ However that exclusion contains a caveat that allows the CPSC to regulate pesticides under the FHSA if the

¹⁵ Osmose Inc, *What is Preserved Wood*, at <http://www.osmose.com/wood/usa/preservatives/what/> (last visited Mar. 13, 2003).

¹⁶ American Council on Science and Health, *What's the Story? Pressure-Treated Wood at* <http://www.acsh.org/publications/story/wood/index.html> (last visited Mar. 13, 2003).

¹⁷ *Id.*

¹⁸ Florida Center for Solid and Hazardous Waste Management, *What is CCA-Treated Wood?*, at http://www.ccaresearch.org/about_cca.htm (last visited Mar. 13, 2003).

¹⁹ See American Wood Preservers Institute, *Frequently Asked Questions: How Long Will Preservative-Treated Wood Last?*, at <http://www.preservedwood.com/faqs/faqs44.html> (last visited Mar. 13, 2003).

²⁰ CONSUMER PRODUCTS SAFETY COMMISSION, BRIEFING PACKAGE: PETITION TO BAN CHROMATED COPPER ARSENATE (CCA-TREATED WOOD) IN PLAYGROUND EQUIPMENT (PETITION HP 01-3) 5 (2003).

²¹ Environmental Protection Agency, *Chromated Copper Arsenate (CCA) and Its Use as a Wood Preservative*, at <http://www.epa.gov/pesticides/factsheets/chemicals/1file.htm> (last visited Mar. 13, 2003).

²² CONSUMER PRODUCTS SAFETY COMMISSION, BRIEFING PACKAGE: PETITION TO BAN CHROMATED COPPER ARSENATE (CCA-TREATED WOOD) IN PLAYGROUND EQUIPMENT (PETITION HP 01-3) 5 (2003).

²³ *Id.*

²⁴ Florida Center for Solid and Hazardous Waste Management, *What is CCA-Treated Wood?*, at http://www.ccaresearch.org/about_cca.htm (last visited Mar. 13, 2003).

²⁵ *Id.*

²⁶ CONSUMER PRODUCTS SAFETY COMMISSION, BRIEFING PACKAGE: PETITION TO BAN CHROMATED COPPER ARSENATE (CCA-TREATED WOOD) IN PLAYGROUND EQUIPMENT (PETITION HP 01-3) 5 (2003).

²⁷ 15 U.S.C. §§ 1261-78 (2000).

²⁸ FIFRA §2(f)(2), 15 U.S.C. § 1261(f)(2) (2000).

pesticide is borne or contained in a substance that meets a two-part test.²⁹ First the substance “(i) is toxic, (ii) is corrosive, (iii) is an irritant, (iv) is a strong sensitizer, (v) is flammable or combustible, or (vi) generates pressure through decomposition.”³⁰ Second, the substance may be regulated only if it “may cause substantial personal injury or substantial illness during or as a proximate result of any customary or reasonably foreseeable handling or use, including reasonably foreseeable ingestion by children.”³¹ With regard to children, the FHSA requires that an “article intended for use by children, which is a hazardous substance, or which bears or contains a hazardous substance in such manner as to be susceptible of access by a child” is to be banned.³² In other words, if playground equipment, which is obviously an “article intended for use by children” contains a substance which is toxic (among other things), and causes substantial personal injury or illness, the CPSC must ban the product.

III. Costs and Benefits of Regulation

A. What Are the Benefits of Banning CCA-Treated Wood in Playground Equipment?

What would be the benefits of banning CCA-treated wood? To understand the benefits, we must first understand the possible problems posed by CCA-treated wood. The CPSC briefing materials suggest that a young child who plays on CCA-treated wood playground structures has an increased risk of between 2 to 100 per million of developing lung or bladder cancer above the risk of these cancers due to other factors.³³ This calculation is based on a number of assumptions, discussed below.

1. Children’s Use of Playground Equipment

CPSC staff believes that children will ingest arsenic by first rubbing their hands on CCA-treated wood and then ingesting the arsenic through either licking their fingers, or touching food and eating the food.³⁴ They argue that children ages 2 to 6 are the “at-risk” group since they exhibit the most hand-to-mouth behavior.³⁵ They assume that children visit playgrounds 156 times a year.³⁶ They assume that arsenic levels on CCA-treated wood in the Washington, D.C. metropolitan area are representative of playgrounds nationwide.³⁷ Also, CPSC staff assumes that children will pick up 7.6 µg of arsenic on their hands every time they play on playground structures made of CCA-treated wood, and that they will ingest 43 percent of this arsenic.³⁸ Assuming all of CPSC staff’s assumptions are correct, this means that a child could ingest 510 µg of arsenic each year.

²⁹ FIFRA § 2(f).

³⁰ FIFRA § 2(f)(1)(A).

³¹ *Id.*

³² FIFRA § 2(q)(1).

³³ CPSC BRIEFING PACKAGE AT 1.

³⁴ CPSC BRIEFING PACKAGE AT 14–15.

³⁵ CPSC BRIEFING PACKAGE AT 15.

³⁶ CPSC BRIEFING PACKAGE AT 15.

³⁷ CPSC BRIEFING PACKAGE AT 187.

³⁸ CPSC BRIEFING PACKAGE AT 19–20.

CPSC staff conducted a couple of studies to quantify the amount of arsenic transmitted from CCA-treated wood to children's hands. In total, the CPSC staff examined CCA-treated wood-to-hand transmission on 20 CCA-treated surfaces.³⁹ Because of outliers, the mean values were much higher than the median values of CCA to hand transmission. In the two studies conducted by CPSC staff, the median values were 3.5 µg and 4.8 µg while the mean values were 7.6 µg and 7.7 µg.⁴⁰ Whenever there are outliers, as is the case here, the mean is not necessarily the best statistic to use because it represents the average, but not necessarily the typical data point.⁴¹ If the distribution of data points is representative of the population (for example, the outliers may represent a subset of CCA-treated structures that pose a more significant hazard), and if the dose-response function is linear, then the use of the mean will give the most accurate forecast of cancer cases. On the other hand, the skewed distribution of data points may simply be an artifact of the particular studies and methods used. With a sample size of only 20, it is not possible to draw any robust conclusion about the shape of the distribution of exposure in the population. Therefore it is imprudent to use the mean and thereby give disproportionate weight to the outliers in this limited data set.

2. Toxicity of Arsenic

CPSC staff examined several studies and made a number of assumptions in determining that the children can be exposed to a dangerous amount of arsenic on playgrounds.⁴² Even though CPSC staff recognized that “significant variability and uncertainty exist the available data, statistical modeling, and extrapolation and that several reasonable approaches could be that would result in estimates of cancer that differ by an order of magnitude or more” they considered the toxicity assessment to be reasonable.⁴³ However, there are many problems inherent in the CPSC's approach.

a) **Limitations in the Studies CPSC Staff Relied Upon in Comparison to Arsenic Ingestion by Children from CCA-Treated Wood**

To determine toxicity, CPSC staff examined studies from Taiwan, Argentina, and Chile. However, every one of the studies that CPSC staff cites approvingly is of questionable significance for people living in the United States, and especially for children playing on playground equipment.

The first major problem is comparing doses of arsenic consumed these studies with doses of arsenic consumed by children. CPSC staff cites studies conducted in by Tseng in 1968 and 1977 in Taiwan that found a dose-related increase in skin cancer. The arsenic concentration in wells was found to be on average between 400–600 µg/L.⁴⁴ A 2001 study by Chiou et al. found “significant dose-response relationship between the incidence of bladder and kidney cancer and

³⁹ CPSC BRIEFING PACKAGE AT 170.

⁴⁰ CPSC BRIEFING PACKAGE AT 170.

⁴¹ See DAVID S. MOORE & GEORGE P. MCCABE, INTRODUCTION TO THE PRACTICE OF STATISTICS 41–44 (1999).

⁴² CPSC BRIEFING PACKAGE AT 14.

⁴³ CPSC BRIEFING PACKAGE AT 23.

⁴⁴ CPSC BRIEFING PACKAGE AT 88.

drinking water containing arsenic at concentrations greater than 100 ppb.”⁴⁵ (100 ppb is equal to 100 µg/L). The CPSC staff also cites a study conducted in Chile where average drinking water arsenic levels were between 200–400 µg/L. The staff also noted that the “data [from the Chilean study] also suggest a synergistic interaction between arsenic ingestion and cigarette smoking.”⁴⁶ However, the fact that there may be a synergistic relationship between arsenic ingestion and smoking seems of very limited importance in this case since not many children between the ages of 2 and 6 smoke. Lastly, CPSC staff cites an Argentine study suggesting an increased risk of lung and kidney cancers due to arsenic ingestion.⁴⁷ The average concentrations of arsenic in the water in the Argentine study were 178 µg/L for the highest exposure group.⁴⁸

The amount of arsenic children would consume by playing on CCA-treated wood, even assuming all of the CPSC staff’s assumptions are correct, is far lower than any of these studies. As noted above, the CPSC staff calculates that a child will consume 510 µg of arsenic a year. If the same child lived in the area studied by Chiou et al., she would consume the same amount of arsenic by drinking a mere 5 liters of water. If this child lived in the area of Chile where the Chilean study was conducted, she could ingest 510 µg of arsenic in a mere 1.275 liters of water. Put in the most simplistic terms, CPSC staff finds it reasonable to compare the amount of arsenic a child consumes over the course of an entire year, to the amount of arsenic people consume every day in areas with high concentrations of arsenic.

Even though the amount of arsenic potentially consumed by children via exposure to CCA-treated playgrounds is very low compared with studies that show that arsenic can be carcinogenic, CPSC staff believes it is possible to extrapolate from chronic doses to the low doses children would consume. It adopted a linear dose-response function in order to extrapolate cancer risks from the relatively high exposure levels observed in the Taiwanese and Chilean studies to the much lower concentrations to which American children may be exposed.⁴⁹ CPSC staff refer to studies by the National Research Council (NRC) of the National Academy of Sciences to support a linear extrapolation of risks to low doses. However, the NRC panel fit a number of models to the Taiwanese data, but none of the models provided a good fit to the data and their estimates of risks at low doses fluctuated wildly.⁵⁰ As one scientist who served on NRC’s subcommittee on arsenic in drinking water explains, “given what is undoubtedly a high error rate in exposure classification in the data, there would be little basis for much credence in any model to fit the data.”⁵¹ In other words, the data the NRC relied upon are not robust enough to provide scientific credence to the extrapolation of cancer risks of chronic arsenic exposures to cancer risks at lower levels.

⁴⁵ *Id.* at 89.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ CPSC BRIEFING PACKAGE AT 315.

⁵⁰ See National Research Council, *Arsenic in Drinking Water* (1999), KENNETH G. BROWN, COMMENTS ON CPSC’S ANALYSIS OF CANCER RISK TO CHILDREN FROM CONTACT WITH CCA-TREATED WOOD PRODUCTS 3 (2003).

⁵¹ KENNETH G. BROWN, COMMENTS ON CPSC’S ANALYSIS OF CANCER RISK TO CHILDREN FROM CONTACT WITH CCA-TREATED WOOD PRODUCTS 3 (2003).

CPSC staff explains that they chose a linear model because there is an “absence of data that the shape of the dose-response at low doses is not linear.”⁵² However, the NRC expert panel believes, based on the evidence on the mode of action for arsenic-associated cancers, that the dose-response function is more likely to be sublinear – meaning that the linear extrapolation used by the CPSC significantly overstates the expected risk at low doses.⁵³

Another problem with the CPSC staff’s extrapolation is the duration of exposure to the carcinogen. As one scientist who has studied arsenic toxicity explains, “even if the risk of low concentrations in drinking water were reliable . . . extrapolation of risk estimates based on chronic exposure to children who are intermittently exposed to CCA-treated wood in childhood is speculative.”⁵⁴ The CPSC staff cites no data to show that intermittent exposures for a short period of time can be compared to lifetime chronic exposures. This is problematic because the body can apparently repair itself over time.⁵⁵ In fact, if a heavy smoker quits, 20 years later his lungs can be “restored to a fully healthy condition in which the risk is as low as nonsmokers.”⁵⁶

b) Studies in the United States that CPSC Staff Omitted

Despite citing all the Taiwanese, Chilean, and Argentine studies approvingly, CPSC staff fails to give any credence to what they acknowledge are “several epidemiological studies in the U.S. [that] have not [shown] increased cancer incidence in populations with elevated drinking water levels (up to about 200 [µg/L])”.⁵⁷ First of all, CPSC staff argues, “these studies did not have sufficient statistical power to detect the small increases in cancer incidence that would be expected at the relatively low doses experienced by the U.S. population.”⁵⁸ However one of the studies led by an EPA researcher was conducted on a cohort of 4,058 individuals who were exposed to waterborne arsenic at levels of 14 to 166 µg/L.⁵⁹ Despite consuming arsenic at levels comparable to those in some of the other studies, the study did not indicate higher levels of bladder cancer.⁶⁰ In fact, the authors of the study observed only 39 deaths from bladder and lung cancer, far below the 63.5 that would be predicted in the normal population.⁶¹ To justify excluding this study, CPSC staff argues “this cohort differed from the larger population in important ways.”⁶² Specifically, the “cohort was rural and belong to a religion with strict

⁵² CPSC BRIEFING PACKAGE AT 315. They further argue that “data do not exist that elucidate the mechanism of arsenic-induced carcinogenicity or define a non-linear effect, and that linear extrapolation at low doses is appropriate in this case.” *Id.*

⁵³ See National Research Council, *Arsenic in Drinking Water* (1999).

⁵⁴ KENNETH G. BROWN, COMMENTS ON CPSC’S ANALYSIS OF CANCER RISK TO CHILDREN FROM CONTACT WITH CCA-TREATED WOOD PRODUCTS 2 (2003).

⁵⁵ See Medscape.com, *Urge Smokers to Quit, Whatever Their Age*, www.medscape.com/viewarticle/407272 (last visited Mar. 22, 2003).

⁵⁶ UC Davis Health System, *How Can Lung Cancer Be Prevented?*, <http://www.ucdmc.ucdavis.edu/ucdhs/health/a-z/72NonSmallCellLung/doc72prevent.html> (last visited Mar. 22, 2003).

⁵⁷ CPSC BRIEFING PACKAGE AT 89.

⁵⁸ *Id.* at 89–90.

⁵⁹ Denise R. Lewis et. al., *Drinking Water Arsenic in Utah: A Cohort Mortality Study*, 107 *Enviro. Health Perspectives* 359 (1999).

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² CPSC BRIEFING PACKAGE AT 90.

lifestyles rules.”⁶³ The members of the cohort were mostly members of the Church of Jesus Christ of Latter-day Saints, and as a result most did not drink alcohol, coffee, tea, and most did not smoke. CPSC staff points out this fact as if this were a confounding factor. However, the members of the cohort merely reduced the confounding influence of other possible causes of cancer, thus making it easier to discern any influence elevated levels of arsenic could have in incidents of cancer.

Another reason the CPSC staff should have paid close attention to this study, instead of discounting it, is because the diet of most members of this cohort is closer to the diet of children. Like the members of the cohort, few children between the ages of two and six consume alcohol, coffee, or tea, and most do not smoke. The studies from Taiwan are not necessarily comparable to the United States, and especially to children, because the members of the Taiwanese cohorts had higher incidents of smoking and poorer nutrition.⁶⁴

c) CPSC Expects the Data to Prove a Negative

In the end, CPSC staff accepts the aforementioned Taiwanese, Chilean, and Argentine studies, “despite the weakness in the epidemiological studies and the uncertainties about extrapolating to the U.S. population.”⁶⁵ Instead of showing any evidence that any of the studies cited by CPSC staff has any relevance to incidents of cancer in the United States, CPSC staff argues that the evidence does not disprove them. In other words, CPSC staff first cites studies approvingly that are of questionable application to the situation of children in the United States. Second, they discount any studies that tend to prove them wrong (and which happen to be the only studies conducted in the United States, and also happen to be on people who have a diet similar to children). Third, after discounting any contrary evidence, CPSC staff argues, “[t]hus, there is no convincing evidence that arsenic does not cause cancer at relatively low exposures.”⁶⁶

This is equivalent to requiring a defendant to prove that he is not guilty, without the prosecution providing any evidence of the defendant’s guilt. Besides the impossibility of proving a negative as the CPSC staff implicitly argues should happen, they also fail to state the obvious, which is exactly the opposite of their claim. Given the evidence presented by CPSC staff, it is easier to draw the conclusion that “there is no convincing evidence that arsenic *causes cancer* at relatively low exposures.”

Also, the CPSC is only given statutory authority to regulate substances if they “may cause substantial personal injury.”⁶⁷ The statutory language does not give the CPSC authority to regulate a substance if “there is no convincing evidence that it does not cause substantial personal injury.” Under the FHSA, the CPSC has to show that there is a possibility or probability of substantial personal injury. Because they fail to provide any evidence that arsenic is carcinogenic at the levels ingested by children from CCA-treated wood, they fail to meet their statutory mandate.

⁶³ CPSC BRIEFING PACKAGE AT 90.

⁶⁴ ROBERT RAUCHER, PUBLIC INTEREST COMMENT ON EPA’S NATIONAL PRIMARY DRINKING WATER REGULATIONS; ARSENIC RULE, REGULATORY STUDIES PROGRAM, MERCATUS CENTER, GEORGE MASON UNIVERSITY (2000).

⁶⁵ CPSC BRIEFING PACKAGE AT 89.

⁶⁶ *Id.*

⁶⁷ FIFRA § 2(f)(1)(A).

d) Other Studies on Arsenic

Besides the two studies on arsenic conducted in the United States that CPSC staff cites, there are many others. In Florida, six doctors, including the chief epidemiologist at the state Department of Health, were appointed to study arsenic risks from playground equipment and recreational facilities.⁶⁸ The workgroup concluded that, “[t]he available data have not demonstrated any clinical disease associated with arsenic exposure from this use of CCA treated wood.”⁶⁹ The workgroup also explained that “CCA-treated wood has never been linked to skin disease or cancer in children exposed during recreational use”⁷⁰ and that “arsenic that could be absorbed from playground soil and CCA treated wood is not significant compared to natural sources and will not result in detectable arsenic uptake.”⁷¹

A study conducted by Dr. Christopher Teaf, director of the toxicology program at Florida State University, found that 420 µg of arsenic per 100 cm² would be safe for occasional childhood exposure (5 years).⁷² By way of comparison, the CPSC staff estimates that CCA treated wood used in playground has 6.3 µg of arsenic per 100 cm².⁷³

A study conducted by Dr. Barbara Beck, an expert in health risk assessment and a lecturer in toxicology at Harvard, found that “CCA-treated wood in both a residential and playground setting does not pose a significant health risk to children or adults.”⁷⁴ In fact, “all of the exposure estimates (and associated risk estimates) in this report for CCA-treated wood are below the exposure and risk estimates associated with the proposed drinking water standard for arsenic and the levels of naturally occurring arsenic in food.”⁷⁵

e) Conclusion on Arsenic Toxicity

As the aforementioned studies indicate, there is controversy over the carcinogenicity of arsenic at low levels. Further, there is not a single study that shows arsenic to be toxic at low levels. There are also no studies conducted in the United States showing that arsenic is carcinogenic at the levels present in the United States. As a member of National Research Council’s Subcommittee on Arsenic in Drinking Water explains,

⁶⁸ Tallahassee.com, *Doctor’s: Amount of Arsenic in Playground Wood Not Harmful*, at <http://www.tallahassee.com/mld/tallahassee/news/local/3821283.htm> (last visited Mar. 15, 2003).

⁶⁹ Letter from Florida Physicians Arsenic Workgroup, to John Agwunobi, M.D., Secretary of Health, State of Florida 1 (June 14, 2002) (available at http://www.citw.org/FL_Physicians.pdf) (last visited Mar. 15, 2003).

⁷⁰ *Id.*

⁷¹ *Id.* at 2.

⁷² See HAZARDOUS SUBSTANCE & WASTE MANAGEMENT RESEARCH, INC., DEVELOPMENT OF WOOD SURFACE TARGET QUANTITY FOR ARSENIC BASED ON EXPOSURE TO DECKS OF PLAYGROUND EQUIPMENT CONSTRUCTED OF CCA-TREATED WOOD (2001) (available at <http://www.preservedwood.com/safety/wsreport.pdf>) (last visited Mar. 15, 2003).

⁷³ American Wood Preservers Institute, *Assessment of Risks from Exposure in Decks, Playground and Soil Beneath Them*, at http://www.preservedwood.com/safety/research_teaf.html (last visited Mar. 15, 2003).

⁷⁴ GRADIENT CORP., EVALUATION OF HUMAN HEALTH RISKS FROM EXPOSURE TO ARSENIC ASSOCIATED WITH CCA-TREATED WOOD ES-1 (available at <http://www.preservedwood.com/safety/011020cca-body.pdf>) (last visited Mar. 16, 2003).

⁷⁵ *Id.* at ES-3.

there is clear evidence of cancer and non-cancer effects [of arsenic], but at or below 50 µg/L, limitations regarding the epidemiological data and the mode-of-action or arsenic toxicity are inadequate to support the conclusion that there are adverse health effects in the United States. The implications for the CPSC analysis is that they are trying to ferret out cancer risks at extremely small arsenic intakes for which it is not at all clear that there even is an cancer risk.⁷⁶

3. Significance of Risks as Calculated by CPSC Staff

If we give CPSC staff every benefit of the doubt on their assumptions (and as noted above there are many reason to believe that the estimates of arsenic carcinogenicity are overstated), this possible additional risk of cancer from CCA-treated wood is nevertheless very slight. CPSC staff estimates the increased risk of lung or bladder cancer because of arsenic in CCA-treated wood is between 2 per one million and 100 per one million. To put this risk in perspective, about one of every 10,000 non-smokers (0.01 percent) develop lung cancer.⁷⁷ According to CPSC staff's estimates, the risk of developing lungcancer would increase from 0.01 to between 0.0102 and 0.020 percent.

The lifetime risk of developing bladder cancer is about 2.0 percent for men and 0.5 percent for women. The risk estimated by CPSC staff would increase this risk for men from 2.0 percent to between 2.0002 and 2.02 percent and for women from 0.5 percent to between 0.5002 and 0.51 percent.

To compare these risks to other risks of everyday life, the following all increase the annual risk of death by one in one million: Traveling 10 miles by bicycle, drinking Miami drinking water for one year, traveling 150 miles by car, flying 1,000 miles by jet, living 2 months in Denver, living 2 months in a average stone or brick building, or having one chest x-ray at a good hospital.⁷⁸ There is a 4 per one million chance of a resident on the ground dying from a plane crash.⁷⁹ There is a 122 per million chance of a woman dying during two childbirths.⁸⁰ There is 900 in a million (9 in 10,000) chance of a women being killed by a husband/lover and there is a 6,000 in a million (6 in 1,000) chance that during your lifetime, as a pedestrian you will be killed by a car.⁸¹ Put in this perspective, the risk to a child playing 156 days per year on a CCA-treated playground structure is less than the risk of dying from being hit by a plane falling from the sky, at the low end of the risk spectrum or at the high end, dying by bearing two children.

⁷⁶ KENNETH G. BROWN, COMMENTS ON CPSC'S ANALYSIS OF CANCER RISK TO CHILDREN FROM CONTACT WITH CCA-TREATED WOOD PRODUCTS 4 (2003).

⁷⁷ Steven Milloy, *Playground Wood: Cancer Cause or Consumer Scare?*, at <http://www.foxnews.com/story/0,2933,78551,00.html> (last visited Mar. 14, 2003).

⁷⁸ W. KIP VISCUSI ET. AL, ECONOMICS OF REGULATION AND ANTITRUST 642 (2000) *citing* Richard Wilson, *Analyzing the Daily Risks of Life*, 81 Tech. Rev. 40, 45 (1979).

⁷⁹ John D. Graham, *The Risk Not Reduced*, 3 N.Y.U. ENVTL. L.J. 382, 391 (1995).

⁸⁰ *Id.*

⁸¹ *Id.*

4. Conclusions on the Benefits of Banning CCA-Treated Wood in Playground Equipment

Even if CPSC staff is given the benefit of the doubt on their assumptions, analysis, and conclusions, the benefits of banning CCA-treated wood in playground equipment are small. However, there are many reasons to believe CPSC staff's estimates grossly overestimate the risk. Key assumptions—that children will ingest 43 percent of everything their hands come in contact with, or that children between the ages of 2 and 6 will play on CCA-treated wood 156 times a year—seem likely to overstate actual expected values significantly. Further, the small sample size (20 playgrounds) and the large difference between the mean and median suggest that the sample mean may overstate the average arsenic transmission levels in CCA-treated wood by 100 percent or more. CPSC staff cites no studies to show that arsenic is carcinogenic at low doses or that a linear response curve is appropriate to extrapolate arsenic levels from high chronic exposures to low exposures. This is particularly important since even with CPSC staff's generous assumptions, a child only consumes 510 µg of arsenic a year compared to people in the study areas who consume that amount during a typical day, or even during a single meal. While relying on studies conducted in other parts of the world where people have higher rates of smoking, poorer nutrition, and different genetic susceptibilities to bladder and lung cancer, CPSC staff disregards the only study conducted in the United States. This study seems a far more appropriate one from which to extrapolate health effects because (a) the doses of arsenic to which people were exposed were lower than the Taiwanese and Chilean studies (though still much higher than the doses to which children would be exposed) and (b) the study population has similar life-style and nutritional habits to children. The American studies did not show a link between arsenic and cancer.

One way the CPSC staff could have easily demonstrated if their estimates had any scientific validity would have been to conduct urine tests in children exposed to CCA-treated wood. Such a study could easily show if children who are exposed to arsenic in CCA-treated wood have elevated arsenic levels in their blood. Such a study could serve as a useful control to the estimates generated by CPSC staff about arsenic uptake by children.

In conclusion, from the evidence that CPSC staff presents, there is no evidence that there are any benefits of banning CCA-treated wood because of possible arsenic ingestion.

B. What Are the Costs of Banning CCA-Treated Wood in Playground Equipment?

Despite a lack of evidence that banning CCA-treated wood in playgrounds would produce benefits, there is plentiful information that doing so would be very costly, not only economically but environmentally and in terms of public health.

1. Environmental Costs

Pressure treated wood is produced from plentiful tree species.⁸² Almost all of the trees that are used to make pressure treated wood are grown on tree farms, not third world rain forests or old

⁸² Osmose, Inc., *CCA Pressure Treated Wood: Quick Facts*, at <http://www.osmose.com/wood/usa/preserved/treated/facts/> (last visited Mar. 15, 2003).

growth forests.⁸³ Using pressure treated wood instead of untreated wood saves as many as 226,000,000 trees from being harvested every year.⁸⁴ Using CCA pressure treated wood instead of more energy intensive products such as concrete, steel, or plastic saves as many as 32 million barrels of oil a year.⁸⁵ Because one substitute for pressure treated wood is using harder woods, like redwoods, using pressure treated wood saves redwoods.⁸⁶ CCA-treated wood is made partially from recycled wastes and the preserving process does not produce air pollutants or water-waste discharges.⁸⁷ By using pressure treated wood “we have saved a forest two times the size of New England.”⁸⁸ Pressure treated wood is also used as walkways over environmentally sensitive areas. Because pressure treated wood lasts longer than other wood, it decreases the time that the environmentally sensitive areas are disturbed by re-construction.⁸⁹

In short, there are many environmental benefits of using pressure treated wood. Currently CCA is by far the most commonly used preservative on the market.⁹⁰ Shifting to alternative preservatives may or may not be more environmentally friendly than CCA. There are a number of alternative preservative formulations,⁹¹ however, most that would be used instead of CCA are so new that the environmental consequences of their use is not known.⁹² However, one recent study found that alternative treatments leach more copper and the “alternative chemical treated wood chemicals exhibit a greater degree of aquatic toxicity.”⁹³

2. Monetary Costs

Currently, wood preserving is a \$4 billion a year industry.⁹⁴ About 70 percent of the pressure treated wood is produced for residential uses.⁹⁵ In 2001, CCA accounted for 98 percent of that

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ David Stilwell, *Arsenic in Pressure Treated Wood*, at

<http://www.caes.state.ct.us/PlantScienceDay/1999PSD/arsenic99.htm> (last visited Mar. 15, 2003).

⁸⁷ American Council on Science and Health, *What's the Story? Pressure-Treated Wood* at

<http://www.acsh.org/publications/story/wood/index.html> (last visited Mar. 13, 2003).

⁸⁸ DIXY L. RAY, *TRASHING THE PLANET* (1999).

⁸⁹ Osmose, Inc., *CCA Pressure Treated Wood: Quick Facts*, at

<http://www.osmose.com/wood/usa/preserved/treated/facts/> (last visited Mar. 15, 2003).

⁹⁰ Treated Wood News 1 (Summer 2002) (available at

http://www.wwpinstitute.org/pdffiles/col_litho/01_transition.pdf) (last visited Mar. 15, 2003).

⁹¹ These alternatives include Ammoniacal Copper Zinc Arsenate (ACZA), Alkaline Copper Quat (ACQ), Ammoniacal Copper Citrate (CC), Copper Azole (CBA), Copper Dimethyldithiocarbamate (CDDC) and Borate Preservatives. Forest Products Laboratory, *What's In That Pressure Treated Wood?*, Techline Durability 1–2 (2000) (available at <http://www.fpl.fs.fed.us/documnts/techline/III-1.pdf>) (last visited Mar. 15, 2003).

⁹² CPSC BRIEFING PACKAGE AT 28. CPSC staff explains that, “While these alternatives do not contain arsenic, there are insufficient data available on the toxicity and exposure of these alternative chemicals to make a reasonable assessment of their potential for risk.” *Id.*

⁹³ KRISTIN L. STOOK, *CHEMICAL AND TOXICITY CHARACTERIZATION OF PRESSURE TREATED WOOD LEACHATE* at http://www.ccaresearch.org/tag12/present/Alt_Leaching_Toxicity_Jul_2001.ppt (2001). The treated wood samples evaluated were Alkaline Copper Quaternary (ACQ-D), Copper Boron Azole (CBA-A), Copper Citrate (CC), Chromated Copper Arsenate (CCA-C), and Copper dimethyldithiocarbamate (CDDC).

⁹⁴ Marc Reisch, *Getting Arsenic Out of Wood*, *CHEMICAL AND ENGINEERING NEWS*, Feb. 11, 2002, at 9 (available at <http://pubs.acs.org/cen/topstory/8006/8006notw7.html>) (last visited Mar. 15, 2003).

⁹⁵ *Id.*

market.⁹⁶ The companies that have been producing CCA are ready to supply alternative products. Arch Chemicals, Inc. has a product called copper boron azole (CBA),⁹⁷ while Osmose, Inc. and Chemical Specialties, Inc. will produce Ammoniacal Copper Quat (ACQ).⁹⁸ According to one source, these alternatives will likely increase the cost of pressure-treated wood to the consumer by 10–20 percent.⁹⁹ Other estimates put the price increase at 20–30 percent.¹⁰⁰ A price increase percent would likely lead to a transition to other substitutes. But other substitutes can be expensive. For example, redwood is 30–40 percent more expensive than CCA treated wood.¹⁰¹ “Lumber” made from recycled plastics would cost about 10–20 percent more than CCA-treated wood.¹⁰² If the low end of these ranges were accurate (e.g., finding substitutes for CCA would result in a 10 percent increase in the 70 percent of the market made up currently by CCA), eliminating CCA for residential uses would cost consumers \$280 million per year. If the transition to other products increases prices by 30 percent, then consumers would face \$840 million in additional costs each year.

There may be other problems with the alternatives to CCA. For example, one study found that Ammoniacal Cooper Citrate treated wood in a certain wood grade was not as strong as CCA treated wood.¹⁰³ In comments to the EPA, a wood processor found that wood treated with an alternative chemical treatment would only last half as long and cost twice as much.¹⁰⁴ For him there will be a quadrupling of costs if he cannot use CCA.

Also many of the alternatives leach copper, which corrodes fasteners unless stainless steel nails and screws are used.¹⁰⁵ This is an additional expense, on top of the increased price of the lumber itself. Also, for the 350 wood processors to change to alternative formulations, they would have to make changes in their equipment that could cost up to \$200,000 each.¹⁰⁶

Another monetary cost to society would be increased litigation. When a government agency takes regulatory action banning a product, plaintiff’s attorneys will soon be in the courtroom suing the manufactures of the banned product, regardless of whether or not the item is safe or

⁹⁶ CONSUMER PRODUCTS SAFETY COMMISSION, BRIEFING PACKAGE: PETITION TO BAN CHROMATED COPPER ARSENATE (CCA-TREATED WOOD) IN PLAYGROUND EQUIPMENT (PETITION HP 01-3) 5 (2003).

⁹⁷ One problems with CBA is that is that there is standardized treatment for Southern Pine and hemlock-fir species, but not for Douglas-fir lumber. Forest Products Laboratory, *What’s In That Pressure Treated Wood?*, Techline Durability 1–2 (2000) (available at <http://www.fpl.fs.fed.us/documnts/techline/III-1.pdf>) (last visited Mar. 15, 2003). CBA will therefore not be as widely used in the Western United States.

⁹⁸ Marc Reisch, *Getting Arsenic Out of Wood*, CHEMICAL AND ENGINEERING NEWS, Feb. 11, 2002, at 9 (available at <http://pubs.acs.org/cen/topstory/8006/8006notw7.html>) (last visited Mar. 15, 2003).

⁹⁹ *Id.*

¹⁰⁰ Angela Logomasini, *So-called Safety Commission Places Consumers at Risk*, CEI Enviro Wire.

¹⁰¹ Gregory W. Lemley, *Pros and Cons of Pressure Treated Wood*, at <http://www.ecomall.com/greenshopping/lumbersafe.htm> (last visited Mar. 15, 2003).

¹⁰² CPSC BRIEFING PACKAGE AT 29. Plastics also are not suitable as “primary load bearing members, such as posts, beams, and joists.” *Id.*

¹⁰³ Jerrold E. Winandy & Stan T. Lebow, *Effects of Ammoniacal Cooper Citrate Preservative Treatment on Redrying on Bending Properties of Two Grades of Southern Pine 2 By 4 Lumber*, 47 Forest Prods. J. 91 (1997) (available at <http://www.fpl.fs.fed.us/documnts/PDF1997/winandy97b.pdf>).

¹⁰⁴ Angela Logomasini, *So-called Safety Commission Places Consumers at Risk*, CEI Enviro Wire.

¹⁰⁵ *Id.*

¹⁰⁶ Angela Logomasini, *So-called Safety Commission Places Consumers at Risk*, CEI Enviro Wire.

dangerous.¹⁰⁷ Agency action can be very convincing to juries, even if there is little or no science to back up agency claims.

3. Potential health costs

Another potential cost if the CPSC takes action and restricts CCA-treated wood from use in playground equipment would be the removal of existing playground equipment. This would involve a variety of costs including: removing and disposing of the playground equipment, and finding a new place for children to play. Because of tight state and local budgets, many localities won't be able to replace this play equipment at all, if it is removed.

There are benefits to children playing on playgrounds and removing some playgrounds would reduce the benefits for those children. For example, one researcher found that "playgrounds are essential to not only physical strength, but mental strength as well."¹⁰⁸ The American Heart Association has found children and adults need 30 minutes of exercise a day. For children, this exercise provides benefits such as "controlling weight, reducing blood pressure, raising HDL ("good") cholesterol, reducing the risk of diabetes and some kinds of cancer."¹⁰⁹ While exercise on playgrounds will not be eliminated with the removal of playground equipment made from CCA-treated wood, play would be reduced.

The CPSC should carefully consider the tradeoffs involved by taking corrective action with CCA-treated wood. Are the benefits of its removal greater than the lessened playground activities for children? Are children going to find substitute ways to play that are more dangerous than playing on play equipment made of CCA treated wood?

IV. If There is Nearly Zero Risk from CCA-Treated Wood, and the Costs of Transitioning to New Products is High, Why are the CCA-Producers Requesting that EPA Cancel its Registration?

During the Public Hearing on March 17, 2003, Chairman Stratton asked the scientists whose work was supported by the CCA-producers a simple question. If what the scientists were saying is true (ie. arsenic in CCA-treated wood causes between very little and no risk), then why are the producers asking the EPA to have their registrations of CCA cancelled? Chairman Stratton's curiosity was well placed. Why would all of the CCA producers write letters to the EPA within three days of each other asking the EPA to cancel their registration of CCA?¹¹⁰ Why would these companies stop producing a product they have produced for years, when their own research shows that CCA in wood is not harmful to consumers? Why would CCA producers cancel their permits to produce CCA, given that the permit is essentially a valuable property right?

¹⁰⁷ See David E. Bernstein, *The Breast Implant Fiasco*, 87 Cal. L.Rev. 457 (1999).

¹⁰⁸ Sherri Arnold, *Child Playgrounds*, (abstract available at <http://www.unl.edu/casestudy/456/sherri.htm>) (last visited Mar. 15, 2003).

¹⁰⁹ American Heart Association, *Exercise (Physical Activity) and Children*, at <http://www.americanheart.org/presenter.jhtml?identifier=4596> (last visited Mar. 17, 2003).

¹¹⁰ Notice of Receipt of Request to Cancel Certain Chromated Copper Arsenate (CCA) Wood Preservative Products and Amend to Terminate Certain Uses of CCA Products, 67 Fed. Reg. 8,244 (Feb. 22, 2002). Specifically, the letter from Chemical Specialties, Inc. was dated February 4, 2002, the letter from Arch Wood Protection, Inc. was dated February 5, 2002, and the letters from Osmose, Inc. and Phibro-Tech, Inc. were dated February 6, 2002. *Id.* at 8,245.

According to the EPA, the cancellation is a response to “market place demands for wood products that do not contain CCA.”¹¹¹ Although it is obvious that companies will want to provide alternatives to CCA to satisfy some customer concerns, this reason does not explain why CCA producers want to eliminate its use in a number of applications entirely.

One alternative to the EPA’s explanation is that CCA producers believe that they will be able to make more money by eliminating competition from CCA and selling their more expensive alternative products such as ACQ and CBA. According to CPSC staff’s economic analysis, “non-arsenical preservatives are expected to cost wood treaters 3 to 5 times more than CCA;”¹¹² that is, end consumers will pay 10–20 percent more for alternatives to CCA.¹¹³ If the demand for pressure treated wood is relatively inelastic, CCA producers will make more money. By asking the EPA to cancel their registration of CCA, the producers eliminate competition to ACQ and CBA from CCA.

EPA Administrator Christine Todd Whitman endorsed this “responsible action by the industry,” saying in a press release:

The companies deserve credit for coming forward in a voluntary way to undergo a conversion and retooling of their plants as quickly as possible. The transition to new alternatives will provide consumers with greater choice for their building needs.¹¹⁴

However, are the companies behaving responsibly and voluntarily? Rather than requesting cancellation of their product, the producers could have voluntarily chosen not to produce it. However, that would not have ensured substitution of their new, more expensive alternatives (since other producers could have stepped in to meet consumer demand for CCA). Collusion among wood preservative producers may not have been successful (in addition to being illegal), as one company always has the incentive to defect from the cartel and profit by selling CCA.¹¹⁵ EPA cancellation of the CCA registration, on the other hand, puts the agency in the position of enforcer and eliminates competition from CCA.

Furthermore, canceling CCA does not “provide consumers with greater choice” as Whitman’s press release claims; it does the opposite—it takes a safe product away from consumers, thereby limiting consumer choice.

¹¹¹ EPA Press Release, Whitman Announces Transition From Consumer Use of Treated Wood Containing Arsenic, (available at <http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/1a8cfb4970823b3885256b5e006ffd67?OpenDocument>) (last visited Mar. 24, 2003).

¹¹² CPSC BRIEFING PACKAGE AT 29.

¹¹³ Marc Reisch, *Getting Arsenic Out of Wood*, CHEMICAL AND ENGINEERING NEWS, Feb. 11, 2002, at 9 (available at <http://pubs.acs.org/cen/topstory/8006/8006notw7.html>) (last visited Mar. 15, 2003).

¹¹⁴ EPA Press Release, Whitman Announces Transition From Consumer Use of Treated Wood Containing Arsenic, (available at <http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/1a8cfb4970823b3885256b5e006ffd67?OpenDocument>) (last visited Mar. 24, 2003).

¹¹⁵ See, e.g., HAL R. VARIAN, INTERMEDIATE MICROECONOMICS 474–75 (1996).

One explanation of this type of regulation was first described by economist Bruce Yandle, in his famous “Bootleggers and Baptists” theory of regulation. He explains that,

[D]urable social regulation evolves when it is demanded by both of two distinctly different groups. “Baptists” point to the moral high ground and give vital and vocal endorsement of laudable public benefits promised by a desired regulation. Baptists flourish when their moral message forms a viable foundation for political action. “Bootleggers” are much less visible but no less vital. Bootleggers, who expect to profit from the regulatory restrictions desired by the Baptists, grease the political machinery with some of their expected proceeds.

The theory’s name draws on colorful tales of states’ efforts to regulate alcoholic beverages by banning Sunday sales at legal outlets. Baptists fervently endorsed such actions on moral grounds. Bootleggers tolerated the action gleefully because their effect was to limit competition.¹¹⁶

With regard to the pending cancellation of the CCA registration, the “Baptists” are the environmental groups who want to ban a product they believe is dangerous. They provide the needed moral message and they endorse laudable goals. The “Bootleggers” are the CCA producers. They will benefit from reduced competition because they can make more money with their new products such as ACQ and CBA.

Health and safety regulation is intended to protect consumers from hazards; not to protect producers from competition. Regulatory agencies, particularly those that operate product registration systems, need to guard against anticompetitive abuses of government power.

Regardless of industry motivation, consumers will be hurt by the EPA canceling CCA for residential uses. Consumers will have to pay higher prices for a product that is at best equivalent, and in some cases, inferior quality.

V. Conclusions and Recommendations

The CPSC was “created to protect the public from unreasonable risks of injuries and deaths.”¹¹⁷ Banning the use of CCA-treated wood in playground equipment would not advance that mission. This comment has examined the health benefits of a ban as well as the offsetting health, environmental and economic costs of a ban.

A. A ban on CCA-treated wood would alarm communities without providing health benefits.

While the CPSC staff recommends that the Commission wait for EPA’s proposed determination regarding the registration of CCA, its Briefing Package relies on a number of unrealistic assumptions to estimate that children exposed to CCA-treated playground equipment face an increased risk of cancer. For example, the Briefing Package presented by CPSC staff provides

¹¹⁶ Bruce Yandle, *Bootleggers and Baptists in Retrospect*, REGULATION (1999) (available at <http://www.cato.org/pubs/regulation/regv22n3/bootleggers.pdf>) (last visited Mar. 26, 2003).

¹¹⁷ CPSC, ANNUAL REPORT 2001 1, (2001) (available at <http://www.cpsc.gov/cpscpub/pubs/reports/2001rpt.pdf>).

no evidence that arsenic is carcinogenic at low doses. In fact, CPSC staff cites no studies offering a scientifically valid way to extrapolate chronic doses of arsenic down to the low levels children would consume from CCA-treated wood. CPSC staff justifies ignoring the only studies in the United States about arsenic's carcinogenicity, because the U.S. population in the study do not smoke, or drink coffee or alcohol. However, children between the ages of 2 and 6, the population of concern here, also do not smoke, or drink coffee or alcohol. Thus, these U.S. studies would be far more appropriate than studies CPSC staff does rely on; which were conducted in other parts of the world where people have high rates of smoking, poorer nutrition, and different genetic susceptibilities to bladder and lung cancer. Ignoring the results of the U.S. studies is conspicuous since they do not show a link between arsenic in drinking water and bladder and lung cancer.

CPSC staff's estimates of cancer risk also depend on questionable data and assumptions regarding (1) concentrations of arsenic in playground equipment, (2) ingestion of arsenic by children who play on the equipment, and (3) extent of exposure to treated playgrounds (156 times per year for 5 years).

Banning a valuable product based on such uncertain risks is inconsistent with the CPSC's mission to protect the public. Instead, the CPSC should provide scientifically valid information about potential risks such as arsenic in CCA. This is necessary to avoid unreasonable scares that worry consumers into spending money on alternative products needlessly. One easy way to improve the scientific validity of the assumptions made by CPSC staff is to do a study on the actual arsenic uptake by children who play on CCA-treated playgrounds. Arsenic uptake can be measured by sampling children's urine. By doing this type of testing, CPSC staff could conduct a scientifically valid experiment to see if there is actually a difference in the levels of arsenic in children who play on CCA-treated playgrounds, and children who do not.

B. The health, environmental and economic costs of a ban could be significant.

Even if the CPSC accepts all assumptions made by CPSC staff in the Briefing Package, before taking action it should develop a better understanding of the impacts of such a ban. While nothing more than speculation is known about the benefits of banning CCA-treated wood in playground equipment, the costs of a ban would be high. Alternatives to CCA-treated wood are likely to have a negative impact on the environment. A ban would also cost American consumers millions of dollars in transitioning to alternative products. Perhaps the most important cost is that a ban on CCA-treated playground equipment would deprive children of needed places to play. It is possible that children would be at greater risk by not having CCA-treated playgrounds to play on because they could exercise less, or play in areas that are less safe. Before proceeding, the CPSC should weigh these opportunity costs against the hypothetical benefits of a CCA ban.

C. The CPSC should avoid conferring competitive advantages on producers.

The CPSC should also be suspicious of seemingly altruistic behavior on the part of the companies that are currently registered to produce CCA. CPSC actions should protect consumers from hazards; not protect producers from competition.

**APPENDIX I
RSP CHECKLIST
CCA-TREATED PLAYGROUND EQUIPMENT**

Element	Agency Approach	RSP Comments
1. Has the agency identified a significant market failure?	The agency has not identified a market failure. Grade: D	Quite the opposite. The Briefing Materials report that playground manufactures have either switched to non-arsenical products, or they are offering alternatives to CCA-treated wood. This occurred even before the EPA announced its intention to grant the cancellation of the CCA registration and before the CPSC received the petition to ban CCA in playgrounds.
2. Has the agency identified an appropriate federal role?	Under the Federal Hazardous Substances Act the CPSC has the authority to do something about CCA-treated wood. Grade: C	There are no interstate commerce justifications for a federal ban. Individual states, local governments and private citizens have the incentives and ability to weigh the benefits and costs of using CCA-treated wood in playgrounds. In fact, states such as Florida have studied the issue and found that arsenic in CCA-treated wood does not pose a health risk.
3. Has the agency examined alternative approaches?	The Briefing Materials do not examine alternatives approaches, but rather they suggest the CPSC should wait for the EPA before taking corrective action. Grade: B	CPSC staff recognizes that CPSC action may be unwarranted depending on the actions of EPA.

Element	Agency Approach	RSP Comments
4. Does the agency attempt to maximize net benefits?	The CPSC staff Briefing Package does not address benefits and costs. Grade: D	There is no attempt to make comparisons between CCA and alternatives, or to weigh the benefits of taking corrective action with regard to CCA and the cost such an action. This grade would be lower if CPSC staff suggested taking corrective action instead of suggesting that the CPSC wait until the EPA acts.
5. Does the proposal have a strong scientific or technical basis?	The studies on which CPSC staff based its risk estimates do not represent the population or exposures in this case. Grade: F	CPSC staff relied on science of questionable applicability, disregarded the science that tended to prove them wrong, and asserts that “there is no convincing evidence that arsenic does not cause cancer at relatively low exposures.” Even if this statement did not rely on proving a negative, it can only be true if CPSC staff disregards the studies that tends to prove their assessment wrong.
6. Are distributional effects clearly understood?	There is no mention of distributional effects. Grade: C-	There is no recognition that the manufactures of alternatives to CCA will be able to charge wood treaters between 3 to 5 times as much for the alternatives to CCA. This means that the companies who produced CCA will make more money, while driving up the costs to consumers. Also, there is no discussion of the effects on children if corrective action is taken and some children’s playgrounds are taken away.
7. Are individual choices and property impacts understood?	Grade: D	There is no discussion of whether people should be given the evidence and allowed to make decisions for themselves about the types of playgrounds and decks they would prefer. This grade would be lower if CPSC staff suggested taking corrective action instead of suggesting that the CPSC wait until the EPA acts.