

WPSC

Wood Preservative Science Council

January 9, 2009

NIOSH Docket Office
Robert A. Taft Laboratories
4676 Columbia Parkway, MS C-34
Cincinnati, OH 45226

REFERENCE: NIOSH Docket Number NIOSH-144

Dear sirs:

As announced at 73 FR 61874 (October 17, 2008), The National Institute for Occupational Safety and Health (NIOSH) has requested review and comments on the September 2008 draft document "NIOSH Criteria Document Update: Occupational Exposure to Hexavalent Chromium." NIOSH specifically requested comments on whether the hazard identification is an accurate reflection of the available scientific studies and whether the recommendations for protecting workers are appropriate and justified. I am writing on behalf of the Wood Preservative Science Council (WPSC)¹, to identify errors and misstatements in the draft NIOSH document in both of those areas and to propose corrections.

Our comments are largely related to the paragraph on report page 26, lines 24 to 32. That paragraph mischaracterizes the actions undertaken by both registrants of CCA and the U.S. EPA, misidentifies the registered uses of CCA, and incorrectly identifies potential exposures to hexavalent chromium associated with both the manufacture and use of CCA-treated wood.

CCA is a pesticide registered by the US EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 USC §§136a *et seq.* Under FIFRA, EPA regulates all aspects of pesticide formulation and application, including, in the case of wood preservatives, the uses for which wood may be treated. On February 22, 2002, US EPA announced receipt of a request to amend the registrations of CCA pesticide products to delete certain uses (67 FR 8244, February 22, 2002). That announcement is required under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 6(f)(1). The decision to delete certain uses was made voluntarily by the registrants, to address changes in the market place, but still needed to follow the required procedures under FIFRA. On April 9, 2003, US EPA announced the official deletion of certain uses for CCA pesticide products (68 FR 17366, April 9, 2003), as it is required to do so under FIFRA. The results of that voluntary amendment of the pesticide labels

¹ The WPSC is a trade association of manufacturers of water borne wood preservatives. It supports and participates in objective scientific analysis of water borne wood preservatives with a focus on CCA. We are supported by our members, Arch Wood Protection, Inc. and Osmose Inc. The WPSC consults with the nation's leading experts in the fields of environmental science, epidemiology, risk assessment, and toxicology.

limited use of CCA after December 31, 2003 to treatment of wood products intended for use largely in industrial, commercial, and agricultural uses. Treatment of wood for other purposes would be a violation of federal law and subject to both criminal and civil penalties under FIFRA. While the amendment of the registrations was voluntary, the effect is mandatory.

The wording in the draft NIOSH document does not clearly explain the mandatory nature of the label change and suggests that treatment of wood for use in residential settings would be permitted. That is not the case. While wood treated with CCA prior to December 31, 2003 could have continued to be distributed for uses in residential settings, if the label used to treat the wood still permitted that type of treatment, in fact, very little was available at that time and none since. As a result, it is irrelevant to discuss these actions as part of a current, updated criteria document intended to consider potential current exposure situations and steps to be taken moving forward.

The chromium in wood and in dislodgeable residues from wood treated with Chromated Copper Arsenate (CCA) is present solely in the Cr(III) state and is best represented as a Cr/As cluster consisting of a Cr dimer bridged by an AS(V) oxyanion (Nico et al. 2004²). Analysis of dislodgeable residues from CCA-treated wood, whether from the wood surface or in the soil below structures constructed from CCA-treated wood, confirm that only Cr(III) is present (Nico et al., 2004; Nico et al. 2006³; Cooper 2003⁴), and it has been well established for many years that only Cr(III) is present in wood following fixation.

In light of the data cited above, statements in the draft NIOSH document referring to potential exposures to hexavalent chromium are incorrect and should be deleted. In particular, the NIOSH document incorrectly asserts that carpenters working with CCA treated wood might be exposed to hexavalent chromium. Because there is only chromium (III) in CCA, this statement should be deleted.

While it may be factually correct that workers at the highest risk of exposure to hexavalent chromium in the manufacture of treated wood are those working in the treatment plants, that statement alone fails to adequately identify that CCA is applied in a closed-system to pressure treatment retorts, meaning that there is very little opportunity for exposure to hexavalent chromium in the treatment facilities. This potential exposure is to pesticide applicators and is within the jurisdiction of EPA under FIFRA, not OSHA. Therefore, it is inappropriate for NIOSH to be focusing on these exposures in its document.

² Nico, P.S., S.E. Fendorf, Y.W. Lowney, S.E. Holm, and M.V. Ruby. 2004. Chemical structure of arsenic and chromium in CCA-treated wood: implications of environmental weathering. *Environ Sci Technol* 38:5253-5260

³ Nico, P.S., M.V. Ruby, Y. W. Lowney, and S.E. Holm. 2006. Chemical speciation and bioaccessibility of arsenic and chromium in chromated copper arsenate-treated wood and soils. *Environ Sci Technol* 40:402-408

⁴ Cooper, P.A. 2003. CCA fixation and its implications on availability of hexavalent chromium (CrVI) for dislodgeability and leaching. Unpublished report prepared for the American Chemistry Council Arsenical Wood Preservative Task Force. Submitted to the EPA FIFRA SAP as background material for the December 3-5, 2003 meeting on Probabilistic exposure and risk assessment for children who contact CCA-treated wood on playsets and decks and CCA-containing soil around these structures.

We propose the following as a complete revision to lines 24 to 32 on page 26 of the draft NIOSH document:

Wood preservative pesticide products such as chromated copper arsenate (CCA) are used to treat wood for use in a variety of commercial, industrial and agricultural applications. Workers at the highest risk of exposure to Cr(VI) in this application are those working in treatment plants, although the actual mixing and application in such plants occurs in closed systems which effectively prevent exposures to workers. Wood preservatives are pesticides regulated by U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (U.S. Code Title 7, Section 136). Worker protection also is administered by EPA under FIFRA. CCA is a restricted use pesticide, which means that only certified pesticide applicators can use the product. Further, all workers must follow the EPA-approved label, including compliance with the use and maintenance of all required personal protective equipment and all other directions. Assessment and regulation of potential exposures to treatment plant workers to pesticide products is under the jurisdiction of U.S. EPA and will not be addressed in this document.

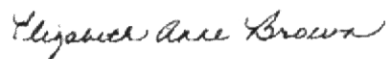
In addition, the references to EPA 2002 and EPA 2006 are irrelevant and should be deleted from the reference list (NIOSH document page 154).

Because there is no exposure to hexavalent chromium when working with wood that has been treated with CCA, even discussing this in relation to worker exposures to hexavalent chromium in air and the feasibility to control those exposures is irrelevant. Therefore, we believe that the following additional revisions to the NIOSH document are needed:

1. Table 2-5 on page 17: The final row of Table 2-5 should be eliminated in its entirety.
2. Appendix A, page A-10: The final bullet under Category 2 should be eliminated in its entirety.

Please contact me at 202-419-5166 if there are any questions regarding these comments.

Sincerely,



Elizabeth Anne Brown, Ph.D.
Steptoe & Johnson LLP
On behalf of the Wood Preservative Science Council