

**Subject: Follow up info of interest**

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To: The RTA R&D Strategic Planning Committee

Several weeks ago RTA sent the following statements and questions to Dr.

Mike Barnes and Dr. Terry Amburgey regarding wood preservatives. We sought their expert academic opinion based on available data derived from published research within their scope of knowledge. Dr.'s Barnes and Amburgey have replied with answers that follow the statements and questions.

1-Creosote is a viable and efficacious stand alone treatment for hardwood crossties. Yes

2-Copper Naphthenate is a viable and efficacious stand alone treatment for hardwood crossties. Yes

3-Pentachlorophenol in an appropriate carrier solvent is a viable and efficacious stand alone treatment for hardwood crossties Yes, but the current environmental issues revolving around Penta make it a doubtful future solution for railroads.

4-CCA is a viable and efficacious stand alone treatment for hardwood crossties. No-see 1982 AWPA report

5-ACQ is a viable and efficacious stand alone treatment for hardwood crossties. No-probable microdistribution problems with hardwoods as occurs with CCA. No data available.

6-Sodium Borate is a viable and efficacious stand alone treatment for hardwood crossties. No, leachability. Seem more viable as a pretreatment prior to air seasoning. Impact on physical properties such as hardness not known.

7-Zinc Borate is a viable and efficacious stand alone treatment for hardwood crossties. No, solubility. Low solubility makes its use improbable.

8-Sodium Fluoride is a viable and efficacious stand alone treatment for hardwood crossties. No, works well in a remedial program.

9-Zinc Chloride is a viable and efficacious stand alone treatment for hardwood crossties. No, impractical because of leaching. Was removed

Follow up info of interest

from  
Book of Standards years ago.

10-ACZA is a viable and efficacious stand alone treatment for hardwood crossties. No, no data; see CCA

11-ACA is a viable and efficacious stand alone treatment for hardwood crossties. No, no data; see CCA, use likely to completely diminish being replaced by ACZA.

12-IPBC is a viable and efficacious stand alone treatment for hardwood crossties. No, paint & joinery preservative. Much too expensive to use at levels needed to protect against decay & termites in crossties.

13-CZC is a viable and efficacious stand alone treatment for hardwood crossties. No, minimal use today

14-Inorganic Boron is a viable and efficacious stand alone treatment for hardwood crossties. No-see 6

15-AAC - DDAC is a viable and efficacious stand alone treatment for hardwood crossties. No

16-CDDC is a viable and efficacious stand alone treatment for hardwood crossties. No, two stage treatment, no hardwood data.

17-ACC is a viable and efficacious stand alone treatment for hardwood crossties. No

18-Copper Azole is a viable and efficacious stand alone treatment for hardwood crossties. Maybe, but no data.

19-Copper-8-Quinolinolate is a viable and efficacious stand alone treatment for hardwood crossties. Maybe since it can be carried in oil but no data.

20-Chlorpyrifos is a viable and efficacious stand alone treatment for hardwood crossties. No, use as wood preservative being withdrawn; was used to bolster termiticidal activity of fungicides.

21-Copper Boron Azole is a viable and efficacious stand alone treatment for hardwood crossties. Maybe, but no data (same as 18).

22-Are there other known wood preservatives that might be viable and efficacious stand alone treatments for hardwood crossties? Chlorothalonil, possible but no data.

23-Are there combinations of any known preservatives or biocides that might viable and efficacious treatments for hardwood crossties? Creosote-Chlorothalonil, Borate-Chlorothalonil, or Creosote or Borates with Kathon(isothiazolone).

24-As guidance to railroads that may wish to explore any of the viable and efficacious treatments identified could you prioritize the most promising to least promising systems? See answers to 23, 21, and 18

We have asked Dr. Barnes to consider discussing this at our convention this fall.

Also, please note the sessions planned at the AWPA convention this year on the subject of the wood preserving challenges from the railroad industry. This session was a direct outgrowth of our task force meeting earlier in the year. If you have not seen the topics we can provide a fax copy

Follow up info of interest

of the agenda or you can view online at <[www.awpa.com](http://www.awpa.com)>

Finally, and we can't take credit for this one, you will receive a fax this morning on a call for papers for an international conference to enhance the durability of lumber and engineered wood, to be held in early 2002 by the Forest Products Lab. You may find some interest in attending this conference or providing a paper.

It certainly seems that we are covering all the bases on the matter.

Jim Gauntt