

RTA Reviews Collaborative Ongoing Wood Tie R&D Study

By Dr. Nate Irby



The group tested the mechanical properties of a newly constructed pier at the MSU Dorman Lake facilities.

Railway Tie Association (RTA) members visited Mississippi State University’s department of Sustainable Bioproducts on March 1 to review the collaborative ongoing wood crosstie research and development study and discuss the potential for adding another construct.

Named “Alternative Wood Preservative Research Project” (RTA-AWPRP), the project encapsulates wood crossties treated with multiple preservative systems in stand-alone and dual-treatment configurations.

The original project was founded in 2008, with a second phase added in 2012, and maturation in 2034 and 2043, respectively. Wood crossties were installed in two field sites for exposure: at Dorman Lake just outside of Starkville and in the southern part of the state near McNeill.

All original program participants as well as new potential collaborators were invited to visit MSU and the Dorman Lake field site to discuss study progress and outline schematics for future wood crosstie research needs.

The current study is the largest of its kind, with the unique robustness of the simultaneous duplicative alternative preservative experimental groups, and with the utilization of full-size wood crossties rather than small-scale representative samples. The two primary objectives aspire to 1) assess the relative performance of new preservative systems in direct comparison to existing creosote and

borate/creosote systems in both refractory and non-refractory species, and 2) concurrently duplicate the research in a location where Formosan subterranean termites are active (McNeill site).

Program participants in attendance ranged from wood preservative suppliers and wood processors/treaters to railroad end users and ancillary entities engaged in advancing the science. With MSU as the host, a brief departmental overview and safety briefing was conducted by Dr. Rubin Shmulsky. Mike Sanders and Dr. Beth Stokes, both with MSU Sustainable Bioproducts, are custodians of the study and reported on progress and outlined deliverables in the auditorium before travel to the test plots.

As with any RTA function, proper decorum is paramount, and Executive Director Dr. Nate Irby provided a brief antitrust overview and project administrative insights to give proper context before viewing the site, decompressing on learnings, and outlining future pathways for added research.

While at the Dorman Lake study plot, attendees were divided into two groups, one led by Dr. Beth Stokes and the other led by Mike Sanders, to give a more intimate approach and core conceptual detail.

Program participants, traditional and contemporary, were provided ample engagement opportunities with their peers while at the event. Such cooperative development and relationship building are



Dr. Rubin Shmulsky, MSU Sustainable Bioproducts Department Head and Professor



MSU's Mike Sanders, lead researcher, and Dr. Beth Stokes, principal investigator, for the RTA-AWPRP



RTA Executive Director Dr. Nate Irby provides cautionary information and delivers the RTA antitrust policy to the audience.



core values of RTA. The event was both refreshing from a state-of-the-art perspective and a wholesome fellowship experience.

In brainstorming current and future needs, multiple approaches were hypothesized, some including:

- Accelerated testing of small samples in a laboratory setting
- Encompass an array of experimental designs simultaneously: small sample, large sample, test plot and in-track considerations, etc.

- Include additional alternative wood species beyond the original scope
- Examine existing methodology for analyzing wood protection techniques and models and, likewise, preservative systems in use today

RTA's tact in distilling those ideas down and potentially expanding the partnership with MSU are being formulated and will be discussed individually with each program participant, historic and new, before unveiling to the larger cooperative. Please stay tuned for more information and do not hesitate to contact your RTA with questions, comments and/or concerns. It is our privilege to serve this great community while lending a hand and leaving a smile.

Attendees:

Jeff Thomas of Nisus; Stacey McKinney and Kevin Coker of Koppers; Bob Baeppler and Jonathan Whitehead of Viance; Dustin Juneau, Kevin Conn, Shane Rice and Steve Bosela of Norfolk Southern RR; Will Cumberland of North American Tie & Timber; Dr. Nate Irby of Railway Tie

Association; Max Schwartz of CSX RR; Erik Frohberg and Zach Dombrow of BNSF RR; Robert Pearce of Stella-Jones; Jerry Rose of University of Kentucky; Bill Moorehead of TRAMMCO; Dr. Beth Stokes and Mike Sanders of MSU-SBP; Kevin Ragon of MSU-SB/ES; Justin Duma of Arxada; and Jeremy Beasley of ERDC-Dept. of Defense. ■



(L-R) Jonathan Whitehead (Viance), Kevin Conn and Shane Rice (NS)



(L-R) Jeremy Beasley (ERDC), Jeff Thomas (Nisus) and Zach Dumbrow (BNSF)



After returning from Dorman Lake and a focus group decomposition, attendees were offered an optional tour of the wood research lab facilities at MSU's Sustainable Bioproducts Department. Amy Rowlen, an MSU research associate, provides an overview of an analytical and testing space on the grounds.



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