

## **Potential for Preservative Migration from Treated Wood Poles or Piles**

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Virtually all preservatives must have some water solubility to move in water within the wood so they can be absorbed by fungi or insects attempting to attack the wood. The amounts of chemical available are generally low, otherwise, the preservative would be rapidly depleted from the wood, which would then be degraded. There are a variety of entities concerned with the potential environmental impacts of preservative migrating from wood. This presentation will review previous studies on preservative levels around various treated wood products and then outline possible additional research needed to better answer regulatory questions.

## **Evaluation of Human and Ecological Risks Associated with Remedial Wood Preservatives**

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### **ABSTRACT**

On behalf of Osmose Utilities Services, Inc., O'Brien & Gere (OBG) conducted a risk assessment to evaluate potential ecological and human health impacts, if any, related to the application of six (6) supplemental wood preservatives to in-service utility poles. For this risk analysis, OBG Researchers utilized a ground water transport computer model to generate "worst case" estimates of preservative release in stormwater and groundwater at a 15 m distance downgradient from the pole. A similar computer model was successfully used by OBG in a 1992 field study and risk assessment sponsored by the Empire State Electric Energy Research Corporation (ESEERCO) and performed by OBG.<sup>1</sup> As with the 1992 ESEERCO Study, predictive estimates of preservative release for this computer modeled risk assessment are conservative. This is particularly true when considering the cautious nature of the USEPA RSL residential tap water exposure scenario of bathing 42.6 minutes/day; drinking 2.5 liters/day; for 350 days/year for 26 years. Even with this conservative approach, predicted surface water and potable well water concentrations remained below the environmental and human health thresholds established by EPA. Based on the results of this risk assessment, it is concluded that supplemental utility pole treatments of MP500-EXT, Pole Wrap CB, Hollow Heart CB, MITC-FUME, WoodFume and EZ-FUME provide minimal risk to the environment and human health when properly applied.

## **Wood Pole Service Life and Impact of Cyclical Maintenance Strategies**

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### **ABSTRACT**

In the utility industry, structure asset managers have long understood that a variety of factors affect the service life of wood poles, including the species, original preservative treatment, geography and maintenance policy. Using empirical data on in-service pole condition from approximately 40 million poles, this presentation will both provide an update to metrics associated with the aforementioned variables, as well as provide insight into new variables that may help improve the selection and management of poles in the future. The presentation will also highlight ongoing research being performed using unsupervised and supervised machine learning algorithms to create additional pole-specific decay hazard zones based on empirical pole service life data.

## **Review of Brazilian Poles LCA**

**Stephen T. Smith**  
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### **ABSTRACT**

Stephen Smith provided peer review of an article to be published in the Journal of Life Cycle Assessment (JLCA). The draft article, Life Cycle Assessment of the Environmental Influence of Wooden and Concrete Utility Poles Based on Service Lifetime, both provided a comparative LCA of CCA-treated Eucalyptus versus concrete utility poles used in Brazil and considered the impact of service life in LCA conclusions. Mr. Smith's comments, submitted in August 2016, noted in particular that article LCA assumption that CCA-treated poles would only last 15 years was too short versus an assumed life of 30 years for concrete and that the report mixed the intended message and focus of addressing service life assumptions by also providing the LCA. The report was revised in December 2016 with better assumptions and better focus on service life assumptions. Mr. Smith again provided review and comments. A final version was made and offered for review in February, 2017. Mr. Smith's comments on the final version were positive and recommended the article be published.

Although the situation was different than for the LCA I co-wrote for the TWC regarding penta-treated poles, the conclusions were generally consistent that treated wood has lower life cycle environmental impacts than concrete. Further, it reinforced the point that service life assumptions need to be accurate for the LCA conclusions to be accurate. Environmental impacts of products continue to be studied and to matter. The treated wood industry needs to stay engaged to understand and defend its products.

## **Utility Pole Specifications: A Suppliers Perspective**

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### **ABSTRACT**

The objective of this presentation is to provide a review of wood pole standards routinely utilized by the nations's utility industry, offer suggestions for providing a specification to pole suppliers, provide pole size specifying practices that maximize the resource and review inspection alternatives during the production process.

## **Use of Creosote by Construction and Transportation Industries**

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### **ABSTRACT**

The combination of wood treated with creosote has for well over 100 years been the very foundation on which the American construction and transportation industries has been established. This paper will describe the use of a renewable resource – wood – and its treatment with creosote, and the undeniable performance of product's service life with railroad crossties, transmission and utility poles, foundation and marine piling, fence posts, and lumber and timber products. It is important to focus on the fact that these treated wood products are integral to the critical infrastructure of the United States. In addition, information will be presented regarding the health and safety issues concerning the use of creosote.