CWPA Proceedings, 2003, pp 186-190

STORAGE, SITING AND DISPOSAL OF INDUSTRIAL TREATED WOOD – THE USERS GUIDANCE DOCUMENT

Brenda MacDonald

Nova Scotia Power

My talk today will discuss the Industrial Treated Wood User's User Guidance Document. I will discuss what it is, a brief history of why the document is being prepared, a discussion of the contents of the document and next steps that have to be taken to finalize the document.

The User Guidance Document – What is it?

Many people are familiar with the Technical Resource Documents (TRDs) for the design and operation of wood preservation facilities. These documents were first prepared in the 1988's and updated in 1997. Wood preservation facilities in Canada are well on their way to meeting the intent of the specifications outlined in the document.

The User Guidance Document will provide a similar standard for industrial users on the purchase, storage, siting and disposal of industrial treated wood. Note that the term "standard" is used loosely – the document will not be an official standard but will be a reference document for industrial users appropriately manage treated wood – from purchase to disposal. It is anticipated that eventually industrial users will meet the intent of the document in a similar manner that wood preservation facilities are on the way to meeting the intent of the TRDs.

Note that industrial treated wood users are a diverse group that range from large railroad and utility companies to government agencies (e.g. transportation departments) and municipalities. Wood preservation facilities are relatively similar. The additional challenge of the UGD is to make the document relevant to a diverse group of users that do have different needs and use treated wood in very different applications.

The User Document Document – How did it come to be?

The Government of Canada established a Strategic Options Process for the Wood Preservation sector. This process began in earnest in 1997 and concluded in 1999 with the publication of the Strategic Options Report (SOR).

The general purpose of the Strategic Options Process was to reduce identified *CEPA-toxic*[1] substance releases to the environment. The *CEPA toxic* substances that were included in the SOP for Wood Preservation were inorganic arsenic compounds, chromium (VI), polycyclic aromatic hydrocarbons (PAH), creosote-impregnated wastes, polychlorinated dibenzodioxins, polychlorinated dibenzofurans and hexachlorobenzene. These substances are component parts or microcontaminants of the major types of industrial treated wood – CCA, pentachlorophenol and creosote.

The SOP consisted of two phases – information gathering and options identification. Release data for the various chemicals were estimated. Each Issue Table develops recommendations on the most feasible way to address the problems associated with the specific toxic substances (Environment Canada, 2002). These recommendations are published in the Strategic Options Report.

What was unique to the SOP for the Wood Preservation Sector was that two Steering Committees were formed to implement the recommendations in the report – the Manufacturers/Treaters Steering Committee and the Industrial Treated Wood Users Steering Committee. This allowed for continued stakeholder input as major stakeholders were part of the Steering Committee and made certain that the recommendations and hard work put in to the process did not die with the report.

Various working groups were formed under these Steering Committees. The Industrial Treated Wood Users Steering Committee has four working groups (see figure 1).

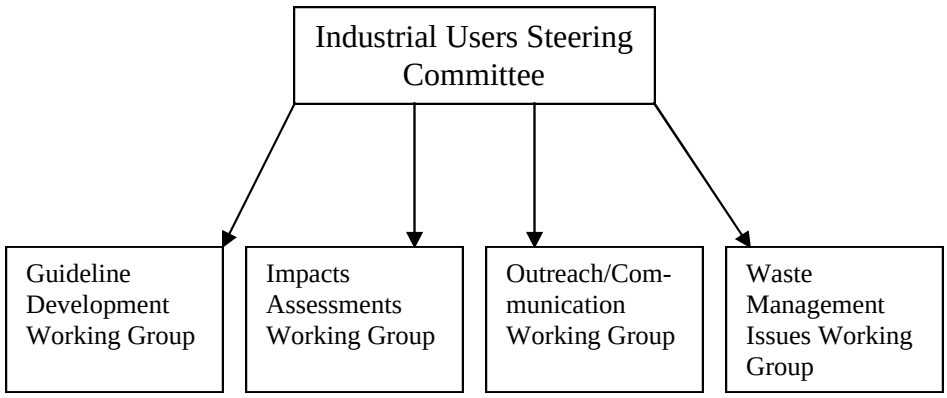

Figure 1: Structure of the Industrial Users Steering Committee

[1] The Canadian Environmental Protection Act (CEPA 1999) defines *CEPA toxic* as a substance is toxic if it is entering or may enter the environment in a quantity or concetration or under conditionz:

a) having or may have an immediate or long-term harmful effect on the environment;
b) constituting or that may constitute a danger to the environment on which human life depends, or
c) constituting or that may constitute a danger in Canada to human life or health.

(Canadian Environmental Protection Act, 1999)

One of the tasks assigned to the Guideline Development Working Group was to develop the User Guidance Document.

It became evident during the SOP that there was not an abundance of good data on releases of various substances from treated wood and more importantly, the environmental impact of these releases. It was determined that developing a management system on the appropriate uses of treated wood throughout its lifecycle would be more effective than trying to determine a direct mechanism to track reductions in *CEPA-toxic* substances. This approach would address one of the risk areas identified during the SOP – inappropriate reuse of industrial treated wood.

The User Guidance Document – Contents

The backbone of the User Guidance document is a series of eight recommendations agreed to by stakeholders during the Strategic Options process (see table 1). Note that the Users Guidance Document is not designed to be a prescriptive document but rather outlines minimum requirements that one must meet. How the industrial user meets the requirements will be conducted in a manner that best suits the particular industrial user.

The eight recommendations are as follows:

TABLE 1: Recommendations in the User Guidance Document	
Recommendation 1	Use purchasing policies that make certain any treated wood purchased has been treated appropriately
Recommendation 2	Address potential impacts appropriately in locating storage facilities for treated wood
Recommendation 3	Address potential impacts appropriately in managing storage facilities for treated wood
Recommendation 4	Consider, where practicable, alternatives to the use and in-service retreatment of wood treated with CEPA-toxic substances in areas that may be sensitive in terms of the environment and human health, such as areas in close proximity to potable water supplies and aquatic resources.

TABLE 1: Recommendations in the User Guidance Document	
Recommendation 5	Encourage the original user to re-use treated wood to the extent practicable, and where such reuse occurs, make every reasonable effort to manage the handling of that wood and any by-products (e.g., wood chips, saw dust, extracted preservatives) in a manner that prevents or minimizes: a) preservative being released to the environment: and, b) risks to human health.
Recommendation 6	Develop procedures to keep account of treated wood taken out of service. Whenever the transfer of possession of treated wood occurs, make every reasonable effort to include an advisory bulletin for the subsequent user that details: a) that wood has been treated with a wood preservative; and b) any suggested management practices related to its future handling and use.
Recommendation 7	When the user is disposing of treated wood make every reasonable effort to utilize the recommended was management hierarchy that inlude reuse, recycle, recovery options for treated wood.
Recommendation 8	Make every effort to continually improve the handling and management practices of treated wood.

The UGD will provide detail as to how industrial users can meet these recommendations. Some background documentation has been prepared to provide detail on the steps that industrial users must take to be able to meet the intent of the recommendations.

Treated wood storage guidelines have been drafted that outline basic requirements for the appropriate storage of treated wood (minimum set back distances from sensitive areas, potable water, storing of surfaces with limited permeability, etc.). These guidelines provide the background information that would address recommendations 2 and 3.

A Life Cycle Assessment methodology has been developed to provide background information for industrial users to address recommendation 4. Whether alternatives to treated wood provide reductions in releases to *CEPA-toxic* substance and/or are more beneficial to the environment are not always clear. This document does provide a methodology for conducting those evaluations. One drawback of the methodology is that

it is complex and it would be difficult for someone not familiar with life cycle methodology to apply.

A waste management hierarchy has been prepared. This hierarchy includes:

- waste abatement or elimination;
- waste reduction or modification;
- waste reuse;
- waste recycling;
- waste treatment (e.g., product or energy recovery); and
- waste disposal.

(Konasewich et. al., 2001)

The guidelines for a National Strategy for the Management of Post-Use Preservative Treated Industrial Wood (Konasewich et. al., 2001) provide a review of available current approaches and technical options that are available for application to each component of the waste management hierarchy. An implementation strategy for the waste hierarchy is being developed by the waste management working group. This information will be used to supplement information addressing recommendation 7.

Users Guidance Document – Next Steps

The User Guidance Document is in the final stages of preparation. The document will be formatted so that it has a similar look to the Technical Resource Documents. The document will have to be translated as well.

Auditing protocols which will be included in an appendix in the document have to be finalized. These auditing tools will assist users in self-determining whethere they have the systems in place to be able to meet the intent of the recommendations.

The document has to be rolled out and communicated to all industrial users.

Much of this work will take place in 2004.

References

Environment Canada, Strategic Options for the Management of CEPA-Toxic Substances from the Wood Preservation Sector, Volume I, July 1, 1999 (http://www.ec.gc.ca/sop/wood-bois/pubs/pub_e.htm)

Environment Canada – Strategic Options Process information on the internet, 2002, (http://www.ec.gc.ca/sop/wood-bois/over/wpsop_e.htm)

Konasewich et. al., National Strategy for the Management of Post-Use Preservative Treated Industrial Wood, 2001