



December 2010 Newsletter

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Boat at Arcadia Primary School
Designed by Fiona Robbe
Supplied in Tanalith E treated Spotted Gum



"hug me" poles at Centennial Park Sydney.
Designed by Fiona Robbe,
Supplied in Tanalith E treated Iron Bark

Timber Treatment 101 (Continued)

How dangerous is CCA?

When the APVMA reviewed the scientific studies into CCA, which probably range into the multi thousand, it concluded:

"Based on a consideration of the exposure to CCA treated timber products, in particular children's play equipment there was no compelling evidence from the available data to conclude that there was likely to be an unacceptable risk to public health from arsenic from CCA treated timber." (APVMA UD.19)

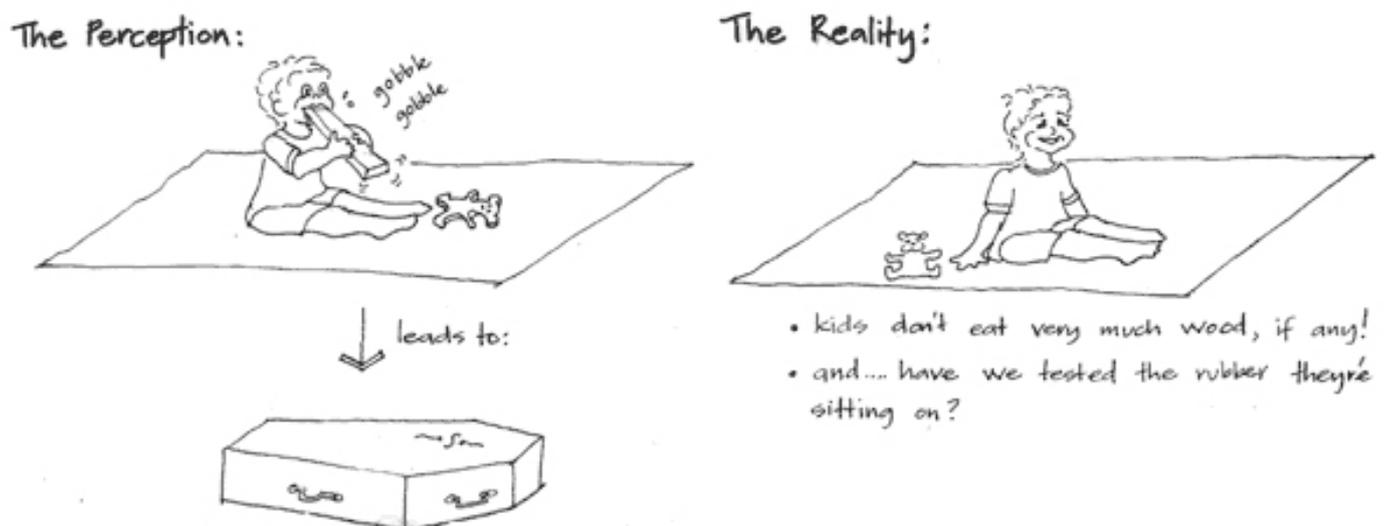
Their conclusion in face of this less than overwhelming evidence was *"Evidence of health problems associated with this use has not been proven. Because arsenic at higher levels is a carcinogen, and alternative wood preservatives are available, restrictions in some domestic applications will occur as a precaution."* (CSIRO UD, 7).

CCA was removed from segments of the Australian market, not because it was proven dangerous but because it was not proven safe. Unfortunately the APVMA could not agree with the industry on the format of test regime whereby it may be proven to be safe.

The New Zealand Authorities reviewed the same data and came to a different conclusion. Their report said “CCA treated wood has also been in use for many years without discernable health effects suggesting that if there is a true increased risk it is very small” (ERMANZ 2003, 57). The New Zealanders attempted to quantify the risk in that country. They maintain that an increased risk of one in 100,000 over a 70 year lifetime from exposure to a carcinogen was acceptable (ERMANZ 2003, 57). The actual risk is far less than this (ERMANZ 2003, 56 9). Bear in mind that the very visit to a playground is probably more dangerous. There are in the order of 250,000 playground injuries in Australia each year!

The New Zealand study makes a wise observation “Despite uncertainty and potential overestimation of cancer risk it would be prudent public health policy to reduce human exposure to arsenic from all sources wherever feasible” (ERMANZ 2003, 62). The implications of this statement are enormous. When we test our employees for arsenic levels it is essential that they do not drink beer or eat seafood for three days beforehand as these can give a false high reading because of their arsenic content. Is anyone seriously going to be consistent and ban these?

But facts are worth very little when dealing with grandmothers who grew up with Arsenic and Old Lace and young mothers who saw the fictional account of CCA poisoning in The Practice. There are alternatives available to counter these perceptions and it is simply much easier to use them than to fight against the tide. While there are alternatives to CCA available for most applications it is not simply a matter of saying Tanalith E treated to H5 instead of CCA treated to H5 (which in many cases was over specification). Because of issues of cost, licensing of treatment plants and availability the higher levels of treatment will probably not be realizable. As mentioned in last's months newsletter they simply were never achievable in sawn timber.



A cartoon by Fiona Robbe

A few years ago I spoke at a timber treaters' conference and met with a representative of the APVMA. I asked “Have all the products that are used in children's playgrounds been subject to the same scrutiny as CCA?” The reply was “I hope so”. The fact is they have not been. This was confirmed 12 months later when I spoke at the Kidsafe conference on the subject of treating. During lunch I sat near two manufacturers of rubber soft fall and they were expressing concern about the safety of their product. Have you seen studies on rubber soft fall? Here is a report that might have some relevance Assessment of cancer clusters using limited cohort data with spreadsheets: application to a leukaemia cluster among rubber workers Smith AH, Duggan HM, Wright C Am J Ind Med, 1994 Jun;25(6):813 to 823 available at <http://www.ncbi.nlm.nih.gov/pubmed/8067359>. The likely scenario is that when all the products that we use in children's playground have been subject to the same scrutiny as CCA there is likely to be nothing left to design with!

At this stage Kidsafe are recommending Tanalith E, which OSA uses as one of the appropriate treatments for use in children's play equipment.

Links:

The APVMA report is found at:

http://www.apvma.gov.au/products/review/docs/arsenic_tox.pdf

The CSIRO report is found at:

http://www.csiro.au/resources/CCATreatedTimber--ci_pageNo-7.html

The ERMANZ report can be found at:

<http://www.ermanz.govt.nz/resources/publications/pdfs/cca-report.pdf>

The Kidsafe recommendation is found at:

<http://kidsafensw.org/docs/factsheets/PAU/Timber%20Treatment%20KL%202010.pdf>



Leaching Trials



Contact Trials

What can be done with existing CCA Infrastructure?

If an asset owner is not prepared to maintain their structures they should pull them out now, whether they are made of steel or timber, untreated or treated. Surely the danger from a loose bolt is more real (and likely) than a possible risk from treatment? Wise asset management dictates that timber infrastructure should be regularly maintained with a simple, effective maintenance program regardless of the treatment employed. This maintenance program should include the simplest preparation and reapplication techniques. Preparation should be able to be performed quickly by unskilled labour

The APVMA has no regulatory authority over existing structures constructed of CCA treated timber and so has made no recommendation with respect to future action for existing structures. To date, regulatory authorities in the USA, Europe and Canada have not recommended dismantling existing structures. However, the APVMA is aware that the USEPA is conducting an extensive assessment of this issue.

CCA treated timber which is processed in Australia is now illegal for many traditional applications. Serious concern (and almost panic) has been expressed in many quarters about what to do with existing CCA structures. Understandably asset owners simply did not know what to do with existing CCA treated infrastructure. While the APVMA did not require existing CCA timber to be removed even from children's playgrounds and their ruling gave no clear guidance as to what to do with it, sealing the timber with a penetrating oil was suggested as a potential effective solution. They said:

*"Information is limited on the possible benefits of painting treated timber (including existing structures) to reduce possible risks. Some scientific studies indicate that certain penetrating coatings, such as oil based semi transparent stains, when used on a regular basis **may** reduce the potential for CCA exposure. However, there have been some questions raised about the effectiveness of film forming or non penetrating stains*

because of cracking, peeling and flaking” (emphasis ours).

Source: http://www.apvma.gov.au/chemrev/arsenic_faq.shtml

This suggestion is exactly the same as wise asset management however the APVMA says *may* reduce exposure. Does it in actual fact work?

OSA asked Arch Chemicals who manufacture Tanacoat for us to undertake testing to determine if this sealing does in fact happen. We are pleased to advise that Tanacoat has been proven to be remarkably effective in sealing CCA treated timber. Under laboratory simulation leaching of the active constituents was reduced by 50% and transfer by physical contact to virtually one twentieth. So, applying Tanacoat to timber allows the asset owner to maintain good timber maintenance practices and deal with CCA at the same time.

The South Australian Government has attempted to adopt a uniform Australian approach to existing CCA timber playground equipment. Contact us for a copy of their assessment of the issues and identified Tanacoat (tinted) as an appropriate sealant.

Detailed results of the trial are found at:

http://www.outdoorstructures.com.au/pdf/cca_timber_treatment_analysis.pdf

and the methodology used is found at:

http://www.outdoorstructures.com.au/pdf/cca_timber_treatment_methodology.pdf

Further information on sealing CCA can be found on the USEPA website:

<http://www.epa.gov/scipoly/sap/meetings/2006/november/november2006finalmeetingminutes.pdf>

A word of Caution

Take care when specifying “timber treatments”, to ensure you do not put yourself in a situation that may require future remedial action. CCA is still legal for some products such as commercial decking (but illegal for domestic, not terribly logical) and a guide is available on our website (see link below). Not every application is covered in this list. Remember also that the APVMA requirements do not apply to imported timber. Discuss any questions you have with us or Steven Koch of Koppers Arch ph. 0411 489 651

The guide to acceptable use is found at:

http://www.outdoorstructures.com.au/pdf/cca_acceptable_usage.pdf

Our datasheet on Tanalith E is found at:

http://www.outdoorstructures.com.au/pdf/tanalith_treatment.pdf

One of the possibilities of the Somerset Bridge

Brochure for Somerset Bridges Available

A brochure is now available for our new track bridge which we have called the “Somerset”. It is designed to be used in situations where access is so poor that a helicopter is needed. Briefly, the advantages of the Somerset bridge are:

- Lower profile
- Less intrusive visually



- Significant inundation possible
- Tube catches less debris
- Timber or metal decking
- Ideal for spans up to 9.0m
- Lightweight & compact
- Intended for difficult locations
- Variety of handrails possible

The segmented bridge is also suitable for helicopter access

Brochures are found at: <http://www.outdoorstructures.com.au/pdf/osa-summerset-series-bridge.pdf>

Bridge Quote Requests

If there is any doubt that OSA make the best kit bridges in the country look at the [Berrinba Wetlands Project](#). Not all bridges are equal. After encountering three bridges in one month that did not meet the Bridge Code I wrote the [May newsletter](#). Refer to the May OSA Newsletter when assessing the suitability of quotes.

See our [Steel Bridge Quotation Request Form](#) and our [Timber Bridge Quotation Request Form](#)

Steel Bridge Quotation Request Form

http://www.outdoorstructures.com.au/bridge_request.php?Mode=st

Timber Bridge Quotation Request Form

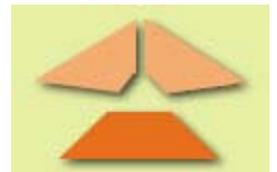
http://www.outdoorstructures.com.au/bridge_request.php

Regards

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