Is the WHO & UN recommended lead limit of 90ppm in new paint something APMF could get behind?

This article is based on an Email from The LEAD Group to the Australian Paint Manufacturers Federation (APMF), 17th December 2019

Hi Bernard,

Is the WHO & UN lead limit of **90 ppm** (parts per million) something APMF could get behind? Since its formal launch in 2011, the Global Alliance to Eliminate Lead in Paint (GAELP), run by the World Health Organisation (WHO) and United Nations (UN), and more recently shortened to "Lead Paint Alliance" has advocated for every country to legislate to limit total lead in paint to **90 ppm**.

> **90 ppm** total lead is the concentration limit recommended by the "Model Law and Guidance for Regulating Lead Paint". It is the lowest, most protective regulatory limit for lead paints that has been set in countries.

Above: GAELP recommendation for 90 ppm total lead limit in paint, from https://wedocs.unep.org/bitstream/handle/20.500.11822/30110/2019_Global_Update.pdf?sequence=1&isAllowed=y

The *Lead Alert: Six Step Guide to Painting Your Home* booklet on the Australian federal Environment department website at http://www.environment.gov.au/protection/publications/lead-alert-six-step-guide-painting-your-home (in which contact details for both APMF and The LEAD Group are listed on page 30 and in which LEAD Group Kits that can be used to collect old paint chips, dust, soil, etc samples and have them analysed for lead at a lab are mentioned several times) gives a dotted history of the issue so I've copied the relevant text from page 5 of the booklet, and added in the relevant conversion [in square brackets] to parts per million (ppm):

> Paints containing as much as 50 per cent [**500,000 ppm**] lead were used on the inside and outside of homes built before 1950. Until the late 1960s, paint with more than 1 per cent [10,000 ppm] lead was still being used.
>
> As a rule of thumb, the lead content of paint was limited to 1 per cent [10,000 ppm] by 1970. However, **homes built after 1970 might still contain paint with more than 1 per cent [>10,000 ppm] lead**, particularly if old paint, industrial paints, or marine paints have been

used.

In 1992, a 0.25 per cent [2,500 ppm] limit on the maximum allowable amount of lead in house paint was recommended. This has been reduced to **0.1 per cent [1,000 ppm] since December 1997**.

Some industrial coatings and specialised paints used today contain lead. These products must be labelled if they contain more than 0.1 per cent [**>1,000 ppm**] —so you need to read the label.

Domestic paints are available that also comply with the safety of toys standard (Australian Standard 8124.3), which limits leachable lead to 90mg/kg [**90 ppm**].

[end of text copied from p 5 of the *6 Step Guide* booklet]

So you can see from the above that the only Australian paints that might comply with the World Health Organization's & United Nations Lead Paint Alliance's proposed global total lead paint limit of **90 ppm** are paints that comply easily with the less stringent soluble lead paint limit of **90 ppm** in the Australian/New Zealand Mandatory Toy Standard ASNZS8124.3 (which also limits 7 other metals in toy paints).

You are correct in one sense that "adding lead to paint was already banned in Australia [in 1997]" because it is my understanding that in the early 1990s when the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) No. 12 - Appendix P - Uniform Paint Standard pp 252 - 256 (1994) was being modified in regards to lead paint, the APMF argued that, due to the high level of lead contamination in raw ingredients in paints, especially zinc-based paints, that all paint manufacturers would have to reformulate their paints without lead compounds, in order to comply with the new lead limits. When the June 1994 SUSDP became Effective (by law) on 1st December 1997, it allowed up to 0.1% [**1,000 ppm**] lead in all paints (with the exception of industrial paints) or 0.2% [**2,000 ppm**] lead in zinc-based paints (because zinc ore is naturally contaminated with lead).

Regarding your question about regulations: the SUSDP (which later became the Standard for the Uniform Scheduling of Medicines and Poisons or SUSMP) is incorporated into state and territory Poisons Regulations. As for lead legislation in Industrial paints, I published an article about that in October 2017, at https://www.lead.org.au/lanv18n2/lanv18n2-5.html . The article was a history of The LEAD Group's successful advocacy for Australia to become the first country in the world to ban the addition of 15 lead compounds to non-residential paint, that is, (nearly) all paints and inks (with the exception of artists' paints) by limiting each lead compound, from 1st January 2010, to 0.1% [1,000 ppm]. But I think you'll find the article also provides an excellent history of The LEAD Group's collaboration with APMF.

In the USA, paint raw ingredients or the raw ingredients in newer formulations of residential paint must be lower in natural lead-contamination levels than in Australia, because in the US the residential paint lead level was made more stringent at 0.06% [**600 ppm**] lead, a long time ago (in 1978). This US lead in house paint limit was further reduced to 0.009% [**90 ppm**] lead (effective August 2009),

making the USA the first country to achieve the Lead Paint Alliance recommended limit of **90 ppm** in residential paint.

And if you have a look at the latest United Nations Environment – GAELP or Global Alliance to Eliminate Lead Paint (of which both our organisations are members) report "Update on the Global Status of Legal Limits on Lead in Paint September 2019" at https://wedocs.unep.org/bitstream/handle/20.500.11822/30110/2019_Global_Update.pdf?sequence=1&isAllowed=y you'll see in Table 2 and Figure 2 that 37% of countries which have a legal limit on lead in paint now have a limit of 90 ppm on lead in paint. As far as I can work out, they actually mean lead in residential (house) paint, as it does not appear that any other country has created legislation to limit the lead content of non-residential paint (eg marine, line-marking, industrial, aviation, vehicle, cranes and mining machinery paint, etc) since Australia achieved the 1997 residential paint limit of **1,000 ppm** lead in all paints and inks sold and used in Australia, by 2010.

It seems that if we wanted to join with the US and a dozen other countries such as Bangladesh, Cameroon, Ethiopia and India, in limiting lead in residential paint to **90 ppm**, all we would have to do is contact the Advisory Committee on Chemicals Scheduling ("ACCS") to ask them to advise the Secretary of the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) to change the paint lead limit, in the next version from the December 2019 version of the SUSMP (at https://www.legislation.gov.au/Details/F2019L00032/Download) in:

SECTION SEVEN/Appendix I PAINT OR TINTERS

7.1 General Requirements

(2) A person must not manufacture, sell, supply or use a paint or tinter containing more than **0.1%** Lead (the proportion of Lead for the purposes of this section is calculated as a percentage of the element present in the non-volatile content of the paint).

from **0.1% [1,000 ppm]** to **0.009% [90 ppm].**

Note that China is on the list in Table 2 of the Lead Paint Alliance "Update on the Global Status of Legal Limits on Lead in Paint September 2019" - although China has only limited soluble lead (otherwise known as leachable lead, that is, not total lead present in the non-volatile content of the paint) in paint to **90 ppm** so all of the Australian paints manufactured to comply with our Toy Standard would already meet that less stringent requirement in China.

I sincerely hope you can take this issue to the earliest possible meeting of APMF members or the board (if that is required of you) so that Australia can be one of the first (at most) twenty countries to reach the **90 ppm** GAELP recommended lead limit in house paint.

Elizabeth O'Brien, The LEAD Group Inc, Australia

Editor's Note: as at 28th June 2020. The Lead Paint Alliance newsletter of June 2020 states that the situation noted in the above email regarding China's lead paint rule has changed, specifically:

"**China** recently strengthened its national standards that reduce the lead limit for woodenware and architectural paints to **90 ppm** total lead and lower the standard for vehicle and industrial protective coatings to **1000 ppm** total lead…"

So it is possible that China has become the second country, after Australia, to limit lead in non-residential paints (in China's case vehicle and industrial protective coatings) to **1000 ppm** total lead.

As to whether Australia can still be in the first 20 countries to limit lead in residential or architectural paint to **90 ppm** lead, will be known when GAELP produces its annual report on the subject, presumably in September 2020.

Let's get cracking to limit lead in Australian residential paint to 90 ppm before September 2020!!

2018 **Volcano Art Prize** Entry: Title: **Australia first to ban lead in all paint.** Lead-safety Message: "Test paint for lead before renovating. Never create lead paint dust or lead fumes." Artist: Hugh O'Brien. https://volcanoartprize.com/portfolio-item/australia-first-to-ban-lead-in-all-paint/