OFFICE OF THE PRIME MINISTER'S CHIEF SCIENCE ADVISOR

Professor Sir Peter Gluckman, ONZ KNZM FRSNZ FMedSci FRS
Chief Science Advisor

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Hon Kris Faafoi
Minister of Commerce and Consumer Affairs
Parliament

Dear Minister Faafoi

Re: Methamphetamine Testing: NZS8510:2017 and General Standards-Setting Processes

Last week we discussed our observations about the processes that led to the inappropriate use of methamphetamine testing in housing, and you asked for a follow-up note. Much relates to the processes and systems involved in the Standards development process. Our comments arise from the observations made in the course of the development of our report to Minister Twyford '*Methamphetamine contamination in residential properties in New Zealand: Exposures, risk levels, and interpretation of standards'*.

Specific issues related to development of the NZS 8510:2017 standard:

Ministry of Health

Our research into health effects of exposure to methamphetamine residues on household surfaces led us to examine how existing remediation guidelines were derived both in New Zealand and internationally. This included an extensive literature review and analysis of the original (2010) NZ Ministry of Health *Guidelines for the Remediation of Clandestine Methamphetamine Laboratory Sites*,[1] the 2016 ESR review of this guideline,[2] the NZS 8510:2017 standard, and all available guidelines from the US and Australia. It also involved detailed analysis of the studies that were used to support the California and Colorado risk-based decontamination standards for methamphetamine manufacturing sites. Our report explains the very conservative nature of the reference doses and the exposure assumptions used to calculate acceptable surface methamphetamine levels that serve as a proxy for adequate cleaning of former clandestine meth labs.

[1] Ministry of Health (2010) *Guidelines for the Remediation of Clandestine Methamphetamine Laboratory Sites* http://www.moh.govt.nz/notebook/nbbooks.nsf/0/97DCB4331641B346CC2577AB000515FC/$file/guidelines-remediation-clandestine-meth-lab-sites.pdf

[2] Fowles, J., Deyo, J., & Kester, J. (2016). *Review of remediation standards for clandestine methamphetamine laboratories: Risk assessment recommendations for a New Zealand standard*. Institute of Environmental Science and Research (ESR) http://www.moh.govt.nz/NoteBook/nbbooks.nsf/0/3169D54AC7E94227CC25806D006716AD/$file/methamphetamine-remediation-report-oct2016.pdf

Mail: PO Box 108-117, Symonds Street, Auckland 1150, New Zealand
Physical: Ground Floor, Boyle Building (505), 85 Park Road, Grafton, Auckland 1023
Telephone: +64 9 923 6318 Email: csa@pmcsa.org.nz Website: www.pmcsa.org.nz

What became clear from our research was that the original Ministry of Health guideline, which was specifically developed to provide advice on *remediation of clandestine meth lab sites,* had been co-opted for use in the general testing of houses for the presence of methamphetamine. This misuse was then inappropriately embedded in the NZS 8510 standard, developed in 2017. It was not within our mandate to investigate who was responsible for the inappropriate use of the original guideline but it does suggest the failure of sufficient expert input or oversight.

The Ministry of Health guideline was noted as having a very conservative threshold level for methamphetamine residues post-remediation. Further, the discussion in section 9.2, p 74, of health effects of methamphetamine use and the suggestion that these could occur from low-level exposure is not supported by evidence. The recommendations in the guideline for reaching 'no residual risk' and 'minimal residual risk' (p 83) are undoubtedly excessively precautionary except in the absolute worst-case scenario.[3]

However, setting aside these issues, the guideline is reasonably clear that the trigger for screening properties is based primarily on police or fire service inspection (see figures 4 and 5 on p. 44 and 45 in the guideline, and in the **Appendix** below), or through complaints that trigger a police or health authority investigation.

The misuse of this guideline by extending it more broadly for whatever reason by a number of parties, possibly driven by media attention to meth lab busts and stories of the resulting contamination at some point began to fuel the growth of the meth testing and remediation industry. This industry latched onto and further promoted a number of unsupported claims about health effects arising from methamphetamine contamination.

The activities of this industry put the spotlight back onto the Ministry of Health guideline and its unsuitability for the purpose to which it was being put.

Standards NZ

But rather than first asking *what was the purpose of a standard or guideline* or considering the clear exaggerated use that had developed, in 2015 Standards NZ began work to develop a new standard for dealing with methamphetamine contaminated buildings, focusing mainly on ensuring reliable results from the meth testing and remediation industry by standardising methodologies, procedures and performance criteria.

As part of this process, the Ministry of Health contracted ESR in 2016 to undertake an independent review of the existing guidelines to provide updated advice on acceptable post-remediation methamphetamine levels. According to the Ministry of Health website, "*the scope included seeking advice on both remediation of properties used as clandestine labs and solely for recreational use*."

[3] The guidelines note the following on page 1: *"In the United States over 20 states have established clean-up (remediation) standards or guidelines specifically for methamphetamine and associated chemical residue. However it is important to note that; although set in the interest of protecting human health and the environment, these levels have not been set according to health-based criteria; rather remediation standards/guidelines have been set at what are believed to be conservative levels to account for scientific uncertainty while at the same time establishing a standard/guideline that site remediation contractors can meet (USEPA 2009)."*

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The ESR report took a toxicological perspective to attempt to determine the threshold level of methamphetamine that would result in *no risk* to human health to any exposed person. Because of a lack of data on adverse effects of low-dose methamphetamine, this was a theoretical modelling exercise that took by definition a precautionary approach to both the reference dose and the possible exposure scenarios.

Similar to the commissioning of the NZS 8510 standard itself, the study did not look at the broader question of why and how meth testing and remediation was being done, nor did it analyse the New Zealand context with regard to methamphetamine manufacturing methods or levels of residue likely to be encountered from use of methamphetamine. In other words, this assessment did not give any consideration to the actual extent of the problem or the purpose of testing.

Nonetheless, the Standards Development Committee used the recommendations of the ESR report as a basis for choosing a single threshold level for detecting methamphetamine on surfaces, regardless of whether or not the site was used for manufacturing of the drug.

The 18-member committee[4], established by Standards NZ according to their protocols for providing 'balance', comprised nine (50%) representatives from the methamphetamine testing and remediation industries.

For the most part, it appears that these industry representatives had no scientific background. Many of their websites make strong claims about the health effects of methamphetamine exposure without any supporting evidence. These claims are used to suggest universal testing of houses is needed.

False claims similar to those promoted by the meth-testing industry in NZ have begun to appear in Australia. News items point to NZ as having '*taken the lead when it comes to awareness of methamphetamine contamination, prompting calls that Australia should follow suit*." [5]

[redacted] This is incorrect. According to every guideline that specifies a trigger for an initial screening for methamphetamine contamination, the trigger is the discovery or strong suspicion of the existence of a clandestine lab (or former lab). In this way they are more similar to the 2010 Ministry of Health guideline than to the current standard (see **Appendix**).

This suggests application of the guidelines in a way that benefitted the industry at the expense of the NZ public. The formation of a standards committee heavily weighted towards this very industry thus suggests a systems failure. For example:

[4] Standards NZ website states that there were 21 members of the committee, but their published list of members shows 18, half of which are industry representatives: https://www.standards.govt.nz/touchstone/building/2016/jun/committee-appointed-to-develop-meth-testing-standard/?utm_campaign=ts&utm_medium=feature&utm_source=homepage

[5] https://www.news.com.au/finance/real-estate/buying/methamphetamine-use-is-on-the-rise-and-contamination-in-the-home-is-serious/news-story/5f76616f37d8e0be7deabbc1c8a6aa44

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- Protocols for initial screening are problematic – field composite testing can easily be manipulated to provide a positive reading which leads to a further round of testing. This situation benefits only the testing industry and not the NZ public.

- The standard prescribes requirements for validation which would make it difficult to introduce rapid test kits for initial screening into the market. This is also beneficial to testing companies, as it generates more business and more need for expensive tests.

- The issues pointed out clearly by some submitters such as Community Housing Nga Wharerau o Aotearoa and the NZ Drug Foundation – the only two submissions that can be found online – do not seem to have been taken into account (see attached submission documents). We cannot access the full range of submissions so it is not possible to assess how the committee weighed up the evidence and viewpoints provided. This should be reviewed, and all submissions should remain publicly available.

- The standards did not appear to take into account information from the California background documents, in which decontamination experiments showed that "*a relatively simple cleaning process using Simple Green detergent appears to remove most (in the case of drywall or plywood) or all (in the case of glass and sheet metal) of the surface methamphetamine residue that is potentially available for exposure."*[6]

Generalising

There are some general issues that are not specific to this situation:

Standards development should start from zero-base questioning. Depending on the type of standard, this may require a more independent review from outside the industry, to answer the following questions:

- What problem will the standard address? What is its purpose? Is the right question being asked?
- Is the standard being considered in the wider context of how the relevant industries are operating?
- How will the standard affect *all* relevant stakeholders?

Scientific input should not be merged with values-based and interest-based inputs. Rather it should be ring-fenced so it is clear to those with final approval roles whether the standard is in accord with the evidence.

Governance issues

- There is a need to better define 'balance' on the committee representation, and what it means to be an 'expert'.

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[6] Salocks, C.B. (2009). *Assessment of Children's Exposure to Surface Methamphetamine Residues in Former Clandestine Methamphetamine Labs, and Identification of a Risk-Based Cleanup Standard for Surface Methamphetamine Contamination*. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency, Sacramento, CA, USA. https://oehha.ca.gov/media/downloads/crnr/exposureanalysis022709.pdf

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- There is risk of the development process being captured by persuasive individuals who advocate strongly for a particular view. It would be beneficial to appoint an independent, scientific reviewer to oversee the process.

Accreditation

It is of concern that testers in NZ were not subject to accreditation as they are in other jurisdictions. Here we had a new activity emerge which had both technical and serious social and economic implications. Yet no consideration was given to ensuring that those involved were properly able to use the technology or give advice that was appropriate.

Yours sincerely

Sir Peter Gluckman

Dr Anne Bardsley

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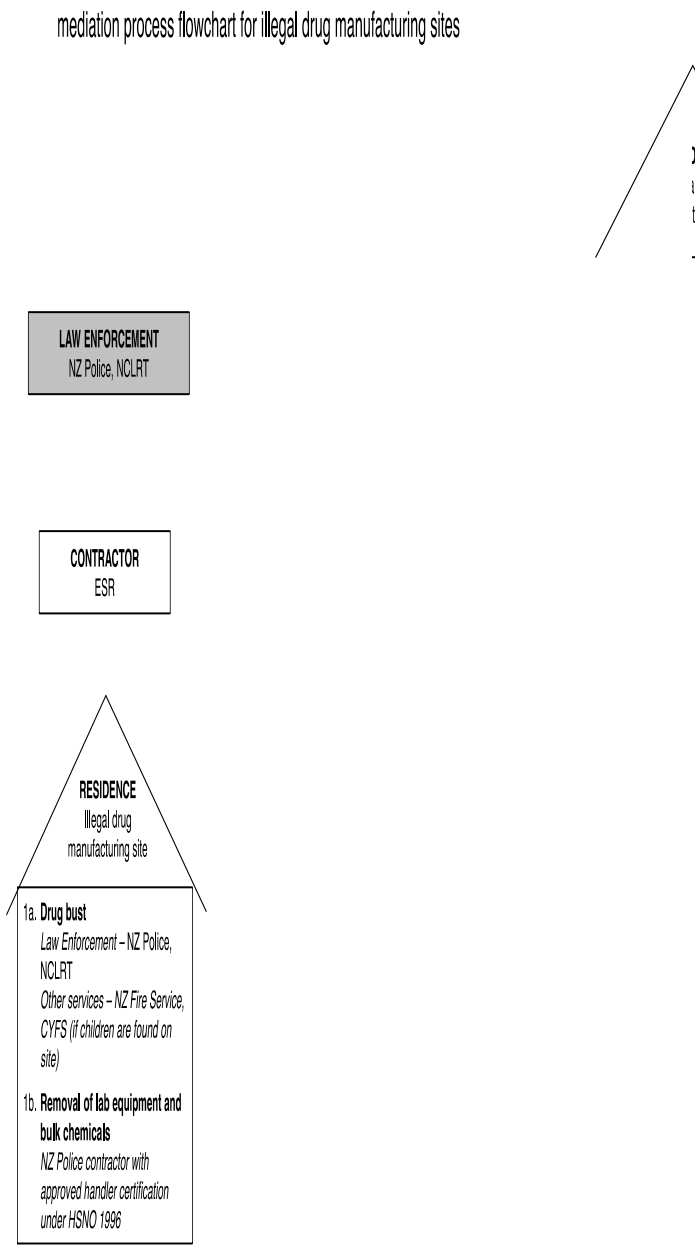
APPENDIX

Flowcharts for assessing houses for methamphetamine contamination, according to the 2010 Ministry of Health *Guidelines for the Remediation of Clandestine Methamphetamine Laboratory Sites* http://www.moh.govt.nz/notebook/nbbooks.nsf/0/97DCB4331641B346CC2577AB000515FC/$file/guidelines-remediation-clandestine-meth-lab-sites.pdf



Source: Adapted from Alaska Department of Environmental Conservation (2007).

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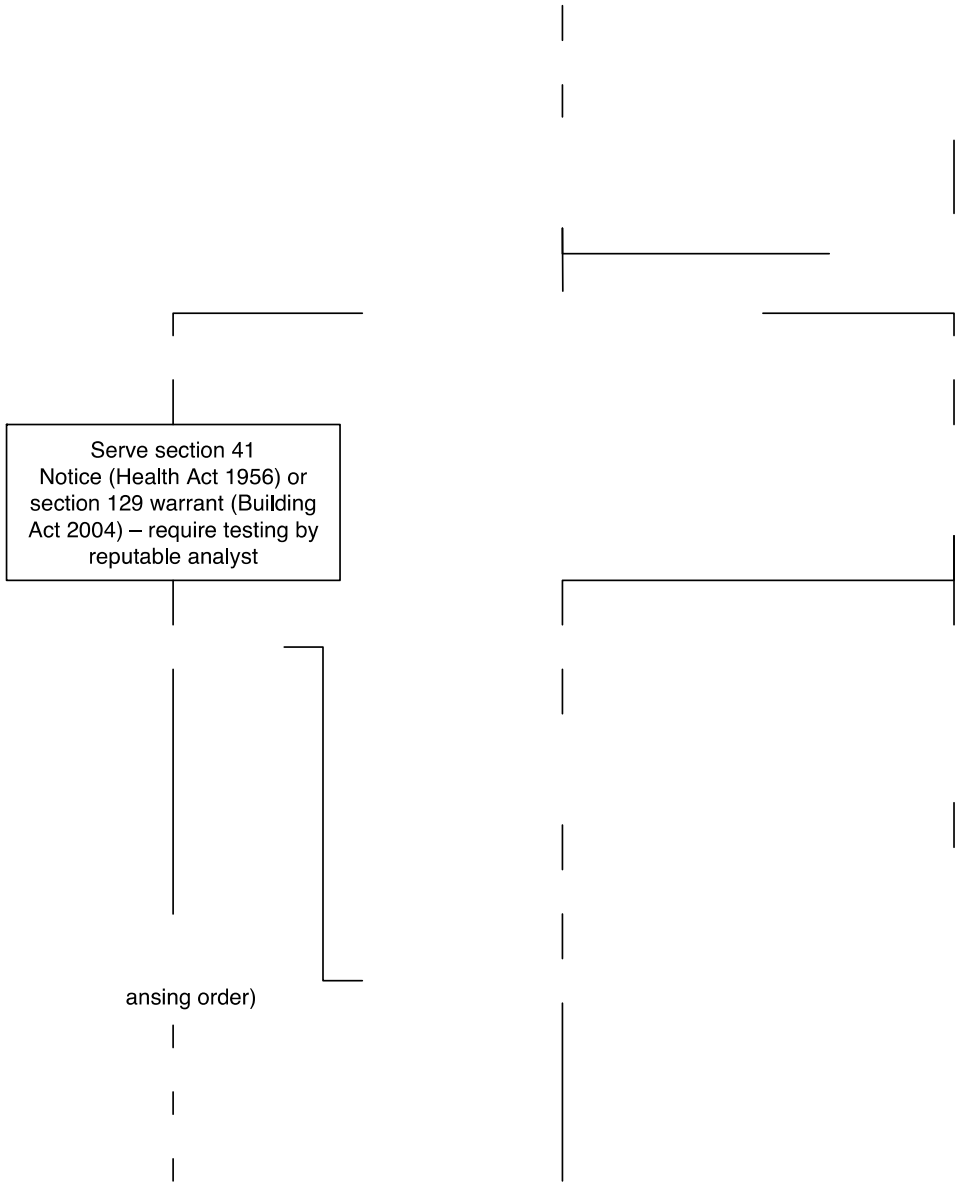

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