

# **National Measurement Regulations (Amendment) 1994 No. 54**

## **EXPLANATORY STATEMENT**

### **STATUTORY RULES 1994 No. 54**

Issued by Authority of the Minister for Science and Small Business

*National Measurement Act 1960*

National Measurement Regulations (Amendment)

Regulation 83 of the National Measurement Regulations currently prescribes that uncertainties are to be calculated on the basis "that there is not more than 1 chance in 100 that the verified value of the standard of measurement differs from the true value by more than the calculated uncertainty".

The use of the 99% confidence limit, as expressed above, has been used to calculate uncertainties of standards of measurement as an international standard for a number of years. Recently, the international standard has been redefined in terms of a 95% confidence limit, which requires "that there are not more than 5 chances in 100 that the verified value of the standard of measurement differs from the true value by more than the calculated uncertainty", to take effect from 1 January 1994.

Existing subregulations 78A(3) and 79(3) provide that the Commonwealth Scientific and Industrial Research Organisation (CSIRO) may determine the manner or manners of calculating uncertainties of Australian primary and secondary standards and of State primary standards respectively.

Similarly, subregulations 80(8) and (9) provide that the National Standards Commission may determine the manner or manners of calculating uncertainties of reference standards of measurement.

It is proposed that Regulation 83 be repealed and that, utilising the existing subregulations, determinations of both the CSIRO and the Commission will harmonise with the new international standard and require 95% confidence limits for the verification of standards of measurement. The use of determinations Will also permit a timely response to future changes, allow a phasing in period for the change from 99% to 95% confidence limits and allow the flexibility to use non-standard confidence limits where appropriate.