

National Measurement Regulations 1999 1999 No. 110

EXPLANATORY STATEMENT

STATUTORY RULES 1999 No. 110

Issued by the authority of the Minister for Industry, Science and Tourism

National Measurement Act 1960

National Measurement Regulations 1999

The Act provides the legislative basis for Australia's National Measurement System. The aim of the Act is to ensure that measurements are what they purport to be and to give legal sanction to the national standards of measurement.

The National Measurement Regulations 1999 ("the regulations") represent a rewrite and consolidation of the previous National Measurement Regulations ("the previous regulations") as reprinted on 31 March 1993 and the National Measurement (Patterns of Measuring Instruments) Regulations ("the previous pattern approval regulations"). Amendments provide for new mechanisms to demonstrate traceability of measurement, a new method of prescribing Australian legal units of measurement, a new mechanism for recognition of overseas calibration and testing, and pattern compliance testing of approved trade measuring instruments by the National Standards Commission.

The major thrust of the amendments is to provide additional pathways for government agencies and industry to demonstrate the traceability of their measurements. Two additional items, certified measuring instruments and certified reference materials have previously been introduced into s. 10 of the Act in order to provide these pathways. Part 4 of the regulations provides for the certification of measuring instruments in order to provide additional means by which a measurement can be shown to be made in terms of Australian legal units of measurement under s. 10(h) of the Act. The provisions go part way towards implementing one of the recommendations (Recommendation 6) of the 1995 Review of Australia's Standards and Conformance Infrastructure that recommended that mandatory requirements be introduced for legal measuring instruments. Part 5 comprises new provisions that specify the requirements for reference materials to be certified. Certified reference materials will provide additional means by which a measurement can be shown to be made in terms of Australian legal Units of measurement under s. 10(a) of the Act. Chemical measurements make an important contribution to the Australian economy and this part will facilitate the demonstration of traceability, where it exists, of these measurements.

Part 2 specifies the Australian legal units of measurement. These are now prescribed in the same abbreviated manner as has been adopted by the International Organisation for Standardisation (ISO). Guidelines issued by the Commission under s.7B of the Act govern how Australian legal units of measurement may be formed from the prescribed SI units and prescribed prefixes. The physical quantities for which Australian legal units of measurement may be formed are listed in the guidelines and are unchanged from the previous regulations apart from the addition of apparent power, reactive power, apparent energy and reactive energy to satisfy the needs of the electricity industry. The new method of prescribing Australian legal units of measurement means that a larger range of prefixes may be used with the base unit of measurement for each physical quantity. This obviates the need to amend the regulations from time to time as technology advances to include specific compound units of measurement.

One of the issues faced by the Australian measurement system is the appropriate recognition of international calibrations and testing. The proposed regulations provide for the Commission to recognise by written instrument foreign verifications of reference standards of measurement

(regulation 2 1), foreign certifications of measuring instruments (regulation 40) and foreign certifications of reference materials (regulation 53).

Part 6 specifies the requirements for the pattern approval of measuring instruments. Its effect is unchanged from that of the previous pattern approval regulations, apart from regulation 64 that will provide for the Commission to examine a particular measuring instrument that it has in its possession in order to determine if the instrument conforms to its approved pattern. The Act contains offences and penalties (s. 19B of the Act) relating to non-compliance of a measuring instrument with its approved pattern. Under the previous regulations the Commission did not have the power to examine a measuring instrument, provided to it by a State trade measurement authority and suspected of being non-compliant, to determine if it complied with its approved pattern. The Commission could only request that the manufacturer supply a sample instrument so that it could re-evaluate the pattern. Proposed regulation 64 remedies this deficiency in the previous regulations.

CSIRO has advised that the requirement in the previous regulations for reference standards of measurement to be verified under standard reference conditions was too onerous and impractical. The regulations relax this requirement but introduce a new requirement in regulations 18(2)(e) and 19(1)(f) to provide that the relevant environmental or other influence factors pertaining to a verification are reported in the certificate of verification. At the request of State and Territory trade measurement authorities, the maximum permissible errors for trade measuring instruments, are included as Schedule 12. Previously these were published as a Commission document and included in certificates of approval. Also at the request of State and Territory authorities, the largest denomination of Inspectors' class 3 mass standards for which maximum permissible errors are specified has been increased to 10 tonnes (Schedule 9).

Regulation 2 specifies that the regulations commence on the date of commencement of the *National Measurement Amendment (Utility Meters) Act 1999*. The mechanism to introduce metrological control of specified utility meters is that initially all utility meters will be exempt from the provisions of Part VA of the Act. Once consultations are completed for a particular class of utility meter and an agreed grace period has expired, the exemption will be lifted for that class of utility meter. Proposed regulation 87 contains the exemptions and therefore the regulations must commence at the same time as Part VA of the Act or all new utility meters would be in breach of offences contained in this part.

The remainder of the changes in the regulations arise from the rearrangement and elaboration of existing provisions to enhance their clarity.