Welcome to measureUP

Opening the lines...

There have been many changes to the Measurement and Product Safety Service (MAPSS) and legal metrology in recent times. Changes, such as those to the accreditation scheme since the commencement of the Weights and Measures Amendment Act 2005, makes the need for communication between the Ministry, Accredited Persons (APs) and stakeholders important.

This new bi-annual publication measureUP has been launched to improve communication and give APs the opportunity to interact with the Ministry over issues they feel appropriate.

The Ministry intends to use this publication to keep APs and stakeholders informed of the latest issues within Legal Metrology as well as providing clarification and information on more technical matters.

We would appreciate it if you, our stakeholders, contributed by writing to us highlighting any issues or clarifications that you would like to feature in future editions.

We also intend to provide a Questions and Answers section from the next edition onwards. So please feel free to put us on the spot and ask us to clear up any uncertainties with regard to trade measurement and legal metrology.

If you wish to make a more substantive input by providing editorial relevant to the industry, it would also be very welcome. Please direct any such communications to:

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Since his appointment at the end of 2004, Tony Lee has eased into the role as Manager of the Measurement and Product Safety Service (MAPSS), in the Ministry of Consumer Affairs (MCA). As with any new role, it has required time to understand the regular processes and day-to-day running of MAPSS.

“Entering a new managerial role is always challenging. It requires you to take over the reins from someone else and your efforts will always be compared to your predecessor. This was all the more challenging as John Barker [former manager of MAPSS] was a hard act to follow. John was “Mr Measure”, a fountain of knowledge, a pillar of the weights and measures industry, and well respected in New Zealand and internationally,” said Tony.

“Everyone needs time to adjust to change, and I have had to balance this with bringing new ideas to the fore. But now, with a new look team, it is time for us to use that unique blend of new and old experience. We have to implement some new ideas and different approaches to shape where MAPSS will go beyond 2006, whilst ensuring we continue to supply a high quality service and balance this with our responsibilities as a regulator.

“My vision is to involve and empower the MAPSS team in the key objective of improving measurement and product safety outcomes for New Zealand consumers.”

With an engineering and operations background, Tony brings to the role considerable operational and leadership experience. Prior to joining MCA, Tony was a member of the management team at New Zealand Oil Services Ltd (NZOSL), a joint venture oil company that manages and operates a number of oil terminals across New Zealand and Australia. We want to assist every New Zealand business that could use MAPSS as a service.

Overall, MAPSS needs to deliver a high quality service, whilst balancing our responsibilities as a regulator. To do this, we will work with businesses, seek feedback on our efforts and input into our initiatives. In the coming years you will see more of us, we are keen to assist wherever possible.

My door is always open, feel free to get in touch and let me know how MAPSS can help you.

Tony Lee
Manager
MAPSS
Over the past couple of years the Measurement and Product Safety Service (MAPSS) team has seen many changes. Now MAPSS has 17 staff members dealing with both legal metrology and product safety issues.

The current team has an international flavour, with officers from around the globe, including New Zealand, Malaysia, Wales, England, India, Russia, Fiji and Scotland. Four officers (Srinivas Bobbala, Charanjit Singh, Keith Clark and Phil Clark) have recently completed their training entitling them to become Weights and Measures Inspectors, as prescribed by the Act. They are now up and running as MAPSS officers.

Trainee officers Vladimir Koutsaenko and Raj Narayan are currently undertaking the Ministry’s training program and will be fully up to speed in the next year or so.

MAPSS operates out of offices in Panmure (Auckland), Petone (Wellington), Christchurch and the Head Office in Bowen Street, Wellington.

The Changing Faces of MAPSS
Amendments to the Weights and Measures Act

In December 2005 the Weights and Measures Amendment Act 2005 came into force. This Act, which contains a number of changes to the Weights and Measures Act 1987, is something that all Accredited Persons (APs) and all accredited companies should be aware of.

The changes stem from a review of the Weights and Measures Accreditation and Verification Scheme, initiated in 2003 by the Measurement and Product Safety Service (MAPSS), on behalf of the Minister of Consumer Affairs. This review and related consultation with the measurement industry, manufacturers and other interested parties, found that although the current scheme worked well, it could be improved. The Weights and Measures Amendment Act 2005 is intended to rectify some of the short comings and implement the improvements identified in this review.

The key changes affect the renewal period for letters of accreditation, empower MAPSS to suspend accreditation and alter the verification period for glass measures.

The New Wording of the Amended Act

Three Year Renewal Period for Letters of Accreditation

The review highlighted the fact that the current one year renewal period for letters of accreditation was too short. The majority of submissions that were received, and the relevant publications of the International Organisation of Legal Metrology (OIML), supported a longer duration period for these letters. The amendment of the Act now makes it possible for the duration of letters of accreditation to be increased to three years.

Also identified, was that the AP renewal criteria did not include continued competency based criteria. In response, the legislation now requires demonstration of continued competence before accreditation is renewed. Now MAPSS must be satisfied that the applicant continues to meet the requirements for accreditation before renewal, as prescribed by the Weights and Measures Regulations. This confidence will be established through a combination of the routine surveillance, completed by MAPSS Officers, on the compliance of work completed by an AP and a full systems audit prior to accreditation renewal.

The practical implementation of these changes will be co-ordinated by a Professional Practice Group of MAPSS Inspectors. This group will forward guidelines and a letter outlining how the transition into the three yearly renewal will be managed. Information will be sent to the management representative of each AP in March 2006 and will be followed up by MAPSS regional client managers.

Even though these changes are being put into action, the current requirements of accreditation remain the same. Most importantly, an AP is still required to apply for renewal of their letter of accreditation before their current letter expires.

CONTINUED OVER ...
30C  Duration and renewal of accreditation

(1) Subject to this section and to sections 30D and 30DA, every letter of accreditation issued under section 30A of this Act shall be in force for a period of 3 years beginning on the date of its issue.

(2) Every letter of accreditation, unless it has been revoked pursuant to section 30D or is, at the time of application for its renewal, suspended under section 30DA, may from time to time be renewed in accordance with this section.

(3) An application for the renewal of a letter of accreditation shall be made in writing, in the prescribed form (if any), to the Secretary, and shall be accompanied by the prescribed fee (if any).

(4) The Secretary must renew a letter of accreditation for a period of 3 years if the Secretary—

(a) receives an application for the renewal of that letter of accreditation under subsection (3); and

(b) receives payment of the prescribed fee (if any); and

(c) is satisfied that the applicant continues to meet the requirements for accreditation prescribed by regulations made under this Act.

(5) Where an application for the renewal of a letter of accreditation has been made but not dealt with before the letter of accreditation expires, the letter of accreditation shall continue in force until the application is dealt with by the Secretary.

30D  Revocation of accreditation

(1) Subject to subsection (3) of this section, the Secretary may at any time revoke the accreditation of any person as an accredited person if the Secretary is satisfied that the person—

(a) no longer meets all the requirements for accreditation prescribed by regulations made under this Act; or

(b) has failed to comply with any condition imposed by the Secretary in respect of that person’s accreditation; or

(c) has failed to exercise or perform the powers, functions, and duties of an accredited person to a satisfactory standard; or

(d) has been convicted of an offence against section 32(fa) of this Act.

(2) Subject to subsection (3) of this section, where the Secretary is satisfied that any person whose name is specified in a letter of accreditation pursuant to section 30A(2) of this Act—

(a) has failed to comply with any condition imposed by the Secretary in respect of that letter of accreditation; or

(b) has failed to exercise or perform the powers, functions, and duties of an accredited person to a satisfactory standard; or

(c) has been convicted of an offence against section 32(fa) of this Act,—

the Secretary may remove that person’s name from that letter of accreditation.

(3) The Secretary shall not revoke the accreditation of any person pursuant to subsection (1) of this section, or remove the name of any person from a letter of accreditation pursuant to subsection (2) of this section, unless the Secretary has first given that person an opportunity to be heard.

(4) Where the Secretary revokes the accreditation of any person pursuant to subsection (1) of this section, or removes the name of any person from a letter of accreditation pursuant to subsection (2) of this section, that person shall be deemed, from the date of that revocation or removal, not to be an accredited person for the purposes of this Act.
Power to Suspend Accreditation

This amendment gives MAPSS the power to suspend the accreditation of an individual or company for a period of up to 28 days. This suspension is a lesser sanction than revocation and would allow time for an AP to receive further training or instigate remedial action. It is envisaged that this power will only be used in situations where a serious non-compliance, or breach of the Act, has been detected and continuation of accreditation would create the potential for further serious non-compliance. Any decision made to suspend an accreditation can be reviewed by right of appeal to the District Court.

The MAPSS Audit Manual and Accreditation Guide are currently being modified to clarify the situations where suspension may be considered and the procedures to be followed. Once this work is done, the updates will be forwarded to all management representatives.

30DA Suspension of accreditation

(1) The Secretary may suspend the accreditation of any person as an accredited person if the Secretary is satisfied that the person—
   (a) no longer meets all the requirements for accreditation prescribed by regulations made under this Act; or
   (b) has failed to comply with any condition imposed by the Secretary in respect of that person’s accreditation; or
   (c) has failed to exercise or perform the powers, functions, and duties of an accredited person to a satisfactory standard; or
   (d) has been convicted of an offence against section 32(fa).

(2) The Secretary may suspend the accreditation of any person whose name is specified in a letter of accreditation pursuant to section 30A(2) if the Secretary is satisfied that the person—
   (a) has failed to comply with any condition imposed by the Secretary in respect of that letter of accreditation; or
   (b) has failed to exercise or perform the powers, functions, and duties of an accredited person to a satisfactory standard; or
   (c) has been convicted of an offence against section 32(fa).

(3) The Secretary may make a suspension under subsection (1) or subsection (2) for a period of no more than 28 days.

(4) The Secretary may at any time, of his or her own motion, revoke a suspension made under subsection (1) or subsection (2).

(5) Every suspension under subsection (1) or subsection (2) must be communicated to the person concerned by notice in writing, which must state—
   (a) the effect of the suspension; and
   (b) the reasons for the suspension; and
   (c) the date on which the suspension begins, which must be no earlier than the notice is deemed to have been received by that person; and
   (c) the period of the suspension.

(6) The Secretary is not obliged to give a person an opportunity to be heard before the Secretary suspends the accreditation of that person under subsection (1) or subsection (2).

(7) For the purposes of subsection (5),—
   (a) a notice that is posted to a person’s last known business address is deemed to be received by that person 3 working days after the date on which it was posted;
   (b) a notice that is sent to a person at a fax number or electronic address is deemed to be received by that person on the working day following the day on which it was sent;
   (c) a notice that is personally delivered to a person is deemed to be received by that person on the day on which it was delivered.

(8) Despite subsection (7), a notice is not to be deemed to have been received if the person to whom it is posted or sent proves that it was not received, otherwise than through fault on that person’s part.

30DB Effect of suspension of accreditation

(1) A person is not an accredited person, for the purposes of this Act, for the period for which his or her accreditation is suspended.

(2) At the end of the period of suspension, the person’s accreditation is immediately revived unless—
   (a) the accreditation has, during the period of suspension, expired, in which case that person may apply for the renewal of his or her letter of accreditation under section 30C; or
   (b) the accreditation has been revoked under section 30D(1); or
   (c) that person’s name has been removed from the letter of accreditation under section 30D(2).
Verification Period for Glass Measures Increased to Ten Years

The verification period for AP working standards that are constructed of glass and used to determine a measure of volume, has been increased from one to ten years. This means any glass measure submitted to MAPSS for verification after 15 December 2005, will receive a verification certificate that is valid for a period of ten years from the date of testing.

Changes to Weights and Measures Regulations

Further to changes of the Weights and Measures Act, a number of minor amendments are planned to the Weights and Measures Regulations. These changes, which will be implemented later in the year, include:

- Amend Schedule 7 of the Weights and Measures Regulations 1999, “Requirements for Quality Management System to be operated by Accredited Persons,” to recognise and integrate an organisation’s existing ISO quality systems. A number of organisations operate ISO9001 and ISO17025 quality management systems in parallel to the requirements of Schedule 7. This results in duplication and increased compliance costs for some APs. It is considered that recognition and integration of these systems into Schedule 7 will eliminate this duplication. As a result, MAPSS will only conduct quality management system audits in organisations where it has not already been carried out by a competent auditing body.

- Amend Regulation 17 of the Weights and Measures Regulations 1999, “Requirements for Accreditation,” to enable the Chief Executive to take into account convictions under the Weights and Measures Act when considering a person for accreditation.

- Subject to the results of consultation, Amend Table 1, Schedule 7A of the Weights and Measures Regulations 1999 to include the latest amendments for pre-packages outlined in the 2004 edition of OIML Recommendation R87.

- Amend Section 27 of Weights and Measures Regulations 1999, “General requirements for weights other than carat metric weights,” to include the variations to the definitions for Class M masses outlined in the 2004 edition of OIML Recommendation R111.

- Amend Schedule 3, Table 2 of Weights and Measures Regulations 1999, “Errors Permissible on Verification or Inspection,” to include the small variations to maximum permissible errors prescribed in the 2004 edition of OIML Recommendation R111.

The Weights and Measures Amendment Act 2005 can be purchased at Government Bookstores or viewed online at the New Zealand Government Legislation website www.legislation.govt.nz by entering the Statutes section of this site and searching for the Act by name.
Guidance for Accredited Persons

As a result of routine MAPSS surveillance of weighing and measurement equipment, and from complaints received from the public, particular areas of the accreditation scheme, as prescribed by the Weights and Measures Act 1987 and its regulations, need addressing. The issues discovered relate to both technical and behavioural non-compliances.

Accredited Person or Technician?

There are many times when an AP also works solely as a Technician. An AP needs to be very clear where to draw the line between the two roles. Where repairs to equipment are carried out, the AP is acting as a Technician. Once testing commences, the AP assumes a legal identity and is bound to abide by the Weights and Measures Act and Regulations. APs are also bound by the requirements of the Quality Management System they are accredited to.

Component Changes

Where an Indicator has the sealing or mark of verification removed, for example to change a printer or data cable, it is acceptable for the AP, who applied the seal or mark, to remove it, make the repair, and re-seal or re-apply the mark of verification using their ID. It is not acceptable to make a component change that will, in any way, affect the calibration or the metrological characteristics without doing a full test to verification tolerances. Where a repair takes place, which does not affect the metrological set up, but allows the destructible label to be replaced, then the original date should be reapplied to the new destructible label and not the date of the non-metrological repair.

The equipment must also fully comply with its Certificate of Approval.

Certificate of Approval

Equipment may only be verified or certified when it passes all the regulatory tests and fully meets all conditions of approval. If there are any doubts as to these conditions, or if the equipment is approved, then the AP should contact their management representative or a MAPSS Officer.

Mark of Verification

Where a MAPSS Officer finds a piece of trade equipment that does not bear the mark of verification, then it may be rejected.

It is through the correct issuing of Notices of Non-Compliance that MAPSS can ensure all APs are operating on a level playing field. This way, APs are not being disadvantaged commercially by competitors not following the correct procedures.

If you are in doubt as to what action to take, contact your Management Representative, your Client Manager at MAPSS, or another MAPSS Officer.
Certificate of Accuracy

Under the Act and Regulations, a Certificate of Accuracy may be issued by an AP if the equipment complies. The duration of a certificate is 12 months from the date of the test. This is set in regulation. There is no discretionary ability by APs to issue certificates for a greater or shorter period of time.

Markings

As a requirement under their conditions of approval, all weighing and measuring equipment in use for trade must bear minimum metrological markings. This requirement is explicit in the regulations and is mandatory for the instrument to pass a verification or certification test.

Sealing

The general requirement is for instruments to be sealed. However, there are situations where security is provided by technology. For example, a code must be used to access the calibration function. These requirements are specified on the Certificate of Approval.

Where an indicator or calibration function is sealed with wire and a lead seal, the lead seal can bear the mark of verification. The indicator can also be sealed by a mark of verification, in self destructible label form, if it spans the two halves of the indicator.

Where the calibration function is entered through the keyboard, it is important the mark of verification is applied to the indicator in label form as above, or by wire terminating in a lead seal with the mark of verification applied to it.

Where the instrument is sealed using audit trails, or audit event counters, the event logger number should be applied indelibly to the instrument. This could be done on the Mark of Verification destructible label. If this number does not match the number held in the instrument’s memory, then the instrument is not verified.

Testing Instruments to Maximum Capacity

When testing high capacity equipment such as weighbridges or large platform scales, there is often a reliance on what makeweight is available as to what capacity equipment can be tested to.

As a result of discussion among MAPSS staff, the following guideline has been established:

- Weighbridges up to 40 tonne must be tested to full capacity.
- Weighbridges from 40 tonne to 60 tonne must be tested to a minimum of 46 tonne.

The rationale behind this rule is that the maximum legal road limit is set at 44 tonne.

The Commercial Vehicle Inspection Unit have been consulted on this and the tolerance they allow will take the maximum to 45.5 tonne. The only situations where this tolerance can be exceeded are when the truck and trailer combination is specially permitted.

Where makeweight is available, the weighbridge must be tested to maximum capacity and blanking checked at maximum capacity plus 9e.

Other Test Issues

Discrimination Test

In a Technical Bulletin released to APs in August 1999, MAPSS made the following statement;

“Accredited Persons are not required to carry out discrimination tests on a digital weighing instrument which meets all other tests as set out in the Weights and Measures Regulations 1987. MAPSS will deem the discrimination test to have been carried out”. This is still MAPSS policy.

Discrimination Test Load

Where a discrimination test is necessary, then it is acceptable to use a lower value than 1.4e (that is one test weight). If the instrument being tested passes, then proceed to the next regulatory test. If it does not pass, retest using exactly 1.4e (the maximum load for discrimination).
Verification/Certification Using Non-test Masses

It is not permissible under any circumstances to test equipment and issue a Certificate of Accuracy, or to verify a piece of weighing or measuring equipment, using anything other than certified standards.

An example of this would be a loadcell change in a weighbridge. It could not be legally certified or verified by an AP by simply running a truck over a nearby weighbridge and using that weight to calibrate the one under repair. In this situation, where test masses are not available, the AP is legally obliged, under their conditions of accreditation, to issue a notice of Non-Compliance and to send a copy to MAPSS.

Internet Source for OMIL Documents and Recommendations

The International Organisation of Legal Metrology (OIML) is an intergovernmental organisation, which was set up in 1955 to develop cooperation in the field of legal metrology. OIML has developed a worldwide network of technical committees and subcommittees that provide its members with international recommendations, documents and publications.

These publications outline metrological guidelines for the development of national and regional requirements concerning the manufacture and use of measuring instruments for a large variety of legal metrology applications.

In New Zealand many of our type approval tests, verification tests, procedures and the legislative requires in the Weights and Measures Act 1987, are directly based on the relevant OIML recommendations.

New Zealand is a full member of OIML. This membership allows New Zealand to have input into the technical committees that are responsible for the development of OIML publications and provides valuable insight into international trends and developments.

In a recent move, supported by New Zealand and aimed at increasing the accessibility of OIML publications, they have been made freely available in an electronic format (Acrobat PDF) directly from the OIML website: http://www.oiml.org/publications/

This website represents a valuable resource of legal metrology knowledge. Some of the publications that would be of interest and value to APs in New Zealand include:

- R 60 Metrological regulations for load cells
- R 76 Non-automatic weighing instruments
- R 107 Discontinuous totalizing automatic weighing instruments
- R 111 Weights of classes E1, E2, F1, F2, M1, M2, M3,
- R 118 Testing procedures and test report format for pattern evaluation of fuel dispensers for motor vehicles.
Development of
New Zealand Type Approval Capability

MAPSS are currently working on developing the capability of our Type Approval laboratory in Petone, Wellington. This work is focused on expanding the laboratory’s accreditation to cover International Organisation of Legal Metrology (OIML) certification of driveway flow meters and increasing the international acceptance of OIML certificates for non-automatic weighing instruments.

Under the Weights and Measures Act 1987, all weighing and measuring equipment used for trade in New Zealand must be of an approved type. Approval testing (also referred to as pattern or type approval) involves testing weighing and measuring instruments to ensure they do not facilitate fraud, and they operate within prescribed tolerances, even when exposed to a variety of operational and environmental influences. Once the equipment has passed the New Zealand requirements, a MAPSS certificate is issued and the equipment is able to be used in New Zealand for trade.

MAPSS is also NZ/ISO/IEC 17025 accredited for type approval and an issuing authority for OIML certificates for non-automatic weighing instruments. This means that MAPSS is currently able to test non-automatic weighing instruments against the requirements of OIML Recommendation R76 and issue OIML Type Approval Certificates. These OIML certificates are internationally recognised and assist the export sale of New Zealand manufactured instruments. MAPSS is currently in the process of extending this accreditation to the approval of driveway flow meters (fuel dispensers) tested to OIML Recommendation R117.

New Zealand has a number of innovative manufacturers of weighing instruments and fuel dispensers that are trying to identify and access new markets, and take advantage of international opportunities for trade. The fact that MAPSS can issue internationally recognised OIML Type Approval Certificates in New Zealand represents a significant cost saving and establishes international credibility for their products.

The international credibility of MAPSS Type Approval Regime can be noted through agreements that have been signed for the mutual acceptance of type approval test reports with the National Weights and Measures Laboratory of the United Kingdom and the National Measurement Institute of Australia. These documents are expressions of confidence and establish important international connections. The agreements mean that test reports issued on equipment tested in New Zealand will have automatic acceptance in Australia and the United Kingdom.

To further enhance this acceptance, MAPSS is also actively participating in the development of OIML Mutual Acceptance Arrangements for Non-Automatic Weighing Instruments and Loadcells. These arrangements are aimed at increasing the acceptance of OIML certificates and reducing the need for equipment to be retested before being sold in other countries. It is hoped that this work will be completed later this year and New Zealand will be able to sign a Declaration of Mutual Confidence involving all the countries that export or import non-automatic weighing instruments.
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