

## Appendix A

### Report on the Activities of the International Organization of Legal Metrology (OIML) and Regional Legal Metrology Organizations

Weights and Measures Division, NIST

#### INTRODUCTION

The Weights and Measures Division (WMD) of the National Institute of Standards and Technology (NIST) is responsible for coordinating U.S. participation in the International Organization of Legal Metrology (OIML) and other international legal metrology organizations. Learn more about OIML at the website ([www.oiml.org](http://www.oiml.org)) and about NIST Weights and Measures Division at the WMD website ([www.nist.gov/owm](http://www.nist.gov/owm)). Dr. Charles Ehrlich, Group Leader of the International Legal Metrology Group (ILMG), can be contacted at [charles.ehrlich@nist.gov](mailto:charles.ehrlich@nist.gov) or at (301) 975-4834 or by fax at (301) 975-8091.

***Please note:***

- *OIML publications are available without cost at <http://www.oiml.org>.*
- *The United States will host the annual meeting of the International Committee of Legal Metrology (CML) in Orlando, Florida, September 20 - 24, 2010.*

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**Table A**  
**Table of Contents**

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Reference Key Number	Title of Item	Page
I.	Report on the Activities of the OIML Technical Committees .....	A2
II.	Report on the 44 <sup>th</sup> CML Meeting in Mombasa, Kenya, October 2009.....	A5
III.	Future OIML Meetings .....	A6
IV.	Regional Legal Metrology Organizations.....	A7

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**Table B**  
**Glossary of Acronyms**

BIML	International Bureau of Legal Metrology	IR	International Recommendation
B	Basic Publication	IWG	International Work Group
CD	Committee Draft <sup>1</sup>	MAA	Mutual Acceptance Arrangement
CIML	International Committee of Legal Metrology	MC	Measurement Canada
CPR	Committee on Participation Review	OIML	International Organization of Legal Metrology
D	Document	R	Recommendation
DD	Draft Document <sup>2</sup>	SC	Technical Subcommittee
DR	Draft Recommendation <sup>2</sup>	TC	Technical Committee
DoMC	Declaration of Mutual Confidence	WD	Working Draft <sup>3</sup>
DV	Draft Vocabulary <sup>2</sup>	USNWG	U.S. National Work Group
ILMG	International Legal Metrology Group		

<sup>1</sup> CD: a draft at the stage of development within a technical committee or subcommittee; in this document, successive drafts are numbered 1 CD, 2 CD, etc.

<sup>2</sup> DD, DR, and DV: draft documents approved at the level of the technical committee or subcommittee concerned and sent to BIML for approval by CIML.

<sup>3</sup> WD: precedes the development of a CD; in this document, successive drafts are number 1 WD, 2 WD, etc.

**Details of All Items**  
**(In Order by Reference Key Number)**

**I. Report on the Activities of the OIML Technical Committees**

This section reports on recent activities and the status of work in OIML technical committees (TCs) and technical subcommittees (SCs) of specific interest to members of the NCWM. Also included are schedules of future activities of the Secretariats, the U.S. National Work Groups (USNWGs), and the International Work Groups (IWGs) of the committees and subcommittees.

*TC 3/SC 5 “Conformity assessment” (United States and BIML)*

The Subcommittee held a meeting in May 2008 to discuss the revision of the documents B 3 (Certificate System) and B 10 (MAA). A 2 CD of B 3 and a first CD of B 10 were sent to TC 3/SC5 members in December 2009. The meeting included discussion of a working draft (WD) of a new document on the incorporation of measurement uncertainty into conformity assessment decisions in legal metrology. In April 2009, the Secretariat distributed the 1 CD of a new document entitled “The role of measurement uncertainty in conformity assessment decisions in legal metrology.” International comments on this document have been received and are being used to develop the 2 CD. A meeting of the MAA Committee on Participation Review (CPR) was held in June 2009 in Berne, Switzerland (please see the MAA section in the NTEP report of this publication for more details). For more information on the activities of this subcommittee, please contact Dr. Charles Ehrlich at (301) 975-4834 or at charles.ehrlich@nist.gov.

*TC 5/SC 1 “Environmental conditions” (Netherlands)*

The Secretariat has started the revision cycle of D11 “General requirements for electronic measuring instruments.” This is a very important document in the OIML system and is used by all of the OIML technical committees as a general reference for technical and testing requirements on all electronic instruments. Please contact Dr. Ambler Thompson at (301) 975-2333 or at ambler@nist.gov if you would like further information on this project.

*TC 5/SC 2 “Software” (Germany and BIML)*

The new OIML Document D 31 “General requirements for software-controlled measuring instruments” was published in December 2008 and will serve as guidance for software requirements in International Recommendations by OIML technical committees. The United States participated in the technical work on this document and submitted votes and comments on several drafts of the document. A new project on software verification was also approved by the CIML, and the United States is waiting for the first draft of this document. The ILMG participated in NCWM Software Sector meetings in Columbus, Ohio, in March 2009. Please contact Dr. Ambler Thompson at (301) 975-2333 or at [ambler@nist.gov](mailto:ambler@nist.gov) if you would like to discuss OIML software efforts.

*TC 6 “Prepackaged products” (South Africa)*

Discussions continue on the issue of an OIML International Quantity Mark, referred to as an IQ Mark. The IQ Mark, designed to eliminate trade barriers, would be a program that would allow for an international system of acceptance of prepackaged goods. Receiving countries want imported packages to meet all requirements and packers in exporting countries want to ensure prepackages will not be rejected after arriving in the destination country. Such a program would also require that participants meet specific requirements in order to participate in a program for quantity control and marking of prepackaged goods.

The United States is participating in a work group that is developing guidelines on good manufacturing practices and additional documentation for selected criteria that would be used in the IQ Mark’s accreditation programs. It was agreed that all members of the TC 6 would send out a questionnaire to all current stakeholders, including industry, and federal and state agencies seeking input to specific questions. NIST WMD surveyed U.S. industry, including the largest manufacturers of packaged goods, and found no support for the IQ Mark effort. The United States believes the effort to manage and certify quality control systems will add costs to all participating suppliers. Even though there is significant opposition to the IQ Mark effort from several countries (including the United States), the technical committee continues to move forward with this project under the premise that such a voluntary system would be of great value to developing countries. A TC 6 meeting was held in March 2009 in South Africa. Please contact Mr. Ken Butcher at (301) 975-4859 or at [kenneth.butcher@nist.gov](mailto:kenneth.butcher@nist.gov) if you would like more information about the work of this subcommittee or to participate in any of these projects.

*TC 8/SC 1 “Static volume and mass measurement” (Austria and Germany)*

Two revised Recommendations, OIML R 71, “Fixed storage tanks,” and R 85, “Automatic level gages for measuring the level of liquid in fixed storage tanks,” were published in January 2009. The United States, however, had serious opposition to the inclusion of specialized tanks (including pressurized tanks and non-vertical tanks) in the scope statements of both R 71 and R 85 because the requirements in the Recommendations did not fully reflect this inclusion. The United States now chairs a work group that is drafting new sections of R 71 and R 85 that will include the specific requirements for specialized tanks. OIML R 80-1, “Road and rail tankers, metrological and technical requirements,” was published in May 2009. OIML R 80-2, “Road and rail tankers, test methods,” is being developed. The revisions to R 71 and R 85 and the development of R 80-2, were discussed at a subcommittee meeting in Vienna, Austria, in October 2009. Please contact Mr. Ralph Richter at (301) 975-3997 or at [ralph.richter@nist.gov](mailto:ralph.richter@nist.gov) if you would like copies of the documents or to participate in any of these projects.

*TC 8/SC 3 “Dynamic volume and mass measurement for liquids other than water” (United States and Germany)*

OIML R 117-1, “Dynamic measuring systems for liquids other than water, Part 1: Metrological and technical requirements” has undergone an extensive revision. The Recommendation was published in March 2008. The revision incorporates new instrument technologies and includes a merger with OIML Recommendations R 86, “Drum meters,” and R 105, “Mass flowmeters.” The ILMG has worked closely with the USNWG, Canada, Germany, and the Netherlands on this effort. Meetings of the USNWG on flowmeters were held during the NCWM Annual Meeting in July 2009, in San Antonio, Texas. Subcommittee work is continuing on the development of R 117-2, “Test methods,” and R 117-3 “Test report format.” A meeting of the IWG for R 117-2 was held in Vienna, Austria, in April 2009. A first draft of R 117-2 is planned for early 2010. If you have any questions or would like to participate in the next phases of this project, please contact Mr. Ralph Richter at (301) 975-3997 or [ralph.richter@nist.gov](mailto:ralph.richter@nist.gov).

*TC 8/SC 5 “Water Meters” (UK)*

OIML, ISO, and CEN are working together to harmonize requirements for water meters using OIML R 49 “Water meters intended for the metering of cold potable water and hot water” parts 1, 2, and 3 as the base document. A WD was distributed in January 2009, and a joint meeting of the three organizations was held in May 2009 in Ottawa, Canada. The joint work group is now developing a new committee draft based on submitted comments and decisions made in Ottawa. The American Water Works Association (AWWA) Committee on Water Meters is assisting in these efforts. Please contact Mr. Ralph Richter at (301) 975-3997 or at [ralph.richter@nist.gov](mailto:ralph.richter@nist.gov) if you would like copies of documents or to participate in this project.

*TC 8/SC 6 “Measurement of cryogenic liquids” (United States)*

Members of the subcommittee and U.S. stakeholders decided that there is sufficient justification for revising R 81, “Dynamic measuring devices and systems for cryogenic liquids.” Responses received by the Secretariat indicated that a revision of R 81 was justified to update: (1) electronic tests in accordance with the latest edition of OIML D 11 (2004) and/or the latest IEC and ISO standards; (2) technical requirements to include new developments in hydrogen measurements; (3) Annex C to include current recommendations for density equations; and (4) existing sections into three distinct parts similar in format to recently-developed OIML Recommendations. The Secretariat will ask members of TC 8/SC 6 and the USNWG to review and formally comment on the first draft of the revised R 81. To obtain more information or to participate in this project, please contact Ms. Juana Williams at (301) 975-3989 or [juana.williams@nist.gov](mailto:juana.williams@nist.gov).

*TC 8/SC 7 “Gas metering” (Netherlands)*

The Secretariat has distributed the first committee draft (1 CD) of OIML R 137-1 and R 137-2, “Gas meters; Part 1: Metrological and Technical Requirements, and Part 2: Metrological controls and performance tests.” U.S. comments are being developed in cooperation with the measurement committees of the American Gas Association (AGA) and will be returned to the Secretariat in January 2010. This document is especially important to U.S. interests because the ANSI B 109 committee on gas measurement is using OIML R137 to create a new performance-based standard for gas meters in the United States. Please contact Mr. Ralph Richter at (301) 975-3997 or [ralph.richter@nist.gov](mailto:ralph.richter@nist.gov) if you would like to obtain a copy any gas measurement documents or if you would like to participate in the work of this subcommittee.

*TC 9 “Instruments for measuring mass” (United States)*

At the 43<sup>rd</sup> CIML meeting in October 2008, the CIML approved a new work item to begin revision of OIML R 60:2000 “Metrological regulation for load cells.” It is anticipated that this revision will cover everything from the basic principles of R 60 (e.g., tolerances and accuracy classes) to exploring the addition of new requirements. For more information on these efforts, please contact John Barton at (301) 975-4002 or [john.barton@nist.gov](mailto:john.barton@nist.gov).

*TC 9/SC 2 “Automatic weighing instruments” (United Kingdom)*

The Recommendation R 134-1, “Automatic instruments for weighing road vehicles in motion – total load and axle weighing,” has been approved by CIML and published. U.S. comments concerning terminology and document scope were incorporated in the document. The test report format of this document, R 134-2, has been approved by the Subcommittee and was published in October 2009. If you would like to receive a copy of these documents or get more information on the work of this subcommittee, please contact Mr. Richard Harshman at (301) 975-8107 or at [harshman@nist.gov](mailto:harshman@nist.gov).

It is anticipated that the DR of OIML R 106 Parts 1 and 2, “Automatic rail-weighbridges,” will receive final CIML approval in 2010. If you would like to receive copies of these documents or get more information on the work of this subcommittee, please contact Mr. John Barton at (301) 975-4002 or [john.barton@nist.gov](mailto:john.barton@nist.gov).

*TC 17/SC 1 “Humidity” (China and United States)*

The Co-secretariats (China and the United States) are working with a small IWG to revise OIML R 59 “Moisture meters for cereal grains and oilseeds.” All drafts have been distributed to the USNWG, which for the most part is a subset of the NTEP Grain Sector. In October 2008, the Secretariat of TC 17/SC 1 was jointly allocated to China and the United States. The 5 CD of OIML R 59 was distributed to the Subcommittee in February 2009. A 6 CD is being developed based on international comments received on the 5 CD. Please contact Ms. Diane Lee at (301) 975-4405 or at [diane.lee@nist.gov](mailto:diane.lee@nist.gov) if you would like to participate in this work group.

*TC 17/SC 8 “Quality Analysis of Agricultural Products” (Australia)*

This subcommittee was formed to study the issues and write a working draft document “Measuring instruments for protein determination in grains.” Australia is the Secretariat. A TC 17/SC 8 meeting was hosted by NIST to discuss the 2 CD. At the NIST meeting, the TC 17/SC 8 also discussed comments concerning the maximum permissible errors (MPEs) and harmonization of the TC 17/SC 8 Recommendation for protein with the TC 17/SC 1 Recommendation for moisture. Please contact Ms. Diane Lee at (301) 975-4405 or at [diane.lee@nist.gov](mailto:diane.lee@nist.gov) if you would like to participate in this work group.

**OIML Mutual Acceptance Arrangement (MAA)**

The report on the OIML Mutual Acceptance Arrangement (MAA) has moved. It can now be found in the NTEP section of this document. For further information on the MAA and its implementation, please contact Dr. Charles Ehrlich at [charles.ehrlich@nist.gov](mailto:charles.ehrlich@nist.gov) or at (301) 975-4834 or by fax at (301) 975-8091.

## **II. Report on the 44<sup>th</sup> CIML Meeting in Mombasa, Kenya, October 2009**

The International Committee of Legal Metrology (CIML) opened with addresses given by Mr. Alan E. Johnston, CIML President.

The Committee welcomed the Dominican Republic and the Union Economique et Monetaire de l’Ouest Africain, (UEMOA) as new Corresponding Members. The approval of UEMOA, a group of West African countries, represents a new type of arrangement for Member States, but this type of corresponding membership is still under review by the CIML. It was again noted that the Committee wants to continue to raise the level of awareness of the advantages of OIML Membership in order to encourage the widest possible participation in the International Legal Metrology System.

The Committee expressed its appreciation for the strong level of interaction and cooperation between the BIML and the International Bureau of Weights and Measures (BIPM). The Committee asked the Director of the BIML to prepare a draft report on the relationship between the two Organizations and to encourage further discussion on this relationship during the 45<sup>th</sup> CIML Meeting. This report should be mainly strategic in nature and should consider the point of view of the stakeholders of both organizations.

The Committee expressed its appreciation for the continued cooperation with the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF). In order to develop this cooperation at a national level, CIML Members were invited, within their applicable national legal framework, to contact their National Accreditation Bodies and promote the use of appropriate technical and metrological experts and lead assessors and the associated requirements in the OIML Systems in accreditation or peer assessment wherever appropriate.

The Committee instructed the Bureau to start a revision of the OIML/IEC Memorandum of Understanding (MoU) and develop cooperation with the IEC similar to that followed for the revision of the OIML/ISO MoU.

The Committee took note of the progress on several projects at the BIML. The revision of part 1 of the Directives for OIML Technical Work has advanced, and the committee requested that the Bureau and the work group for this effort plan to complete this revision with a view to submitting it to the CIML for approval at its meeting in 2010. The Committee also expressed its appreciation for the training provided to TC/SC Secretariats and instructed the Bureau to continue to develop formats and templates for use by the TC/SC Secretariats.

The Committee approved the following publications:

- Amendment to R 138, “Vessels for commercial transactions;” and
- R 143, “Instruments for the continuous measurement of SO<sub>2</sub> in stationary source emissions.”

The Committee took note of the re-confirmation of the following publications:

- R 14, “Polarimetric saccharimeters graduated in accordance with the ICUMSA International Sugar Scale;”
- R 48, “Tungsten ribbon lamps for the calibration of radiation thermometers;”

- R 75-1, “Heat meters. Part 1: General requirements; Part 2: Type approval tests; Part 3: Test Report Format;”
- R 84, “Platinum, copper, and nickel resistance thermometers (for industrial and commercial use);” and
- R 124, “Refractometers for the measurement of the sugar content of grape musts.”

The Committee approved the withdrawal of the following publications:

- R 70, “Determination of intrinsic and hysteresis errors of gas analyzers;”
- R 73, “Requirements concerning pure gases CO, CO<sub>2</sub>, CH<sub>4</sub>, H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub> and Ar intended for the preparation of reference gas mixtures;”
- D 7, “The evaluation of flow standards and facilities used for testing water meters.”

The Committee approved the following new work items:

- TC 3/SC 5: Revision of D 30, “Guide for the application of ISO/IEC 17025 to the assessment of Testing Laboratories involved in legal metrology;”
- TC 6: Revision of R 87, “Quantity of product in prepackages;”
- TC 6: New publication on methods to determine the actual quantity of product in prepackages (drained weight, etc.) in collaboration with WELMEC WG 6;
- TC 8: Revision of R 63, “Petroleum measurement tables;” and
- TC 8: Revision of R 119, “Pipe provers for testing of measuring systems for liquids other than water.”

The Committee approved the launching of a new DoMC that will be based on OIML R 118, “Testing procedures and test report format for pattern examination of fuel dispensers for motor vehicles” (edition 1995). This new DoMC will be limited to fuel dispensers and will include all of the requirements of OIML R 117-1 (edition 2007) as additional requirements.

The CIML meeting included a seminar on “Priorities for Legal Metrology for Trade,” and the issue of international standards to facilitate trade was a significant issue. The Committee noted that:

- the increasing importance of prepackaged foods and beverages in global trade now accounts for over 75 % of agri-foods exports; and
- developing country exports are particularly disadvantaged by having to conform to a multiplicity of international requirements.

The Committee noted that the term of the current BIML Director will expire in December 2010. The Committee decided to advertise the position of Director of BIML in 2010 with the aim of either appointing a new Director or reappointing the present Director.

The Committee also noted that the election for the position of CIML President will be held in 2010 and reminded CIML Members that candidacies must be sent to the Bureau before the end of May 2010.

The CIML established a small work group to study a proposal to restructure the BIML Pension Plan according to a “modern accountancy” scheme, which could have a significant impact on the financial statement of the BIML.

### **III. Future OIML Meetings**

The United States is excited to be hosting the 45<sup>th</sup> CIML Meeting in Orlando, Florida, September 20 - 24, 2010. Dr. Charles Ehrlich made a presentation on plans for this meeting, including a scheduled presentation on “Metrology at NASA.” Please contact Dr. Ehrlich at (301) 975-4834 or at [charles.ehrlich@nist.gov](mailto:charles.ehrlich@nist.gov) if you would like to attend the CIML meeting as an observer.

The Committee thanked and accepted the invitation of the Czech Republic to hold the 46<sup>th</sup> CIML Meeting in the Czech Republic. The meeting will most likely be held in October 2011 in Prague.

#### **IV. Regional Legal Metrology Organizations**

##### **Meeting of the Inter-American Metrology System (SIM) General Assembly and the SIM Legal Metrology Work Group (LMWG)**

The SIM General Assembly was held in Lima, Peru, during the last week of October 2009. Dr. Humberto S. Brandi, Director of Scientific and Industrial Metrology (SIM) at INMETRO Brazil, is the SIM President. Marcos Senna (senna@inmetro.rs.gov.br), also of INMETRO in Brazil, serves as the Chairman of the SIM Legal Metrology Work Group (LMWG). Training sessions of the SIM LMWG were held in March 2009; course topics included: non-automatic weighing instruments, liquid fuel dispensers, electrical energy meters, and taximeters. The organization is working to build capacity in legal metrology for SIM member countries. Please contact Dr. Ambler Thompson at (301) 975-2333 or at ambler@nist.gov for more information.

##### **Asia-Pacific Legal Metrology Forum (APLMF) Meeting**

The 16<sup>th</sup> APLMF meeting was held in Chiang Mai, Thailand (a one-hour flight north of Bangkok). The Peoples Republic of China holds the Presidency and Secretariat of the APLMF. Mr. Pu Changcheng, APLMF President and Vice Minister of AQSIQ, chaired the meeting. APLMF activities are facilitated through its seven work groups. The most active is the work group on Training Coordination chaired by Australia.

There were two training courses and two Workshops given by APLMF this year. The training courses, covering requirements in select OIML Recommendations, and offered primarily to assist the developing countries in APLMF, were on prepackaged goods and electricity meters. The Workshops were on 1) Product Safety, Food Safety and Agricultural Metrology, and 2) Legal Metrology of Speedometers. Workshops planned for 2010 include training on gas meters, mass flow meters, electronic weighing instruments, and software-controlled measuring instruments. Future priorities for APLMF training courses also include OIML R 117 (flowmeters for liquids other than water), R 126 (Breathalyzers), and R 91 (Radar Devices). While feedback from the previously-held training courses has been positive, it is becoming clear that in order to continue to receive funding for the training, APLMF needs to do a more thorough job of assessing and documenting the impact of the training courses on the economies that receive the training.

The United States was represented by Dr. Charles Ehrlich, who serves as Chairman of the APLMF Work Group on Mutual Recognition Arrangements. Dr. Ehrlich gave an extensive report and update on the OIML Mutual Acceptance Arrangement (MAA).

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