



Australian Government

Department of Industry, Science,  
Energy and Resources

**National  
Measurement  
Institute**

**Appointment as an Approving Authority  
for  
Utility Meters**

In accordance with Regulation 76 of *National Measurement Regulations 1999* (Cth), in force under the *National Measurement Act 1960* (Cth), the Chief Metrologist hereby appoints

**NSW Department of Planning Industry and Environment  
(ABN 20 770 707 468)**

Operating at:  
**Manly Hydraulics Laboratory  
110 B King Street  
Manly Vale NSW 2093**

as an approving authority for the pattern approval examining of:

**Water Meters**

This appointment is for the period from 11 November 2021 to 10 November 2024 and is limited to the range specified in the attached schedule, and the use of procedures approved by the Chief Metrologist.

Dated this      Eleventh                      day of                      November                      2021

Signed

James Cantrill  
For Dr Richard Bruce Warrington  
Chief Metrologist  
National Measurement Institute

Certificate: NMI2021-057-MHL-AA                      Form No. NMI/AA/2021                      Page 1 of 5

# **Schedule to Appointment as an Approving Authority for Utility Meters**

**NSW Department of Planning Industry and Environment  
(ABN 20 770 707 468)**

Operating at:  
**Manly Hydraulics Laboratory  
110 B King Street  
Manly Vale NSW 2093**

## **Scope of Appointment**

- (i) Water meters intended for the metering of cold potable water with a flowrate range of 3 L/h to 12 kL/h.
- (ii) Water meters intended for the metering water in full flowing pipes with a flowrate range of 0.5 L/s to 450 L/s.
- (iii) Water meters intended for the metering of water in open channels and partially filled pipes with a flowrate range of 0.5 L/s to 450 L/s.

## **Classes of water meters which may be tested**

- (i) Class 2 as defined in document 'NMI R 49-1 Water meters for cold potable water and hot water. Part 1: Metrological and Technical Requirements'.
- (ii) Class 2.5 as defined in document 'NMI M 10-1 Meters Intended for the Metering of Water in Full Flowing Pipes. Part 1: Metrological and Technical Requirements'.
- (iii) Class 2.5 as defined in document 'NMI M 11-1 Meters Intended for the Metering of Water in Open Channels and Partially Filled Pipes. Part 1: Metrological and Technical Requirements'.

James Cantrill  
For Dr Richard Bruce Warrington  
Chief Metrologist  
National Measurement Institute

## Tests

- (i) For Class 2 water meters intended for the metering of cold potable water - as defined in 'NMI R 49-2 Water meters for cold potable water and hot water. Part 2: Test Methods':

- 6 External Examination
- 7.3 Static Pressure Test
- 7.4 Determination of Intrinsic Errors (of indication)
- 7.5 Water Temperature Test
- 7.6 Overload Water Temperature Test
- 7.7 Water Pressure Test
- 7.8 Reverse Flow Test
- 7.9 Pressure Loss Test
- 7.10 Flow Disturbance Tests
- 7.11 Durability Tests
- 8.17 Absence of Flow Test

- (ii) For Class 2.5 water meters intended for the metering of water in full flowing pipes as defined in 'NMI M 10-2 Meters Intended for the Metering of Water in Full Flowing Pipes. Part 2: Test Methods':

- 5 External Examination
- 6.2 Static Pressure Test
- 6.3 Determination of Intrinsic Errors of Indication and the Effects of Meter Orientation.
- 6.4 Absence of Flow Test
- 6.5 Water Pressure Test
- 6.6 Flow Reversal Test
- 6.7 Pressure Loss Test
- 6.8 Flow Disturbance Tests
- 6.9 Endurance Tests
- 6.11 Meters Used in Open Channel Emplacements
- 6.12 Installation Tests
- 6.13 Test for Cartridge Meters and Meters with Interchangeable Inserts
- 6.14 Maintenance Tests
- 9.1 Tests for Initial Verification – Water Meter

James Cantrill  
For Dr Richard Bruce Warrington  
Chief Metrologist  
National Measurement Institute

- (iii) For Class 2.5 water meters intended for the metering of water in open channels and partially filled pipes as defined in 'NMI M 11-2 Meters Intended for the Metering of Water in Open Channels and Partially Filled Pipes. Part 2: Test Methods'.

- 5 External Examination
- 6.2 Static Pressure Test
- 6.3 Determination of Intrinsic Errors of Indication and the Effects of Meter Orientation.
- 6.4 Low Flow Test
- 6.5 Full Flow Test
- 6.6 Wave Disturbance Tests
- 6.7 Flow Disturbance Tests
- 6.8 Head Loss Test
- 6.9 Endurance Tests
- 6.10 Installation Tests
- 6.11 Maintenance Tests
- 9.1 Tests for Initial Verification – Water meter
- 9.2 Tests for Initial Verification – Separable Parts

### **Statutory Conditions**

This appointment as an approving authority for utility meters under regulation 76 of the *National Measurement Regulations 1999* (Cth) is subject to the conditions stated in regulation 77 of the *National Measurement Regulations 1999* (Cth) as amended. At the time of appointment regulation 77 contains the following conditions

- (a) That the authority participate in training, related to the performance of the duties of an authority, required by the Chief Metrologist;
- (b) That the authority report, as required by the Chief Metrologist, about its performance of its duties;
- (c) That the authority, and any responsible agent or employee of the authority, comply with the *National Measurement Act 1960* (Cth) and the *National Measurement Regulations 1999* (Cth) and any condition stated in the instrument of appointment.

James Cantrill  
For Dr Richard Bruce Warrington  
Chief Metrologist  
National Measurement Institute

## **Additional Conditions**

In addition to the statutory conditions of appointment of authorities contained in regulation 77 of the *National Measurement Regulations 1999* (Cth) this appointment is also subject to the following conditions:

- (i) Continuing accreditation against AS ISO/IEC 17025 *General requirements for the competence of testing and calibration laboratories* in the form of NATA accreditation No. 17156.
- (ii) The authority shall not engage a responsible agent or arrange for any test(s) to be performed by an agent or anyone under its supervision without obtaining the prior consent of the Chief Metrologist in writing;
- (iii) Discharge of all financial obligations to the National Measurement Institute in respect of this appointment;
- (iv) Compliance with the formatting and/or any other requirements of the Chief Metrologist and/or the National Measurement Institute with respect to the reporting of test results;
- (v) During the term of this appointment all staff with substantive responsibility for performing testing under this appointment must attend a legal metrology seminar conducted by the Policy and Regulatory Services Section of the Legal Metrology Branch of the National Measurement Institute;
- (vi) This appointment revokes and replaces any previous appointments and/or any extensions granted to any previous appointments.

**Notes:** Nil.

James Cantrill  
For Dr Richard Bruce Warrington  
Chief Metrologist  
National Measurement Institute