In this regular rulemaking, the Department of Food and Agriculture amends two sections related to requirements set forth in the National Institute of Standards and Technology Handbook 44 "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices" and other requirements applicable to hydrogen gas-measuring devices.

OAL approves this regulatory action pursuant to section 11349.3 of the Government Code. This regulatory action becomes effective on 1/23/2020.
# A. PUBLICATION OF NOTICE

**SUBJECT OF NOTICE**

Hydrogen Gas-Measuring Devices (3.39)

**TITLE(S)**

4

**FIRST SECTION AFFECTED**

4002.9

**REQUESTED PUBLICATION DATE**

May 31, 2019

**NOTICE TYPE**

Other

**CONTACT PERSON**

Samuel Ferris

**TELEPHONE NUMBER**

(916) 229-3000

**FAX NUMBER (Optional)**

(916) 229-3055

**ACTION ON PROPOSED NOTICE**

Disapproved/Withdrawn

**NOTICE REGISTER NUMBER**

2019-22-2

**PUBLICATION DATE**

5/31/2019

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# B. SUBMISSION OF REGULATIONS

**SUBJECT OF REGULATIONS**

HYDROGEN GAS-MEASURING DEVICES

**SECTION(S) AFFECTED**

ADOPT

4001 AND 4002.9

AMEND

4002.9

REPEAL

4001

**TYPE OF FILING**

Regular Rulemaking (Gov. Code §11346)

Resubmittal of approved or withdrawn emergency filing (Gov. Code §11346.10)

Certificate of Compliance: The agency officer named below certifies that this agency complied with the provisions of Gov. Code §11346.2-11347.3 either before the emergency regulation was adopted or within the time period required by statute.

**BEGINNING AND ENDING DATES OF AVAILABILITY OF MODIFIED REGULATIONS AND/OR MATERIAL ADDED TO THE RULEMAKING FILE**

OCTOBER 14-30, 2019

**EFFECTIVE DATE OF CHANGES**

Effective on filing with Secretary of State

**OTHER AGENCY OR ENTITY**

Department of Finance (Form STD. 399) (SAM §6680)

**CONTACT PERSON**

Samuel Ferris

**TELEPHONE NUMBER**

(916) 229-3000

**FAX NUMBER (Optional)**

(916) 229-3055

**E-MAIL ADDRESS (Optional)**

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**I certify that the attached copy of the regulation(s) is a true and correct copy of the regulation(s) identified on this form, that the information specified on this form is true and correct, and that I am the head of the agency taking this action, or a designee of the head of the agency, and am authorized to make this certification.**

**Signature**

Kevin Masuhara, Deputy Secretary

**Date**

12/19
§ 4001. Exceptions.
The following regulations in Handbook 44 are not adopted or incorporated by reference:

1.10. General Code.

G-S.1.2. Remanufactured Devices and Remanufactured Main Elements.
(b) equipment that has been placed in commercial service within the preceding 30 days and is being officially tested for the first time;
(c) equipment that has been returned to commercial service following official rejection for failure to conform to performance requirements and is being officially tested for the first time within 30 days after corrective service;
(d) equipment that is being officially tested for the first time within 30 days after major reconditioning or overhaul;

2.20. Scales.
S.1.8.4. Customer’s Indications.
N.3. Minimum Test Weights and Test Loads*.
UR.2.6.1 Vehicle Scales.
UR.3.7. Minimum Load on a Vehicle Scale.


UR.2.2. Ticket Printer; Customer Ticket.


UR.2.3. Vapor Return Line.

S.4.3. Temperature Compensation.

S.1.3.1.1. Compressed Natural Gas Used as an Engine Fuel.
§ 4002.9. Hydrogen Gas-Measuring Devices (3.39.)

A.4. Type Evaluation. – The National Type Evaluation Program (NTEP) or California Type Evaluation Program (CTEP) will accept for type evaluation only those hydrogen gas-measuring devices that comply with all applicable requirements of this article.

S.5.2. Location of Accuracy Class 2.0, 3.0, 5.0, 7.0, and 10.0 Information: – An additional Accuracy Class statement shall be placed adjacent to the quantity display on the face for the dispenser and shall be conspicuously, legibly, and indelibly marked with a statement such as “The Accuracy Class of this dispenser is XX.0 and represents the accuracy of the delivery
expressed as a plus or minus percentage of the delivered quantity. The lettering shall be in Helvetica or Arial Bold font type, in all capitals, and no less than 3/16 inch (0.48 cm) in height.

Note: The XX.0 is the Accuracy Class as stated on the certificate of approval issued by the California Department of Food and Agriculture after successful type evaluation, NTEP Certificate of Conformance or CTEP Certificate of Approval and is part of the identification information required in paragraph S.5. The rating represents the allowable limits of error expressed as a plus and minus value. For example, a dispenser approved and marked with a 3.0 Accuracy Class has an allowable maintenance tolerance in Table 2 ranging from plus three (+3) percent to minus three (−3) percent.

EXAMPLE:

THE ACCURACY CLASS OF THIS DISPENSER IS 3.0 AND REPRESENTS THE ACCURACY OF THE DELIVERY EXPRESSED AS A PLUS OR MINUS PERCENTAGE OF THE DELIVERED QUANTITY.

N.3. Test Drafts.—The minimum test shall be one test draft at twice the declared minimum measured quantity and one test draft at approximately ten times the minimum measured quantity or 1 kg, whichever is greater. More tests may be performed over the range of normal quantities dispensed. (See T.3. Repeatability)

The test draft shall be made at flows representative of that during normal delivery. The pressure drop between the dispenser and the proving system shall not be greater than that for normal deliveries. The control of the flow (e.g., pipe work or valve(s) size, etc.) shall be such that the flow of the measuring system is maintained within the range specified by the manufacturer.

N.4.1. Master Meter (Transfer) Standard Test.—When comparing a measuring system with a calibrated transfer standard, the minimum test shall be one test draft at twice the declared minimum measured quantity and one test draft at approximately ten times the minimum measured quantity or 1 kg, whichever is greater. More tests may be performed over the range of normal quantities dispensed.

N.4.2. Gravimetric Tests.—The weight of the test drafts shall be equal to at least twice the amount delivered by the device at the declared minimum measured quantity and one test draft at approximately ten times the minimum measured quantity or 1 kg, whichever is greater. More tests may be performed over the range of normal quantities dispensed.

N.4.3. PVT Pressure Volume Temperature Test.—The minimum test with a calibrated volumetric standard shall be one test draft at twice the declared minimum measured quantity
and one test draft at approximately ten times the minimum measured quantity or 1 kg, whichever is greater. More tests may be performed over the range of normal quantities dispensed.

N.6.1.1. Repeatability Tests. — Tests for repeatability should include a minimum of three consecutive test drafts of approximately the same size with no less than 1000 scale intervals (divisions), and be conducted under controlled conditions where variations in factors are reduced to minimize the effect on the results obtained.


<table>
<thead>
<tr>
<th>Table T.2.</th>
<th>Accuracy Classes and Tolerances for Hydrogen Gas-Measuring Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Application or Commodity Being Measured</td>
</tr>
<tr>
<td>Class</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>Hydrogen gas as a vehicle fuel</td>
</tr>
<tr>
<td>10.0</td>
<td></td>
</tr>
</tbody>
</table>


1. The tolerance values for Accuracy Classes 3.0 and 5.0 hydrogen gas-measured devices are applicable to devices installed prior to January 1, 2020.

2. The tolerance values for Accuracy Classes 10.0 hydrogen gas-measured devices are applicable to devices installed prior to January 1, 2018.

T.3. Repeatability. — When multiple tests are conducted at approximately the same flow rate and draft size greater than 1000 scale intervals (divisions), the range of the test results for the flow rate shall not exceed 40% of the absolute value of the maintenance tolerance and the results of each test shall be within the applicable tolerance. See also Section 4002.9—N.6.1.1. Repeatability Tests.

T.6. Tolerance Minimum Measures Quantity (MMQ). The maximum error applicable to the minimum measured quantity is twice the applicable tolerance in Table T.2.

<table>
<thead>
<tr>
<th>Accuracy Class</th>
<th>Acceptance Tolerance</th>
<th>Maintenance Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>1.5 %</td>
<td>2.0 %</td>
</tr>
<tr>
<td>3.0</td>
<td>2.0 %</td>
<td>3.0 %</td>
</tr>
<tr>
<td>5.0</td>
<td>4.0 %</td>
<td>5.0 %</td>
</tr>
<tr>
<td>7.0</td>
<td>5.0 %</td>
<td>7.0 %</td>
</tr>
<tr>
<td>10.0</td>
<td>5.0 %</td>
<td>10.0 %</td>
</tr>
</tbody>
</table>

In Table T.2., above, the tolerance values for Accuracy Class 10.0 hydrogen gas-measuring devices are applicable to devices installed prior to January 1, 2018.