

Tuesday, April 21, 2026

Shane Kelly
Director, Standards and Rulemaking Division
United States Department of Transportation
Office of Hazardous Material Special Permits & Approvals
East Building, 2nd Floor, PHH-10
1200 New Jersey Avenue, SE
Washington, DC 20590
USA

Subject: Request for Interpretation – Transition Provisions for ISO 9809 Standards under 49 CFR §178.71(g)

Dear Mr. Kelly,

We respectfully request clarification regarding the transition from currently incorporated-by-reference (IBR) ISO standards to their updated editions within **49 CFR §178.71(g)**, specifically as it relates to the transition provisions associated with ISO 9809.

Our inquiry concerns ISO 9809-1, -2, and -3, which are incorporated by reference in **49 CFR §178.71(g)(1)–(3)**. Each subsection includes a transition period ending December 31, 2026. However, the regulatory language differs slightly among the subsections, which may lead to differing interpretations:

- **§178.71(g)(1):** "...Until December 31, 2026, the manufacture of a cylinder conforming to the requirements in ISO 9809-1:2010(E)..."
- **§178.71(g)(2):** "...Until December 31, 2026, the manufacture of a cylinder conforming to the requirements in ISO 9809-2:2010... is authorized."
- **§178.71(g)(3):** "...Until December 31, 2026, a cylinder may instead conform to ISO 9809-3:2010(E)..."

We kindly request confirmation as to whether the intent of **§178.71(g)(3)** is functionally equivalent to that of **§178.71(g)(1)** and **(2)**, notwithstanding the variation in wording.

Additionally, we seek confirmation of our understanding that:

- Cylinders manufactured and certified in accordance with the ISO 9809:2010 editions are compliant if produced on or before December 31, 2026; and
- Cylinders manufactured and certified after that date in accordance with the updated ISO 9809:2019 editions will meet the requirements of **49 CFR §178.71(g)(1)–(3)**.

From an operational standpoint, pressure vessel manufacturers must maintain continuity of supply beyond the transition date. Accordingly, we request guidance on how previously approved cylinder designs (approved to ISO 9809:2010) should be managed after December 31, 2026.

Specifically, we seek clarification on the following:

- Is it necessary to re-register or re-approve existing, previously approved cylinder designs with PHMSA to reflect compliance with the ISO 9809:2019 editions?
- Alternatively, if the technical requirements between the 2010 and 2019 editions are substantially equivalent, may ongoing production continue under existing approval without formal re-approval?

If PHMSA determines that some form of update or notification is required, we would appreciate guidance on acceptable approaches. For example, would PHMSA consider any of the following options related to Competent Authority (CA) approvals when transitioning to newer standard editions:

Option 1: CA General correspondence / notification application

Submission of updated design drawings, quality control (QC), and quality management (QM) procedures demonstrating compliance with ISO 9809:2019, accompanied by:

- Manufacturer attestation of compliance to include a gap analysis between revisions; and
- A letter of recommendation (LOR) from the approved Independent Inspection Agency (IIA) confirming continued compliance and implementation of any applicable updates.
- PHMSA fitness inspections shall further verify compliance and implementation.

Option 2: CA General correspondence / notification application

Enhanced notification with targeted verification -submission as above, with inclusion of supporting evidence where applicable, such as:

- Additional batch testing as applicable by ISO 9809:2019;
- Supplemental prototype testing limited to areas impacted by revisions (e.g., additional torque test).

Option 3: CA modification application

Submission of a formal CA modification to the existing approval incorporating ISO 9809:2019 requirements.

- This modification will require full prototype (Type Approval) testing, consisting of a complete repetition of all original prototype tests.
- Any additional testing required to demonstrate compliance with ISO 9809:2019, as applicable, shall also be included.

Our current understanding—based on typical Competent Authority (CA) approval letter provisions (e.g., sections 6(b) and 6(d))—is that full type-approval testing (**Option 3**) is generally only required where there has been a significant technical change affecting the original design qualification. In most cases, periodic revisions to ISO standards (typically every five years) do not materially alter design qualification or testing requirements. Revisions to standards are generally intended to enhance clarity and consistency of existing requirements, rather than to introduce new or additional testing requirements solely for safety

We further note that the differences between ISO 9809 revisions are generally limited and do not result in substantive changes to pressure vessel design. Requiring full prototype testing would necessitate approximately

12 test cylinders and a prototype production lot of approximately 50 cylinders for each parent design, resulting in significant cost, lead time, and administrative burden for both **manufacturers** and **PHMSA**, without a corresponding increase in safety. In addition, variant designs (designs by similarity) would also be subjected to reduced prototype testing.

In our view, it would be more appropriate for the transition date to represent the point at which all production must conform to the updated standard, without requiring full prototype testing of previously approved designs. Where warranted, targeted supplemental testing addressing specific changes in the updated standard would appear to be a more reasonable and risk-based approach.

In conclusion:

- Manufacturers have approached Arrowhead seeking guidance on how to proceed with revision upgrades; however, there is currently no clearly defined regulatory pathway to provide consistent direction to manufacturers.
- The current transition framework, in the absence of clear guidance, may introduce significant regulatory and operational burdens—**not only for ISO 9809, but potentially for other ISO standards incorporated by reference within Title 49—particularly if Option 3 reflects PHMSA’s current position.**
- Clarification from PHMSA on acceptable pathways for maintaining existing approvals during the transition to updated standards would provide essential regulatory guidance to industry and support continued compliance without significant disruption to global supply chains.
- We recognize that updates to 49 CFR may take several years to complete through the formal rulemaking process. As such, it is our view that **Option 1** could be implemented through Competent Authority (CA) approvals in the interim, as a practical mechanism to support continuity of existing approvals, avoid unnecessary disruption to industry, and maintain compliance with evolving standards. Manufacturers in many cases already conform to the latest editions of applicable standards, as their products are supplied to global markets that require certification in accordance with updated versions incorporated within the UN Model Regulations (e.g., ADR, TDG, etc.).
- Arrowhead intends to proactively engage with industry leaders through the Compressed Gas Association to gather guidance, feedback, and broader industry perspective on this topic.

We would greatly appreciate PHMSA’s interpretation and confirmation of these points, as well as any guidance regarding the documentation required to update existing designs referenced in Competent Authority approvals to reflect ISO 9809:2019.

Thank you for your time and consideration. We look forward to your guidance and would welcome the opportunity to meet to further discuss this matter at your convenience as time is of the essence.

Sincerely,

Joe Cassidy
President

Arrowhead Industrial Services USA, Inc.

Cc: PHMSA Approvals and permits, PHMSA science and engineering, PHMSA Field Operations, Compressed Gas Association