U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

July 22, 2025

Sam Browning
Moog, Inc.
Ashchurch Parkway
Tewkesbury
Gloucestershire
GL20 8TU
United Kingdom

Reference No. 24-0033R

Dear Mr. Browning:

This letter in response to your original April 2 email is updated and revised based on your follow-up September 4, 2024 email, and your subsequent conversation with a member of my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to cylinder condemnation. Specifically, you have questions about the process for condemning a cylinder consistent with the requirement outlined in 49 CFR § 180.205(j)(1)(x) when the owner of the cylinder knows that its service life has expired.

We have paraphrased and answered your questions as follows:

Q1. Must a person (*i.e.,* a cylinder owner) have any part of a "requalification"—as defined in 49 CFR § 180.203—performed when the cylinder owner knows that the authorized service life of a cylinder such that it is now subject to condemnation consistent with § 180.205(j)(1)(x)?

A1. No. In this instance, when a cylinder owner knows a cylinder is not suitable for continued service because it has reached the end of its service life it does not need to be subjected to requalification provisions. The term "requalification"—as defined in § 180.203—means the completion of a visual inspection and/or the test(s) required to be performed on a cylinder to determine its suitability for continued service.

Q2. In the instance of a cylinder owner knowing a cylinder is not suitable for continued service because it has reached the end of its service life and the owner uses the services of a cylinder requalifier to condemn the cylinder in accordance with § 180.205(j), must a

requalifier complete any part of recordkeeping found in §§ 180.215(b) introductory text or 180.215(b)(2), respectively?

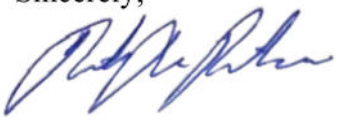
A2. No. A cylinder known to have an expired service life does not need to undergo formal requalification including maintenance of a record because the owner has already determined the cylinder is no longer suitable for continued service past its authorized service life. The requalifier needs only to adhere to the requirements found in § 180.205(j)(2).

Q3. When is a requalification record of condemnation of a cylinder necessary for a cylinder past its specified service life?

A3. A record of condemnation is necessary if during performance of a requalification, it is determined by the requalifier that a cylinder's authorized service life has expired.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,



Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

Baker, Y.
24-0033R

From: Browning, Sam
To: INFOCNTR (PHMSA); Dodd, Alice (PHMSA)
Cc: Baker, Yul (PHMSA); DerKinderen, Dirk (PHMSA); Dodd, Alice (PHMSA)
Subject: RE: Interpretation Final Response
Date: Wednesday, September 4, 2024 4:35:50 AM
Attachments: image001.png

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear Alice,

Please see an addition in red to my previous email.

Regarding the attached response to my query,

If we were to completely ignore my reference to section "49 CFR 180.205(f) Visual inspection"

Can you please clarify that if a cylinder is to be condemned due to section § 180.205(j)(1)(x), there is no need to conduct any part of a "Requalification" as defined in 49 CFR 180.203 due to the cylinder being determined unsuitable for use prior to any part of a requalification taking place.

Can you also confirm there is **no** need to complete any part of section 180.215(b) or 180.215(b)(2). In particular, the need to keep a record of that cylinder's condemnation.

Can you confirm that the only time it is needed to complete a record of condemnation is when a cylinder fails a "*visual inspection/pressure test*" (a cylinder being out of service life does not constitute as a failed visual inspection), thus resulting in its condemnation. This should then be captured on the requalification record. (as expressed in 49 CFR 180.215(b)(2) *"disposition, with reason for any repeated test, rejection or condemnation")*

Kind regards

Sam Browning | Product Engineer

Mobile +44 7475 140 111
e-mail sbrowning@moog.com

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www.moog.com

From: Browning, Sam
Sent: Tuesday, September 3, 2024 1:58 PM
To: Infocntr@dot.gov; Dodd, Alice (PHMSA) <Alice.Dodd@dot.gov>
Cc: Baker, Yul (PHMSA) <yul.baker@dot.gov>; DerKinderen, Dirk (PHMSA)

<Dirk.DerKinderen@dot.gov>; Dodd, Alice (PHMSA) <Alice.Dodd@dot.gov>
Subject: RE: Interpretation Final Response

Dear Alice,

Regarding the attached response to my query,

If we were to completely ignore my reference to section “49 CFR 180.205(f) Visual inspection”

Can you please clarify that if a cylinder is to be condemned due to section § 180.205(j)(1)(x), there is still **no** need to complete any part of section 180.215(b)(1) or 180.215(b)(2). In particular, the need to keep a record of that cylinder’s condemnation.

Can you confirm that the only time it is needed to complete a record of condemnation is when a cylinder fails a visual inspection/pressure test, thus resulting in its condemnation. This should then be captured on the requalification record. (as expressed in 49 CFR 180.215(b)(2) “disposition, with reason for any repeated test, rejection or condemnation”)

Kind regards

Sam Browning | Product Engineer

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Baker

24-0033

From: Approvals (PHMSA)
To: Hazmat Interps
Subject: FW: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query
Date: Tuesday, May 28, 2024 8:20:57 AM
Attachments: image001.png
image003.png

Duane M. Cassidy
Chief, Pressure Vessels Branch (PHH-25)
Sciences and Engineering Division
Office of Hazardous Materials Safety

US Department of Transportation
Pipeline and Hazardous Materials Safety Administration
E21-301, 1200 New Jersey Ave SE, Washington, DC 20590
Office/Mobile: 202.596.0583

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From: Browning, Sam <sbrowning@moog.com>
Sent: Tuesday, May 28, 2024 8:00 AM
To: Approvals (PHMSA) <Approvals@dot.gov>
Subject: RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

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Dear whom it may concern,

Please could you comment on the below?

Sam Browning | Product Engineer

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From: Browning, Sam
Sent: Wednesday, May 8, 2024 9:29 AM
To: Approvals (PHMSA) <Approvals@dot.gov>
Subject: RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

Subject: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear whom it may concern,

I write to you from Moog Aircraft Control components in Tewkesbury, United Kingdom.

We have the capability of hydrostatic testing a selection of cylinders for requalification.

I Write to you regarding a query around the condemnation of cylinders due to service life expiry.

Can you confirm,
when a cylinder is to be condemned due to meeting the criteria in section 49 CFR 180.205(i)(1)(x) "For a cylinder with a specified service life, its authorized service life has expired."

Cylinder condemnation.

49 CFR 180.205(i)

(1) A cylinder must be condemned when—

(i) The cylinder meets a condition for condemnation under the visual inspection requirements of paragraph (f) of this section.

(ii) The cylinder leaks through its wall.

(iii) Evidence of cracking exists to the extent that the cylinder is likely to be weakened appreciably.

(iv) For a DOT specification cylinder, other than a DOT 4E aluminum cylinder or a special permit cylinder, permanent expansion exceeds 10 percent of total expansion.

(v) For a DOT 3HT cylinder—

(A) The pressure test yields an elastic expansion exceeding the marked rejection elastic expansion (REE) value.

(B) The cylinder shows evidence of denting or bulging.

(C) The cylinder bears a manufacture or an original test date older than

twenty-four years or after 4380 pressurizations, whichever occurs first. If a cylinder is refilled, on average, more than once every other day, an accurate record of the number of rechargings must be maintained by the cylinder owner or the owner's agent.

(vi) For a DOT 4E aluminum cylinder, permanent expansion exceeds 12 percent of total expansion.

(vii) For a DOT special permit cylinder, permanent expansion exceeds the limit in the applicable special permit, or the cylinder meets another criterion for condemnation in the applicable special permit.

(viii) For an aluminum or an aluminum-lined composite special permit cylinder, the cylinder is known to have been or shows evidence of having been overheated. Arc burns must be considered evidence of overheating.

(ix) The cylinder is known to have been or shows evidence of having been over-pressurized.

(x) For a cylinder with a specified service life, its authorized service life has expired.

(xi) The cylinder has been stamped on the sidewall, except as provided in part 178 of this subchapter.

This means it does NOT need to be visually inspected as per 49 CFR 180.205(f)

Visual inspection. Except as otherwise provided in this subpart, each time a cylinder is pressure tested, it must be given an internal and external visual inspection.

(1) The visual inspection must be performed in accordance with the following CGA Pamphlets: C–6 for steel and nickel cylinders (IBR, see § 171.7 of this subchapter); C–6.1 for seamless aluminum cylinders (IBR, see § 171.7 of this subchapter); C–6.2 for fiber reinforced composite special permit cylinders (IBR, see § 171.7 of this subchapter); C–6.3 for low pressure aluminum cylinders (IBR, see § 171.7 of this subchapter); C–8 for DOT 3HT cylinders (IBR, see § 171.7 of this subchapter); and C–13 for DOT 8 series cylinders (IBR, see § 171.7 of this subchapter).

(2) For each cylinder with a coating or attachments that would inhibit inspection of the cylinder, the coating or attachments must be removed before performing the visual inspection.

(3) Each cylinder subject to visual inspection must be approved, rejected, or condemned according to the criteria in the applicable CGA pamphlet.

(4) In addition to other requirements prescribed in this paragraph (f), each specification cylinder manufactured of aluminum alloy 6351–T6 and used in self-contained underwater breathing apparatus (SCUBA), self-contained breathing apparatus (SCBA), or oxygen service must be inspected for sustained load cracking in accordance with Appendix C of this part at the first scheduled 5-year requalification period after January 1, 2007, and every five years thereafter.

(5) Except in association with an authorized repair, removal of wall thickness via

grinding, sanding or other means is not permitted. Removal of paint or loose material to prepare the cylinder for inspection is permitted (*e.g.,* shot blasting).
(6) Chasing of cylinder threads to clean them is permitted, but removal of metal must not occur. Re-tapping of cylinder threads is not permitted, except by the original manufacturer, as provided in § 180.212.

Thus, meaning it does NOT need a "Pressure test and visual inspection record "49 CFR 180.215(b)(2)" to be completed as a visual inspection or pressure Test isn't being undertaken.

From my interpretation if we have a cylinder that is known to be out of service life then we are required to complete section "49 CFR 180.205(i)(2)" ONLY.

When a cylinder must be condemned, the requalifier must—

(i) Communicate condemnation of the cylinder as follows:

(A) Stamp a series of Xs over the DOT-specification number and the marked pressure or stamp "CONDEMNED" on the shoulder, top head, or neck using a steel stamp;

(B) For composite cylinders, securely affix to the cylinder a label with the word "CONDEMNED" overcoated with epoxy near, but not obscuring, the original cylinder manufacturer's label; or

(C) As an alternative to the stamping or labeling as described in this paragraph (i)(2), at the direction of the owner, the requalifier may render the cylinder incapable of holding pressure; and

(ii) Notify the cylinder owner, in writing, that the cylinder is condemned and may not be filled with hazardous material and offered for transportation in commerce where use of a specification packaging is required.

(3) No person may remove, obliterate, or alter the required condemnation communication of paragraph (i)(2) of this section.

I look forward to hearing from you.

Kind regards

Sam Browning | Product Engineer

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e-mail sbrowning@moog.com

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