



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

October 10, 2023

Steven W. Steuer
System Safety Engineer
Raytheon
1151 E Hermans Rd
Tucson, AZ 85706

Reference No. 23-0074

Dear Mr. Steuer:

This letter is in response to your August 7, 2023, email and subsequent email conversation requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) regarding the applicability of the HMR to expended explosive devices. Specifically, you ask what the appropriate classification is for an expended explosive device, such as an initiator that was originally approved for transportation as a Division 1.4 explosive.

The answer is that the classification of an expended explosive device must be determined case-by-case based on the presence or absence of energetic material remaining in the device. If the explosive substance within the device has been consumed/expended and there is no energetic substance remaining, then the device would not be subject to the requirements of the HMR for transportation as a Class 1 explosive material.

It is the responsibility of the shipper to determine whether the expended explosive device contains residual energetic material or any other chemical residue that may be subject to the HMR prior to offering the device for transportation. If a shipper plans to offer a device containing residual energetic materials—including a “dud” or misfired device—for transportation, they must seek a competent authority approval in accordance with § 173.56.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Dirk Der Kinderen".

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

From: [Foster, Glenn \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#); [Jones, Jessie Jane CTR \(PHMSA\)](#)
Subject: Expedited previous LIVE ordnance/explosives
Date: Tuesday, August 15, 2023 8:21:35 AM
Attachments: [image002.png](#)

Good morning, Alice and Jessie.

Was the following checked in as a request for an Interp?

Thanks,
Glenn

From: Fink, William (PHMSA) <William.Fink@dot.gov>
Sent: Tuesday, August 15, 2023 7:08 AM
To: Steuer, Steven W RTX <Steven.W.Steuer@rtx.com>; Foster, Glenn (PHMSA) <Glenn.Foster@dot.gov>
Cc: Raszewski, Kimberly (PHMSA) <kimberly.raszewski@dot.gov>; INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>; Singh, Harpreet (PHMSA) <harpreet.singh@dot.gov>
Subject: RE: Expedited previous LIVE ordnance/explosives

Mr. Steuer,

I will ask Mr Foster to open an interp on this question.

Normally any residual amount of unreacted explosives would require a PHMSA classification approval for transportation.

Example-

Lab waste – residual amounts on paper towels, gloves, etc.

William Fink
Transportation Specialist
William.Fink@dot.gov

US Department of Transportation
Pipeline and Hazardous Materials Safety Administration, PHH24
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[PHMSA Home](#) | [LinkedIn](#) | [Twitter](#) | [HAZMAT](#) | [OPS](#)



From: Steuer, Steven W RTX <Steven.W.Steuer@rtx.com>

Sent: Monday, August 14, 2023 9:12 AM

To: Raszewski, Kimberly (PHMSA) <kimberly.raszewski@dot.gov>; INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>

Cc: Fink, William (PHMSA) <William.Fink@dot.gov>

Subject: RE: Expended previous LIVE ordnance/explosives

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.

Thought I'd ask about this one again...I haven't heard or seen anything from the INFO center about this? Thanks, steve

Steven W Steuer
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From: Raszewski, Kimberly (PHMSA) <kimberly.raszewski@dot.gov>

Sent: Monday, August 7, 2023 12:58 PM

To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>

Cc: Steuer, Steven W RTX <Steven.W.Steuer@rtx.com>; Fink, William (PHMSA) <William.Fink@dot.gov>

Subject: [External] FW: Expended previous LIVE ordnance/explosives

Importance: High

Good afternoon Info Center,

Please see Mr. Steuer's inquiry below.

Thank you,

Kim Raszewski

Transportation Specialist, Energetic Materials Branch

US Department of Transportation

Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Ave., Washington, D.C., 20590

Office: 202-366-4498

From: Steuer, Steven W RTX
Sent: Monday, August 7, 2023 9:29 AM
To: Fink, William (PHMSA) <william.fink@dot.gov>
Subject: Expended previous LIVE ordnance/explosives
Importance: High

William, good day!

I am trying to determine whether DOT makes any distinction for how to handle “expended” ordnance/explosives? I currently don’t see anything in 49CFR for this, and I haven’t found any DOT Letters of Interpretation for this subject.

Raytheon has generally treated expended explosives as no longer being able to produce any LIVE explosive reaction...and therefore no longer needing any EX letter for that condition. We know that that doesn’t mean that in the case for rocket motors that there isn’t residual materials remaining in the RM case, which also implies that it must be handled as ordnance waste for disposal...in other words, it is NOT chemically INERT. We further believe that for smaller explosive devices... initiators, bottle cutters, etc, mostly 1.4 devices...this is even less of a concern for an expended item having even far less residuals and far less opportunity for any explosive reaction.

Looking to see if there is any DOT policy or practice for transportation hazard classification of “expended” explosives? Thanks, steve

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