



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

1200 New Jersey Avenue, SE
Washington, DC 20590

April 14, 2022

Sean Lindley
Manager
Ordnance Lab LLC
P.O. Box 295
Three Rivers, TX 78071

Reference No. 22-0003

Dear Mr. Lindley:

This letter is in response to your January 12, 2022, email and subsequent email correspondence requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to transportation of Division 1.1 explosive devices onboard an aircraft. Specifically, you describe a scenario in which Division 1.1 explosive devices would be loaded aboard a rotorcraft. The rotorcraft would transport the explosives over an explosive testing range, where the explosives would be dropped to observe their explosive effects. The flight of the rotorcraft with explosives on board would occur solely over contiguous private property, to which public access is restricted.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether the HMR apply to aircraft loaded with Division 1.1 explosive devices and flown above contiguous private property, to which public access is restricted. You note that the purpose of the flight is to employ the explosives on an explosive testing range, not to deliver them from one location to another.
- A1. The answer is yes. The HMR apply to the transportation of hazardous materials in commerce, i.e. in support of a commercial enterprise. Section 171.1(d)(4) specifies that rail and motor vehicle transportation of a hazardous material within a contiguous facility to which public access is restricted is not subject to the requirements of the HMR. However, the transportation of a hazardous material onboard an aircraft in support of a commercial enterprise—even over a contiguous facility to which public access is restricted—is subject to the HMR.

- Q2. You ask whether there is a self-executing or default exception that would allow your company to conduct the proposed activities without direct approval from the Department of Transportation if the exception under § 171.1(d)(4) does not apply to this activity.
- A2. The answer is no. The HMR forbid transportation of Division 1.1 explosive devices aboard passenger and cargo aircraft. You must obtain a Department of Transportation special permit (DOT SP) from PHMSA authorizing a variance from this restriction before performing the described activity. Additionally, if the use of aircraft includes explosives as an external load operation, you must receive an approval from the PHMSA Associate Administrator for Hazardous Material Safety in accordance with § 175.9(a).
- Q3. You ask whether the applicability of the HMR is dependent upon the 14 CFR operational authority for the flight—e.g., if the aircraft is operated under 14 CFR Part 91 as a private general aviation flight—or 14 CFR Part 135 as a chartered aircraft.
- A3. The answer is no. The HMR apply to the transportation of hazardous materials in commerce. “Commerce” is defined in § 171.8 as “trade or transportation in the jurisdiction of the United States within a single state; between a place in a state and a place outside of the state; that affects trade or transportation between a place in a state and place outside of the state; or on a United States-registered aircraft.” The 14 CFR operational authority under which the flight occurs is not a factor in determining whether the HMR apply to hazardous materials being transported in furtherance of a commercial enterprise.
- Q4. You ask whether your company, as the owner of the explosive materials, would be able to secure authorization to conduct the described activity or, alternatively, if the aircraft operator is required to secure any necessary authorizations.
- A4. The answer is that both your company and the aircraft operator may need to receive authorization in the form of a DOT SP and/or approval from the PHMSA Associate Administrator for Hazardous Material Safety. As noted above, Division 1.1 explosive devices are forbidden for transportation aboard passenger or cargo aircraft, including rotorcraft. Either your company—as the owner and offeror of the explosives—or the air operator acting as the carrier, may seek a special permit to authorize the transportation of Division 1.1 explosive devices aboard an aircraft. The approval required in § 175.9 for rotorcraft external load operations, if applicable in this scenario, is typically issued to the rotorcraft operator.
- Q5. You ask what specific authorizations would be required from the Department of Transportation for the proposed operations.
- A5. The answer is dependent on the specific details of the operation. As noted previously, you may require both a DOT SP for the transportation of a Division 1.1 explosive device aboard an aircraft and a § 175.9 approval for rotorcraft external load operations from PHMSA. Additionally, FAA requirements will apply to this proposed operation. We suggest you engage with the FAA Office of Security and Hazardous Material Safety and

the FAA Flight Standards District Office with jurisdiction over your area prior to engaging in the proposed flight.

Finally, you note that you are interested in eventually conducting the described operation with an Unmanned Aerial System (UAS) in place of a manned rotorcraft. Please be aware that as described, transportation of the explosives aboard a United States-registered UAS in support of a commercial enterprise is subject to the requirements of the HMR, as well as all applicable FAA requirements and restrictions. Specifically, please be aware that you will need to seek an FAA Section 363 Letter of Authorization.

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', written in a cursive style.

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

Patrick

22-0003

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: Interpretation Request for Transport of 1.1 Explosives via Aircraft
Date: Wednesday, January 19, 2022 12:14:16 PM
Attachments: [Ordnance Lab LLC DOT Inquiry on Transport of Explosives by Aircraft.pdf](#)

Hello Alice,

Please see the attached LOI request.

Let me know if you have any questions on anything.

Regards,

-Breanna

From: Sean Lindley <sean@ordnance-lab.com>
Sent: Wednesday, January 12, 2022 8:49 AM
To: PHMSA HM InfoCenter <PHMSAHMInfoCenter@dot.gov>
Subject: Interpretation Request for Transport of 1.1 Explosives via Aircraft

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.

Hello,

Attached is a request for an interpretation related to the applicability of 49 CFR in regards to transporting explosive weapons by aircraft for the purposes of employing them.

Thank you,

Sean Lindley
Manager
Ordnance Lab LLC
936-334-4748
www.ordnance-lab.com

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Type 20, Manufacturer of High-Explosives FEL
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12 January 2022

FOR Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590.

SUBJECT: Applicability of 49 CFR for Transport of 1.1 Explosive Materials by Aircraft Over Private Property.

1. **Bottom Line Up Front:** This is a request for guidance on the applicability of 49 CFR for the limited transport of explosive Destructive Devices categorized as 1.1 explosive materials via an aircraft over a single piece of privately owned property for the purposes of employing the weapons.
2. Ordnance Lab LLC is holder of a Bureau of Alcohol, Tobacco, Firearms & Explosives (ATF), Type 10 Manufacturer of Destructive Devices, Federal Firearms License and a Type 20, Manufacturer of High-Explosives Federal Explosives License; is a Class 02, Manufacturer of NFA Firearms, Special Occupational Taxpayer; and a Directorate of Defense Trade Controls registered Manufacturer of Defense Articles under the International Traffic in Arms Regulations (ITAR). Under these licenses, Ordnance Lab LLC is authorized to manufacture and use explosive weapons (bombs, grenades, etc), which are classified as Destructive Devices under the National Firearms Act (NFA).
3. Ordnance Lab LLC would like to conduct testing of dropping explosive Destructive Devices with a Net Explosive Weight of no more than ½ lb of 1.1 explosives such as hand-grenades, potential munitions for Unmanned Ariel Systems (UAS), and similar explosive weapons from a rotary-winged aircraft flying under a Standard Airworthiness Certificate over a single and contiguous piece of private property. Potentially relevant factors are:
 - A. **Transport Would Otherwise be Exempted:** At no time would the aircraft fly over any other property or a public road. Thus, if the same transportation were to be done by a land vehicle, it would not fall under the preview of 49 CFR due to being exempted under §171.1(d)(4) “Functions not subject to the requirements of the HMR” for being “motor vehicle movements of a hazardous material exclusively within a contiguous facility boundary where public access is restricted”.
 - B. **Transport Incidental to Use:** In this particular instance the transport of explosives would be entirely for the purpose of their employment as weapon systems. The aircraft would take-off, fly to an altitude of between 100-500 feet, release the munitions, and then return to the same landing spot. No explosives would be transported for the purpose of relocating them.
4. Our questions are as follows:
 - A. If the movement of hazardous materials by aircraft is conducted “exclusively within a contiguous facility boundary where public access is restricted”, does the exemption provided under §171.1(d)(4) apply?
 - (1) If the exemption does apply, is there a limitation on the quantity of explosive materials which can be transported under the exemption?
 - (2) If the exemption does apply, is there an altitude above which 49 CFR would apply?
 - B. If the exemption under §171.1(d)(4) does not apply to the movement of hazardous materials by aircraft, is there a self-executing or default exemption that would allow Ordnance Lab LLC to conduct the proposed activities without an explicit authorization from the Department of Transportation?

- C. Is the applicability of 49 CFR in any way dependent upon if the aircraft is operated under 14 CFR, Part 91 as a private General Aviation flight, or Part 135 as a chartered aircraft?
 - D. If neither §171.1(d)(4) nor a self-executing exemption applies to this situation, and 49 CFR would intrinsically apply to the proposed operations, would Ordnance Lab LLC as the owner of the explosive materials be able to secure authorization to conduct such operations or would the aircraft's operator need to secure the authorization?
 - E. If specific authorizations would be required from the Department of Transportation for the proposed operations, what authorizations would be needed?
5. We fully understand that the Federal Aviation Administration (FAA) will have additional regulations on the dropping of items from aircraft under the Federal Aviation Regulations (FAR). This request is exclusively in regard to the applicability of 49 CFR under these particular circumstances and not intended to be a request for compliance with any aviation regulations.
6. Point-of-contact for this memorandum is the undersigned at 936-334-4748, sean@ordnance-lab.com or the address on this memorandum's letterhead.



Sean Lindley
Manager, Ordnance Lab LLC