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

1200 New Jersey Avenue, SE
Washington, DC 20590

May 7, 2025

Kevin Young
Vice President, Transportation Compliance
Clean Harbors
42 Longwater Drive
Norwell, MA 02061

Reference No. 25-0023

Dear Mr. Young:

This letter is in response to your February 25, 2025 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as it relates to the meaning of "closed bulk bin" in § 173.240(c). Specifically, does a non-UN rated large containment packaging—meeting the general design requirements of § 173.410 for Class 7 (radioactive) material packaging as referenced in the certificate provided by the packaging supplier—qualify as a closed bulk bin to be used as an outer packaging for low hazard Class 9 material(s)?

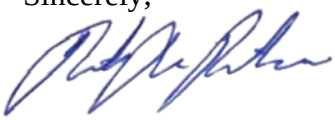
Yes. Provided the containment packaging is consistent with the provisions of the HMR for a non-Department of Transportation (DOT) specification, sift-proof, closed bulk bin. Under § 171.8, "sift-proof packaging" is a packaging impermeable to dry contents, including fine solid material produced during transportation. The HMR provides no definition for closed bulk bins; however, prior letters of interpretation (LOI)[1] we have issued indicate that closed bulk bins are enclosed packagings that are tough, firm, durable (*i.e.*, strong), and constructed so that their contents cannot pass through (*i.e.*, completely enclosed), and which meet other applicable requirements of § 173.24.

[1] See LOI Reference Nos. 20-0065 and 15-0103

Please be aware that it is the shipper's responsibility to ensure that the packaging is designed, constructed, maintained, filled, and closed, so that under conditions normally incident to transportation there will be no identifiable release of hazardous material per the requirements of § 173.24(b).

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

25-0023

From: INFOCNTR (PHMSA)
To: Dodd, Alice (PHMSA)
Cc: Hazmat Interps
Subject: FW: Letter of Interpretation request
Date: Wednesday, February 26, 2025 3:40:08 PM
Attachments: IWT Siftproof Packaging Sample COC 03-Feb-2025.pdf

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Hello Alice,

Please see the below interpretation request and the attachment. Let us know if you need anything.

Sincerely,
Janaye

From: Young, Kevin S <young.kevin@cleanharbors.com>
Sent: Tuesday, February 25, 2025 5:28 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Letter of Interpretation request

Hello

My question is related to past interpretation responses. In response #05-0114, dated July 27, 2005, the PHMSA provided interpretation that a box van trailer, if meeting the requirement of sift-proof per shipper evaluation, can meet the definition of a closed bulk bin under the provisions of § 173.240(c). In similar interpretation, response # 15-0103 dated September 10, 2015, provided interpretation that a device, exceeding non-bulk packaging standards, containing Class 9 NA3077 material, would also qualify as a sift-proof closed bulk bin under the provisions of § 173.240(c).

My question is, if a box van trailer, a non-UN rated container, can meet the definition specified under § 173.240, and would be permissible as packaging for Class 9 material subject to the bulk packaging requirements of § 173.240, would a non-UN rated large containment packaging, that meets requirements of § 173.410, as referenced by the supplier's Certificate (attached), as well as the § 171.8 definition of sift-proof packaging, the general packaging provisions of § 173.24 and 173.24b, and is capable of being closed also qualify as a closed bulk bin? If so, would this packaging also be permissible as outer packaging for low hazard, Class 9 materials?

Thank You

Safety Starts with Me: Live It 3-6-5

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Certificate Of Conformity: IP-1 Packaging

PERRY JOHNSON REGISTRARS, INC.
ANAB ACCREDITED ISO/IEC 17021 MANAGEMENT SYSTEMS CERTIFICATION BODY

Date: 03 February 2025

ISSUED TO:	IWT Cargo-Guard (Nuclear)

PacTec Incorporated, a registered ISO 9001:2015 company, certifies that the Flexible Packaging System(s) being supplied has been evaluated as meeting the following packaging regulations and standards requirements for Industrial Packaging Type 1 (IP-1) when loaded in accordance to PacTec loading instructions and used in the intended manner. [See regulations and standards on reverse side of this COC]

PACKAGING REGULATIONS AND STANDARDS
IAEA Safety Standards, "Regulations for the Safe Transport of Radioactive Material," No. SSR-6 (2018 Edition), Section VI, General Requirements for all Packaging and Packages, for Type IP-1 packaging, paras 607-618, 623 and 636
Title 49, United States Code of Federal Regulations (CFR), Part 173.410, "General design requirements" and Industrial Packaging Type 1 (IP-1), Part 173.411, Industrial Packagings, section (a), General, and section (b)(1), Industrial packaging certification and tests, and Part 173.24, General requirements for packagings and packages (a & b only)

Contract/PO#:	-	Work Order #:	DRAFT

Tracking Requirement: Item Code, Work Order# and the Serial# (below), all of which appear on the product label

Item/Product Code(s):	QTY	Additional Comments	Rev	Serial#
OP4999-18VF12Z IP-1	-	None	0.0	-
OP5999-18VF12Z IP-1	-	None	0.0	-

The Flexible Packaging System(s) being furnished is of good quality, as pursuant to industry standard manufacturing practices for Flexible Packaging Systems, including the materials / components used in manufacturing. All materials used in the fabrication of the listed Product ID Number(s) are genuine (that is, not counterfeit) and match the quality, test reports, markings and/or fitness for use required by the Contract/PO.

NOTE! Unused containers should be STORED INDOORS OR TARPED OUTDOORS ON A PALLET to minimize UV degradation.

This container is flexible packaging. The internal load and shifting of contents needs to be considered and taken into account by the shipper during transportation. If testing is conducted a uniformly distributed load is used.

These packagings meet the definition of "Siftproof Packaging" per 49CFR171.8
"Siftproof packaging means a packaging impermeable to dry contents, including fine solid material produced during transportation."

PacTec #	DRAFT

Company Official:

Marques Lynch II - Quality Assurance Manager

Date: 02/03/2025

Maria Stanfill - Designee

PACTEC CERTIFICATE OF CONFORMANCE (REVERSE SIDE): TYPE IP-1 INDUSTRIAL PACKAGING APPLICABLE REGULATIONS: 49 CFR §173.410 & §173.411(a, b): IAEA SAFETY STANDARDS NO. SSR-6 (2018 Edition), SECTION VI, 607-618, 623 & 636

49 CFR 173.411(b) Each IP-1 must meet the general design requirements prescribed in §173.410

623. A *Type IP-1 package* shall be designed to meet the requirements specified in paras 607–618 and 636, and, in addition, the requirements of paras 619–621 if carried by air.

173.410(a) The package can be easily handled and properly secured in or on a conveyance during transport.

607. The *package* shall be so designed in relation to its mass, volume and shape that it can be easily and safely transported. In addition, the *package* shall be so designed that it can be properly secured in or on the *conveyance* during transport.

173.410(b) Each lifting attachment that is a structural part of the package must be designed with a minimum safety factor of three against yielding when used to lift the package in the intended manner, and it must be designed so that failure of any lifting attachment under excessive load would not impair the ability of the package to meet other requirements of this subpart. Any other structural part of the package which could be used to lift the package must be capable of being rendered inoperable for lifting the package during transport or must be designed with strength equivalent to that required for lifting attachments.

608. The *design* shall be such that any lifting attachments on the *package* will not fail when used in the intended manner and that if failure of the attachments should occur, the ability of the *package* to meet other requirements of these Regulations would not be impaired. The *design* shall take account of appropriate safety factors to cover snatch lifting.

609. Attachments and any other features on the outer surface of the *package* that could be used to lift it shall be designed either to support its mass in accordance with the requirements of para. 608, or shall be removable or otherwise rendered incapable of being used during transport.

173.410(c) The external surface, as far as practicable, will be free from protruding features and will be easily decontaminated.

610. As far as practicable, the *design* shall be such that any lifting attachments on the *package* will not fail when used in the intended manner and that if failure of the attachments should occur, the ability of the *package* to meet other requirements of these Regulations would not be impaired. The *design* shall take account of appropriate safety factors to cover snatch lifting.

611. Attachments and any other features on the outer surface of the *package* that could be used to lift it shall be designed either to support its mass in accordance with the requirements of para. 608, or shall be removable or otherwise rendered incapable of being used during transport.

173.410(d) The outer layer of packaging will avoid, as far as practicable, pockets or crevices where water might collect.

611. As far as practicable, the outer layer of the *package* shall be so designed as to prevent the collection and the retention of water.

173.410(e) Each feature that is added to the package will not reduce the safety of the package.

612. Any features added to the *package* at the time of transport which are not part of the *package* shall not reduce its safety.

173.410(f) The package will be capable of withstanding the effects of any acceleration, vibration or vibration resonance that may arise under normal conditions of transport without any deterioration in the effectiveness of the closing devices on the various receptacles or in the integrity of the package as a whole and without loosening or unintentionally releasing the nuts, bolts, or other securing devices even after repeated use.

613. The *package* shall be capable of withstanding the effects of any acceleration, vibration or vibration resonance that may arise under routine conditions of transport without any deterioration in the effectiveness of the closing devices on the various receptacles or in the integrity of the *package* as a whole. In particular, nuts, bolts and other securing devices shall be so designed as to prevent them from becoming loose or being released unintentionally, even after repeated use.

173.410(g) The materials of construction of the packaging and any components or structure will be physically and chemically compatible with each other and with the package contents. The behavior of the packaging and the package contents under irradiation will be taken into account.

614. The materials of the *packaging* and any components or structures shall be physically and chemically compatible with each other and with the *radioactive contents*. Account shall be taken of their behaviour under irradiation.

173.410(h) All valves through which the package contents could escape will be protected against unauthorized operation.

615. All valves through which the *radioactive contents* could escape shall be protected against unauthorized operation.

616. The *design* of the *package* shall take into account ambient temperatures and pressures that are likely to be encountered in routine conditions of transport. [This requirement was proven by our test working in conjunction with LLWR, UK and Wyle Test Labs, Huntsville, Alabama USA. Wyle Test & Evaluation Report is available upon request.]

617. A *package* shall be so designed that it provides sufficient shielding to ensure that, under routine conditions of transport and with the maximum *radioactive contents* that the *package* is designed to contain, the radiation level at any point on the external surface of the package would not exceed the values specified in paras 516, 527 and 528, as applicable, with account taken of paras 566(b) and 573.

636. The smallest overall external dimension of the *package* shall not be less than 10 cm.