



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

May 04, 2023

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21097
(FIRST REVISION)

EXPIRATION DATE: 2027-04-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: United States Dept of Geological Survey
(United States Geological Survey)
Woods Hole, MA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of methane hydrate (frozen methane gas) within canes (non-DOT specification metal cylinders) inserted into liquid nitrogen dry shippers (Dewars). This special permit provides no relief from the Hazardous Materials Regulations (HMR) or International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
 - c. No party status will be granted to this special permit.
 - d. This special permit serves as an approval under Part 6, paragraph 5.1.1.2 of the ICAO TI (for UN1971) and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302(a) in that non-DOT specification packaging is authorized for UN1971.
5. BASIS: This special permit is based on the application of United States Dept of Geological Survey (United States Geological Survey) dated January 25, 2023, submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

| Hazardous Material Description | | | |
|---|------------------------|-----------------------|---------------|
| Proper Shipping Name | Hazard Class/ Division | Identification Number | Packing Group |
| Methane, compressed* | 2.1 | UN1971 | N/A |
| Nitrogen, refrigerated liquid <i>cryogenic liquid</i> | 2.2 | UN1977 | N/A |

*Only methane hydrate (frozen methane gas) is authorized.

7. SAFETY CONTROL MEASURES:
 - a. PACKAGING: Methane hydrate must be packaged as follows:
 - (1) Primary receptacle: The methane hydrate sediment sample (~25 cm long, 5.4 cm diameter) must be placed within a cane (non-DOT specification metal cylinder).
 - (2) Secondary receptacle: The cane must be inserted into a dry shipper (Dewar) authorized for nitrogen, refrigerated liquid. Up to 5 canes may be inserted into a dry shipper (Dewar).
 - (3) Outer packaging: The dry shipper (Dewar) holding liquid nitrogen must be packaged within a 1H2 padded drum. The packaging (dry shipper within the drum) must be prepared in accordance with Packing Instruction 202 of the ICAO TI.
 - b. MARKING AND LABELING: In addition to the markings and labels required by the HMR and the ICAO TI, the outer packaging must be marked and labeled with the following:

- (1) Shipper's name and address;
- (2) Consignee's name and address;
- (3) Name and telephone number of emergency contact;
- (4) "Dry shipper, Not Restricted";
- (5) "UN1971, Methane, compressed";
- (6) Package orientation arrows;
- (7) The CARGO AIRCRAFT ONLY label; and
- (8) "DOT-SP 21097".

c. OPERATIONAL CONTROLS:

- (1) The emergency response information provided with the shipment and available via an emergency response telephone number must provide appropriate guidance in case receptacles are exposed to fire.
- (2) The packaging authorized under this special permit is only authorized for the transportation of frozen hydrocarbon samples.
- (3) Transportation from the shipper to the consignee must be completed within 3 days to ensure safe transportation of the frozen samples.

8. SPECIAL PROVISIONS:

- a. Under the terms of this special permit, the grantee may only offer hazardous materials (i.e., the grantee is not authorized as a carrier).
- b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modification or change is made to the package and it is offered for transportation in conformance with this special permit, the HMR, and the ICAO TI.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- d. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of countries of origin, transit, or destination.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
 - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each “Hazmat employee”, as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) — “The Hazardous Materials Safety and Security Reauthorization Act of 2005” (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term “exemption” to “special permit” and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this

special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

A handwritten signature in blue ink, appearing to read "W. Schoonover", is written over a faint circular stamp.

for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-13, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at <https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search>. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: SMITH/NICKS