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U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 20490
(SECOND REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain hazardous materials by 14 CFR Part 133 cargo-only aircraft (rotorcraft external load operations) transporting hazardous materials attached to or suspended from the aircraft, and Part 135, as applicable, in remote areas of the US only, without being subject to certain hazard communication requirements, quantity limitations and certain loading and stowage requirements. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. This Special Permit does not grant the authority to use foreign controlled airspace or airports outside the United States.
 - d. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B), § 172.204(c) (3), § 173.27(b) (2) and § 175.30(a) (1) in that the explosives and oily rags are

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forbidden for transportation aboard cargo aircraft, except as specified herein; § 172.200 in that shipping papers are waived for other than Class 1 materials; § 172.301(c) in that marking the special permit number on each package is waived; Part 173 in that certain specification packaging requirements are waived; and § 175.75 in that alternative stowage is authorized.

5. BASIS: This special permit is based on the application of ROTAK LLC dated June 27, 2017 submitted in accordance with § 107.105 and the public proceeding thereon and the editorial review conducted by the Pipeline and Hazardous Materials Safety administration dated March 27, 2020.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Acetylene, dissolved	2.1	UN1001	N/A
Aerosols, corrosive, <i>Packing Group II or III, (each not exceeding 1 L capacity)</i>	2.2	UN1950	N/A
Aerosols, flammable, <i>(each not exceeding 1 L capacity)</i>	2.1	UN1950	N/A
Air, Compressed	2.2	UN1002	N/A
Alcoholic beverages	3	UN3065	II
Alcohols, flammable, toxic n.o.s	3	UN1986	I, II or III
Alcohols, n.o.s	3	UN1987	I, II or III
Amines, solid, corrosive, n.o.s. or Polyamines, solid, corrosive n.o.s.	8	UN3259	I, II or III

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/Division	Identification Number	Packing Group
Ammonium nitrate-fuel oil mixture	1.5D	NA0331	N/A
Articles, explosive, n.o.s.	1.4S	UN0349	N/A
Articles, explosive, n.o.s. (pyrotechnic breaking capsule)	1.4C	UN0351	N/A
Batteries, wet, filled with acid, electric storage	8	UN2794	N/A
Batteries, wet, filled with alkali, electric storage	8	UN2795	N/A
Batteries, wet, non-spillable, electric storage	8	UN2800	N/A
Boosters, without detonator	1.1D	UN0042	N/A
Butane see also Petroleum gas, liquefied	2.1	UN1011	N/A
Carbon dioxide solid or Dry ice	9	UN1845	N/A
Cartridges for weapons, blank or Cartridges, small arms, blank	1.4C	UN0338	N/A
Cartridges for weapons, blank or Cartridges, small arms, blank	1.3C	UN0327	N/A
Cartridges for weapons, inert projectile or Cartridges, small arms	1.4S	UN0012	N/A
Cartridges for weapons, with bursting charge	1.2E	UN0321	N/A
Charges, demolition	1.1D	UN0048	N/A

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Charges, shaped, flexible, linear	1.1D	UN0288	N/A
Charges, shaped, without detonator	1.1D	UN0059	N/A
Combustible liquid, n.o.s.	Combustible Liquid	NA1993	III
Cord, detonating, flexible	1.1D	UN0065	N/A
Detonators, electric, for blasting	1.1B	UN0030	N/A
Detonators, electric, for blasting	1.4B	UN0255	N/A
Detonator assemblies, non-electric for blasting	1.1B	UN0360	N/A
Detonator assemblies, non-electric, for blasting	1.4B	UN0361	N/A
Diesel fuel	3	NA1993	III
Diesel Fuel	3	UN1202	III
Engine, internal combustion, flammable gas powered, or Engine, fuel cell, flammable gas powered, or Machinery, internal combustion, flammable gas powered, or Machinery, fuel cell, flammable gas powered	2.1	UN3529	N/A

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Engine, internal combustion, flammable liquid powered, or Engine, fuel cell, flammable liquid powered, or Machinery, internal combustion, flammable liquid powered, or Machinery, fuel cell, flammable liquid powered	3	UN3528	N/A
Engine, internal combustion, or Machinery, internal combustion	9	UN3530	N/A
Environmentally hazardous substance, liquid, n.o.s	9	UN3082	III
Environmentally hazardous substance, solid, n.o.s.	9	UN3077	III
Ethyl methyl ketone or Methyl ethyl ketone	3	UN1193	II
Explosive, Blasting, Type A	1.1D	UN0081	N/A
Explosive, blasting, type B or Agent blasting, Type B	1.5D	UN0331	N/A
Explosive, blasting, type E	1.1D	UN0241	N/A
Explosive, blasting, type E or Agent blasting, Type E	1.5D	UN0332	N/A
Fire extinguishers containing compressed or liquefied gas	2.2	UN1044	N/A
Flammable liquids, n.o.s.	3	UN1993	I, II or III
Fuel, aviation, turbine engine	3	UN1863	I, II or III

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Fuel oil (<i>No. 1, 2, 4, 5, or 6</i>)	3	NA1993	III
Fuse, igniter <i>tubular metal clad</i>	1.4G	UN0103	N/A
Fuse, safety	1.4S	UN0105	N/A
Fusee (<i>rail or highway</i>)	4.1	NA1325	II
Gas oil	3	UN1202	III
Gas cartridges, (<i>flammable</i>) <i>without a release device, non-refillable</i>	2.1	UN2037	N/A
Gasoline includes gasoline mixed <i>with ethyl alcohol, with not more than 10% alcohol</i>	3	UN1203	II
Hydrochloric acid	8	UN1789	II
Kerosene	3	UN1223	III
Lighters containing <i>flammable gas</i>	2.1	UN1057	N/A
Lighters refills containing <i>flammable gas not exceeding 4 fluid ounces (7.22 cubic inches) and 65 grams of flammable gas</i>	2.1	UN1057	N/A
Lighters, fuse	1.4S	UN0131	N/A
Lithium ion batteries packed <i>with equipment including lithium ion polymer batteries**</i>	9	UN3481	N/A
Lithium metal batteries packed <i>with equipment including lithium alloy batteries**</i>	9	UN3091	N/A

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries, contained in equipment <i>including lithium ion polymer batteries**</i>	9	UN3481	N/A
Lithium metal batteries, contained in equipment <i>including lithium alloy batteries**</i>	9	UN3091	N/A
Lithium ion batteries <i>including lithium ion polymer batteries**</i>	9	UN3480	N/A
Lithium metal batteries <i>including lithium alloy batteries**</i>	9	UN3090	N/A
Methanol	3	UN1230	II
Nitrogen, compressed	2.2	UN1066	N/A
Oxygen, compressed	2.2	UN1072	N/A
Paint <i>including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base</i>	3	UN1263	I, II or III
Paint related material <i>including paint thinning, drying, removing, or reducing compound</i>	3	UN1263	I, II or III
Paint or Paint related material	8	UN3066	II or III
Paint corrosive, flammable <i>including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler, and liquid lacquer base</i>	8	UN3470	II

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Paint, flammable, corrosive including paint lacquer, enamel, stain, shellac, varnish, polish, liquid filler, and liquid lacquer base	3	UN3469	I, II or III
Pentaerythrite tetranitrate, wetted or Pentaerythritol tetranitrate, wetted, or PETN, wetted with not less than 25 percent water, by mass, or Pentaerythrite tetranitrate, or Pentaerythritol tetranitrate or PETN, desensitized with not less than 15 percent phlegmatizer by mass	1.1D	UN0150	N/A
Petroleum distillates, n.o.s. or Petroleum products, n.o.s.	3	UN1268	I, II or III
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A
Propane see also petroleum gases, liquefied	2.1	UN1978	N/A
Rags, oily	4.2	UN1856	III
Receptacle, small, containing gas or gas cartridges (flammable) without release device, not refillable and not exceeding 1L capacity	2.1	UN2037	N/A
Receptacle, small, containing gas or gas cartridges (non-flammable) without release device, not refillable and not exceeding 1L capacity	2.2	UN2037	N/A

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Hazardous Materials Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Receptacle, small, containing gas or gas cartridges (oxidizing) without release device, not refillable and not exceeding 1L capacity	2.2	UN2037	N/A
Refrigerant gas R 404A	2.2	UN3337	N/A
Self-defense spray, non-pressurized	9	NA3334	III
Trinitrotoluene and Trinitrobenzene mixtures or TNT and trinitrobenzene mixtures or TNT and hexanitrostilbene mixtures or Trinitrotoluene and hexanitrostilnene mixtures	1.1D	UN0388	N/A
Turpentine	3	UN1299	III

*All explosive materials must be approved as required by § 173.56.

**A lithium battery, including those packed with or contained in equipment, with a mass exceeding 35 kg may not be transported under the terms of this special permit unless the offeror (shipper) holds an approval in accordance with § 172.102(c)(2), Special Provision A54.

7. SAFETY CONTROL MEASURES FOR MATERIALS OTHER THAN CLASS 1:

a. PACKAGING: Prescribed packaging is the manufacturer's original packaging or a packaging of equal or greater strength and integrity. Compatibility and effectiveness of all packaging must, at a minimum, meet the requirements § 173.24.

b. Aerosols and compressed gases must be secured in an upright position with protective caps and/or covers

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installed to prevent any unwanted discharge and be secured against movement incidental to transportation.

c. Batteries (Other than Lithium Batteries): All batteries packed in equipment must be packed in a manner that prevents accidental activation or dangerous evolution of heat. Spare batteries or batteries packed with equipment must have their terminals insulated or protected to prevent short circuits and prevent a dangerous evolution of heat.

d. Lithium Cell and Batteries: All lithium cells and batteries (including those packed with equipment or contained in equipment) must be packed in such a manner as to prevent short circuits, including movement that could lead to short circuits. The batteries must be equipped with an effective means to prevent dangerous reverse current flow (e.g., diodes, fuses) if a battery contains cells or series of cells that are connected in parallel. Spare cells and batteries must be separated from other metallic objects by being packed in a sturdy plastic bag. Battery powered equipment must be packaged in a manner that prevents accidental activation. Additionally, each lithium cell and battery must be of a type proven to meet the criteria in Part III, sub-section 38.3 of the UN Manual of Tests and Criteria (IBR; see § 171.7).

e. Compressed Gas: Compressed gases must be packaged and conform to Subpart G of Part 173. The cylinders must be secured in such a manner that prevents the cylinder from movement during transportation. The cylinder neck/valve shall be protected by the use of safety caps or collars. At no time shall the safety caps or collars be used as a lifting point. The cylinder must be inspected for leakage, corrosion, denting, bulging, gouging and fire damage. Inspection of valve, valve protection and around and inside the footing for corrosion and foreign materials must be conducted. If a cylinder fails any part of the visual inspection it may not be transported until repaired or replaced.

f. Compressed oxygen must be transported in accordance with § 173.302(f).

g. Dry Ice: Carbon dioxide, solid (dry ice), must be packed in packaging designed and constructed to permit the release of carbon dioxide gas to prevent a buildup of pressure that could rupture the packaging.

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h. Spontaneously Combustible Materials: Division 4.2 materials must be transported in sealed containers to prevent any spontaneous combustion.

i. Liquid fueled or gasoline powered equipment may be filled to not more than 80% of their capacity to allow for expansion due to altitude changes.

j. Compatibility of Cargo: Hazardous material that might react dangerously with one another may not be placed next to each other or in a position that would allow a dangerous interaction in the event of leakage. Segregation Table in § 175.78 shall be used.

k. Alternative pilot-in-command notification procedures for § 175.33, may be established subject to the written approval of the FAA Office of Hazardous Materials Safety.

8. SAFETY CONTROL MEASURES FOR CLASS 1 MATERIALS:

a. PACKAGING: As prescribed in § 173.62 further packaged in a type 3 magazine manufactured per ATF publication 5400.7 section 55.209 and transported as a Class B external load. The explosives must be packaged in conformance with the HMR. When metal outer packagings are used, a 3-5 foot metal chain or other type of static discharge wick must be fitted to the bottom of the metal box to dissipate the build-up of static electricity.

b. Authorized Explosives: Explosives authorized in paragraph 6., that are forbidden for transportation aboard aircraft in the HMR, may be accepted and transported in cargo aircraft subject to the conditions stated herein.

c. Maximum Weight: Not more than 1,000 pounds total net weight of explosives may be carried in, on or suspended from the aircraft.

d. Advanced Notice of FAA Office of Hazardous Materials Safety. The operator of the aircraft must notify the Office of Hazardous Materials Safety (9-AWA-AXH-SPFlightNotifications@faa.gov) in the region where the flight will originate. This notification must be given at least 72 hours in advance of plans to operate under the special permit, unless prior arrangements have been made with the Office of Hazardous Materials Safety. The notification must include the point of departure, intermediate stops, destination(s), and a loading and

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departure schedule. If a flight schedule deviates more than four hours from the originally scheduled departure time, the operator of the aircraft must immediately notify 9-AWA-AXH-SPFlightNotifications@faa.gov. Alternative notification procedures may be established subject to the written approval of the Office of Hazardous Materials Safety.

e. Advance Permission from Airport: If an airport is used, the operator of the aircraft must have advance permission from the owner or operator of each manned airport where the material is to be loaded or unloaded or where aircraft is to land while the materials are on board. When the destination is changed after departure because of weather or other unforeseen circumstances, permission from the owner or operator of the alternate airport must be obtained as soon as practicable.

f. Flight Plan: The operator of the aircraft must include the following information in the "Remarks" section of each flight plan when the provisions of this special permit are exercised:

(1) The classification of each hazardous material aboard, attached to or suspended from the aircraft.

(2) The net weight of each class of hazardous material aboard the aircraft.

(3) This requirement does not apply to operations where a flight plan cannot be filed (e.g., operating in remote areas or uncontrolled airspace).

g. Loading and Unloading: Loading and unloading operations under this special permit must comply with the following:

(1) The loading and unloading of the aircraft must be conducted at a safe distance from heavily populated areas and from any place of human abode or assembly. However, at an airport where the airport owner or operator or authorized representative thereof has designated a specific location for loading or unloading, the explosives may not be loaded or unloaded at any other location.

(2) Carriage of explosives under this special permit is subject to the same limitations and conditions specified for their transportation by motor vehicle in § 177.835(g) and § 177.848.

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(3) During loading or unloading, no person may smoke an electronic cigarette, smoke or carry a lighted cigarette, cigar or pipe or operate any device capable of causing an open flame or spark within 50 feet of the aircraft.

(4) No fueling operations of the aircraft may be conducted during loading and unloading of the explosives. Whenever possible fueling operations shall be conducted without hazardous materials attached to the aircraft and located at a safe distance from any hazardous materials.

(5) A static discharge procedure must be implemented for Class 1 materials.

h. Requirements During Operation of Aircraft: Operation of the aircraft during takeoff, en route, and landing must be conducted at a safe distance from heavily populated areas.

(1) Before movement of the aircraft prior to take-off, in an airport traffic area, the pilot of the aircraft must notify the control tower of the class(es) of explosive(s) (including ammunition) on board.

(2) The pilot of the aircraft, prior to entering an airport traffic area, must notify the control tower of the amount and class of explosives on board and request this information be relayed to the appropriate airport officials. For airports without control towers, this call must be made to the Flight Service Station nearest the airport of intended landing.

(3) When under radar control during the approach and landing phase, the pilot must request appropriate vectors to avoid heavily populated areas.

(4) Whenever explosives are on board, attached to or suspended from the aircraft, the pilot must ensure that no person on the aircraft may smoke an electronic cigarette, smoke or carry a lighted cigarette, cigar or pipe or operate any device capable of causing an open flame or spark.

i. Pilot Requirements: The operator of the aircraft must ensure the following with respect to pilots of aircraft operating under this special permit:

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(1) A minimum of two pilots is required aboard any multi-engine aircraft carrying explosives under this special permit.

(2) Each pilot must be provided written instructions outlining any conditions and limitations applicable at each airport of intended use. The name of the official(s) granting the advance permission required by paragraph 8.e. above must be included in these instructions, except when a landing permit has been granted by an agency of the Department of Defense for landing at a military installation.

(3) Each pilot of an aircraft being operated under this special permit must have received formal training on the requirements of the HMR that are applicable to his duties and be thoroughly familiar with the specific requirements of this special permit.

j. Attendance of Explosives: Explosives that are forbidden for transportation aboard aircraft in the HMR must be attended at all times they are in the possession of the operator (from the time of receipt from consignor until time of receipt by the consignee) unless placed in an explosive storage magazine that is approved by the Federal, State or local authority or at a location on a military installation designated by appropriate military authorities.

k. A copy of the required security plan must be made available to any DOT inspector upon request.

l. Alternative notification procedures for 49 CFR Part 175.33, may be established subject to the written approval of the FAA Office of Hazardous Materials Safety.

9. SPECIAL PROVISIONS:

a. The aircraft operator must maintain permanent records of each flight during which explosives are carried under the authority of this special permit. This record must be made available at its principal business office to representatives of the FAA and submitted to the Associate Administrator for Hazardous Materials Safety (AAHMS) upon request. The record for each flight must include:

(1) Name of the shipper(s).

- (2) Name of the consignee(s).
- (3) Origin airport(s).
- (4) En-route airport(s).
- (5) Destination airport.
- (6) Shipping name and class of each explosive.
- (7) Net weight of each explosive.
- (8) Name of each pilot and any other person aboard the aircraft.
- (9) Registration number of the aircraft.
- (10) Name of the individual representing the owner or operator of each manned airport who granted advance permission for the aircraft to land or take-off while it was being operated under this special permit.

The record required by this paragraph must be maintained current to within 72 hours of each flight under this special permit.

- b. All packages must be blocked and braced to prevent movement.
- c. Materials transported by external load must comply with the safety controls specified in this special permit.
- d. This special permit does not grant the authority to use foreign controlled airspace or airports outside the United States.
- e. Operations under the terms of this special permit are only authorized to be conducted in remote areas of the U.S.
- f. The marking requirements of 49 CFR 172.301(c) are waived.
- g. The requirements for shipping papers are waived for other than Class 1 materials.
- h. Each outer packaging must be properly marked and labeled for the hazardous materials contained within.

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- i. The safe operational weight limit of the aircraft may not be exceeded.
 - j. This special permit does not waive any FAA airworthiness requirements or the need to obtain other required FAA authorizations.
10. MODES OF TRANSPORTATION AUTHORIZED: Cargo-only aircraft and rotorcraft external load operations.
11. OPERATIONAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport materials covered by this special permit.
- a. Authorized Aircraft: Aircraft used under this special permit must be authorized as part of an FAA 14 CFR Part 133 or Part 135 Operating Certificate.
 - b. Operations Manual: FAA 14 CFR Part 133 or Part 135 operations must be conducted in accordance with conditions and limitations specified in the certificate holder's FAA-approved Rotorcraft Load Combination Flight Manual (RLCFM) and Hazardous Material Safety Mitigation Plan.
 - c. Authorized Persons Aboard Aircraft: No person may be carried on the aircraft other than as authorized by 14 CFR 133.35.
12. 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

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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.

13. 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.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: AE