U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

OCT 0 8 2019

Frits Wybenga
Dangerous Goods Transport Consulting Inc.
15108 Red Clover Drive
Rockville, MD 20853

Reference No. 19-0055

Dear Mr. Wybenga:

This letter is in response to your April 17, 2019, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the reclassification of certain fire suppression systems as permitted by Special Permit (SP) DOT-SP 20600. Specifically, you ask a number of questions regarding PHMSA's intent and authority as it relates to the issuance of the special permit and the provisions of the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions).

PHMSA issued SP 20600 in accordance with 49 CFR Part 107, Subpart B to permit the transport of certain devices under alternative provisions to the requirements specified in the § 172.101 Hazardous Materials Table and § 173.166. Because PHMSA is the competent authority for the transportation of hazardous materials (dangerous goods) as cargo by air to, from, or within the United States, SP 20600 serves as a competent authority approval for the purposes of compliance with international transport standards and regulations. Note that under the HMR, the use of the ICAO Technical Instructions is optional, and although PHMSA has competent authority status, acceptance of a shipment authorized under PHMSA's authority is ultimately left to the discretion of the destination State.

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

Sincerely,

A. C. M

Shane C. Kelley
Director
Standards and Rulemaking Division

Casey

19-0055

Dodd, Alice (PHMSA)

From: Kelley, Shane (PHMSA)
Sent: Wednesday, April 17, 2019 6:01 PM
To: Hazmat Interps
Cc: Pfund, Duane (PHMSA); Tackett, Christina (PHMSA)
Subject: Fwd: Request for interpretations of international regulations/HMR as applicable to SP 20600
Attachments: request for interp sp20600.docx; Fireaway Application-2 (004).pdf; SP20600 _BRichard.pdf

Please process this request. I would like it assigned to a specialist that can manage quickly and prioritize - Dirk/Glenn please provide an indication of whom is best suited. I will be working closely with the drafter and with Duane, Ryan P and Christina as this one has high implications for PHMSA.

Thanks

From: Frits Wybenga <fwybenga@dg-transportation.com>
Sent: Wednesday, April 17, 2019 5:26 PM
To: Kelley, Shane (PHMSA)
Cc: PHMSA FOIA; PHMSA Public Affairs; McLaughlin, Janet <AWA>; Givens, Michael <AWA>
Subject: Request for interpretations of international regulations/HMR as applicable to SP 20600

Hi Shane – please accept my attached letter requesting interpretations of the HMR as well as international regulations as they apply in the case of Special Permit 20600. In addition to my letter requesting interpretation, I also attach the application submitted for SP 20600 and SP 20600 itself.

Having served as the US nominated Dangerous Goods Panel Member for many years, I am concerned that SP 20600 may pose certain safety risks, in particular the inadvertent placement of unauthorized devices meeting explosives classification criteria on commercial passenger aircraft worldwide.

I do not believe that PHMSA has the authority to extend the relief SP 20600 provides in the case of the HMR to transport under international regulations such as the ICAO TI. Yet the relevance of SP 20600 to transport under the ICAO TI and IMDG Code is unclear and may be misleading. Under international regulations, I see no basis for SP20600 relief that appears to be have been granted solely on the basis of commercial interests.

Since I have submitted a FOIA request that is related to this, I have copied the PHMSA FOIA contacts. In addition due to the potential safety concerns related to air transport, I am copying Janet and Michael.

I would hope that this can be resolved through clarification with your office. *Given that there are safety concerns*, I hope that your response will be timely. I would appreciate knowing your intent and planned timing of a response.

If it is not possible to address my letter for whatever reason, it may be necessary to raise my concerns with others within and outside of PHMSA. Obviously that is not my first choice.

Thanks - Frits

Frits Wybenga
Dangerous Goods Transport Consulting Inc.

15108 Red Clover Drive
Rockville, MD 20853
301-929-1668
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www.dg-transportation.com

U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

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

DOT-SP 20600
(THIRD REVISION)

EXPIRATION DATE: 2022-04-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Fireaway Inc.
Minnetonka, MN

2. PURPOSE AND LIMITATION:

a. This special permit authorizes the manufacture, mark, sale, and use of certain fire suppression devices as safety devices when transported by highway, rail, cargo vessel and cargo-only aircraft. 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 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. In accordance with 49 CFR 107.107(a) party status may not be granted to a manufacturing permit. These fire suppression devices may be packaged and offered for transportation in accordance with 49 CFR 173.22a.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

Tracking Number: 2018029335

4. REGULATION FROM WHICH EXEMPTED: 49 CFR 173.166 in that these devices are not required to be installed in vehicles, vessels or aircraft to enhance safety to persons are considered as safety devices and 172.101(c) in that these devices may be thermally initiated.

5. BASIS: This special permit is based on the application of Fireaway Inc. dated February 15, 2018, submitted in accordance with § 107.105.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	**Hazard Class/ Division**	**Identi-fication Number**	**Packing Group**
Safety devices	9	UN3268	N/A

7. SAFETY CONTROL MEASURES:

a. FIRE SUPPRESSION DEVICES: The devices authorized under the provisions of this permit are electrically or thermally initiated fire suppression devices intended to protect life or property. Except as specified in Paragraph 4, the device designs meet all the applicable requirements of 49 CFR 173.166 and Special Provision 160.

b. TESTING: These articles must be successfully tested in accordance with Test series 6(c) of Part I of the UN Manual of Tests and Criteria with no explosion of the device, no fragmentation of device casing or pressure vessel, and no projection hazard or thermal effect that would significantly hinder fire-fighting or other emergency response efforts in the immediate vicinity.

c. PACKAGING: The fire suppression devices prepared for transport must be packaged in a manner that provides protection from accidental initiation, including but not limited to positive restraint system to prevent accidental initiation, and rigid outer packaging to control movement of the article within the packaging under conditions normally incident to transportation.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may package and offer for transportation the fire suppression device authorized by this special permit under the hazardous materials description specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a fire suppression device covered by this special permit, may reoffer it for transportation provided no modification or change is made to the fire suppression device and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the fire suppression device is offered or reoffered for transportation.

d. Each fire suppression device manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the fire suppression device is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. For each manufacturing run, when fire suppression devices are initially offered for transportation the grantee must maintain the following record and upon request and make this record available to DOT representatives or enforcement officials. The record to be maintained is as follows:

(1) Dates and description of each shipment; and

(2) Description of each type of shipment. Including number of items shipped.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail, cargo vessel, and cargo-only aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit

must be carried aboard each motor vehicle, cargo vessel, or cargo-only aircraft 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:

a. 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. If an incident occurs during air transportation, the Associate Administrator must be notified in writing at specialpermits@dot.gov of the incident within 7 days of the incident.

b. Annual reporting of number of devices shipped shall be due no later than March 1st of every year that the permit is active. This annual report shall be submitted to specialpermits@dot.gov. Failure to report could lead to suspension and/or termination 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.

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: TG

Appendix 1 – Authorized devices

Stat-X 30 E (P/N 15100); Stat-X 60 E (P/N 15110); Stat-X 100 E (P/N 15120); Stat-X 250 E (P/N 15130); Stat-X 500 E (P/N 15140); Stat-X 1000 E (P/N 15150); Stat-X 1500 E (P/N 15160); Stat-X 2500 E (P/N 15170); Stat-X 30 T (P/N 15300); Stat- X 60 T (P/N 15310); Stat-X 100 T (P/N 15410); Stat-X 250 T (P/N 15510); Stat-X 500 T (P/N 15610); Stat-X 1000 T (P/N 15710); Stat-X 1500 T (P/N 15810); Stat-X 2500 T (P/N 15910); Stat-X 30 MT (P/N 15301); Stat-X 60 MT (P/N 15311); Stat- X 100 MT (P/N 15411); Stat-X 250 MT (P/N 15511); Stat-X 500 MT (P/N 15611); Stat-X 1000 MT (P/N 15711); Stat-X 1500 MT (P/N 15811); Stat-X 2500 MT (P/N 15911); Stat-X 30 ME (P/N 15500); Stat-X 60 ME (P/N 15510); Stat-X 100 ME (P/N 15520); Stat-X 250 ME (P/N 15530); Stat-X 500 ME (P/N 15540); Stat-X 1000 ME (P/N 15550); Stat-X 1500 ME (P/N 15560); Stat-X 2500 ME (P/N 15570), (11700), (11855), (11895), (11935), (11705), (11860), (11900), (11940), (11740), (11865), (11905), (11945), (11710), (11870), (11910), (11950), (11000), (11100), (11200), (11300), (11010), (11110), (11210), (11310), (11020), (11120), (11220), (11320), (11030), (11130), (11230), (11330), (15140), (15610), (15611), (15540), (15150), (15710), (15711), (15550), (15160), (15810), (15811), (15560), (15170), (15910), (15911), (15570), (11690), (11875), (11915), (11955), (11770), (11880), (11920), (11960), (11800), (11885), (11925), (11965), (11850), (11890), (11930), (11970), (11040), (11140), (11240), (11340), (11050), (11150), (11250), (11350), (11060), (11160), (11260), (11360), (11070), (11170), (11270), (11370)

If any of the listed devices are initiated in a manner that is not thermal or electrical, they are excluded from transport under the terms of the special permit.

HAZMAT SAFETY CONSULTING, LLC

December 20, 2017

Associate Administrator for Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
Attention: Energetic Materials PHH-32
1200 New Jersey Avenue, SE
East Building, 2nd floor
Washington, DC 20590-0001

Subject: Emergency Application for Special Permit

Fireaway Inc. ("Fireaway") requests that the Pipeline and Hazardous Material Safety Administration ("PHMSA") consider this application for a special permit and also requests that the application be considered for emergency processing on the basis of the justification provided herein.

We believe that classifying our fire suppression safety articles as "Safety Devices, UN 3268 is appropriate. We believe that since the product we are addressing is an article as opposed to a substance, that it is used in vehicles and that it acts much like an airbag that the UN 3268 classification is most appropriate. We are providing a copy of the results of the Test Series 6(c) testing that demonstrates no explosion of the device, no fragmentation of device casing or pressure receptacle, and no projection hazard nor thermal effect which would significantly hinder fire-fighting or emergency response efforts. In this application, we explain why the criteria in the 6c test is not entirely appropriate for our device.

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ATTACHMENTS

Applicant Name, Address & Principal Place of Business

This request is made by:
Robert A. Richard
President, Hazmat Safety Consulting
10036 Lake Occoquan Drive
Manassas, Va. 20112
Phone: (773) 540-0837
Email: brichard@hazmatsafety.com

This request is made on behalf of:
Keath E. Young
Chief Financial Officer
Fireaway Inc.
5852 Baker Road
Minnetonka, MN 55345
952-935-9745 (office)
952-847-4650 (direct)
E-Mail Address: kyoung@statx.com

Company CEO & DUNS Identifier:

Gonzalo Lopez-Davila
Chief Executive Officer
952-935-9745 (office)
952-847-4670 (direct)
E-Mail Address: gdavila@statx.com
DUNS #: 61-483-3700

Designated Agent for Service:

Not applicable. The company is based in the United States.

Request for Emergency Processing per §107.117:

Fireaway is requesting emergency processing in accordance with §107.117(a)(2) and (c), on the basis of significant economic loss and immediate national security purposes. Fireaway produces the only aerosol fire suppression system that is 100% manufactured in the United States. The basis for this requested Emergency Special Permit is to allow Fireaway's Products to reach their destinations in an expedient manner and to achieve global harmonization as required by the Hazardous Materials Transportation Act, for our exports. Fireaway exports over 755 of the Products, which are wholly manufactured in the United States, to multiple countries in all continents.

Several foreign-based manufacturers make equivalent products to Fireaway's Products. Those competitors import and distribute their products as Class 9, Class 5.1, or Class 4.1 creating an uneven playing field and driving both U.S. and foreign customers to the products manufactured outside of the United States. Our foreign competitors' Safety

Data Sheets identifying these classifications are included at Attachment 3. The requested Special Permit will level this playing field, help achieve global harmonization in the screening and treatment of the products upon import/export, all while assuring the safety of the products during transport.

Emergency processing is necessary for immediate national security reasons and to prevent economic loss. Fireaway's fire extinguishing products are distributed world-wide, including to the U.S. military for use on MATV vehicles deployed in combat and non-combat zones, protecting the lives of our military personnel. The fire extinguishing products need to reach our combat personnel as expediently as possible to protect lives and suppress fires. In addition, Fireaway will suffer economic harm if a Special Permit is not issued allowing it to ship under the Class 9 designation.

Hazardous Materials Registration:
U.S. DOT Registration Number: 062816550099YA. HM Company ID: 104261

Locations Where the Special Permit will be Used
Fireaway offers its packages for shipment from its manufacturing facilities located at 5852 Baker Road, Minnetonka, MN and 1006 2nd Street, Area J, Camp Minden, Minden LA . Additionally, the products will be shipped from authorized dealers.

Description of Special Permit
Fireaway submits this emergency application for a Special Permit authorizing the "manufacture, mark, sale and use" (MMS) of its fire extinguishing and suppression articles for transporting them under a classification that will allow for expedient shipping and handling throughout the world, or, in other words under a classification other than explosives. Emergency processing is necessary in this case for immediate national security and safety reasons as described in paragraph 15 below. Specifically, Fireaway requests an Emergency Special Permit to ship, document, mark, label and placard using the entry "UN 3268, Safety Devices, Class 9".

Regulations Which Applicant Seeks Relief:
Fireaway seeks relief from the classification of its fire extinguishing products as Division 1.4S articles. The basis for this request for appropriate classification under the HMR is as follows:

-the products addressed are articles as opposed to substances;
-the articles are clearly safety devices;
-they should be excluded form Division 1.4S on the basis that they are not intended to function with an explosive or pyrotechnic effect; and
-that the UN 3268 classification is most appropriate.

Special Provision 280 which is assigned to the entry for Safety Devices states: "This entry applies to safety devices for vehicles, vessels or aircraft, e.g. air bag inflators, air bag modules, seat-belt pretensioners, and pyromechanical devices, which contain dangerous goods of Class 1 or of other classes, when transported as components parts and if these articles as presented for

transport have been tested in accordance with Test Series 6(c) of Part 1 of the Manual of Tests and Criteria, with no explosion of the device, no fragmentation of device casing or pressure receptacle, and no projection hazard nor thermal effect which would significantly hinder fire-fighting or emergency response efforts in the immediate vicinity.

An information paper "UN/SCETDG/52/INF.32 - (COSTHA) - What constitutes a SAFETY DEVICE, UN3268" has been submitted to the 52nd session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods which opens the question of what is included under this designation. We believe our device fits the description for being considered a safety device. We have had discussions with several members of the PHMSA staff who support the view that our product can be shipped in the UN 3268 Safety Device entry.

In evaluating whether Fireaway's articles can be excluded from Class 1 the most important issue to consider is that they are NOT intended to produce a practical explosion or pyrotechnic effect.

Proposed Modes of Transport:
The packages will be transported by highway, rail, air and water.

Identification and Description of Each Shipment:
Fireaway requests that it be allowed to classify these materials for purposes of transport as:

Safety Devices	9	UN3268

Package Handling Procedures:
The Products will be transported by highway, rail, air and water following guidelines listed on the Safety Data Sheet.

Packaging Description & Specifications:
The packaging will be consistent with 49 CFR §173.166. Fireaway does not request relief from or propose to modify any packaging requirements.

Basis for Relief:
Fireaway produces the **only** aerosol fire suppression system that is 100% manufactured in the United States. The device is clearly a "Safety Device". The basis for this requested Emergency Special Permit is to allow Fireaway's Products to reach their destinations in an expedient manner and to achieve global harmonization as required by the Hazardous Materials Transportation Act, for our exports. Fireaway exports over 75% of the Products, which are wholly manufactured in the United States, to multiple countries in all continents. Several foreign-based manufacturers make equivalent products to Fireaway's Products. Those competitors import and distribute their products as Class 9, Class 5.1, or Class 4.1, creating an uneven playing field and driving both U.S. and foreign customers to the products manufactured outside of the United States. Our foreign competitors' Safety Data Sheets identifying these

classifications are included at Attachment 3. The requested Special Permit will level thes playing field, help achieve global harmonization in the screening and treatment of the Products upon import/export, all while assuring the safety of the Products during transport.

Technical points why Fireaway's fire extinguishing articles should be excluded from Class 1:

a. The Fireaway Stat-X/Aero-K aerosol fire suppression system is an innovation that has the principle purpose of serving as a safety device and saving lives. It is used in vehicles as required by special provision 160 of the HMR.
b. The finished assembled articles are sold as USA origin products and shipped domestically and to global markets. 75% of total sales are products shipped overseas to foreign ports.
c. Fireaway is seeking a Special Permit for reclassification as "not Class 1". We received a suggestion from the US DOT Special Permits and International Standards groups that Class 9 Safety Devices is possible and practical.
d. The aerosol fire suppression technology is recognized as a distinct fire extinguishing technology from all other fire extinguishing technologies under NFPA 2010, Standard for Fixed Aerosol Fire-Extinguishing Systems. Under NFPA 2010, the specific description for Stat-X/Aero-K products is listed as Condensed Aerosol agents. Definition: Condensed Aerosol, an extinguishing medium consisting of finely divided solid particles, generally less than 10 microns in diameter, and gaseous matter, generated by a combustion process of a solid aerosol-forming compound.
e. To relate the test results of the SMSI report with regards to obscuration, it must be understood that the fire suppressant component is the solid particle component of the aerosol discharged from the article. These micro-particles are not combustible "smoke" that results from a typical pyrotechnic combustion or explosion, but alkali metal salts such as potassium carbonate K2CO3 and potassium bi-carbonate KHCO3. These are NOT the same chemicals as the original potassium nitrate, DCDA, and organic resin that formed the original pellet classed as 1.4G. They are also NOT SMOKE as the US DOT classed as 1.4S substances or articles, including air bag inflators or seat belt pre-tensioners.
f. The aerosol fire suppressant extinguishes flames where the micro-particle solids come into contact with the flame as a total flooding system. The thermal decomposition of the aerosol potassium based particle disrupts the combustion process forming the flame where the potassium radical is freed from the aerosol particle and bonds with the flame free radicals. This continuous reaction between the dense cloud of aerosol surrounding the flame, depopulates the available flame free radicals in the combustion process causing the flame to snuff out and extinguish. In other words, this fire suppression agent interferes with the chemical chain reactions that sustains combustion and flame.
g. The SMSI light transmission test is measuring the density of this aerosol fire suppressant cloud. The lower the density of this cloud, the less efficient the total flooding system would be to extinguish the fire. For this technology to PASS the obscuration test, the system would FAIL as a fire extinguishing system. Consequently, it is difficult to pass the obscuration test in the SMSI/US DOT test protocol.
h. NFPA 2010, ISO 15779, ANSI/UL 2775 are national standards recognized by several US Federal agencies including the US EPA, US DOT, NASA, DOE, and US State fire codes and building codes nationwide. All federal or state agencies that recognize or use condensed

aerosol products recognize that these are articles that use a pyrotechnic substance that generate total flooding aerosol clouds and warm propellant gases discharged from these devices.
i. What the SMSI report defines as a risk to public safety, is UL listed as safe for use as a fire extinguisher and US EPA SNAP listed as a total flooding fire suppression agent approved for public exposure in normally occupied areas.
j. Consequently, these aerosol products are not manufactured by Fireaway with a view to producing a practical explosive or pyrotechnic effect. In other words, this article which is type tested and complies with NFPA, ISO, and UL standards is not intended to be sold as an explosive but as a fire suppressant product oriented to the improvement of the public safety.
k. The aerosol cloud characteristics discharged from the article observed by the US DOT that they claim defines this product as a Class 1.4S explosive based on current regulations does not allow for this innovation that is recognized by other Federal agencies as a non-explosive by their definition.
l. The Special Permits group had commented during our visit to their Washington DC office that the UN and Federal regulations could be revised to recognize this pyrotechnic technology as a distinct technology from other explosives such as fireworks and explosives for mining, military, and propellant technologies. The UN Transport of Dangerous Goods Sub-Committee is also addressing this matter.
m. We have type approval by independent agencies that our "smoke" complies with fire extinguishing performance requirements to those agency standards. Those agencies warrant that our product is beneficial and effective for the protection of the public and property.
n. Nearly 320,000 of these articles have been shipped domestically in the USA and to foreign ports and destinations all over the world over the world since 2005 (12 years). There has never been any accidental discharge nor fire damage caused by any packaged unit by any transportation carrier.
o. There has never been any claim by any transportation carrier regarding the adequacy of our packaging.

Special Permit Use and Estimated Volumes:
It is difficult to estimate with any degree of certainty the number of shipments that will occur under this Emergency Special Permit. Fireaway typically ships between 600 – 800 orders of its fire suppression equipment containing various quantities of the Products over a period of six months. Some shipments may contain one unit, and others may contain hundreds of units of Product.

Shipper/Carrier Status:
Fireaway will be acting as a manufacturer and shipper (offeror), offering the Products for shipment.

Equivalent Level of Safety Justification:
Fireaway produces the **only** aerosol fire suppression system that is 100% manufactured in the United States, and our product Stat-X is the ***only*** condensed aerosol fire suppressant carrying the United States Environmental Protection Agency's approval for normally occupied spaces.

EPA's risk assessment on the Products, dated October 9, 2014 found that these Products are safe when activated in confined spaces. See **Attachment 4**.

The 1.4S (explosives) classification causes an undue hardship on our U.S. based manufacturing business by increasing costs, delays and even preventing the Products from being shipped to our customers around the world, thereby forcing customers to look to our competitors for solutions. Some carriers refuse to take any Class I packages. Certain modes of transport, such as ship or plane, may refuse to carry the Products when classified as a 1.4S explosive. Certain countries require special permits and incur customs delays when importing a 1.4S labelled packages. This significantly delays the shipment of the Products and increases the expense, all at the expense of the U.S.-based manufacturer and to the benefit of our foreign-based competitors.

Approximately 250,000 Stat-X generators have been produced and shipped worldwide since 2006, without a single transportation incident. And, since 2008, Fireaway has manufactured, marked and offered to ship the Products under the 4.1 Classification, understanding that it was applicable. Fireaway was inspected by PHMSA in September of 2011, and no issue was raised concerning classification of the Products. There is no difference in the packaging of the Products, whether classified as 1.4S or 9. Therefore, there is no increased risk in transporting the product as proposed in this application. The Products are designed to improve safety for individuals and property, and to ***extinguish*** fires. Thousands of generators have been supplied to the U.S. Army, many for use on MATV's vehicles deployed in combat zones protecting lives of our military personnel. A 1.4S classification will slow the ability to ship replacements, or spare generators, to the U.S. Army.

Hundreds of generators have been supplied to the US Navy (operating near Japan) for use on their landing craft utility (LCU). A 1.4S classification will slow the ability to ship replacements, or spare generators to the U.S. Navy. The Products have a life of ten years, making them a viable solution for primary and secondary fire suppression systems in many applications, and meaning many early customers need to replace these units.

Our product is very similar to a vehicle airbag and hundreds of millions of these have been transported safely under a Class 9 designation. We are providing a copy of the results of the Test Series 6(c) testing that demonstrates no explosion of the device, no fragmentation of device casing or pressure receptacle, and no projection hazard nor thermal effect which would significantly hinder fire-fighting or emergency response efforts.

Conclusion:

In conclusion, it is requested that this application be reviewed and that an EX Approval be granted as requested. We appreciate your consideration of this Approval application and look forward to hearing from you. If you have any questions please contact Robert Richard using the contact information provided above.

Respectfully submitted,

Robert A. Richard

Dangerous Goods Transport Consulting, Inc

15108 Red Clover Drive
Rockville, Maryland 20853
301-929-1668
Cell 301-356-2096
f.wybenga@comcast.net
fwybenga@dg-transportation.com

April 17, 2019

Associate Administrator for Hazardous Materials Safety
(Attention: Approvals, PHH-32)
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
East Building, 2nd Floor, E23-406 1200
New Jersey Avenue, SE.
Washington, DC 20590-0001

Dear Mr. Kelly:

This is to request clarification as to whether PHMSA considers the provisions in Special Permit 20600 as being authorized when transport is accordance with the ICAO Technical Instructions on the Safe Transport of Dangerous Goods by Air (Technical Instructions or TI) or the IMO International Maritime Organization International Maritime Dangerous Goods Code (IMDG Code). Review of the application submitted to PHMSA (attached) would indicate that the applicant sought relief in the case of both HMR and international regulations yet Special Permit 20600 (attached) is not clear as to whether PHMSA provided relief in the case of international requirements. The lack of clarity of the special permit, presents potential safety and compliance concerns, including that articles that meet explosives classification criteria other than 1.4S and thus prohibited from transport on passenger aircraft may inadvertently be placed on foreign and U.S. registered passenger aircraft.

While this letter focuses on air transport, I believe some of the points below are also relevant to transport in accordance with the IMDG Code as well as other international regulations and other national regulations.

Background

The following is provided as background:

Special Permit 20600

Based on the application, the Special Permit covers over 755 fire extinguishing and suppression articles (devices)[1]. Under SP 20600:

1. The devices are authorized to be transported as "UN3268 Safety Devices, *electrically initiated"* even though they are *not* used for vehicles, vessels or aircraft to enhance safety to persons as required in 173.166 of the DOT Hazardous Materials Regulation and also as required by Special Provision A115 of the ICAO TI (SP280 of the UN Model Regulations); and they are exempt from the requirement to be electrically initiated as implied in the shipping description shown in the HMR and the ICAO TI (see paragraph 4 of SP 20600).
2. The devices are restricted to transport by "cargo aircraft only" (CAO) even though the HMR and the ICAO TI authorize transport of UN3268 devices on both passenger and cargo aircraft (see paragraphs 2(a) and 9 of SP 20600).
3. The special permit must accompany each shipment; but there is no stated requirement for the shipper to provide any special notification such as a shipping paper warning or a CAO label to notify an air carrier that the devices may only be transported on cargo aircraft only (see paragraph 10 of SP20600).
4. In approving the devices for classification as UN3268, it appears PHMSA overlooks the criterion for exclusion from Class 1 given in 2.1.3.6.4(e).[2]

In addition to the devices not being in compliance with international regulations, it appears that, since SP 20600 covered devices are only authorized on cargo aircraft, PHMSA determined that at least some of the SP 20600 devices are more dangerous than devices rightfully covered under UN3268 by the HMR and international regulations. Please note that I have requested tests reports that were submitted as part of the SP 20600 application in order to better assess the correct classification of the full range of SP 20600 devices; but this has yet to be provided.

Further, simply requiring that a copy of the special permit accompany each shipment may not provide adequate warning to alert air carriers that these devices are too dangerous for transport by passenger aircraft, particularly if airline acceptance personnel are not conversant in English and fully understanding of the DOT Hazardous Materials Regulations. By authorizing the same shipping name for the SP 20600 devices as devices authorized under the regulations to be transported on both passenger and cargo

[1] Page 1 of the application under the heading "Request for Emergency Processing per §107.117" where it is stated, "Fireaway exports over 755 of the Products, which are wholly manufactured in the United States, to multiple countries in all continents."

[2] The applicant notes in his application on page 4, paragraph (g), "For this technology to PASS the obscuration test, the system would FAIL as a fire extinguishing system. Consequently, it is difficult to pass the obscuration test in the SMSI/US DOT test protocol."

aircraft, airline acceptance personnel may overlook the CAO restriction on SP 20600 devices and treat them as "rightfully" classified UN 3268 devices allowed on both passenger and cargo aircraft.

Application for Special Permit 20600

From the special permit application, it appears the intent was to obtain, for seemingly commercial purposes, an authorization to classify these devices as nonexplosive for transport under internationally recognized modal regulations, including the IMDG Code and the ICAO TI.[3] [4]

ICAO Technical Instructions Provisions for an Approval or an Exemption

Under 1;1.1.2 of the ICAO TI, PHMSA may as a competent authority issue an approval where *specifically provided* by the ICAO TI.[5] [6] In reviewing the ICAO TI, I was unable to locate a provision where the ICAO TI specifically provided for a competent authority to eliminate limitations on what may be classified as a UN 3268 Safety Device, *electrically initiated* so that there does not appear to be a basis for considering SP 20600 as an approval under the ICAO TI.

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[3] The applications states, "Fireaway submits this emergency application for a Special Permit authorizing the "manufacture, mark, sale and use" (MMS) of its fire extinguishing and suppression articles for transporting them under a classification that will allow for expedient shipping and handling throughout the world, or, in other words under a classification other than explosives. Emergency processing is necessary in this case for immediate national security and safety reasons as described in paragraph 15 below. Specifically, Fireaway requests an Emergency Special Permit to ship, document, mark, label and placard using the entry "UN 3268, Safety Devices, Class 9."

[4] The application states, "The 1.4S (explosives) classification causes an undue hardship on our U.S. based manufacturing business by increasing costs, delays and even preventing the Products from being shipped to our customers around the world, thereby forcing customers to look to our competitors for solutions. Some carriers refuse to take any Class I packages. Certain modes of transport, such as ship or plane, may refuse to carry the Products when classified as a 1.4S explosive. Certain countries require special permits and incur customs delays when importing a 1.4S labelled packages. This significantly delays the shipment of the Products and increases the expense, all at the expense of the U.S.-based manufacturer and to the benefit of our foreign-based competitors."

[5] The text of 1;1.1.2 reads as follows: "1.1.2 Where specifically provided for in these Instructions, the States concerned may grant an approval provided that in such instances an overall level of safety in transport which is equivalent to the level of safety provided for in these Instructions is achieved."

[6] An approval is defined in 1;3.1 as follows: "Approval. An authorization granted by the appropriate national authority for:
a) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions state that such goods may be carried with an approval; or
b) other purposes as provided for in the Technical Instructions.
Note.— In the absence of a specific reference in the Technical Instructions allowing the granting of an approval, an exemption may be sought."

Note: While the HMR defines a competent authority approval in 105.5 and recognizes that a special permit may serve as a competent authority approval, for a PHMSA special permit to serve as a competent authority approval under the ICAO TI, the ICAO TI must specifically provide (i.e., include text similar to "as approved by the competent authority" in association with a regulation) for such an approval.

Under 1;1.1.3 of the ICAO TI, PHMSA as a one of the "states concerned" may issue an exemption under specified limited conditions.[7] For purposes of an exemption, Note 1 to 1;1.1 of the ICAO TI identifies the states concerned as "States of Origin, Operator, Transit, Overflight and Destination"

Questions

Based on the above, I would appreciate PHMSA's clarification on the following questions:

1. Does PHMSA regard SP 20600 as constituting a competent authority approval for purposes of the ICAO TI as described in 1;1.1.2 for purposes of domestic transport in accordance with Part 171, Subpart C? If so, what is PHMSA's basis?
2. Does PHMSA regard SP 20600 as constituting a competent authority approval for purposes of the ICAO TI as described in 1;1.1.2 for purposes of international transport throughout the world? If so, what is PHMSA's basis?
3. If not, does PHMSA consider SP 20600 as constituting an exemption under the ICAO TI as defined in 1;1.1.3? Of the three criteria listed in 1;1.1.3, which one serves as a basis for issuance of SP 20600 as an ICAO exemption?
4. If SP 20600 is an exemption, does PHMSA follow any procedure to ensure that other "states concerned" are made aware of the PHMSA exemption? If it is an exemption, must the air operator have confirmation that exemptions have been issued by the States involved (see ICAO TI supplement 1;1.1.2.3)?
5. Given that under SP 20600, the HMR applies except as noted, are CAO labels required in accordance with 173.27(b)(4)?
6. If the CAO label is required, could this lead to frustration when transport is in accordance with the ICAO TI considering 3;2.1.2(a)(1) of the ICAO TI?

[7] The text of 1;1.1.1.3 reads as follows: "1.1.3 In instances:
a) of extreme urgency; or
b) when other forms of transport are inappropriate; or
c) when full compliance with the prescribed requirements is contrary to public interest,
the States concerned may grant an exemption from the provisions of the Instructions provided that in such instances every effort is made to achieve an overall level of safety in transport which is at least equivalent to the level of safety provided for in these Instructions."

7. Does PHMSA regard the relief provided by SP 20600 applicable to transport under the IMDG Code in accordance with SOLAS Convention provisions in Part A of the convention?
8. Does PHMSA regard the relief provided by SP 20600 applicable to transport under the European road and rail regulations (ADR and RID)?
9. Considering PHMSA's lack of authority over transport outside the U.S., it would seem that the SP 20600 could have authorized use of "NA 3268" (see 172.101(e)) in place of "UN 3268" to ensure that the devices covered in SP 20600 could not be confused with devices covered by UN 3268 in accordance with international regulations. Why was this practice not followed in the case of SP 20600?

In the past, PHMSA when issuing a special permit would, as appropriate, note that, in additional to it providing relief from the HMR, it also constituted a competent authority approval under relevant international regulations. No such statement is included in SP 20600 and applicability of the SP 20600 relief is unclear in the case of international transport. Consistently clarifying the relevance of special permits to international regulations would seem to obviate the need for a request for clarification.

I appreciate your consideration of my request for clarification. Should you have any questions, please do not hesitate to contact me.

Sincerely,

Frits Wybenga
Dangerous Goods Transport Consulting, Inc.

Attachments:
1. SP 20600 application submitted by Hazmat Safety Consulting, LLC, dated December 20, 2017;
2. PHMSA Special Permit 20600.