



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

JAN 30 2008

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Ms. Carol S. Marcus  
Prof. of Radiation Oncology and of Radiological Sciences, UCLA  
1877 Comstock Avenue  
Los Angeles, CA 90025-5014

Ref No.: 07-0210

Dear Ms. Marcus:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) is issuing this letter to clarify the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to the transportation of check sources used in radiation detection devices. On December 17, 2006 you sent a letter requesting a policy statement from the Transportation Security Administration (TSA) regarding the carriage of radiation detection devices and check sources on commercial aircraft. In that letter you described the check sources as tiny quantities of radioactive material in the form of sealed sources which are used to check that survey meters are working properly. You state that the check sources are so low in activity that they fall under the Nuclear Regulatory Commission (NRC) category of exempt material. On January 22, 2007, TSA issued a letter responding to your request. We are issuing this letter to clarify the applicability of the HMR to the transportation of check sources. The HMR must be considered in addition to TSA restrictions when transporting hazardous materials by aircraft.

Your letter to TSA does not indicate type, quantity, or activity of the radioactive material. However, your check source is not subject to the HMR if: (1) the activity concentration in each device is below the activity concentration limit for exempt material specified in § 173.436 for the radionuclide; or, (2) the total activity of the consignment (all devices being carried) is less than the activity limit for exempt consignment specified in § 173.436 for the radionuclide. If the activity exceeds both of these exempt limits, then the device may be offered for transportation as a "Radioactive material, excepted package-limited quantity of material" or "Radioactive material, excepted package-instrument" (for a check source carried in the survey meter) if it satisfies the conditions in §§ 173.421 or 173.424, and § 173.422. Note that the exception requires training in accordance with Subpart H of Part 172. In addition, the outside of each package must be marked with the UN identification number (UN2910 or UN2911) when transporting radioactive material in accordance with §§ 173.421 or 173.424, and § 173.422.

It should be noted that the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods (ICAO TI) specifically prohibits passengers from carrying excepted radioactive materials in the cabin or in checked baggage (see ICAO TI 8; 1.1.1). Many commercial airlines follow the International Air Transport Association's (IATA) Dangerous Goods Regulations which are based on the ICAO TI. Therefore, even in the U.S.,

airlines may choose to prohibit the carriage of excepted radioactive materials in the cabin and checked baggage based on these ICAO international regulations or IATA industry standards.

In addition, a U.S. air operator's ability to carry excepted radioactive materials may also be limited by its operations specifications issued by the Federal Aviation Administration (FAA).

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in cursive script that reads "Edward T. Mazzullo". The signature is written in black ink and is positioned above the printed name and title.

Edward T. Mazzullo

Director, Office of Hazardous Materials Standards

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY · DAVIS · IRVINE · LOS ANGELES · RIVERSIDE · SAN DIEGO · SAN FRANCISCO



Kichenlaub

\$ 175.10

Air

07-0210 UCLA

SANTA BARBARA · SANTA CRUZ

DEPARTMENT OF RADIATION ONCOLOGY  
DAVID GEFKEN SCHOOL OF MEDICINE AT UCLA  
200 UCLA MEDICAL PLAZA, SUITE B265  
BOX 956951  
LOS ANGELES, CALIFORNIA, 90095-6951

PHONE: (310) 825-9771  
FAX: (310) 794-9795

[www.radonc.ucla.edu](http://www.radonc.ucla.edu)

Dec. 17, 2006

Kip Hawley, Director  
Transportation Security Administration  
c/o Contact Office  
601 S. 12<sup>th</sup> Street  
Arlington, VA 22202

Dear Director Hawley:

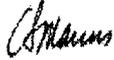
I am a Medical Officer and the radiation expert for two federal medical emergency response teams under the National Disaster Medical System (NDMS). These teams are Disaster Medical Assistance Team (DMAT) CA-9 and the Western National Medical Response Team (NMRT). These and other DMATs and NMRTs travel to disasters on commercial airline flights. If we travel with radiation detectors, such as Geiger-Mueller (G-M) survey meters, we need to also travel with our check sources. These are tiny quantities of radioactive material in the form of sealed sources which are used to check that the survey meters are working properly. These check sources are so low in activity that they fall under the Nuclear Regulatory Commission (NRC) category of exempt material. That is, it is not necessary to have a radioactive materials license to purchase, possess, or use these check sources. **We need to carry these check sources as either personal baggage or checked baggage on any flight and in any airport of the United States and its possessions.** Discussion with the Radiologic Health Branch of California and of Los Angeles indicated uncertainty and potential problems with taking check sources on commercial airplanes. Discussions with two TSA representatives (Renaldo and Teonia) on 12-15-06 indicated that at present this is not possible. Both suggested calling the airport directors of all the airports involved on a trip-by-trip basis and requesting permission in advance (with no guarantee that we will get it). That is absolutely unworkable and unacceptable. **I therefore request that you issue a blanket *written* policy for radiation safety personnel that states that carrying radiation detection devices and check sources as personal or checked luggage is permitted on any airplane and in any airport in the United States and its possessions.**

I am sending a copy of this letter to Dr. Dale E. Klein, Chairman of the Nuclear Regulatory Commission. Dr. Klein holds a Ph.D. in Nuclear Engineering and will certainly be able to see to it that all your questions pertaining to the radiation safety of check sources will be answered. I will also be happy to answer any questions you have. I hold a Ph.D. in Radiation Biology and am a physician board-certified in Nuclear Medicine. Copies of this letter will also be e-mailed to numerous persons involved in radiation protection and emergency medical services.

You may contact me at (310)277-4541 or [csmarcus@ucla.edu](mailto:csmarcus@ucla.edu). My mailing address is 1877 Comstock Avenue, Los Angeles, CA 90025-5014. My FAX is (310)552-0028.

Thank you for your attention and consideration.

Sincerely,



Carol S. Marcus, Ph.D., M.D.  
Prof. of Radiation Oncology and of Radiological Sciences, UCLA  
and  
Medical Officer, DMAT CA-9 and Western NMRT

cc: Dale E. Klein, Ph.D.  
Chairman, Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

## A letter to Dr. Carol Marcus that may be of interest

U.S. Department of Homeland Security

TSA HQ East Tower  
601 South 12<sup>th</sup> Street  
Arlington, VA 22202-4220

JAN 22 2007



**Transportation  
Security  
Administration**

Thank you for your December 17, 2006, letter requesting a policy statement on the carriage of radiation detection devices and check sources on commercial aircraft. We understand that you have previously inquired about this policy through conversations with employees of the Transportation Security Administration (TSA) Contact Center, who suggested that leaders of Federal medical emergency response teams make prior arrangements with airport personnel on a trip-by-trip basis.

Based on your letter and conversations with my staff, we understand these check source devices to be small (coin-sized) objects that contain tiny amounts of radioactive material in a sealed enclosure. Further, we understand that these check sources are used to help determine the operability of radiation survey meters and that the amount of radioactive materials contained therein places the devices into the exempt category of Nuclear Regulatory Commission guidelines.

TSA does not prohibit carriage of the devices described in your letter either as part of an individual's accessible property (items brought into the cabin of an aircraft) or in an individual's checked baggage. These devices will be screened by applying standard screening protocols to include x-ray examination. Once a Transportation Security Officer determines that the device is not itself, and does not contain, a prohibited item, the device will be cleared for travel. For further information on prohibited items, please visit the TSA website at [www.tsa.gov/travelers/airtravel](http://www.tsa.gov/travelers/airtravel).

In coordination with the Department of Transportation (DOT), TSA screening procedures also address the processing of hazardous materials (HAZMAT) discovered during the screening process. Although DOT regulates the transportation of radioactive materials from a safety perspective, the quantity and types of radioactive materials in the check sources as described in your letter are not subject to DOT restrictions and therefore do not trigger TSA HAZMAT-related screening procedures.

Given the information above, your assistance and response teams need not coordinate with airport or TSA officials prior to boarding flights in order to transport these devices aboard commercial aircraft. If you experience any difficulty during the screening of these devices, please ask to speak to the Assistant Federal Security Director for Screening at that airport.

We appreciate that you took the time to share your concerns with us and hope this information is helpful.

Sincerely yours,

Morris McGowan  
Acting Assistant Administrator  
for Security Operations

