



U.S. Department  
of Transportation

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

**Pipeline and Hazardous  
Materials Safety Administration**

MAY 18 2007

Ms. Marjory Crawford  
N. Wood Counter Laboratory, Inc.  
P.O. Box 2509  
Chesterton, IN 46304

Reference No.: 07-0093

Dear Ms. Crawford:

This responds to your May 3, 2007 letter and our telephone conversations concerning the transportation of certain hermetically sealed nuclear radiation sensor (detector) tubes containing less than one gram of Boron trifluoride, 2.3, Hazard Zone B, at less than atmospheric pressure under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

We reviewed the information submitted on the hermetically sealed detector tubes, each containing not more than one gram of Boron trifluoride filled to less than atmospheric pressure, and packaged in a specially designed packaging. Based on the form and quantity of Boron trifluoride contained in the radiation detector tubes, it is our determination these tubes, when packaged and offered for shipment as described in your letter, will not pose an unreasonable risk to health, public safety or property during transportation and, therefore, are not subject to the HMR.

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

Sincerely,

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Safety



070093

171.2

Mitchell  
§ 171.2  
Applicability 07-0093

**N. WOOD COUNTER LABORATORY, INC.**  
RADIATION DETECTORS SINCE 1949

P.O. BOX 2509 • CHESTERTON, INDIANA 46304 USA • TEL (219) 926-3571 • FAX (219) 926-6662

May 3, 2007

Ms. Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Material Standards  
U.S. Dept. of Transportation  
400 Seventh St. S. W.  
Washington, DC 20590

FAX Number: (202) 366-7435

**RE: Our A.M. Conversation**

Dear Ms. Mitchell,

We urgently need a letter updating the DOT letter of February 1984 (addressed to The N. Wood Counter Laboratory, Inc.).

I am enclosing the nineteen (19) pages I received yesterday (May 2, 2007) as you requested. This communication illustrates the confusion caused by the federal HAZMAT shipping regulations which apply to tanks of compressed Bf<sub>3</sub>.

Compressed Bf<sub>3</sub> is the way manufacturers receive Bf<sub>3</sub> from sources such as Eagle Picher. Tanks of Bf<sub>3</sub> are shipped on trucks in crates with HAZMAT labels which is how we and LND receive Bf<sub>3</sub> to use in the manufacture of Bf<sub>3</sub> tubes.

Helium 3 tubes are another type of neutron detectors not interchangeable with Bf<sub>3</sub> tubes in portable instruments. Some customers of Bf<sub>3</sub> neutron detectors think they can avoid shipping problems by "switching" to HE 3 tubes.

An updated letter to the 1984 letter would solve both of these problems.

Thank you for your kind attention to this matter.

Sincerely,

Marjory Wood Crawford  
President, N. Wood Laboratory, Inc.



U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

April 2, 2007

Ms. Marjory Crawford  
N. Wood Counter Laboratory, Inc.  
P.O. Box 509  
Chesterton, IN 46304

Dear Ms. Crawford:

In a February 9, 1984 letter, we provided you with a determination regarding certain of your company's radiation detector tubes containing less than one gram of boron trifluoride, filled to less than atmospheric pressure, and overpacked in a specially designed packaging. We informed you that due to the form and limited quantity of boron trifluoride contained in the radiation detector tubes, these devices, when packed and offered for shipment as described in your letter were not subject to the Hazardous Materials Regulations. A copy of the letter is enclosed.

We would appreciate your providing us with an update on the transportation experience of these devices. Please contact me at (202) 366-8553 if you have any questions concerning this request.

Sincerely,

A handwritten signature in cursive script, appearing to read "Hattie L. Mitchell".

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Standards

Enclosure

TO: ROBERT ORTEGA  
ALM  
DUANE STEPHENS  
FAX: 312-237-4672  
FROM: MARJORY CRAWFORD  
FAX: 312-926-6662  
(24 HR)  
DOT LETTER  
5/15/86

FEB - 9 1984

Ms. Marjory Crawford  
Vice President  
N. Wood Counter Laboratory, Inc.  
1525 East 53rd Street  
Chicago, Illinois 60615

Dear Ms. Crawford:

This is in reference to your application dated January 31, 1984, requesting an exemption authorizing the transportation of radiation detector tubes. These tubes contain less than a gram of boron trifluoride gas, are filled to less than atmospheric pressure, and are overpacked in a specially designed packaging.

Your application is returned as being unnecessary. Due to the form and limited quantity of boron trifluoride contained in the radiation detector tubes, these devices, when packed and offered for shipment as described in your application, are not construed to pose a risk to life or property during transportation and, therefore, are not considered subject to the Hazardous Materials Regulations, 49 CFR Parts 170-179.

Sincerely,  
ORIGINAL  
ALAN L. ROBERTS

Alan I. Roberts  
Associate Director for Hazardous  
Materials Regulation  
Materials Transportation Bureau

Enclosure