



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 11, 2008

Docket No. 030-08562  
Control No. 142589

License No. 06-15099-01

John G. Tamburro  
Vice-president  
Canberra Industries, Inc.  
800 Research Parkway  
Meriden, CT 06450

SUBJECT: CANBERRA INDUSTRIES, INC., REQUEST FOR ADDITIONAL INFORMATION  
CONCERNING APPLICATION FOR AMENDMENT TO LICENSE, CONTROL  
NO. 142589

Dear Mr. Tamburro:

This is in reference to your letter dated July 8, 2008 requesting to amend Nuclear Regulatory Commission License No. 06-15099-01. In order to continue our review, we need the following additional information:

1. You requested that your license be amended to allow you to be able to designate employees as authorized users at temporary job sites. However, you possess a license of limited scope which authorizes research and development with unsealed materials; testing and calibration of instruments; and distribution of sealed sources to persons specifically licensed. The ability to name and approve your own users for research and development is available only with a license of broad scope pursuant to 10 CFR Part 33. There are some limited scope licenses, authorizing activities such as leak testing and calibration services, that allow such activities to be performed by persons, who are not named on the NRC license as authorized users, but who have received training that was reviewed and approved by the NRC and referenced in the license condition. In order to add such a condition to your license:
  - a. Specify the activities that persons will perform at temporary job sites, with sealed sources.
  - b. Provide a description of the training including the outline of topics (radiation safety, radiation instrumentation and use, radiation protection equipment and use, NRC regulations, operating and emergency procedures, case histories, etcetera); the amount of time the training is expected to require; the frequency of training and refresher training; the method of assessing training; any on-the-job audit requirements; and the course instructor qualifications.
2. Condition 11 of your license requires that you restrict the possession of licensed materials to quantities that do not require provision of financial assurance. Attachment 1 of your letter, the "Appendix G Worksheet for Amendment #19" appears to have some

incorrect information.

- a. Item 6-7-8.A. of your license authorizes any byproduct material with atomic numbers 3 through 84, excluding carbon-14, krypton-85, strontium-90 and iodine-129, in any form, not to exceed 5 microcuries per radionuclide and 100 microcuries total. In Attachment 1, you listed the limiting radionuclide as 1,000 microcuries of europium-152; however, the limiting radionuclide would be 10 microcuries of any alpha emitter (or if you limit this authorization to exclude alpha-emitters, the limiting radionuclide becomes 100 microcuries of any beta/gamma emitter). If you are using this table to demonstrate the theoretical limits, confirm that you will correct this limit to 10 microcuries of any alpha emitter. If you wish to exclude alpha emitters from this authorization, provide that information.
- b. Item 6-7-8.B. of your license authorizes any byproduct material with atomic numbers 84 through 98, excluding americium-241, in any form, not to exceed 1 microcurie per radionuclide and 5 microcuries total. In Attachment 1, you listed the limiting radionuclide as 100 microcuries of any alpha emitter; however, the limit is 10 microcuries of any alpha emitter. If you are using this table to demonstrate the theoretical limits, confirm that you will correct this.
- c. Your table includes non-dispersible source material, for which provision of financial assurance is not required. These radionuclides may be excluded from the table, or the table should clearly show that these radionuclides are not required to be considered for the provision of financial assurance.
- d. Your table includes sealed sources of special nuclear, for which provision of financial assurance is not required. These radionuclides may be excluded from the table, or the table should clearly show that these radionuclides are not required to be considered for the provision of financial assurance.

Alternately, you could demonstrate that the actual inventory of radioactive materials possessed under this license does not exceed the requirements to provide financial assurance. This evaluation of your actual inventory would normally be reviewed during inspection of your license.

3. In order to issue the amendment to your license, we need to list a maximum amount to be possessed for Item 8.L of your license, the sealed sources authorized for the J. L. Shepherd Model 6810 device. Please specify an amount to be authorized.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-888-293-6498. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

We will continue our review upon receipt of this information. Please reply to my attention at the Region I Office and refer to Mail Control No. 142589. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5040.

J. Tamburro

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If we do not receive a reply from you within 30 calendar days from the date of this letter, we will assume that you do not wish to pursue your application.

Sincerely,

***Original signed by Elizabeth Ullrich***

Betsy Ullrich  
Senior Health Physicist  
Commercial and R&D Branch  
Division of Nuclear Materials Safety

cc:  
Terry W. Schwager, Radiation Safety Officer

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**SUNSI Review Complete: EUllrich**

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