UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

January 25, 2010

Mr. Arthur T. Howell, III
Director, Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region IV
612 East Lamar Boulevard, Suite 400
Arlington, TX 76011-4125
Facsimile: 817-860-4125

Subject: Use of a Generally-Licensed Source at NIST Boulder

Dear Mr. Howell:

I wanted to inform you that NIST plans to restart work in Boulder using a generally-licensed Ni-63 source that is contained in an electron capture detector (ECD) for a gas chromatograph (GC).

Before restarting work with this source, and despite the fact that the source in question did not appear on NIST Boulder's materials license, NIST wants to be certain that proceeding with these plans will not conflict in any way with the requirements of Item 3 in the NRC's July 2, 2008 Confirmatory Action Letter (CAL) or with any other commitments NIST has made to the NRC. Hence, NIST wishes to document herein the steps that it has taken to meet the spirit of the requirements of Item 3 as they would apply to a generally-licensed source.

For the record, Item 3 states:

> "Prior to personnel working with **licensed material**, you will ensure that procedures are appropriate to the circumstances, your personnel have received the requisite training, and you have assessed the effectiveness of their training. Specifically, you will review training records, conduct interviews as needed, and review the adequacy of procedures to confirm that personnel using **licensed materials** *(emphasis mine)* have completed the requisite initial and annual refresher **training committed to in your license**; and that your personnel are capable of implementing the **procedures required by your license**. You will ensure that all personnel using licensed material are trained pursuant to the **commitments specified in Item 8 of application dated December 15, 2004**. Individuals using special nuclear material must also be trained pursuant to the **commitments specified in Item 8 of your letter dated February 15, 2007**. Furthermore, you will ensure that all **procedures referenced in these letters** are available and are appropriate to the circumstances. If you

determine that procedures are not appropriate to the circumstances, procedures will be enhanced and appropriate personnel trained in their use prior to working with **licensed material.**"

As I have indicated by the added emphasis, Item 3 of the CAL refers to procedures and training required by the NIST Boulder materials license, requirements that do not apply to the generally-licensed Ni-63 source. Hence, we focus below not on procedures and training required by the NIST Boulder materials license, but on procedures and training appropriate for the circumstances, i.e., appropriate for the use of the Ni-63 source in the ECD for a GC.

With regard to Item 3 in the CAL, NIST has:

- Reviewed the NIST Boulder Health Physics Instructions (HPI's) to ensure they are appropriate for the circumstances.
    - Enhanced HPI 1-3, Emergency Response for Ionizing Radiation, to address the requirements of the general license, including new sections on a damaged, ruptured, or leaking source; a lost or stolen source; medical emergencies involving radioactive material; and laboratory emergencies such as fire or explosion.
- Trained the appropriate personnel on the use of generally-licensed devices, including general licensing requirements (10 CFR 31); day-to-day compliance; lessons learned from industry events; reporting events; emergency response and reporting; radiological risks and perspectives; and acquisition, possession, and disposition of generally-licensed devices.
    - Appropriate personnel include the Division Chief responsible for the GC, the individual designated by the Division Chief as responsible for ensuring day-to-day compliance, and all other persons identified by the Division Chief as users or potential users of the GC.
- Assessed the effectiveness of the training through a written test.

NIST has also taken the following actions:

- Verified that the label attached to the ECD states that the source is regulated by a general license.
- Attached a sign to the GC stating, "This device contains radioactive material; contact the Safety Office prior to relocating, transferring or disposing of this device."
- Performed leak tests in accordance with 10 CFR 31.5 and documented the results.

Please let me know if the NRC has any questions or concerns about NIST's plans to restart work with the Ni-63 source. As always, you may reach me at 301-975-4502 or at richard.kayser@nist.gov.

I am providing a copy of this letter to the City of Boulder.

Sincerely,

Richard F. Kayser
Special Assistant for Environment, Safety, and Health

cc: Mr. Paul Fetherston
Deputy City Manager
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