



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

AUG 12 2010

Stephen Musson, Ph.D.  
Radiation Safety Officer  
Environmental Protection Agency  
26 W. Martin Luther King Drive  
Cincinnati, OH 45268

Dear Dr. Musson:

Enclosed is Amendment No. 26 to your NRC Material License No. 34-12736-02 in accordance with your request. Please note that the changes made to your license are printed in **bold** font.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

**Please note that, at this time we were unable to designate your cadmium-109 source for "possession only." This is because the information submitted in the letter dated June 17, 2010, was insufficient to complete our review.**

In addition, this refers to the telephone discussions between you and me, including my associate, Colleen Carol Casey, on various dates in July 2010. In the course of these calls, we acknowledged that the sealed source of cadmium-109 currently in storage but listed on your license as though "active," had decayed well beyond the ten microcurie threshold for "Exempt Quantities," pursuant to 10 CFR 30.18 and Schedule B to 10 CFR Part 30.

Condition No. 26 of your license allows for "decay in storage" for materials with a half-life less than or equal to 120 days. The half-life of cadmium-109 is 462 days. However, it appears that this particular source decayed during use and storage over the course of approximately 21 years.

Ms. Casey and I suggested that you survey this source with no interposed shielding, using an appropriate survey instrument, to determine whether the source was emitting any radiation indistinguishable from background. If it is not, you may possibly be able to dispose of the source without regard to its residual radioactive content because there is so little radioactivity left in it. You agreed to consider this option if EPA allows it. You are also trying to obtain funding for disposal of the source, as you described in our calls, but to date, you have not been successful in securing that funding. You may contact me at (630) 829-9752 if you wish to discuss any of these options.

The other option we discussed was listing this source "for possession only with intent to dispose." This seemed to be the best short-term option for you right now.

S. Musson

In order for us to consider this option, limited to the cadmium-109 source, please submit the following as "additional information to control number 319074," addressed to my attention, and please, as always, ensure that your response letter is signed by an appropriate senior management official. These instructions will help facilitate proper handling of your response in our offices and we appreciate your cooperation.

Please submit a reasonably detailed, concise description of all of the efforts made to dispose of the cadmium-109 source, including telephone calls, letters, facsimiles, personal contacts, etc.

Please confirm that you will not be purchasing any devices in the future that contain cadmium-109 and that the source/device currently in your possession will not be used for any purpose, at any time, pending disposal.

Please confirm that the cadmium-109 source will be securely stored in the same facility as authorized on the current license.

Describe the security/key access control for the source/device in storage.

Please confirm that you will maintain an acceptable accountability program for assuring that the source/device remains in secure storage and is not used. You may wish to refer to Section 8.10.3 in NUREG-1556, Vol.7, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope Including Gas Chromatographs and X-Ray Fluorescence Analyzers."

Please confirm that you will leak test the source/device at least once every 10 years and within 6 months of transferring the source/device to an authorized recipient .

In addition, during the course of this review, we noticed that an error was made on page one of the amendment numbered "24" on page one, but "25" on the remaining pages. This was an error. Page one of that amendment, dated October 27, 2009, should have been numbered "25." Therefore, this amendment is numbered "26."

We apologize for this error and for any inconvenience it may have caused you.

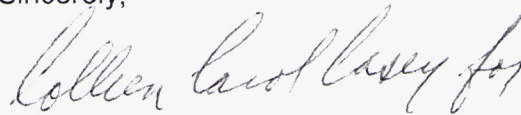
In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

S. Musson

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Statement of Policy and Procedure for NRC Enforcement Actions.

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael G. Herr", followed by a flourish.

Michael G. Herr, CHP  
Materials Licensing Branch

License No. 34-12736-02  
Docket No. 030-13379

Enclosure:

Amendment No. 26