



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
2443 WARRENVILLE RD. STE 210
LISLE, IL 60532-4352

Willie M. (Jack) Crawford, M.S.
Radiation Safety Officer
The Curators of the University of Missouri
311 Jesse Hall
Columbia, MO 65211

JAN 06 2016

Dear Mr. Crawford:

This refers to the letter dated December 30, 2013, signed by you, with the attached NRC Form 313 application dated December 30, 2013, signed by Jacquelyn K. Jones, Vice Chancellor for Administrative Services; the letter dated July 9, 2013 and received July 15, 2014, signed by you; and the letters dated November 6, 2015, December 2, 2015, and December 15, 2015, all signed by you. These documents constitute the renewal application and supporting documentation for your NRC byproduct materials license no. 24-00513-32.

The letter dated December 15, 2015, has been processed as an amendment request under new control number 589950. This letter was intended to address responses to items G, L and M from our letter to you dated November 30, 2015.

It appears that the information provided in your letter dated December 15, 2015, is incomplete in its responses to items G and L. The response to item M is acceptable.

We have restated portions of our original requests and added clarification, as appropriate. We would welcome the opportunity to discuss these matters with you in a telephone discussion to ensure a mutual understanding of these issues. Please contact me to arrange such a telephone call as shown below.

We find that we need the following information in order to continue our review.

Within 15 days of the date of this letter, please provide only one complete, written response to the issues below that is currently dated and signed by you. If an alternative timeframe for response is needed please contact me directly. Or, if you have any specific questions concerning this letter or the information we are requesting, please contact me at either (630) 829-9841 or (800) 522-3025, ext. 9841. My fax number is 630-515-1078. My email address is colleen.casey@nrc.gov.

Please *do not* resubmit any information beyond the scope of our specific requests, such as if you were to resubmit your letters in entirety again. Resubmitting in entirety, unless we request it, often delays the progress of our review without benefit to your licensed program.

Your written response should be addressed to my attention at the above address, as "additional information to control number 589950." This will help ensure that your response is processed correctly in our offices.

For assistance preparing your response, please use our guidance documents in the NUREG 1556 series, focusing on Volumes 1, Rev. 1; 7 (including Appendix D); 9, Rev. 2; and 11, as applicable.

The following issues refer to your letter dated December 15, 2015, unless otherwise specified.

- G. Our original request stated: "In addition, please include the addresses of special application facilities, including, but not limited to, the incinerator where you process radioactive waste materials, the Resource Recovery Center, the Radwaste Building and other facilities, as requested in Item L. below."

Your response letter dated December 15, 2015, did not include the addresses (or building names and room numbers, for example) of any special application facilities, aside from the Resource Recovery Center and the three hospitals.

NUREG 1556, Vol. 11, section 8.9 Item 9, Facilities and Equipment, explains in detail what "special application facilities" means. A description of the "Response from Applicant" in this section states, in part, "For special application facilities, such as those facilities described above, you will need to specify their locations (i.e., buildings and room numbers) and special considerations that your RSC and/or RSO will use in authorizing byproduct material use. Also describe your procedures for control, review and approval of significant facilities or equipment modifications."

Please review the guidance referenced above and advise us whether you have any "special application facilities," as described. If you do, please provide the information requested in this guidance.

- L. Your response to item L. was quite abbreviated, in contrast to the information we had requested. So much of our original request is repeated here.

Please provide sample diagrams for each classification scheme and special application facility that takes into consideration shielding, the proximity of radiation sources to unrestricted areas and other items related to radiation safety.

By shielding, we do not just mean "wall shielding," but also other forms of shielding employed for radiation protection purposes.

If appropriate, you may resubmit the sample diagrams included with your December 15, 2015, letter and add pertinent information to those diagrams. If "special application facility" diagrams are added, they should contain the requested information.

Please use item 8.9, Item 9, "Facilities and Equipment," Appendix K, Appendix Q and Figure Q.1 in NUREG 1556, Vol. 7 to prepare diagrams and brief descriptions for your sample laboratories, as well as the equipment (please see below.)

Areas that should be clearly shown for each laboratory include, but are not necessarily limited to, where radioactive materials are stored and used, especially in higher quantities and/or potentially more hazardous processes; types, thicknesses and locations of shielding; and areas where waste materials will be held and how they will be secured, labelled and shielded.

The street address or building name, room number, direction of north, the approximate dimensions of each room, and the means of securing radioactive materials in accordance with 10 CFR 20.1801 and 10 CFR 20.1802 should also be included.

Please see NUREG 1556 Vol. 11, section 8.9 Item 9, and Appendices K and L; and NUREG 1556 Vol. 7, Appendix K.

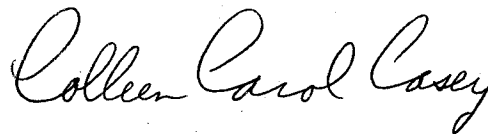
Please include a description of the types of equipment, including survey instrumentation, dose calibrators, shielding, etc. that you will employ for both medical and non-medical uses, as this information appeared to be lacking in all of your letters supporting the renewed license.

Please refer to NUREG 1556 Vol. 7, Appendix M and NUREG 1556 Vol. 9, Rev. 2, section 8.20 Item 9 (for manual brachytherapy equipment) and provide the requested information.

Further, please submit a more specific description of your proposed air sampling program for potentially volatile and/or airborne radionuclides. Please refer to NUREG 1556 Vol. 11, Appendices O and S and 10 CFR 20.1501 and 20.1502.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter 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>.

Sincerely,



Colleen Carol Casey
Materials Licensing Branch

License No. 24-00513-32
Docket No. 030-02278
Control No. 589590