



Research Reactor Center

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June 2, 2011

Ms. Colleen Casey
Materials Licensing Branch
US Nuclear Regulatory Commission, Region III
2443 Warrensville Rd., Suite 210
Lisle, IL 60532-4352

Reference: License Number 24-00513-39
Docket Number 030-32695
Control Number 574637

Dear Ms. Casey,

The following information is being sent to you at your request as a follow up to our initial license amendment application request dated March 2, 2011. The original request was to increase the possession limit for an individual isotope; Cd-109, to 20 Curies at the University of Missouri, Research Reactor for receipt in Any Form. We specifically requested receipt in any form due to the nature of the production of the Cd-109 isotope at the National Lab from which we will receive the material. In all likelihood, the material will be received as a metal dissolved in an acidic solution, however due to the research & development aspects of this project, receipt in other forms may be necessary due to the chemistry considerations of the research.

As noted in our earlier request, this license amendment is necessary to allow us to perform research and development on a process that may have potential for eventual commercial development. We initially will be working with millicurie amounts of activity in the initial phases of research, but should commercial viability of this project seem likely, we anticipate that a separate license will be necessary to accommodate the economic implications of such a process and income stream. Due to the relatively long half life of the isotope (461 days), we are requesting the 20 Ci limit to ensure that we have adequate coverage on our license up to any potential commercial development of this project.

Using the guidance of NUREG 1757, "Consolidated NMSS Decommissioning Guidance," Volume 3, Appendix A, page A-184, the isotope requested above in the form requested would not require financial assurance plans if possessed in the quantities requested. Thus, it is the assessment of the university that the addition

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of 20 Ci of cadmium-109 would not have a significant impact on our total decommissioning funding costs.

The most recent estimate for the cost of decommissioning of MURR was made in September 2009 and includes activities on both the reactor and by-product materials licenses.

If you have any additional questions regarding our submittal, please do not hesitate to contact me.

Sincerely,



Ronald J. Dobey, Jr., CHP
Health Physics Manager/RSO