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**To:** [Jensen, JohnT \(John.Jensen@dm.usda.gov\)](#)  
**Cc:** [Kotzalas, Margie](#); [Jankovich, John](#)  
**Subject:** UNITES STATES DEPARTMENT OF AGRICULTURE, REQUEST FOR ADDITIONAL INFORMATION CONCERNING APPLICATION FOR AMENDMENT TO LICENSE, CONTROL NO. 580279  
**Date:** Thursday, August 08, 2013 7:11:00 AM

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This is in reference to your letter dated March 22, 2013, requesting an amendment to Nuclear Regulatory Commission License No. 19-00915-06, Docket No. 030-06923. The below questions specifically refer to the document which discusses the irradiator upgrade from J.E. Pacheco, dated February 13, 2013. In order to continue our review, we need the following additional information:

1. The document presented the temperature distribution in terms of distance from the welding location (Figures 2 and 3). However, the measurements represent the temperature on the **surface** of the flanges, which is subject to continual cooling by the surrounding air. However, we need similar information about the heat propagation **within the core** of the flanges in terms of distance from the weld location because of the considerable thickness of the flange material which may be subject to heat build-up and is not subject to air cooling. Information about heat propagation should also consider the total thickness of both flanges.
2. We also need information which demonstrates that the heat propagation reaching the lead shield material through the flanges and the lead shielding shell does not raise localized temperatures above the melting point of lead.

You may forward our questions to Sandia. An e-mail response directly from the staff of Sandia will be sufficient.

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. 580279. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5366.

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