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RADIOACTIVE WASTE MANAGEMENT ASSOCIATES

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Mark S Delligatti, Senior Project Manager
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NMSS
US Nuclear Regulatory Commission
Washington, DC 20555

Dear Mark:

Thank you for your November 19 response to my February 27 letter. Your letter did not fully answer my concerns, so I'll try once more.

Brittleness

From several NRC-contractor reports, it is my understanding that irradiated fuel cladding is more brittle than unirradiated fuel cladding. This should alter the consequences of a transportation or ISFSI accident involving impact. You stated that irradiated fuel cladding has "a greater strength value" than unirradiated fuel cladding, but this does not address my concerns about brittleness. It does not appear that NRC staff are querying Holtec and SNC about this important distinction between irradiated and unirradiated fuel cladding. Simply using unirradiated cladding strength in the Holtec and SNC SAR's may not be acceptable.

Dynamic Loading

I am aware that the fuel assembly weight is taken into account in the LLNL report and the Holtec SAR, but the loading is static, that is, the fuel weight is assumed to be evenly distributed along the cladding. The model is essentially a beam between two supports. But this model may not bound the physical situation. In a side impact, the cladding and the fuel are distinct beams. Under impact the fuel pellets would be expected to break their fixed configuration and strike the cladding with force. This dynamic loading is not considered in the LLNL report and may be important. It does not appear that NRC staff are querying Holtec and SNC about this important distinction between static and dynamic loading.

Thank you for reconsidering these issues. And best wishes for the new year.

Marvin Resnikoff

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