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Mr. Eric Benner  
c/o Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

March 7, 2011

Reference: NRC Inspection Report No. 72-1014/10-201 and Notice of Violation Letter on 2/24/2011.  
Subject: Request for clarification

Dear Mr. Benner:

We have reviewed the above-referenced notice of violation arising from the NRC's most recent triennial inspection of our QA program and its implementation. We appreciate NRC's diligent efforts to articulate the basis for the two violations cited in your letter. However, at this time we are unable to fully respond to violation # 2 which pertains to thermal analysis of the vacuum drying condition. The vacuum drying analysis has been documented in the HI- STORM 100 FSAR through a number of CoC amendments spanning many years (Amendment #'s 1 thru 7). Because the inspection based information provided to us by the NRC is first and foremost a learning opportunity for us, we request that the NRC clarify certain statements in the notice to improve our understanding of the matter and to enable us to properly respond to the notice.

The inspection report (Section 3.1.2.5) states:

"The FSAR notes that in order to avoid excessive conservatism in the computed 2-D FLUENT solution, partial recognition for higher axial heat dissipation is adopted in the peak cladding calculations. This approach is described in Appendix I to Holtec FSAR (Report No.: HI-2002407). *The team has determined that the approach described in Appendix I is incorrect.* This failure to comply with the requirements of 10 CFR 72.146, "Design Control," is cited in the attached Notice." [*emphasis added*]

First we would be remiss if we didn't note that Appendix I is not in the Holtec FSAR, rather it is an appendix to the thermal calculation package (HI-2002407 Revision 3) which supports the results in the FSAR. Second, Appendix I was originally sent to support the increased heat load associated with Amendment #1 (ML011910103) and has been explicitly recognized as a valid method of analysis in the SER for Amendment #5 (ML082030170). We have excerpted the relevant text from the above mentioned SER below for your convenience:

"4.8.1 Vacuum Drying

The applicant developed an axisymmetric FLUENT thermal model of the MPC, employing the MPC in-plane conductivity as an isotropic fuel basket conductivity (i.e.,



conductivity in the basket radial and axial directions is equal), to determine peak cladding temperature at design basis heat loads. To avoid excessive conservatism in the computed FLUENT solution, partial recognition for higher axial heat dissipation is adopted in the peak cladding calculations.”

Please note that the last sentence from above refers to the methodology discussed in Appendix I.

The recent inspection report states that the analysis in Appendix I is incorrect; however there is nothing specifically stated within the inspection report about why this is considered incorrect. Therefore, we do not feel we have enough information to allow us to address your determination comprehensively. Your clarification of violation #2 will also help us derive the correct lessons for incorporation in our corrective action initiatives.

We expect to respond to the notice of violation within the 30 day allotted period (by March 25, 2011). However, if NRC's reply to this letter takes considerable time then we respectfully request that our required response date for this violation be extended appropriately so we can formulate a well-considered response.

Sincerely,

Mark Soler  
Director of Quality Assurance  
Holtec International

cc: Mr. Eric Benner, Chief, Rules, Inspections, and Operation Branch, Division of Spent Fuel Storage and Transportation, Office of Nuclear Material Safety and Safeguards, USNRC  
Mr. Jim Pearson, Team Leader, Rules, Inspections, and Operation Branch, Division of Spent Fuel Storage and Transportation, Office of Nuclear Material Safety and Safeguards, USNRC