

June 17, 2010

The Honorable Joseph C. Szabo  
Administrator, Federal Railroad Administration  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Mr. Szabo:

I am responding to your letter to Chairman Jaczko, dated May 5, 2010, requesting the Nuclear Regulatory Commission's (NRC's) review of the Federal Railroad Administration's (FRA) draft report, *Railroad Carrier Employee Exposure to Radiation, Report to Congress, July 2010*, prepared under Section 411 of the Federal Railroad Safety Improvement Act of 2007 (FRSIA). The FRSIA requires that the FRA study potential radiation exposures to railroad carrier employees during transport of high-level radioactive waste (HLRW) and spent nuclear fuel (SNF), and recommend any additional measures that may be needed to protect such employees from unsafe exposure to radiation.

The draft FRA report concludes that radiation doses to railroad carrier employees are small and well below regulatory limits during the normal transport of HLRW and SNF. These conclusions are based on a number of previous studies that focused specifically on radiation exposures to rail workers conducted in Germany (2003), in France (2007), and in the United States (2005). In addition, the studies have been augmented by data from occupational exposure monitoring conducted by the Norfolk Southern Railway (NSR). The NSR data covered 176 individual employee measurements involved in eight trains carrying SNF/HLRW between May 2005 and October 2009.

The NRC conducted a thorough review of the 2005 US study cited in the draft report, *Comparative Safety of the Transport of High-Level Radioactive Materials on Dedicated, Key and Regular Trains* (Dedicated Train Study), and engaged in extensive consultation with FRA during its preparation. The NRC concluded that FRA's Dedicated Train Study showed that doses to railroad carrier employees and the public are small. In addition, the results of the Dedicated Train Study are consistent with a study conducted by the NRC, *Reexamination of Spent Fuel Risk Estimates* (March 2000), which, like the Dedicated Train Study, looked at the projected increase in the number of SNF/HLRW shipments associated with a potential shipment campaign to a disposal facility.

Based on the draft FRA report and the studies cited above, the NRC believes that the radiation doses to railroad carrier employees are small and well below regulatory limits during the normal transport of high-level radioactive waste and spent fuel. The NRC also believes that the FRA recommendation, that no additional protective actions are warranted at this time, is reasonable

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based on the expected low doses involved and the continued oversight of rail workers by the FRA. While our review focused primarily on the conclusions and recommendations of the study, we have provided comments (via e-mail) that may be implemented for additional clarity and accuracy to Mr. Alan Misiaszek of your staff.

Thank you for the opportunity to comment on this draft report.

Sincerely,

/RA/

Catherine Haney, Director  
Office of Nuclear Material Safety  
and Safeguards

cc: Mr. Alan Misiaszek  
Office of Safety Compliance  
and Assurance  
Federal Railroad Administration  
U.S. Department of Transportation  
Ms-25, W38-334  
1200 New Jersey Avenue, SE  
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