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## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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June 5, 1997

Mr. Terry R. Lash  
 Director, Office of Nuclear Energy  
 Science and Technology  
 Department of Energy  
 1000 Independence Avenue, SW  
 Washington, D.C. 20585-0117

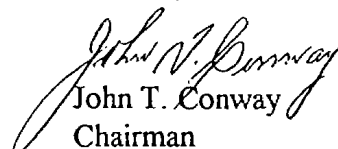
Dear Mr. Lash:

The Defense Nuclear Facilities Safety Board (Board) and its staff have been reviewing the Final Safety Analysis Reports (FSARs) addressing storage of the Department of Energy (DOE) inventory of cylinders containing depleted uranium hexafluoride ( $UF_6$ ) in storage yards at Oak Ridge K-25 and at the Portsmouth and Paducah Gaseous Diffusion Plants. These FSARs and associated DOE Safety Evaluation Reports were provided to the Board on March 31, 1997, in response to Board Recommendation 95-1, *Improved Safety of Cylinders Containing Depleted Uranium*.

Members of the Board's staff have been discussing with representatives of the DOE-Oak Ridge Operations Office (DOE-ORO) and Lockheed Martin Energy Systems (LMES) personnel the FSARs' coverage of the accident scenario involving a fire from a cylinder handler vehicle. Under certain conditions, such a fire could cause a  $UF_6$  cylinder to rupture. While the FSAR analysis indicates this scenario is highly unlikely, the estimated releases of uranium and hydrogen fluoride would cause serious health consequences to nearby workers and to other personnel at some locations beyond the site boundary. Yet the FSARs do not appear to identify controls that would prevent or mitigate such a scenario.

Following discussions with members of the Board's staff, DOE-ORO has obtained a commitment from LMES to evaluate and document additional controls that would be effective in preventing or mitigating the cylinder handler fire scenario. The Board would like to be informed of the results of actions taken by LMES and DOE in determining controls to address the cylinder handler fire scenario, including appropriate incorporation of such controls into the FSARs and operational procedures. The Board looks forward to the results and to the overall establishment of a sound safety basis for storage of the  $UF_6$  cylinder inventory.

Sincerely,

  
 John T. Conway  
 Chairman

c: Mr. James Hall  
 Mr. Mark B. Whitaker, Jr.