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## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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March 7, 2000

The Honorable Bill Richardson  
Secretary of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1000

Dear Secretary Richardson:

The Defense Nuclear Facilities Safety Board (Board) has been informed that the Offices of Science (SC) and Environmental Management (EM) have recently expanded their research programs to more accurately assess the health risks from exposures to low levels of radiation. These studies, now possible because of advances in molecular biology and instrumentation during the past 50 years, offer the possibility of determining whether the biological damage induced by low doses and low dose rates of radiation is repaired by the same cellular processes and with the same efficiencies as normal cellular damage. Positive proof that these processes are the same or achieve an equivalent result would provide hard data which could be used for evaluating the true hazards to the worker and the public of exposure to low doses of radiation.

The research plans of both SC and EM detail a number of fundamental questions to be answered by this expanded research in order to establish a more technically sound basis for regulation of radiation at low doses and low dose rates. Additionally, the research sponsored by EM aims to examine more fully the impact of closely related, but not necessarily radioactive, chemical and physical contaminants and their effects on the cellular process. These studies on chemical and physical effects will also contribute data for analysis of hazards. The Board wishes, in particular, to note the seeming close interaction between SC and EM resulting from initiation of this low level radiation program. This kind of interaction should result in ensuring that the fullest use is made of the basic research findings in the applied programs of EM, thus providing strength to both organizations.

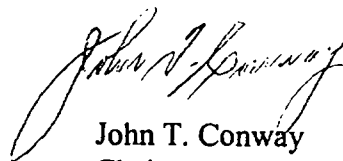
The Board strongly encourages the Department of Energy's support of these expanded programs on low dose radiation at a level that will ensure their timely success. It is also important that the existing programs on the Japanese bomb victims, the populations exposed

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in Russian nuclear activities and the plutonium exposures of former employees in the United States under the Office of Environment, Safety and Health continue to be supported for the useful information they provide.

Sincerely,

A handwritten signature in cursive script, appearing to read "John T. Conway".

John T. Conway  
Chairman

c: Mr. Mark B. Whitaker, Jr.