



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

October 17, 1990

The Honorable Alan Cranston  
United States Senate  
Washington, D.C. 20510

Dear Senator Cranston:

I am responding to your September 19, 1990, letter in which you asked us to address the concerns of your constituent, Ms. Sheila Evans, who expressed her disagreement with a Nuclear Regulatory Commission (NRC) policy which establishes guidelines for the NRC staff in reviewing requests for exemptions for certain low-level radioactive waste (LLW) as being below regulatory concern or BRC.

On July 3, 1990, the Commission issued a Below Regulatory Concern Policy Statement. I have enclosed a copy of this statement together with a companion explanatory booklet for your use in responding to Ms. Evans. The statement identifies the principles and criteria that will govern Commission decisions to exempt certain radioactive material from the full scope of regulatory controls. Thus, the policy could apply, but would not be limited to potential BRC waste determinations. I would emphasize that the policy is not self-executing and does not, by itself, deregulate any LLW. Any specific exemption decisions would be accomplished through rulemaking or licensing actions during which opportunity for public comment would be provided in those situations where generic exemption provisions have not already been established.

The policy can be considered an outgrowth of the concepts articulated in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (Pub. L. 99-240). That Act (i.e., Section 10) directed the NRC to "...establish standards and procedures...and develop the technical capability for considering and acting upon petitions to exempt specific radioactive waste streams from regulation...due to the presence of radionuclides in such waste streams in sufficiently low concentrations or quantities as to be below regulatory concern." In response to the legislation, NRC developed and published in 1986 a Statement of Policy and Procedures which outlines the criteria for considering such petitions. Our recently issued broad policy statement, which has implications beyond waste disposals (e.g., applicable to decommissioning decisions involving the release of residually-contaminated lands or structures), reflects much of the basic radiation protection approach described in this earlier Commission policy. The Commission, in both actions, has acted in the belief that the nation's best interests are served by policies that establish a consistent

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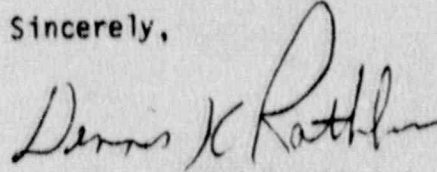
risk framework within which exemption decisions can be made with assurance that human health and the environment are protected. In this regard, we believe our actions are consistent with those of other Federal agencies; e.g., the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA), who have formulated or are attempting to formulate similar policies for the hazardous materials they regulate.

It may be helpful to summarize the typical exposures which we all routinely receive from a variety of sources of radiation. The exposures occur from radiation that is natural in origin as well as from sources which involve man-made uses of radioactive material. In total, as estimated by the National Council on Radiation Protection and Measurements (NCRP Report No. 93), the effective dose equivalent received by an average individual in the United States population is about 360 millirem per year. Of this total, over 83 percent (about 300 millirem per year) is a result of natural sources, including radon and its decay products, while medical exposures such as x-rays, when averaged over the U.S. population, contribute an estimated 15 percent (53 millirem per year). Other man-made sources, including nuclear fallout, contribute the remaining 1 to 2 percent of the total exposure. The remaining 1 to 2 percent also includes the contribution from nuclear power plant effluents. Any low-level radioactive material associated with an exemption decision would not be expected to change this typical exposure "picture." Both the policy and booklet generally describe how the Commission, through monitoring and enforcement actions, will ensure that any combination of radiological exposures from exempt practices will not lead to individual doses approaching the annual public dose limit - an exposure far below life-threatening levels. In considering waste disposal practices, for example, any waste classified as BRC would only involve materials with the lowest levels of radioactivity content. In fact, the level of radioactivity for some potential BRC waste may be such a small fraction of natural background radiation that it may not be readily detectable.

Ms. Evans' concern regarding the potential health and environmental risks from low-level radiation may be based, in part, on reports of the estimates recently made by the United Nations' Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the National Research Council's Committee on the Biological Effects of Ionizing Radiation (BEIR). For the purpose of prudently establishing exposure limits for occupational workers and the public, international and national regulatory bodies, including EPA and NRC, have used the health effects information from various scientific committees, including UNSCEAR and BEIR, to estimate risks at low doses and dose rates based on extrapolations from the risk estimates applicable to the Japanese atomic bomb survivors. We have used this most recent information in the formulation of the BRC policy.

In closing, I want to assure you that we take our mandate to protect the health and safety of the public very seriously. I, therefore, hope the views expressed and the enclosed information will prove useful in responsibly expanding the dialogue on this controversial and technically complex issue.

Sincerely,

A handwritten signature in cursive script that reads "Dennis K. Rathbun". The signature is written in dark ink and is positioned above the typed name and title.

Dennis K. Rathbun, Director  
Congressional Affairs  
Office of Governmental and  
Public Affairs

Enclosures:  
As Stated