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

MAR 9 1981

The Honorable Lawton Chiles
United States Senate
Washington, D.C. 20510

DOCKET NUMBER
PROPOSED RULE PR-20
(45 FR 67018)

Dear Senator Chiles:

Thank you for your letter dated February 17, 1981 on behalf of the Women's International League for Peace and Freedom of Sarasota concerning two proposed changes in NRC regulations. Both changes would relieve licensees of unnecessary and costly regulatory burdens.

The first, published for comment in the Federal Register on October 17, 1980, and approved by the Commission as a final rule on February 26, 1981, will allow NRC licensees to dispose of liquid scintillation media and animal carcasses containing trace quantities of hydrogen-3 or carbon-14 without regard to their radioactivity. The items in question are widely used in research laboratories and hospitals throughout the country. Most licensees presently dispose of these items by sending them to a radioactive waste burial ground or by obtaining special authorization from NRC for incineration or onsite burial.

Scintillation media are toxic and flammable, while animal carcasses used in research are sometimes pathogenic. These characteristics pose a more important public health problem than their radioactivity, which is quite small, and licensees will still be required to comply with applicable Federal, State and local laws governing chemical and biological hazards in their disposal.

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In addition to eliminating a costly and needless regulatory burden for many hospitals and research facilities, the change have several other positive effects. Present disposal in commercial radioactive waste disposal grounds necessitates the transportation of these wastes, often over great distances, and at great expense to licensees. The transportation poses difficult handling problems because the scintillation media are both flammable and chemically carcinogenic, and the decaying carcasses, in addition to being unsanitary, generate methane gas which can explode or otherwise rupture waste containers. The wastes consume scarce waste disposal grounds capacity, which would otherwise be used for radioactive wastes truly requiring burial. Moreover, should the three existing low-level radioactive wastes burial sites be closed for any reason, there could be a prompt and serious interuption of biomedical research and diagnostic activities throughout the nation.

I am enclosing for the information of your constituent a copy of the final rule adopted by the Commission as well as a copy of the value/impact statement prepared by the NRC staff to support the rule.

The other proposed rule, published for comment in the Federal Register on October 27, 1980, would amend existing regulations to exempt from licensing and regulatory requirements technetium-99 and low-enriched uranium as residual contamination in any smelted alloy.

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The rulemaking was originally undertaken by the Commission at the request of the Department of Energy and pursuant to a 1974 amendment (P.L. 93-377) to the Atomic Energy Act (AEA) of 1954. The rulemaking would permit the recycling of scrap metal from discarded equipment at DOE's uranium enrichment plants. This scrap metal is sometimes contaminated with small amounts of byproduct or special nuclear material resulting from the enrichment process. This contamination cannot practically be removed but is considered too insignificant to constitute a radiation health or safety problem.

Until Congress amended the AEA in 1974, it was necessary for the Commission to issue a specific license for the possession of this type of radioactive material, no matter how small the quantity. In amending the Act, Congress gave the Commission the authority to exempt minute quantities of special nuclear material from its licensing requirements if it finds that a licensing exemption "will not constitute an unreasonable risk to the common defense and security and to the health and safety of the public."

We would like to emphasize that under the proposed amendments persons who smelt scrap contaminated with technetium-99 or low-enriched uranium or who are the first transferors of such smelted alloy would not be exempt from licensing requirements. Such persons would be under license and would be required to submit a description of the decontamination and smelting procedures and sampling and analytical procedures to be used. This would assure that the smelted alloys subsequently to be used under the exemption meet the proposed maximum contamination limits. It is also should be noted that the scope of the exemption is narrow permitting only the technetium-99 and low-enriched uranium as the contaminants. Contaminants such as plutonium, high-enriched uranium or other transuranics are not included in the exemption. The Tc-99 amd low-enriched uranium would be minor constituents (less than 5 parts per million (ppm) and 17.5 ppm, respectively) of representative samples of smelted alloys.

The resulting levels of contamination would be at or below those of many products commonly in use which contain traces of unenriched uranium. For example, most building materials contain some traces of uranium (granite, 4.7 ppm; cement, 3.4 ppm; by-product gypsum, 13.7 ppm). Dental procelain, used in making false teeth, has been found to contain from 10 to 990 ppm uranium. The U.S. NRC upper limit for unimportant quantities of unenriched uraniun is 500 ppm. There is essentially no difference in the nature of the radioactivity emitted from this unenriched uranium and the low-enriched uranium being considered for exemption.

The NRC staff has prepared a Draft Environmental Impact Statement (EIS) in support of the proposed rule. Without the exemption, thousands of tons of government-owned nickel, copper, iron and steel scrap would have to be disposed of as radioactive waste at substantial cost to the taxpayers. If exempted, this metal could be smelted down and resold for in excess of $40 million. Further, energy savings from recycle have been estimated at the equivalent of about 170,000 barrels of crude oil or 30,000 Mg of coal. By comparison with these benefits, the risk of cancer from release and unrestricted use of the entire inventory of smelted alloy is estimated

to be considerably less than one. This means that it is highly unlikely that the recycled alloy would cause even one cancer in one person in the total U.S. population.

Notice of the proposed rule was made in the Federal Register and the press on October 27, 1980. To date, over 2,000 public comments have been received. Your constituent's comments will be reviewed along with these and addressed in the Final EIS before any decision is made by the Commission on promulgation of a final rule. Enclosed for your information is a copy of the October 27, 1980, notice as well as the Draft Environmental Impact Statement.

Your interest in these matters is appreciated.

Sincerely,

Carlton Kammerer, Director
Office of Congressional Affairs

Enclosures:
As stated