

COMMENTARY:**A RATIONAL POLICY FOR BIOMEDICAL WASTE**

**L**ow-level radioactive wastes are, by definition, any material that is not high level, i.e., that which is not a byproduct of mining and milling of uranium, not a byproduct of reprocessing nuclear fuel, or does not contain transuranic elements at more than 10 nCi/g. In November 1979, the nuclear medicine community was jolted by the closing of low-level radioactive waste disposal sites. Although it became clear at that time that additional regional



sites would be required, it was evident, to at least some of us, that there was considerable unnecessary and expensive transport to these sites of materials which were so low in radioactivity as not to constitute a problem in radiation safety. In 1979, for instance, liquid scintillation counting wastes occupied more than 10% of the volume at the Hanford site. The Nuclear Regulatory Commission (NRC) estimated that each year a million liters of fluid containing less than 10 Ci  $^3\text{H}$  and less than 1 Ci  $^{14}\text{C}$  were generated. To put these numbers in proper perspective, in New York City, the yearly disposal of  $^3\text{H}$  in biomedical wastes would be less than 1% of the  $^3\text{H}$  naturally occurring in the rainfall and the yearly disposal of  $^{14}\text{C}$  would be less than 1% of the  $^{14}\text{C}$  in the collected garbage. In response to calculations such as these, the NRC on March 11, 1981 did amend its rules to permit disposal of liquid scintillation media and animal carcasses containing  $^{14}\text{C}$  and  $^3\text{H}$  at con-

centrations of less than 0.05  $\mu\text{Ci/g}$ , without regard to their radioactivity. Unfortunately, New York City and perhaps other Agreement States have chosen not to comply.

This rule change was important because it represented official recognition that a rational scientific approach could provide the basis for governmental regulation. Nonetheless, this should have been but the first step and, unfortunately, no additional steps have been taken in the past 4 years. Under the new regulations, for example, one can dispose of the animal carcasses—but not the litter from their cages. What rationale can justify this? Furthermore, it would certainly be appropriate to permit disposal of radioimmunoassay tubes, which generally contain less than 0.01  $\mu\text{Ci}$   $^{125}\text{I}$ /tube as solid waste, without regard to their radioactivity, even as one can dispose of their water-soluble contents down the drain.

It is urgent for those using radioisotopes in clinical medicine and biomedical investigation to organize and develop programs for minimizing the volume of radioactive wastes and to establish criteria to permit broadening the “de minimus” concept to radioisotopes other than  $^{14}\text{C}$  and  $^3\text{H}$ . We cannot expect the initiative to be taken by the NRC or other regulatory agencies. It is up to us to lead and to campaign for rational regulations. If we fail to do so, January 1, 1986 will be upon us and nuclear medicine could well come to an end.

—Rosalyn S. Yalow, PhD  
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(Dr. Yalow was awarded the Nobel Prize for physiology and medicine in 1977)

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**LETTER FROM THE EDITOR**

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This issue marks the premiere appearance of *Newsline* as a news section within *The Journal of Nuclear Medicine*. The basis for this development is the recognition of a need to provide a regular and timely vehicle for news and features of interest to the nuclear medicine community. Joining *The Journal of Nuclear Medicine* as a monthly section fills this need and allows for publication of useful material not previously published by the Journal.

In past issues of *Newsline*, the progress of the organization of compacts among the states to provide for regional disposal of low-level radioactive waste has been reported. One region, initially termed the Northeast Compact, is “in shambles.” We are pleased to provide an opportunity for an in-depth review by David R. Brill, MD, of low-level radioactive waste disposal with particular focus on the proposed Northeast Compact.

In the “Commentary” section

above, Rosalyn S. Yalow, PhD, dissects the issue of radioactive waste and calls for the prompt development of a rational and cost-effective program. In future issues, this section will provide space for commentary by the Society President, the *Newsline* Editor, or guest contributors.

Readers are encouraged to submit comments or manuscripts for publication in *Newsline*.

—Stanley J. Goldsmith, MD  
Associate Editor (*Newsline*)