

DOCKET NUMBER PR 20
PROPOSED RULE 45 FR 67018

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October 29, 1980



Docketing and Service Branch
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

This letter is written regarding the proposed rules published in the Federal Register on October 8, 1980, concerning disposal of liquid scintillation media and animal carcasses containing tracer levels of tritium and carbon-14.

Radiation Safety Engineering is a small consulting firm and a brokerage house for low-level radioactive wastes in Arizona. As a result of our operation, we are intimately familiar with the recent difficulties the medical and research communities have been experiencing in disposal of their low-level radioactive wastes. The proposed changes to 10 CFR 20 listed in the October 8th Federal Register will do much to safely alleviate many of the problems in disposal of contaminated animal carcasses and scintillation media. The rule change will do little, however, for most medical institutions and clinical laboratories using tracer quantities of radio-nuclides for in-vitro studies. The difficulty arises from the limited scope of the proposed rules which consider only tritium and carbon-14. Currently there is no de minimus level for solid radioactive materials listed in 10 CFR 20 although acceptable release concentrations for air and water are specified in Appendix B. The regulatory void created by this omission has caused problems in handling the extremely low-level wastes, as inspectors will often not allow any release no matter how minute.

The problem is further complicated by the Department of Transportation which defines radioactive material in 49 CFR 173.389 as "...any material or combination of materials which spontaneously emits ionizing radiation. Materials in which the estimated specific activity is not greater than 0.002 microcurie per gram of material, and in which the radioactivity is essentially uniformly distributed are not considered to be radioactive materials." All too frequently this firm has been obligated to ship solid waste materials contaminated

Acknowledged by card

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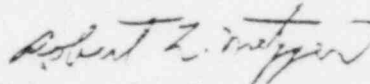
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with I-125 to a licensed repository for burial when the specific activity of the waste was far less than 0.002 microcurie per gram.

Consequently, we would like to suggest that 10 CFR 20 be further modified to establish a de minimus level for all solid radioactive materials based upon each isotope's radiotoxicity, half life and its behavior in the environment. This system would be more flexible than the DOT standard in that it would allow individual release levels for each isotope and could easily be added to Appendix B in Part 20. We feel these changes would be complimentary to the proposed rules and would provide a more complete solution to disposal of very low-level radioactive wastes.

Thank you for considering our comments.

Sincerely,



Robert L. Metzger
Chief Engineer

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