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THE CITY OF NEW YORK
COMMISSIONER OF HEALTH
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NEW YORK, N.Y. 10013

PROPOSED RULE PR 20
45FR67018

November 17, 1980

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Proposed Rule:
Disposal of Certain Tritium and
Carbon-14 Radioactive Waste

As published in the Federal Register,
Volume 45, No. 197, pages 67018-67020
on October 8, 1980

Dear Sir:

The New York City Department of Health hereby submits its comments on the proposed amendment to the Nuclear Regulatory Commission (NCR) regulations, specifically 10 CFR Part 20. The proposed rule would permit NRC licensees and, if adopted by the City of New York, Agreement State radioactive material users licensed by this Department, considerable latitude in disposing of an important category of radioactive waste, namely liquid scintillation media and animal carcasses containing small amounts of hydrogen-3 (tritium, H^3) and carbon-14 (6 C^{14}). The effect of this rule change will be to conserve waste burial capacity which is already in short supply.

Under this proposed rule, any licensee may dispose of these materials in accord with the following protocol and without regard to its radioactivity:

1. .05 microcuries or less of tritium or carbon-14 per gram of medium used in liquid scintillation counting; usually an organic solvent, primarily toluene.

2. .05 microcuries or less of tritium or carbon-14 per gram of animal tissue averaged over the weight of the entire animal. However, the tissue may not be disposed of in a manner that would permit its use either as food for humans or as animal feed;

Acknowledged by card. 11/26/80

3. A single licensed facility in the City of New York is now permitted to discharge up to one curie per year for all radionuclides into the sanitary sewer system. The rule would relax this requirement to permit, in addition to the one curie of all radionuclides, up to five curies of hydrogen-3 and one curie of carbon-14.

APPROVED WITH QUALIFICATIONS

This Department approves of the overall objective and intent of the proposed rule since it would facilitate the disposal of a large volume of radioactive wastes accumulated in vital healing arts, diagnostic procedures and in biomedical scientific research. In proper and normal operation, the radiation dose to the public created by the new rule would be minimal. However, this approval is given with the following qualifications:

1. Incineration - It is not recommended that individual institutions be authorized to separately incinerate their carbon-14 or tritium wastes in the City of New York. The possibility of poor procedures or incineration of unauthorized materials is too great. Rather, it is suggested that an interagency technical group from the Department of Health, Fire, Sanitation and Environmental Protection set up to establish a single suitable place for incineration in New York City or in a neighboring federal jurisdiction. (Perhaps the Brookhaven National Laboratory).

2. Institutional Waste Incinerator Program - The United States Department of Energy is sponsoring an important program at the Federal Idaho National Engineering Laboratory relevant to the incineration of low-level waste. It is an essential requirement applying to this waste in general, and radioactive waste in particular, that the equipment used be able to accomplish effective destruction of scintillation liquid vials and extremely efficient combustion with a minimum of air pollution. Accordingly, the proposed rule should not be implemented until the technology for the proper incineration of these materials is sufficiently developed.

3. Disposal in the Sanitary Sewer System - It should be noted that for both the current and proposed disposal in the sanitary sewer system, the materials involved must be dispersible or soluble in water. Thus, untreated scintillation media such as the generally used toluene could not be so disposed. Dioxane, which is wholly miscible, is no longer extensively used. Additionally, no flammable fluids may be introduced into the New York City sewer system. Again, because it is flammable, scintillation media, primarily toluene, could not be disposed of down the sink irrespective of the new radioactive criteria.

If the above concerns are addressed in the proposed rule, the disposal of large volumes of radioactive waste could be facilitated consistent with the public health.

Very truly yours,

Reinaldo A. Ferrer
Commissioner of Health