

31



# SIERRA CLUB

Pennsylvania Chapter

Reply to:  
Committee on Radiation  
and the Environment

P.O. Box 606  
Harrisburg, PA 17108

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Secretary of the Commission  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

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PROPOSED RULE PR 20  
(59 FR 9146)

To the Secretary:

The Committee on Radiation and the Environment of the Pennsylvania Chapter of Sierra Club submits these comments on the Commission's Notice of Proposed Rulemaking, entitled Disposal of Radioactive Material by Release in Sanitary Sewage Systems, published for comment in the Federal Register, February 25, 1994, at 59 FR 9146-9.

We join with the thrust of comments from the Environmental Coalition on Nuclear Power on the need for more stringent control of radioactive materials that have in the past been permitted to be released to the environment through sewage and the landfilling or landspreading of sewage sludge.

We support strongly the Commission's proposed intent to restrict and reduce the release and reconcentration of radioactive materials through sewage, sewage treatment and disposal. We equally strongly oppose any regulatory actions that would allow licensees' economic considerations to override NRC's provision of maximum protection for public health and safety.

Measurement of contaminants should be taken at the point where maximum concentration occurs, and permissible limits should be based upon the worst case exposure scenarios in order to provide some amount of conservatism. Point of release from a licensed facility to the water body ties the release to its source and records its highest concentration. By contrast, at the point of intake, dilution will have occurred and other radioactive discharges may confound the measurements, clouding the regulator's ability to trace a radioactive contamination to its proper source.

Our Chapter, representing an area with many nuclear industry licensees, is concerned that releases of technologically-produced radionuclides into the environment be held to the lowest possible levels, and that licensees are held accountable for their activities, as Pennsylvania state law endeavors to do with a rebuttable presumption of responsibility for contamination in the vicinity of a low-level radioactive waste disposal facility (a mechanism for regulatory control we would commend to the Commission). All NRC licensees have a responsibility to incorporate fully into their costs of doing business all costs associated with the generation or uses of radioactive materials and the management and disposition of wastes.

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With respect to the questions posed for comment:

1. Forms of material for disposal -- The NRC should impose any and all restrictions necessary to minimize the amounts of radioactive materials that are released into the environment by way of sewage treatment and disposal.

2. Total quantity of material -- We recommend that the NRC eliminate the exemptions of radioactive materials now allowed. The combination of approaches to total quantity limit that will result in the least possible release to the biosystem should be adopted in order to minimize also exposure to individuals. The Commission should not use comparative risk assessments or "acceptable risk" analyses in ways that would permit any increases in the potential levels of dose to the public in order to accommodate an alleged economic or regulatory burden of licensees. Advance licensee notification to the sewage treatment facility should be required by the NRC.

3. Types of limits -- Protection of the public health would be increased through a system of layered monitoring. The permissible limit at the outfall should certainly be no greater than the permissible limit (now 100 mrem/yr) total effective dose equivalent, not 500 mrem/yr. A licensee should include this pathway in its overall TEDE dose calculations. A second layer of monitoring at a treatment facility is advisable, especially where there may be multiple sources of release. A third layer of public health protection should be provided at the potable water intake to assure that the ingestion dose finally received lies well below the maximum drinking water standard.

The best way of reducing sewage sludge contamination is to remove the exemptions for radioactive materials in sewage and sludge and require isolation in licensed secure storage and disposal facilities. The dose limits should conform to standards that provide maximum levels of protection for the public.

4. Exemption of patient excreta -- For medical uses of radioisotopes for diagnosis and treatment, we urge the Commission to establish regulatory control of this source of radioactivity in sewage and resultant sludge. The uses of nuclear medicine have expanded over the years, adding to the overall contributions of radioactive materials and wastes entering the biosphere, as the Commission here recognizes. Since we recommend that the NRC use its regulatory authority to minimize "manmade" increases of radiation in the environment, we urge that this exemption be withdrawn. Because, as the NRC notes, most medical sources are relatively short-lived, the added burden of storage to decay would not be undue for the licensee.