

UNIVERSITY OF CALIFORNIA, BERKELEY

RULE PR 20
(59FR 9146)

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OFFICE OF SECRETARY
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May 12, 1994

Samuel J. Chilk
The Secretary of the Commission
United States Nuclear Regulatory Commission
Washington, DC 20555
Attention: Docketing and Service Branch

RE: **Comments on Proposed Change to 10CFR20
Disposal of Radioactive Material into Sanitary Sewer Systems**

References: Advance Notice of Proposed Rule Making in Federal Register Vol.
59, No. 38, Page 9146 (BIN 3150-AE90)
NUREG/CR-5814, Evaluation of Exposure Pathways to Man from
Disposal of Radioactive Materials into Sanitary Sewer Systems

Dear Secretary Chilk:

The February 25, 1994, Federal Register announced advance notice of proposed rule-making related to the disposal of radioactive materials to sanitary sewers. The FR asked for comment from interested parties; we offer these comments for consideration.

Although the sewer disposal limits of 10CFR20.2003(a)(4) were increased on January 1, 1994, our State of California sewer disposal limit remains at one Curie per year. We are concerned that the Commission may significantly reduce the limits in Part 20.2003--Disposal by release into sanitary sewerage. We believe that, in many cases, sewer disposal of these materials results in the lowest reasonably achievable dose.

We believe that our releases of radioactive materials into the sanitary sewer are typical of a research university (with no hospital). Historically, we have seldom disposed of more than 20% of the one Curie limit per year. The majority of our discharges are short half-life P-32 and S-35, with H-3, and other miscellaneous isotopes. Our discharges are diluted in our sanitary sewerage (almost a million gallons per day) and then flow to a high volume public sewage treatment plant where they are further diluted with discharges from the city of Richmond and Oakland. We have not been able to identify pathways to human dose for either sewage treatment workers or members of the general public. There does not appear to be a process by which any significant re-concentration of our release in the sludge

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page 2
Samuel J. Chilk
May 12, 1994

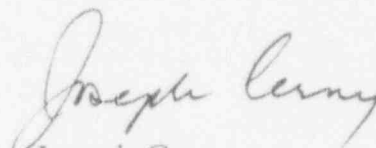
could occur. If re-concentration did occur, the doses would be only fractionally above background. In short, we believe that our sink disposal of these low level, primarily beta emitters reduces both cost and lab worker exposure; therefore, we believe that our process provides doses that are ALARA.

Our concern with the notice of proposed rulemaking is that lower, perhaps much lower, numerical limits will be adopted into Part 20.2003. Agreement states will comply and some may further reduce these limits. Lowering the limits could place a significant burden on us; a burden that can not be justified if the ALARA concept is included.

If it is decided that the numerical limits (10CFR20.2003(a)(4)) are not providing adequate protection from radiation for workers or members of the general population, we suggest that the Commission consider extending the dose calculation concepts in Part 20.1203, Part 20.1204, and 10CFR50--Appendix I to the sewer disposal of radioactive materials. A simplified version of Regulatory Guide 1.111 could be developed to aid licenses and regulators to project and to demonstrate that routine releases comply with the dose limits of 10CFR20.

If you have questions or want additional information please contact our campus Radiation Safety Officer, Paul Lavelly at (510) 643-7976.

Sincerely,



Joseph Cerny
Provost for Research

cc Paul Lavelly, Radiation Safety Officer