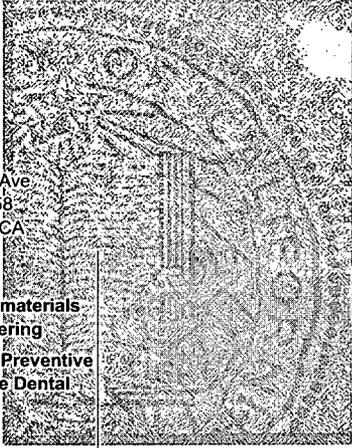


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September 2, 2008

Michael Lesar,
Chief, Rulemaking, Directives, and
Editing Branch, Office of
Administration, Mail Stop T-6D59, U.S.
Nuclear Regulatory Commission,
Washington, DC 20555-0001.
www.regulations.gov; search on docket
ID: NRC-2008-0419.

7/31/08
73 FR 44780

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RULES AND DIRECTIVES
BRANCH
LCN/RD

Dear Mr. Lesar,

I write to express concern about the possible changes to the use of CsCl based gamma radiation sources that are in widespread use in health research facilities. In particular, from our perspective the major issue is the potential cost for obtaining an unplanned-for alternative.

My research group has gone to considerable effort in establishing the efficacy of gamma irradiation as a tooth sterilization method that provides sterilization without altering fundamental properties of the teeth (see references: White JM, Goodis HE, Marshall SJ, Marshall GW. Sterilization of Teeth by Gamma Radiation. J Dent Res 73:1560-1567, 1994; Brauer DS, Saeki K, Hilton JF, Marshall GW, Marshall SJ. Effect of sterilization by Gamma radiation on nano-mechanical properties of teeth. Dent Mater 2008 ;24(8):1137-40). This is necessary since extracted teeth are considered potentially infectious. Thus we have made extensive use of this approach in most of our research studies, and currently have access to a dedicated source on loan from the UCSF Dept. of Environmental Health & Safety. Specimens must be irradiated without interruption for 24+ hrs, and we run specimens every work day, normally at maximum loading.

This sterilization method is used by our own group of about 20 investigators, as well as several other comparable sized groups. In addition we have taken on the task of tooth sterilization for our pre-clinical dental program (approximately 176 students) since this provides teeth for dental students to

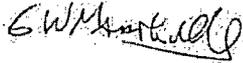
SUNSE Review Complete
Template = ADM-013

F-RIDS = ADM-03
Call = J. Jankovich (JPS2)

practice their cavity preparation skills that have realistic properties and characteristics. In addition to our tooth studies, we also use this source for our tissue engineering work in sterilizing scaffolds for our and bioactive glass studies in collaboration with Lawrence Berkeley National Laboratory.

As you will recognize from our use of these methods for well over two decades, we are quite concerned if major changes are mandated that would require changes that would interrupt our research, complicate our clinical education program, and leave us either without access to comparable approaches or provide them at costs that we are not able to bear in the current budget climate unless new funds are provided for this purpose.

Sincerely yours,

A handwritten signature in black ink, appearing to read "G Marshall". The signature is written in a cursive style and is positioned above the printed name.

Grayson Marshall
Professor

cc. Dean Featherstone
Associate Dean Greenspan