



MAYO CLINIC

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September 26, 2008
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Cynthia G. Jones, Ph.D.
Sr. Technical Advisor for Nuclear Security
U.S. Nuclear Regulatory Commission
Office of Nuclear Security & Incidence Response
Mail Stop T4-D22A
Washington, D.C. 20555

Dear Dr. Jones,

Re: Cesium-137 Chloride Blood Irradiators

It is regrettable that I will not be able to attend the upcoming workshop that will discuss the security and continued use of devices that contain Cesium-137 Chloride (CsCl). To supplement the letter I previously sent to you, I would like to have read into the record some of the important points that were brought up by my Mayo colleagues regarding CsCl blood bank irradiators.

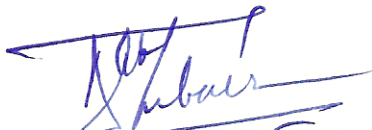
- Irradiation of blood is medically necessary for some patients to prevent transfusion associated graft versus host disease. The 2005 nationwide blood collection and utilization survey reported over 2.5 million blood components were irradiated in the year 2004.
- CsCl blood irradiators are the most reliable, efficient and low maintenance blood irradiators available.
- All hospital blood banks are staffed 24 hours a day 7 days a week. Therefore, with the recent increased security requirements, we believe blood bank irradiators are sufficiently secured.
- If the decision is to outlaw all CsCl containing irradiators, then the ban should be limited to new irradiators.
- The cost of replacement of CsCl irradiators with x-ray irradiators would create a hardship for many hospitals and blood banks. At a minimum, the government should provide the funding for removal of existing Cs-137 blood bank irradiators
- X-ray blood irradiators are the most likely alternative to CsCl blood irradiators but they are not currently as efficient or reliable as CsCl irradiators and may not be as efficacious based on conflicting reports in the literature. X-ray blood irradiators are associated with relatively higher maintenance cost.
- The current manufacturing capacity in the U.S. is not capable of replacing CsCl irradiators in a reasonable period of time. Therefore, the waiting time to purchase an X-ray blood irradiator is over six months and this will significantly get worse if CsCl irradiators are outlawed all at the same time.

My assessment of opinions among colleagues in Transfusion Medicine community is that the

existing measures taken to ensure security blood bank irradiators are adequate. Any measure that will limit their use should be enacted over reasonable time to allow for removal and replacement of existing CsCl blood irradiators.

Thank you for giving us the opportunity to offer our opinions and suggestions. We look forward to the outcome of the workshop and NRC's decisions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Abba C. Zubair', with a long horizontal stroke extending to the right.

Abba C. Zubair MD., PhD.
Director, Transfusion Medicine & Stem Cell Therapy
Department of Laboratory Medicine and Pathology